INTRODUCTION

This background paper is the first of an on-going series of case studies and reports on Anchors In Resilient Communities (ARC). ARC initiatives are multi-stakeholder collaboratives of community organizations and coalitions, anchor institutions, foundations and government working at the intersection of community health, wealth and climate resilience. ARC’s overarching mission is to increase the available social, financial and intellectual capital, as well as innovative projects for building the resilience of low-income communities of color. The community resilience frame addresses the legacy health and economic vulnerabilities of low-wealth communities, but also the new 21st Century heightened family and community risks precipitated by climate change.

The series of ARC reports, funded by The Kresge Foundation, highlight:

1. ARC Rationale and Background
2. Case Study #1: ARC East Bay San Francisco -
3. Case Study #2: ARC Miami
4. Case Study #3: ARC Bronx
5. ARC: Lessons Learned (A primer -mostly for- community partners)
6. ARC: Best Practices in Community Engagement (A primer for health institutions)
7. Excerpt on ARC Miami and ARC Bronx from The Kresge Foundation’s 2016 Annual Report

These initiatives are on-going, long-term projects. Over time, the cumulative experiences and knowledge creation builds a narrative of the promises, strategies and pitfalls of building Anchor-community partnerships to advance intersectional climate resilience efforts. The goal is for Anchor-community resilience collaboratives to become standard practice that can be replicated across the country.

Community-Based Climate Resilience: The Imperative

Widely recognized as a threat multiplier for already-vulnerable populations, climate change is particularly hazardous for the nation’s low-income communities of color and their residents: the poor, the sick, the elderly and the young, whose economic and health challenges are exacerbated by increasingly frequent disasters and extreme weather events.

Disadvantaged communities are not only the most susceptible to the causes and consequences of climate change, they often lack the capacity and resources to prepare for and adapt to its ravages including extreme weather, collapsed infrastructure, the economic consequences of resource depletion and the loss of life and property – that is, to build climate resilience.
Climate resilience thinking emanates from an ecology framework constructed by C.S. Holling in 1973 but is now applied to larger social, economic and ecological systems. It considers the capacity of social systems – families, communities, cities – to prevent, withstand and recover from a major disaster such that the systems are able to function as normal or adapt to changes that have occurred. In short, it refers to “bouncing back” after a disaster. For low-income communities resilience takes on a different meaning. It is more than “bouncing back” or returning to where things were; it is bouncing forward to fix extant legacy problems. Community-climate resilience requires a deeper level of engagement, commitment and strategy.

Mitigating, responding to and adapting to climate change require new, innovative institutional and community partnerships, as well as a restructuring of local economies so that health, food, utility, housing, transportation and communication systems are accessible, high-quality, affordable and functional. Those systems must also have climate resilience consciously embedded into their operating standards. That means that every sector of the economy must minimize the use of fossil fuels, conserve natural resources, minimize risk of collapse or failure in the event of disaster and otherwise be environmentally sustainable solutions.

Fortunately, recognition is growing that anchor institutions – major place-based (i.e., local) nonprofit institutions including hospitals, universities and community colleges – can strengthen the physical, social and economic resilience of their surrounding urban communities, even beginning to counter the legacy of disinvestment that has resulted in too few jobs and depressed local economies. Grounded in a particular place for the long term and with substantial purchasing and investing power and political and social capital, anchors can help build high-road – just, sustainable and inclusive – local economies as they bolster climate resilience.

**The Response: Anchors in Resilient Communities**

These realities inspired Emerald Cities Collaborative (ECC) – a Washington, D.C.-based national nonprofit organization dedicated to creating high-road local economies – to initiate Anchors in Resilient Communities (ARC) (aka Community and Economic Resilience Initiative - CERI), which is enabling high-climate-risk communities to build health, wealth and climate resilience. ECC is partnering with Health Care Without Harm and MIT CoLab to test three innovative anchor-community resilience models.¹

ARC engages the health mission and economic power of hospitals and other anchor partners to:

- Mitigate and adapt to climate disasters;
- Improve residents’ health by reducing environmental hazards; and
- Create jobs and economic development opportunities via local ownership of energy assets and local procurement and contracting by anchor institutions.

ARC launched as demonstration projects in three of the nation’s most climate-impacted urban areas: East Bay San Francisco; Miami, Florida and Bronx, N.Y. Each site represents a learning laboratory for building community resilience and focuses on different strategies towards that end. Specifically:

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¹ ECC and HCWH are currently partnering on the ARC East Bay San Francisco project. ECC and MIT CoLab are currently partnering on the ARC Bronx and ARC Miami projects.
• ARC SF-East Bay targets anchor procurement strategies to strengthen economic resilience by reinvesting in building a local, sustainable food and energy sector;
• ARC Miami forges a labor union-hospital partnership to conduct community outreach and education around community wellness and climate resilience, with the goal of producing an authentic Community Health Need Assessment (CHNA) and re-investments in community resilience.
• ARC Bronx focuses on both energy and economic resilience of its target community and leverages the resources of its anchor partners to do so.

These initial projects differ in strategy, but they share values, capacities, knowledge and experiences of interlocking relationships among several key national organizing partners: ECC, Health Care Without Harm (HCWH), the Massachusetts Institute of Technology Community Innovators Lab (MIT Co-Lab) and Local 1199 of the Service Employees International Union (1199SEIU), and a host of community partners and funders. These relationships resulted in collaborative projects with the following characteristics:

• **Equity-based:** Community partners and coalitions are central drivers, participants and beneficiaries in the ARC collaboratives to ensure better inputs, outcomes and long-term sustainability of the initiatives.
• **Place-focused:** ARC is a geographically-targeted initiative currently focused on sites that experience changing climates and extreme climate events, with initial focus on: Oakland/ Richmond, Calif.; Miami, Fla., and Bronx, N.Y.
• **Multi-sector** collaborations that include community-based organizations and coalitions,
• foundations, healthcare institutions, labor, educational institutions (K-16), advocacy organizations and more.
• **Intersectional strategies:** ARC specifically works at the nexus of community health, wealth and climate resilience. Projects and initiatives must address all three goals.
• **Leveraging anchor resources:** The major innovation revolves around harnessing the assets of anchor institutions to strengthen the communities’ social, economic and physical infrastructure.

**Highly Vulnerable Coastal Communities**

ARC’s initial focus is on three highly urbanized coastal cities that are at risk of the full spectrum of chronic climate conditions and extreme events: East Bay, SF; Miami, Florida and Bronx, N.Y. They are among the most vulnerable to the effects of climate change. According to a June 2012 Bloomberg.com report, Miami ranks #1 and New York #3 among the world’s top 130 climate-vulnerable port cities.

The many extreme events to which the ARC sites are subject include heavy downpours, hurricanes, heat waves, droughts, earthquakes and high winds. These communities also face rising sea levels, rising average temperatures and increased annual precipitation, which worsen the effects of extreme weather. The ARC sites have already begun to see and feel the effects:

• Besides more than 14 major hurricanes in the last century, including the devastating Hurricane Andrew in 1990s and the most recent Category 5 Hurricane Irma in 2017, Miami regularly experiences severe downpours and “king tides” causing localized flooding in some areas of Miami-Dade County, paradoxically leading to water shortages.
• In 2012, New York City experienced the devastating effects of Superstorm Sandy. And
according to the New York Climate Analysis, the city is not only getting wetter, it is also getting hotter – a heat wave in July 2006, for example, culminated in 140 deaths.

- Over the last three years, East Bay SF has undergone historic drought and heat waves, with firestorms and the hottest summer on record in 2012. The drought has resulted in an unprecedented loss of life and property, as well as increased respiratory illnesses, due to wildfires in neighboring counties, including Napa, Sonoma, Santa Cruz and Solona Counties. The effect on the agriculture sector is yet to be determined.

A number of factors heighten the impact of severe weather in port cities, which represent over half of the world’s largest cities:

- They are dense urban commercial centers.
- They have high concentrations of low-income, immigrant, elderly, sick and other vulnerable populations.
- They have older, fragile and complex physical infrastructure that is highly vulnerable to climate disruptions.

**Climate Resilience in Low-Income Communities**

Unfortunately, the scale and frequency of climate risks are not matched by the adaptive capacities to deal with them, particularly for low-income urban communities. Significant work is needed to strengthen the critical infrastructure, including social capital, facilities and economic capacities of such highly vulnerable communities. Their elderly, poor, young, sick/limited-mobility and language-challenged populations are most vulnerable to the impacts of chronic and acute climate conditions and least able to minimize and recover from them.

Katrina and Sandy\(^2\), the country’s recent and memorable extreme weather events, provide the stark evidence. The fragile and inadequate physical infrastructure – the failed levies, electrical grid and transportation and communication systems – devastated at-risk populations and communities the most. Moreover, their social and economic vulnerabilities – such as isolation and limited income – complicated rescue, evacuation and recovery efforts, as well as access to food, water and shelter. And weak and crumbling infrastructure magnify climate impacts, especially in older inner-city neighborhood.

These pre-existing socio-economic stressors increase the risk and consequences of a climate event. Health risks are elevated due to low-income communities’ proximity to hazardous and toxic environments such as freeways and refineries; and limited income and lack of transportation complicate rescue and recovery.

These are some of the challenges that ARC addresses. While each site focuses on strengthening the community’s overall social, physical and economic resilience against climate risks, there is no one-size-fits-all solution. Each site must address its own specific problems and needs. In brief, the entry points are:

- Economic resilience in Oakland/Richmond;

\(^2\) Several more recent climate events – Hurricanes Irma and Maria – in fall 2017 also demonstrate that low-income communities are hit hardest and cannot depend on adequate or timely government response.
• Energy and economic resilience in the Bronx; and
• Climate awareness and economic resilience in Miami.

Background on ECC
Since its founding in 2009, ECC has focused on creating high-road – sustainable, just and inclusive – local economies that reduce dependence on fossil fuels; reduce resulting greenhouse gas emissions, the principle source of climate change; and build social, economic and climate resilience in low-income communities of color. ECC’s local and national partners bring resources and expertise from the community, labor, business and government.

ECC generates high-road economic opportunities for disadvantaged communities by developing energy, green infrastructure and other sustainable development projects in large low-income housing projects, and the MUSH sector – municipal, universities, schools and hospitals, also known as anchor institutions. These projects not only contribute to the resilience of U.S. metropolitan regions, they also ensure an equity stake in the green economy for low-income communities of color and yield family-supporting wages and career paths for residents of target communities and contracting opportunities for women- and minority-owned and other disadvantaged businesses. In pursuit of significant environmental, economic and equity outcomes, ECC builds local multi-stakeholder coalitions that enable collaborative, democratic processes.

Background on ARC
In 2013, ECC initiated work in greening the health sector using high-road practices. The effort leveraged the emerging initiatives in health reform put in place by the Affordable Care Act (ACA), including the requirement that nonprofit hospitals focus on wellness and conduct a community health needs assessment (CHNA) every three years aimed at building community capacity and engagement in preventing vs. treating sickness. Hospitals also are to develop an implementation strategy and reinvest in innovative strategies to address the social, economic and environmental determinants of health identified in the CHNA. By putting environmental health and resilience at the center of anchors’ new resilience orientation, ECC’s ARC initiative is the first to leverage those relationships and anchors’ considerable resources to address climate resilience as part of the ACA’s community benefits.

ARC had no precedent for community-based resilience planning by anchor institutions to address their surrounding communities’ climate risks, nor for investments to mitigate and adapt to them. The idea of climate resilience for private nonprofit institutions had largely focused, if at all, on internal risks to organizations’ core operations. But these institutions underdeveloped resilience planning for their supply chains and largely ignored the critical economic and physical infrastructure needs of their surrounding communities to withstand extreme weather events or to mitigate climate change.

ARC, by contrast, establishes a “mutual benefit” framework that recognizes the resilience of an anchor institution as co-dependent upon that of its surrounding community. The initiative thus advances the next generation of resilience planning by incorporating the interests of major community institutions to:

• Protect their internal operations;
• Operate as safe havens for surrounding communities; and
• Strengthen the resilience of their surrounding communities.

WHY ANCHOR INSTITUTIONS

Overview of Anchor Strategies
The Democracy Collaborative describes anchor institutions such as hospitals, universities and government agencies (alongside others such as churches and museums) as entities that, due to either public or private nonprofit ownership, are place-based, mission-driven and largely “anchored in place.” In the context of ARC, anchors can leverage their existing assets to address social determinants of health, support equitable development and build climate-resilient communities.

Because they are rooted in their communities, a growing number of anchor institutions have adopted an anchor mission, making a commitment to apply their long-term, place-based economic power, alongside human and intellectual resources, to better the long-term welfare of their communities.

Anchors and Health
In a February 2013 op-ed in the Baltimore Sun, The Democracy Collaborative’s Gar Alperovitz, and David Zuckerman note the persistent connection between poverty and poor health and the fact that many leading U.S. hospitals are located in poor communities. They ask, “Could these powerful institutions (in economic as well as medical terms) help overcome the deeper sources of failing health among the 46 million Americans living in poverty?”

They go on to explain that the ACA’s CHNA mandate “provides an unexpected opening…to engage the local community on its general health problems and explain how the hospital intends to address them.” They also note the enormous economic power of hospitals – nonprofit hospitals alone have hundreds of billions of dollars in reported revenues and assets that “could have a major impact on the health and well-being of people in poverty across the nation.”

Along that line, they say, two Cleveland health institutions are using “their massive purchasing power to help develop a network of green, local worker-owned cooperative businesses to supply the area’s large nonprofits.” As a result, “taxpayer funds supporting Cleveland’s nonprofit hospitals now do double duty by helping to underpin a broader community-building agenda, creating jobs and companies that — unlike corporations that come and go — will remain rooted in the local economy.”

ARC builds upon this anchor strategy to include related climate and environmental challenges. Low-income communities and communities of color bear a disproportionate burden from the impacts of environmental hazards and climate change. They often include environmental “hot spots” — areas that are close to power plants, toxic waste and other sources of pollution — as well as older buildings contaminated by lead paint and mold. These environmental hazards cause higher levels of diseases such as cancer, asthma and other respiratory illnesses than in other communities. Good health is also threatened by limited – or no – access to fresh, healthful food, resulting in diet-related maladies such as obesity and diabetes.

With 68 percent of African Americans and 40 percent of Latinos living within 30 miles of a
pollution-spewing coal-fired power plant, and over 50 percent of Asian Americans living in counties with unhealthy air quality, the negative health consequences of poverty and segregated neighborhoods are well documented. The EPA says that in 2010:

- African American children were twice as likely to be hospitalized with an asthma attack and four times as likely to die from the disease as white children;
- Hispanics were 60 percent more likely to visit the hospital for asthma than non-Hispanic whites;
- The asthma rate among children living in poverty was 12.2 percent, compared with 8.2 percent for children living above the poverty line.

Indeed, EPA’s Clean Power Plan (CPP) acknowledges that “low-income communities and communities of color already overburdened with pollution are likely to be disproportionately affected by, and less resilient to, the impacts of climate change.”

HCWH President and cofounder Gary Cohen and senior advisor Robin Guenther note the connections among health care institutions, health and climate resilience:

As “average temperatures rise, heat island effects in dense urban areas will exacerbate chronic respiratory conditions in the elderly and children.” Also, a growing number of extreme weather events – hurricanes, tornadoes, floods, fires, drought – “will require a more resilient emergency care infrastructure capable of delivering potable water and health care. Furthermore, grid reliability is likely to continue to be an issue in unstable energy markets.” And “an active and resilient health care infrastructure can provide essential ‘safe haven’ services” during emergencies.

Anchors such as hospitals can also take pro-active steps to increase health in their communities and address climate change more broadly. For example, about a year ago Dignity Health – one of the nation’s largest health systems, whose locations include California’s Bay Area – made explicit the connection between its health mission and climate change as a public health issue by announcing its intention to restrict investments in coal companies and to consider environmental sustainability when making investment decisions.

Dignity Health’s Community Grants program supports local healthy food projects and organizations that improve access to jobs, housing, food, education and health care for people in low-income and minority communities.

**Anchors and the Built Environment**

The coastal locations of the three ARC sites make them especially vulnerable to extreme weather events such as hurricanes, flooding and heat waves. Outpatient facilities where the most vulnerable populations – the elderly, sick and disabled – reside are particularly at risk during such extreme weather events. Absent intervention, climate change will amplify existing health threats now facing these communities.

A 2011 publication by Richard J. Jackson, UCLA Department of Environmental Health Sciences professor and chair, makes clear the nexus between the built environment and community health, stating that the built environment is the source of many chronic diseases and natural resource
challenges. Significantly, Jackson adds, “The features that promote healthy communities are the same ones that promote a robust environment and economy.”

Similarly, a 2007 PolicyLink report commissioned by The California Endowment says California has focused “on the built environment to improve health outcomes,” and that “particular challenges and opportunities are being addressed in lower-income communities of color to overcome racial and ethnic health disparities.”

Some anchors are working to improve the local built environment in very literal ways. Alperovitz and Zuckerman’s op-ed holds up Baltimore’s Bon Secours Health System as a powerful example: Having concluded in the late 1990s “that the leading community health priorities involved such nuts-and-bolts issues as getting rid of rats, cleaning up trash and providing affordable housing,” Bon Secours, in partnership with Southwest Baltimore residents, “has developed more than 650 units of affordable housing and has cleaned up and converted more than 640 vacant lots into green spaces.”

And given that housing is a major social determinant of health, Dignity Health provides no- and low-cost loans for construction of affordable rental, supported and assisted living housing for various target groups.

Pablo Bravo, Dignity Health’s director of community grants and investments, has stated: “We truly believe that you can’t have a healthy community unless you have access to quality and affordable housing, fresh food, health care and other much-needed services.” He noted that Dignity invests in “upstream community development activities that impact the community’s health,” including “the development of quality, affordable housing and homeless shelters.”

**Anchors and the Economy**

“Eds and Meds” are responsible for over 7.5 percent of gross domestic product: hospital spending totals $780 billion, while higher education spending is nearly $500 billion. Directing even a small percentage of that spending to local procurement can help build local economies and community wealth. (The ARC East Bay case study elaborates on this idea.)

One way that local institutions can fulfill their anchor mission is through deliberate local sourcing of goods and services. Simply buying things that they already need, anchors support community-based businesses and help create jobs and prosperity. Hospitals, in particular, provide employment opportunities spread across income and education levels. And with their large numbers of staff, visitors and patients, they can drive demand for public investments such as transit.

In a 2003 paper entitled Colleges and Universities as Economic Anchors: Profiles of Promising Practices, Andrew Hahn, Casey Coonerty and Lili Peaslee of Brandeis University’s Heller Graduate School of Social Policy and Management, along with PolicyLink, state:

“Every college and university serves to some extent as an economic ‘anchor’ in its respective community. They create jobs and many offer training and education for local residents; most support local businesses through the procurement of goods and services; some advance community development through real estate projects; others facilitate
Anchors and Social Capital
Anchors also play a role in creating and maintaining social capital in vulnerable communities. In *Renewing People and Places: Institutional Investment Policies That Enhance Social Capital and Improve the Built Environment of Distressed Communities*, Rex L. LaMore and Terry Link of Michigan State University encourage institutions of higher learning to help rebuild communities by investing in community development and community-based organizations. They assert that “a public higher education policy supporting a community reinvestment strategy” has been shown to “facilitate community and civic revitalization, stimulate the physical revitalization of distressed areas and reduce environmental stress, while simultaneously improving the economic and social well-being of the community and the state.”

LaMore and Link also reference a Michigan State University paper stating, “social capital is an important resource in poverty reduction, and efforts to reduce poverty through physical redevelopment, financial investment and human development, depend on social capital.”

Such prescriptions are played out “on the ground” at institutions such as the University of Southern California (USC), which places “a high value on being a good neighbor – and on programs and projects that have a positive impact on surrounding neighborhoods.” USC engages with local residents, community partners, civic leaders and area businesses to support and promote more than 400 community initiatives in its neighborhoods, including helping young people get a college education and helping families and small businesses access “resources that support their health and vitality.”

Students in the university’s Dana and David Dornsife College of Letters, Arts and Sciences, for example, participate in community engagement activities aimed at making positive changes in their neighborhoods, while the Cecil Murray Center for Community Engagement trains clergy and lay leaders in organizing to influence public policy and in bringing jobs, housing, business and financial literacy to low- to moderate-income neighborhoods. USC’s Family of Businesses program (https://communities.usc.edu/family-of-businesses/) also promotes social capital through direct community engagement by providing various consulting and technical assistance services to local businesses near two USC campuses “to advance the overall economic health, sustainability and stability of our surrounding neighborhoods.”

Anchors and Climate Resilience
The role of anchor institutions in addressing climate resilience is evolving. The emergent field of work involves two different strands: risk and emergency management. Risk management focuses on ensuring that operations and essential supply chain are not disrupted during a major disaster. Hospitals, for example, must have back-up power in the event of an electric grid failure. Emergency management, on the other hand, positions anchors as safe havens and first responders in an emergency. Schools, churches and hospitals play a critical role in providing disaster victims with access to food, water, transportation and emergency medical services. As critical as it is for anchors to be resilient themselves, most are not. ARC’s focus on community-
based climate resilience, therefore, takes anchor resilience discussion to an entirely different and expanded level of work.

**The Intersection of Health, Wealth and Climate Resilience**

Climate resilience uniquely binds anchor institutions around a common mission. Anchors are co-located in the same geographic area and serve the same population. But their missions, programs, services, and sources of revenues differ. Schools improve the educational and economic opportunities for their “clients” by preparing them for the workforce; health institutions work on wellness; religious institutions feed the social and spiritual needs of the community. None, however, focuses on the larger social, economic or physical conditions that mitigate against success. The result is that they operate in silos, unable to leverage each other’s assets to meet their unique and shared objectives. This changes with a “climate resilience” frame.

Mitigating, adapting to and recovering from climate resilience require a multi-sector approach. Climate change is deemed a threat multiplier. The effects of high carbon emissions and extreme weather prey on and are most unforgiving for the unemployed, sick and those living in unhealthy environments. Working together to make a community climate resilient – improving social networks, housing, food access, economic and physical mobility and safety of families and communities and strengthening social networks – therefore helps to fulfill the combined mission of these institutions.

ARC’s multi-stakeholder collaboratives come to the table with their vested interests and resources. But they work on solutions at the intersection of health, wealth and climate resilience. This involves seeing their work through a different lens, finding solutions that solve multiple problems and creating an environment of community resilience – social, economic and physical.
ANCHORS IN RESILIENT COMMUNITIES (ARC)

Promoting Health, Wealth and Climate Resilience

ARC EAST BAY SAN FRANCISCO
A CASE STUDY

Collaborative Projects of Emerald Cities Collaborative with Health Care Without Harm and MIT CoLab

REPORT FUNDED BY
THE KRESGE FOUNDATION
2017
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ARC EAST BAY, CALIFORNIA

ARC East Bay focuses on under-served neighborhoods in Richmond and East Oakland, California. High rates of poverty, environmental toxins, morbidity and mortality are among the challenges making these two communities most vulnerable to climate change.

ARC East Bay involves a multi-stakeholder table working to address community health, wealth and climate resilience. The initial focus is to develop under local leadership and control, a sustainable food and energy sector. The project seeks to mitigate the impacts of drought and heat waves in the region on rising food and energy prices, while at the same time improving residents’ health and economic opportunities. Food, energy and economic resilience increase the communities’ capacity to reduce carbon emissions, adapt to impacts of drought on the agriculture sector and,
ultimately, develop healthy and more financially enabled households that can better recover from climate dislocations. The project leverages the assets and capacities of local institutional anchors to address the social determinants of health (both economic and environmental) and inclusive economic opportunity.

Demographics
Despite the Bay Area’s booming regional economy, poverty persists, with many low-income communities not benefiting from the overall good economy. Residents lack access to jobs, business and wealth-creation opportunities; and the region’s growth is driving up housing costs and resulting displacement.

The poverty rate in Alameda County, which includes Oakland, was 11 percent according to Census data released in September 2016; for Contra Costa County, which includes Richmond, it was 10 percent. (Both figures are below the national 2015 rate of 13.5%.) Richmond Mayor Tom Butt’s January 2016 State of the City report said unemployment was 5.4% in December 2015, higher than the 5% national rate.

According to a 2015 Oakland Demographic Report by the Oakland Fund for Children and Youth, the number of Oakland school students from low-income households increased significantly since 2005, and three-quarters of all Oakland students were eligible for free and reduced price lunch. At 63%, Oakland’s high school graduation rate was below the 80% average rates for the state and county; and Oakland’s dropout rates were twice county and state averages.

Like other impoverished communities, those in the East Bay are also environmentally unhealthy. East Oakland residents, for example, have the highest rate of diabetes in the city and are at higher risk for problems related to diet, lifestyle, toxic environments, obesity, heart disease and cancer. Asthma rates among African American children are 2.5 times the overall rate found in Alameda County. Similar statistics are seen in underserved communities in San Francisco County.

Climate Challenges and Risks
The Pacific Institute, working with the Oakland Climate Action Coalition, documented not only the major climate challenges in ECC’s Oakland/Richmond target area but also the likely effects of climate change on the rising cost of food and energy. Drought and rising temperatures will have negative impacts on agricultural production, increase food prices and reduce agricultural jobs and businesses. The power disruption from heat waves, wildfires, melting ice packs and hydropower will significantly affect both energy costs and availability.

The critical intervention, therefore, is to build local economies that can offset the cost of food, energy and other essential services, including by increasing jobs and incomes to counter rising prices. Local business development efforts also seek to ameliorate pre-existing stressors and public health problems arising from high ambient heat, ozone depletion and sewage-polluted waters.

Who and How
ECC initiated ARC East Bay in partnership with Health Care Without Harm (HCWH). The ARC team leverages the ongoing investments by The California Endowment (TCE) in East Oakland and Richmond. Launched in 2010, TCE’s Building Healthy Communities is a 10-year, $1 billion initiative to make 14 communities throughout California that are most devastated by health inequities into “places where all people have an opportunity to thrive.” This investment focuses on build cross-sector collaborations among community-based organizations to develop a vision and targeted initiatives to build healthy communities.
ARC East Bay also leverages the ACA’s community investment mandates, community policy work and community placed-based efforts around food, community resilience and small business development. Kaiser Permanente is headquartered in Oakland and has been a core convening partner from the start.

Having established ARC from its inception as a collaborative process and multi-sector partnership, ECC acts as a co-convener with Health Care Without Harm, ensuring transparency, buy-in and consensus-building. Two years into the process, that approach has led to the diverse ARC Advisory Committee, whose “table” includes key community leadership (see Partners box to the right).

What (Goals, Objectives):
ARC East Bay is about expanding jobs, positive health outcomes and climate resilience for low- and moderate-income communities in East Bay San Francisco (East Oakland and Richmond, California), using the purchasing power of the region’s anchor institutions – Kaiser Permanente, K-12 educational institutions – to strengthen access to healthy foods; green, healthy, affordable housing; and economic opportunities. To mitigate the chronic issues that have such negative impacts on these communities, ARC aims to develop viable economic strategies by year 10 of The California Endowment’s Building Healthy Communities initiative, to establish new businesses whose products and services work at the intersection of health, wealth and climate resilience and to create high-road jobs that create pathways to prosperity.

ARC East Bay objectives are to:

• Create a collaborative learning environment/"laboratory" that engages anchor institutions, philanthropy, the community and public-sector stakeholders in co-creating innovative models of community health, wealth and climate resilience.
• Establish long-term anchor partnerships and investments in Richmond and Oakland neighborhoods.
• Generate a feasibility plan for tapping the procurement and investment capital of major public- and private-sector employers – such as Kaiser Permanente, Dignity Health, community health clinics, UC Berkeley and other anchor institutions – to improve community health and wealth.
• Identify specific opportunities that leverage anchor investments into new models of community wealth-creation – including quality job opportunities and career pathways – as well as potential development of local start-ups, social enterprises and cooperatives dedicated to sustainable, climate-resilient communities.
• Identify anchors’ “demand-side” procurement needs that can be fulfilled by “supply-side” local businesses and workers.

How:
Regular ARC advisory committee meetings – via conference call and several public learning sessions – have enabled broad inclusion and feedback from a variety of community partners, typically

Partners
• Health Richmond Community Coalition
• Building Healthy Oakland Community Coalition
• The California Endowment (TCE)/ Building Healthy Communities Initiative
• Kaiser Permanente
• Dignity Health
• University of California Berkeley and UC San Francisco
• California Wellness
• San Francisco Foundation
• Alameda County
• Health Care Without Harm (HCWH)
engaging 40-50 community stakeholders while providing transparency. (Videos of the learning sessions are available.)

The ARC project hired TDC to conduct a procurement study of the regional anchors. Over 14 months, TDC and Emerald Cities conducted over 200 in-person or telephone interviews to assess the spending power of the anchors to determine how much they spend, what they buy and from whom. This “demand-side” analysis was then complemented with a “supply-side” scan of local businesses and economic infrastructure. The goal was to match the demand for goods and services with what could be supplied by local businesses. Switching non-local businesses with local businesses, defined as “import substitution,” is a core strategy for finding key opportunities that would improve community health, wealth and climate resilience.

Findings from the procurement study were discussed with anchor partners, and priority projects were identified. Phase I of ARC was completed in June 2016. The study and Phase II strategy were prepared for dissemination to key stakeholders, foundations, anchors and other learning communities, as well as to the public. The study includes analysis of demand-side supply chain and job opportunities, business ownership by minorities and women, gaps in technical assistance and focused recommendations and how they could be fulfilled.

**Outcomes: Summary Findings**

The procurement study revealed that East Bay hospitals, universities and school districts spend $6.8 billion annually on procurement, so capturing a mere 1 percent of these dollars could direct $68 million a year towards new economic vitality, with co-benefits of health, wealth and resilient, thriving economies.

The ARC study determined several sectors that offer business opportunities for further exploration, most notably healthy food, clean energy/green building and construction and green enterprise, as depicted in this graphic:

![Mobilizing Anchor Potential Regionally; Aggregating Up](image-url)
A number of business ideas and needs emerged that met the health, wealth and climate resilience test and also could be supported at the local level. In particular, ECC and HCWH will be vetting a food-related concept called MyCultiver, a partnership between Food Service Partners (FSP), a company with a 15-year vendor relationship with Kaiser Permanente that delivers 7,000 meals a day, and two additional partners. FSP works with 50+ hospitals across the country, delivering over two million meals a year. Additional partners include MyCootoo, a developer of hands-on educational centers, and Sarah Wally, an experienced real estate developer who helped build the renowned California Culinary Institute.

In a new, localized concept, MyCultiver (which includes an aquaponics/greenhouse facility, spaces for large food processing and small business incubation and a 3-D “edutainment” learning center around food, soil and climate) needs three facilities of varying sizes. MyCultiver, which builds community partnerships, is interested in cooperative ownership of the aquaponics/greenhouse facility by local farmers/gardeners and community stakeholders.

Additionally, the MyCultiver concept is designed to help hospitals, schools and other public institutions meet their goal of locally-produced, sustainable and organic food delivery. For example, Kaiser in its Total Health mission, would like to increase its current achievement of 40 percent local, sustainably-sourced food to 100 percent locally-grown and sustainable. This is an enormous opportunity – and challenge – that the ARC table will help facilitate.

![MyCultiver concept diagram](image-url)

Additional types of businesses are yet to be explored, with further research needed to determine their viability. They could include:

- Green/healthy buildings – net-zero energy goals
- Community solar
- Battery storage (research by Lawrence Berkeley National Laboratory may suggest viable businesses)
- Wind energy and LED lighting
- Zero-waste/recycling facility
The Nexus: Local Sustainable Food Systems, Health, Wealth and Climate Resilience

ARC East Bay’s initial focus on building a local sustainable food economy is a direct result of the “demand- and supply-side” opportunities identified in the procurement study. Kaiser, in particular, and its food service contractor, Food Service Partners (FSP), committed to sustainable-food and buy-local policies being matched by other anchor institutions. Moreover, the East Bay has an emergent but vibrant slow-food movement that can be expanded to meet the demand.

In addition, the food project met the criteria of operating at the nexus of community health, wealth and climate resilience. It has the potential to be disruptive of the global food system and create an alternative food economy that addresses:

- Access healthful food to lower incidences of obesity, diabetes, cancer and other food-related health problems.
- Household budgets threatened by rising food prices as California’s agriculture economy is crushed by drought, heat waves and wildfires.
- Community wealth by creating locally-owned, sustainable food enterprises along the supply chain to meet the aggregated food purchasing needs of anchors.

Challenges:
The role and function of ARC East Bay have, necessarily, expanded from convening, research and planning in Phase I to a more technical role of project development and financing in Phase II. This requires a deeper level of organizational and staff capacity as the collaborative moves into the implementation.

Development of the identified businesses and demand-side needs of Bay Area anchors are complex, requiring more knowledge and support from community partners and/or consultants. This means that moving to Phase II (setting up an ARC governance structure and implementing pilot projects) requires funding to build staff capacity to respond to those problems, as well as knowledge and expertise.

Other challenges include:

- **Anchor institution confidentiality agreements (privacy, health records, procurement contracts, etc.).** Full access to the procurement operations of anchor institutions required execution of non-disclosure agreements. But such agreements limited the full transparency needed to keep collaborative members fully informed and involved in the decision-making, which in turn compromised the project’s trust-building and equity dimensions.
- **Coordinating multiple multi-anchor initiatives and community partnerships.** ARC’s collaboration was one of several “anchor” strategies in the region. These efforts differed – one focused on healthcare jobs for community residents, another focused on a transportation-related project. With ARC’s focus on procurement strategies to produce sustainable local economies, there was confusion in the “marketplace.” Health partners were weary of all the “asks” from different groups, begging the question of “who is the community” and “where to place their time and energy.” Several meetings were held with other anchor project leads to better understand each other’s work and to facilitate joint access to anchor data.
• **Competing and complementary needs/interests.** Moving each partner out of its particular vested interests and silos is an ongoing undertaking. Learning communities are critical for intersectional work.

• **Geography: place-focused vs. sector-focused.** A continuing conversation among anchors was about the project’s geographic focus, as anchors have overlapping territories that are not completely in sync. The community-based frame (East Oakland and Richmond) and the intent to solve community-level problems conflicted with a food supply chain initiative, which requires a regional economic frame. The tentative solution was to take a regional approach, but to connect communities to regional opportunities.

• **Local capacity.** The local sustainable food industry is vibrant, but it still represents a cottage industry. Considerable capacity-building is needed to make it a reliable supplier for the aggregated demands of the local anchors.

**Next Steps:**

**Phase IIa Activities and Objectives:** (2016-2017)

- Vet the recommendations and business/project development opportunities for short- and long-term viability within targeted low-income communities in Alameda and San Francisco Counties.
- Establish a governance structure and build stakeholder tables (key organizations and partners are needed for implementation).
- Design a strategy and timeline of the project opportunities across the Bay Area for the next two-three years and beyond (five-10 years).

**Phase IIb Tasks:** (2017-2018)

- Implement one/two projects ready for financing/funding in the short term. This includes building infrastructure within the communities and organizations tasked with deployment, including ECC, HCWH and additional local nonprofits needed to ensure equity, diversity and economic opportunity.
- Explore other project ideas through deeper research and engagement processes.

**Phase III Activities and Objectives:** (currently in development for 2018-2025)

- Amplify and build an ARC platform for greater regional equity and opportunity in low- and moderate-income communities.
- Export the model to other national/major markets like Los Angeles and New York.
ANCHORS IN RESILIENT COMMUNITIES (ARC)

Promoting Health, Wealth and Climate Resilience

ARC MIAMI
A CASE STUDY

Collaborative Projects of Emerald Cities Collaborative with Health Care Without Harm and MIT CoLab

REPORT FUNDED BY THE KRESGE FOUNDATION 2017
INTRODUCTION
This profile of Miami is part of an ongoing series of case studies and reports on Anchors In Resilient Communities (ARC). ARC initiatives are multi-stakeholder collaboratives of community organizations and coalitions, anchor institutions, foundations and government working at the intersection of community health, wealth and climate resilience. ARC’s overarching mission is to increase the available social, financial and intellectual capital of low-income communities of color, as well as innovative projects for building their resilience. The community resilience frame addresses the legacy health and economic vulnerabilities of low-wealth communities, but also the new 21st Century’s heightened family and community risks precipitated by climate change. The series of ARC reports, funded by The Kresge Foundation, highlight:

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These initiatives are ongoing, long-term projects. Over time, the cumulative experiences and knowledge-creation builds a narrative of the promises, strategies and pitfalls of building anchor-community partnerships to advance intersectional climate resilience efforts. The goal is for anchor-community resilience collaboratives to become standard practice that can be replicated across the country.

MIAMI, FLORIDA
ARC Miami is a labor-community collaborative focused on addressing the critical health, economic and climate risks of low-income Haitian and Latino neighborhoods within the University of Miami Hospital (UMH) service area. The ultimate aim of a Miami community health and resilience agenda is to have healthcare workers and local residents play leadership roles in the shift toward wellness and climate resilience through outreach, education and community engagement. Specifically, 1199SEIU conducted a community health needs assessment (CHNA) and to educate residents on the particular nexus between health and climate change.
This participatory, community-driven CHNA process highlighting root causes of poor health outcomes positions UMH, the key anchor, to invest in initiatives that address the social, economic and environmental factors of poor health, while broadly influencing overall community wellness.

**Demographics**
According to a 2013 report on income and poverty in Miami-Dade County by the Department of Regulatory & Economic Resources, Planning Research and Economic Analysis Section, the county’s 2013 overall median household income was estimated at $41,913, but nearly one-third of households (32%) earned less than $25,000 that year. And while median income for white, non-Hispanic households was $64,976, the median for black non-Hispanic households was just over half of that, $32,044. The Hispanic household median of $39,674 was 61% of the overall median.

In 2013, 21%, of all individuals in the county lived in poverty, including more than 30% of all school-age children; almost 55% of children were low-income, while more than half of residents 65 years of age and over were low-income or in poverty.

The greatest disparity in poverty rates was by race and ethnicity, with two-thirds of all individuals in poverty being of Hispanic origin. Poverty rates were more than 29% for African Americans, 21% for Hispanics and 12% for white non-Hispanics.

The county’s September 2016 unemployment rate was 5.6%, compared with the national rate of 5.0%.

**Climate Challenges and Risks**
According to the county’s Miami-Dade Green website, there is consensus among leading scientists worldwide “that climate change is among the most significant problems facing the world today and that Southeast Florida is one of the most vulnerable areas.”

Referencing Miami-Dade, a January 2016 report by the Center for American Progress states: “Climate change is bringing more flooding, extreme heat and other impacts that affect the way people live, work and even vacation in this low-lying county.” The report goes on to say that the “undeniable” evidence of climate change in Miami-Dade includes “flooded streets [which] are becoming routine even on sunny days, triggered not by extreme storms but by high tide.”

It adds: “Rising seas will exacerbate the impact of hurricanes, which remain ever-present threats. The number of days with temperatures higher than 95 degrees Fahrenheit in Florida and other southeastern states has steadily increased since 1970, putting the health of residents at risk. These dangerous climate change effects pack the hardest punch in the county’s sizeable low-income communities, which lack the economic stability and quality housing to safely weather the stifling heat and flooding that are part of the new normal.”

ARC Miami involves a community-wide strategy to increase the adaptive capacities of community health workers and the resilience of critical outpatient facilities, including community health centers, nursing homes and home health care facilities.

Clearly, community health workers and facilities are on the front lines of climate risk. Rather than being penalized for failing to show up for work during climate events – as they were during Hurricane Rita – those workers must be proactively involved in formulating resilience plans and solutions. Such solutions include:

- Developing alternative transportation and communication strategies for reaching home-bound patients
- Retrofitting homes and other facilities to mitigate risks
- Developing community safety nets and alternative food, water and energy sources
- Providing basic climate-risk education
• Use deep community organizing and engagement to develop strategies for community health, wealth and climate resilience.
• Identify challenges and opportunities related to climate change, given Miami’s coastal location and vulnerability to events such as hurricanes, flooding and heat waves

Who and How
ECC partnered with MIT CoLab to engage 1199 to form ARC Miami to address the shifting landscape from health services to community wellness. To do this, 1199SEIU partnered with its employer, UMH, a 560-bed, nonprofit facility that is part of the three-hospital University of Miami Health System (UHealth) and employs 2,000 SEIU members.

In addition to its ties to that primary anchor partner, 1199 has developed partnerships with two community anchors – Borinquen Health Care Center and Jessie Trice Community Health Center – both of which have strong community ties and strong interest in supporting 1199’s community health engagement and outreach efforts. Borinquen, in operation since the early 1970s, began as a grassroots effort to open a health clinic in the Puerto Rican community and has grown to become a comprehensive primary care, dental and behavioral health center. Jessie Trice has served Miami-Dade County since the late 1960s. Its commitment to the community is reflected in collaborations with coalitions, faith-based institutions, social service agencies and more.

Since 2011, the 1199SEIU/Labor Management Project has created a solid working relationship between the hospital and healthcare workers by bringing together labor and UMH management to “develop cost-effective and high-quality services, conduct research on job trends and industry changes and promote communication and collaboration,” according to the project’s website. In addition, the architects of ARC surmised that UMH would view 1199 members as strong allies in nurturing a more robust relationship with the community and could use 1199 members’ organizing and outreach skills to help the hospital meet its ACA community benefits requirements, including the triennial CHNA.

The labor-management partnership is particularly noteworthy, given that many 1199 healthcare workers live in the communities that UMH serves. This highlights the reality that when the hospital plays a positive role and provides quality care in its community, it also supports the employees on whom it relies for patient care – and, significantly, acknowledges that its institutional health is tied to the community’s health.

Given 1199 healthcare workers’ history of active engagement in their community, they were well-positioned to leverage the labor-management partnership to help conduct a more participatory CHNA that would allow residents to freely discuss their health concerns.
An important development supporting a strong anchor-community relationship was then-UMH CEO David Zambrana’s agreement, at 1199’s request, to appoint a current UMH employee as a community liaison. Additionally, Zambrana connected 1199 with the Health Council of South Florida, which leads the outreach portion of the CHNA process for all three UHealth hospitals. When Zambrana left UMH in April 2016 to become CEO of another Miami hospital, it was hoped that his prior actions would ensure 1199 a continuing place “at the table” during execution of the CHNA. However (please see Challenges section of this case study), the university that manages UMH recently decided not to continue partnering in the same way with 1199, so there is uncertainty about the development of the CHNA implementation plan.

How

By leveraging the anchor institution’s resources and capacities – its investment and community benefit programs – ARC Miami developed a community-driven health needs assessment that incorporates climate resilience, health and wealth-creation. This approach complements UMH’s obligation under the ACA to use its community benefit dollars to develop an implementation strategy addressing the prioritized health needs identified by the CHNA.

The University of Miami contracted with the Health Council of South Florida to complete the CHNA for its three large nonprofit healthcare institutions, including UMH. After discussions with the health council about the limited time and resources to complete the assessments, the targeted population for UMH was reduced to five primary ZIP codes (where 212 members of 1199SEIU are listed as residing) and collection of 50 surveys. The project used GIS mapping to identify the confluence between the hospital’s service area and union members’ homes.

The Community Health Needs Survey was posted online in English, and paper copies were made available in English, Spanish and Kreyol (the language of Haiti). The community health organizer (CHO) for Unite for Dignity (1199’s nonprofit organization) reached out to union members in three major ways:

- **Phone-banking:** The CHO made calls and set up appointments to complete the survey with union members at their homes or public places of their choice. If they preferred to complete the survey online, she emailed them a link.
- **Facility Visits:** The CHO met 1199SEIU organizers (union representatives) assigned to different facilities and accompanied them on visits to union members at their workplaces.
- **Community Meetings:** The CHO attended meetings in which union members in certain neighborhoods were already scheduled to participate due their activism in projects led by a sister organization, the SEIU Florida Community Union.

In the past, union members have been open to completing surveys related to bargaining campaigns on wages, benefit and working conditions, political campaigns and overall union-wide programs. Given this level of activism, the assumption was that union members would be willing to complete a survey related to health needs in their community and was not directly related to work or a controversial social subject. However, the return rate was approximately 30 percent, far less than usual.
Given those results, the CHO expanded the pool of participants by:

- Asking union delegates (union members elected by co-workers as leaders in their workplace) to take extra surveys home to complete with their families, friends and neighbors
- Speaking to residents at local gathering places such as the grocery store, church or community center in the key ZIP codes
- Holding a series of community meetings and trainings on climate change and researching and developing additional materials to support the trainings

After the survey period for the CHNA closed, the CHO focused on community outreach by hosting focus groups and community forums – work that is still ongoing. The first session focused on health disparities and inequalities in low-income communities (primarily communities of color) and how to access and use mapping assets. The second session looked at the social determinants of health and climate risks in low-income communities (primarily communities of color), the role of healthcare workers in disasters and the impact of climate change on health.

The CHO has worked with the YMCA, churches and libraries in the targeted neighborhoods to secure free or low-cost, easily accessible space to host these events, which are held in English, English/Spanish and English/Kreyol, with materials in all three languages. To date, 16 workshops with 112 participants (40 union members, 50 community members and 22 teenage students) have been held, and seven more workshops and one retreat are planned.

These trainings and the CHO’s conversations are building the foundation for residents and 1199 members to play a leadership role in climate resilience. Additionally, the Health Council of South Florida offered to work with 1199SEIU and Unite for Dignity to publish an online analysis of the surveys and community outreach at MiamiDadeMatters.org. ECC’s Climate Change and Health training is another useful tool to begin building local leadership in this emerging field.

As of summer 2016, the work was focusing on:

- **Cultivating relationships** – Based on the information obtained through the surveys and community events, the CHO conducted outreach to organizations in a more strategic manner. This relationship-building is important for both general community engagement and establishing a clear group of stakeholders who can influence and participate in CHNA implementation.
  - The goal is to establish relationships with clinics, churches, community centers, colleges/universities, nonprofit organizations and a core set of community leaders who were already involved, or interested in being involved, in matters of health and climate justice.
  - The CHO mobilized 15 people to
participate in two community health fairs and a one-day symposium on climate change.

- **Continuing community engagement** – There are immediate opportunities to engage three groups of people on health and climate change:
  - **Youth** – Haitian students participated in community awareness activities on climate change over the summer, for which they received credit for volunteer/community service hours – a state requirement for high school graduation – from 1199SEIU’s nonprofit Unite for Dignity.
  - **Senior citizens** – As a follow-up to seniors’ participation in forums on social determinants of health and climate change, 1199SEIU Retirees took part in a workshop on hurricane preparedness and access to resources, particularly for those who live alone.
  - **Healthcare workers** – They are being engaged in meetings at nursing homes and healthcare facilities to discuss disaster response plans for their facilities and, in preparation for negotiating their next contract in 2017, how to leverage union contracts to improve their facilities’ disaster preparedness. Additionally, some of them were recruited to participate in community activities after participating in a climate change workshop.

In addition, 1199 reached out to the Archdiocese of Miami, Miami Dade College and other institutions seeking collaborators to train low-income communities and communities of color on the impact of climate change on seniors’ health. Unite for Dignity provided trainings to residents of The Village of Allapattah, a rental community to low-income seniors.

It is important to note that in preparation for the spring outreach and workshops, it became apparent to the ARC team that cities and counties outside Florida have designed succinct materials (YouTube videos, infographics, PowerPoint presentations, pamphlets) that the general public could easily read and understand. In contrast, the reports and community handouts from government agencies and non-governmental organizations in Miami-Dade County are lengthy, text-heavy and difficult to understand.

At a later date, the ARC team will consider if there are capacity and resources to create simple but dynamic one-page community education handouts. In the meantime, the team has updated PowerPoint presentations and created handouts on the impact of climate change on health and urban communities. The team also has plans to recruit some of the 73 workshop participants to help with video and art outreach projects.

The Vice President of 1199SEIU United Healthcare Workers East is continuing conversations with the changing leadership at UMH to clarify the roles of the two parties in the labor-management partnership. As the final CHNA written for UMH does not specifically mention an implementation plan to address the needs identified in the assessment, the ARC team will focus on community organizing efforts and cultivating relationships with community organizations that share interests in health and climate resiliency. This is intended to build a base of supporters who, at some point, will call attention to the university’s lack of attention/responsiveness to the community’s needs – and, importantly, request that the institution address them.

**Outcomes**
The most successful discussions and survey completions happened when an organizer was present with a group of union members (compared to when the CHO approached the same people alone)
and when the CHO had conversations with the general public/community.

Also notable is that members of the general public were more willing to complete the survey if the CHO asked them the questions and wrote down their answers while sitting or standing next to them than when they had to fill out the whole form themselves. In many cases, people were willing to express their ideas verbally, but they were hesitant to write them down (this could be related to their level of literacy and/or confidence in penmanship).

The CHO met the goal of collecting 50 surveys for the official CHNA; a few more were turned in after the closing date.

**Challenges**

- Limited time and resources to complete the CHNA, leading to a reduction in the initial survey’s scope.
- Low response rate to CHNA.
- As of late July 2016, the university administration that directs UMH had decided to alter its partnership with 1199, at the same time that the UHealth system’s business model shifted towards providing specialty care related to cardiac conditions, surgeries and cancer treatment. This left the union to plot a new way forward for meeting community health needs, including those tied to climate change.

**Prospects**

During the next phase of ARC in Miami, 1199SEIU will continue working to influence implementation of UMH’s CHNA. The union will also develop a strategy to leverage UMH’s resources and upcoming programs, given the shift in the hospital’s business model.

Despite the change in the university administration’s stance toward the anchor strategy, 1199 still sees opportunities to continue educating the community about its health needs, as well as to build a base of activists who can advocate for health care institutions doing more to meet those needs – especially since the hospital plans to retain its nonprofit status and will still be required to conduct CHNAs and execute implementation plans.

In addition, the business model shift towards treating cardiac and cancer patients provides an opportunity not only to engage the institution on treating patients once they are ill, but also to focus on how climate change affects/exacerbates those illnesses and which adaptations the institution can fulfill or fund.

Community education and outreach will involve the following activities:

- **Workshops** will cover specific areas of interest such as urban heat islands; gentrification and affordable housing climate adaptation; and mitigation plans to address sea-level rise, storm-surge flooding and carbon emissions.
  - Beyond the educational component, the goal for the workshops includes a “Call to Action” so participants can easily connect with already-engaged organizations in their neighborhood.
- **Street fairs** will allow organizations, community members and anchor institutions to engage in discussions around social determinants of health, the impacts of climate change on health...
and how the community can become more resilient.

- These events could highlight activities for college and university students whose schools partner on projects in low-income communities and communities of color. While such projects complement ongoing research related to climate change at UMH and Miami Dade College, the schools’ reports currently do not reference those specific communities.

- A planned **Community Academy for Leadership Development and Capacity Building** will develop a base of residents who will serve as true stakeholders and advocates for resiliency in their communities.

Also planned are a community climate symposium and “environmental mini-anchors.” The symposium will launch a committee of healthcare workers and the general public who will focus on resilience plans in the areas of transportation and community safety nets. The mini-anchors will focus on low-cost individual adaptations and community organizing to secure funding for neighborhood-wide adaptations. In addition to UMH/UHealth, potential partners will include:

- The Solutions Project
- Miami Climate Alliance
- Miami Dade College
- Catalyst Miami
- Sierra Club Miami
- Sea Level Center at Florida International University
- Urban Environmental League
- TREEmendous, INC.
- Florida Native Plant Society, Dade Chapter for Native Flowers
- New Florida Majority
- CLEO Institute (Climate Leadership Engagement Opportunities)
ANCHORS IN RESILIENT COMMUNITIES (ARC)

Promoting Health, Wealth and Climate Resilience

ARC BRONX, NEW YORK
A CASE STUDY

Collaborative Projects of Emerald Cities Collaborative with Health Care Without Harm and MIT CoLab

REPORT FUNDED BY THE KRESGE FOUNDATION
2017
INTRODUCTION
This profile of the Bronx is part of an ongoing series of case studies and reports on Anchors In Resilient Communities (ARC). ARC initiatives are multi-stakeholder collaboratives of community organizations and coalitions, anchor institutions, foundations and government working at the intersection of community health, wealth and climate resilience. ARC’s overarching mission is to increase the available social, financial and intellectual capital of low-income communities of color, as well as innovative projects for building their resilience. The community resilience frame addresses the legacy health and economic vulnerabilities of low-wealth communities, but also the new 21st Century’s heightened family and community risks precipitated by climate change. The series of ARC reports, funded by The Kresge Foundation, highlight:

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These initiatives are ongoing, long-term projects. Over time, the cumulative experiences and knowledge-creation builds a narrative of the promises, strategies and pitfalls of building anchor-community partnerships to advance intersectional climate resilience efforts. The goal is for anchor-community resilience collaboratives to become standard practice that can be replicated across the country.

ARC - BRONX, NY

Who and How
With funding from the Rockefeller Brothers Fund and the Kresge Foundation, the ARC initiative in the Bronx borough of New York City is led by the Bronx Community Development Initiative (BCDI) and Montefiore Medical Center, among greater New York’s largest hospitals. BCDI members include community-based organizations (CBOs), anchor institutions, finance partners, elected officials and labor unions that work collectively to leverage anchor institutions’ financial and political power to support community health- and wealth-building. They see energy and economic resilience as key opportunities for that work.
BCDI operates with support from Emerald Cities New York, Commonwise Education, a Bronx-based nonprofit organization, and the Massachusetts Institute of Technology Community Innovators Lab (MIT CoLab) – a center within MIT’s Department of Urban Studies and Planning focusing on innovation and development “from the margins.” CoLab has supported BCDI’s work with marginalized New York City communities for five years.

The Northwest Bronx Community and Clergy Coalition (NWBCCC), one of BCDI’s CBO members and another Bronx ARC initiative founder, is successfully developing meaningful, impactful community-anchor partnerships in the energy sector by collaborating with Montefiore to link energy efficiency upgrades in apartment buildings with building-wide asthma interventions for residents. BCDI has frequently engaged with Montefiore on economic development initiatives, including local purchasing.

BCDI also includes Green Worker Cooperatives, which is dedicated to incubating worker-owned green businesses; the Consortium for Worker Education, which has extensive experience in workforce development and education in the Bronx; and 1199SEIU United Healthcare Workers East, the nation’s largest local union (and the major community partner in ECC’s Miami ARC initiative).

Another major ARC development partner is BlocPower, an energy technology company connecting investors to institutional networks of energy efficiency projects in small businesses, houses of worship and nonprofits in underserved communities.

Despite the presence of these organizational and other valuable cultural, natural and built community assets – including numerous buildings suitable for rooftop solar installations and anchor institutions that could help generate local wealth and improve quality of life – decades of disinvestment, deliberate defunding of local planning capacity and structural racism in the Bronx have left residents with many social and economic challenges.

And while many anchor institutions are planning major investments in clean energy that will reduce energy costs, cut pollution and increase community resilience and health, these plans largely lack community involvement. This means an infusion of investment in clean, renewable and resilient energy may not ease the energy challenges facing Bronx residents, including affordability, vulnerability to outages during major storms and proximity to pollution from energy generation.

That is why ARC incorporates intentional and concerted action from community groups and balanced partnerships between communities and anchors to drive local economic development. This approach is also intended to achieve maximum community benefits from new energy technologies that are facilitating local control of energy production; adoption of clean and renewable energy; and increased resident involvement in decisions around public infrastructure.
**What: Goals, Objectives**

Even before ECC’s involvement in the Bronx and partnership with BCDI, the latter had identified the health and energy sectors as areas of endeavor, due to their rapid growth and potential for local job opportunities and positive health and environmental outcomes. To those goals, ARC adds physical resilience and climate mitigation and adaptation.

To move towards these goals, the ARC project focuses on community development strategies to lower the respiratory effects of carbon and minimize climate-induced power disruptions. In addition, in an effort to increase community health and wealth through community-owned and supportive energy generation in the South Bronx, the project is exploring community energy districts in the Hunts Point food district and within a target community that encompasses Bronx public housing, Lebanon Hospital, Hostos Community College and the surrounding communities.

The initial phase of ARC in the Bronx included two distinct initiatives:

- Assessing the feasibility of a microgrid in the Hunts Point section of the South Bronx
- Promoting holistic community health in the Northwest Bronx via the Bronx Healthy Buildings Program, a cross-sector initiative to provide green building retrofits that address “upstream” causes of asthma-related emergency department (ED) visits and hospitalizations.

The rationale behind the second initiative is that it is very costly for asthma patients to repeatedly seek emergency care and/or be hospitalized because conditions in their buildings (and neighborhoods) are causing and/or triggering their asthma. Such outcomes are costly to the state in the case of Medicaid recipients, costly to the hospital in the case of uninsured patients and costly to insurance companies for those who are covered. There are also indirect costs to asthma patients themselves from missed school and work.

But if the money being spent on ED visits and hospitalizations is redirected to address upstream causes such as poor housing conditions, rather than simply to treat acute symptoms, overall costs can be reduced and health improved.

**Climate Challenges and Risks**

Informed by the experience from Superstorm Sandy – including the loss of power to 8.5 million customers due to failure of the electricity grid – a key strategic focus of the Bronx ARC program is strengthening energy resilience for vulnerable communities in the South Bronx.

Sandy’s multi-day power disruption was significant across the region, but such consequences are a special concern for the South Bronx, a highly dense community that is home to several public housing developments, Bronx-Lebanon Hospital and the region’s food distribution center in Hunts Point.

Following Sandy, area public housing residents were among the last to regain power. Residents in numerous high-rise apartment buildings were stranded without heat, lights and elevator service. They also went without water, which must be pumped to upper floors. Patients at Bronx-Lebanon Hospital faced critical health and safety threats, while the region’s food distribution center located on industrial lands was beset by the loss of power and flooding.
South Bronx Microgrid
Microgrids are decentralized, and often small-scale, energy generation or storage facilities that can provide electricity to the primary grid or operate as self-contained power sources. Community-owned microgrids can build climate resilience and wealth in the Bronx in a number of ways:

- **Meeting environmental goals** – Generating electricity locally reduces energy losses during transmission and allows cogeneration, aka combined heat and power: capture of waste heat from electricity generation that can then be used to cool and heat buildings.
- **Reducing energy costs for residents and businesses** – By reducing transmission costs and introducing more efficient technologies, decentralized and often smaller-scale energy generation or storage facilities – known as distributed energy resources (DERs) or distributed generation (DG) – may offer lower-priced energy than traditional sources.
- **Creating a source of community wealth** – Community-owned energy infrastructure can generate income for community members and organizations that sell energy to utilities or directly to other consumers.
- **Increasing energy resilience and security** – By locating energy resources closer to consumers and reducing the length of transmission cables, DG is automatically more resilient than a traditional, centralized model. Coupled with the ability to switch to local DERs when the primary grid fails, a full-blown microgrid can further increase resilience during extreme weather events.

In such endeavors, anchor institutions are important partners, because they consume a lot of energy and often require consistent power even (or especially) in the event of emergency. They also hold many real estate and capital assets, which can be used to develop DERs.

Further, providing a local source of electricity would counter the drawbacks inherent in the current structure of New York State’s electricity market:

- Transmitting electricity over long distances is inefficient, because energy losses along the way mean power plants have to create more electricity than is actually needed. This increases greenhouse gas emissions and increases electricity costs for consumers.
- Money spent on electricity is taken out of the local economy. Energy suppliers are private companies, and large investors own utilities like New York City’s Con Edison. As they are unlikely to invest any of their profits in the local Bronx economy, money that Bronx consumers spend on electricity simply leaves the borough.
- This system is not resilient. A single stretch of damaged cable can affect large swaths of the grid, so every additional mile of transmission cables increases the system’s vulnerability to extreme weather events or other disruptions.
- The grid requires significant infrastructure investments that cannot be recovered without significant increases in energy costs for consumers.

It should be noted that the New York Public Service Commission is moving the state towards a DER model through its Reforming the Energy Vision, or REV, initiative, under which the traditional utility grid would become a “smart grid” – an interconnected system of local energy generators and consumers that could communicate via technology and price signals to increase production and reduce demand during peak times.
How
Emerald Cities initially identified six broad phases for implementation of a community microgrid in the South Bronx:

1. Select a site that seems plausible for such an intervention.
2. Build the political, technical and community partnerships necessary for implementation.
3. Raise funds for and conduct a detailed feasibility study to determine specific equipment, potential savings and possible sources of financing.
4. Structure the deal to determine how the system will be financed, owned and operated.
5. Implement the community microgrid by securing loans and completing required construction.
6. Operate, maintain and reinvest in the microgrid going forward.

The project began by mapping major South Bronx institutions that could be potential microgrid sites, with the New York City Housing Authority (NYCHA) – the nation’s largest municipal public housing authority – quickly emerging as a strong option. In the Bronx alone, NYCHA owns 90 developments totaling 44,493 units of traditional public housing, which contribute to NYCHA’s very high power demand, particularly in summer months when many residents use energy-gobbling window air conditioners.

NYCHA currently receives all of its power from the New York Power Authority, and the U.S. Department of Housing and Urban Development reimburses its energy costs. Given that NYCHA provides housing to low-, very low- and extremely low-income households, reducing NYCHA’s energy costs clearly serves a public purpose and provides a strong moral argument for community ownership and control.

Hospitals are also a good fit. In the South Bronx, many NYCHA developments are located near major hospitals, meaning several sites could accommodate a NYCHA-hospital microgrid. Shared use of a single microgrid by NYCHA and the hospital would offset peaks or drops in usage at either institution and ensure a relatively consistent level of energy consumption.

With help from New York City Councilmember Ritchie Torres, who represents the 15th Council District in the Central Bronx and chairs the New York City Council Committee on Public Housing, ECC staff had several preliminary conversations with leaders of NYCHA’s energy department. They were enthusiastic about opportunities to explore community microgrids, and after partners signed a nondisclosure agreement, NYCHA shared energy consumption data for all of its Bronx developments. Emerald Cities analyzed these results with the help of the Pace University Climate and Energy Center. The analysis included mapping the developments to identify where energy interventions could have the biggest impact and screening for proximity to critical infrastructure.

Based on this analysis, Emerald Cities New York identified several developments for both energy efficiency upgrades and energy generation/microgrids. Two of the most promising:

• Patterson, which is across the street from Lincoln Medical Center and thus could help support a multi-stakeholder microgrid. It is also in a Hurricane Zone 4, indicating a need for resilient infrastructure.
Morris I/Morris II/Morrisania, three developments that share a heating system, forming a single intervention site from an energy perspective and are adjacent to Bronx-Lebanon Hospital and near many other NYCHA developments.

Outcomes/Lessons Learned
The decision to pursue a community microgrid is as political as it is technical, especially for multi-stakeholder grids. The ARC team thought it could go right into selecting a site but soon realized the need to first educate and organize decision makers to create the relationships and institutional will needed to move forward. That said, external parties like ECC are well positioned to build relationships across multiple institutions.

Early and consistent organizing is needed to ensure true community input into the process and to head off foreseeable challenges during implementation, including:

- The difficulty of both structuring and retaining community ownership and control; and
- Threats to air quality resulting from oil- or gas-powered generation in dense urban areas.

For these reasons, it is crucial that organizations like ECC begin educating and organizing residents immediately around the vision of a microgrid. The South Bronx Community Resiliency Agenda, which is already convening residents around a microgrid in another part of the South Bronx (with support from Kresge) could be a partner in this.

Institutional decisions take a long time if we wait until institutions are ready. But the community can exert influence to hold anchors accountable to a vision of community resiliency.

Energy infrastructure is technical and often seems disconnected from residents’ experiences. We need community trainings that explain the energy system in approachable terms, connect community resilience to other issues that residents care about and build leadership so residents can refine and express their vision to anchors. The Climate Change & Health training developed by Emerald Cities can begin building local leadership in this emerging field.

The ARC early-stage partnership – based on BCDI’s core tenet that ownership is key to self-determination and wealth creation, and that when residents are not making decisions for themselves they will suffer the ill effects of a system that is not designed with them in mind and from which others profit – may well evolve into the system’s eventual governance structure. This means BCDI and its community partners must position themselves as decision makers from the beginning in order to drive the process and achieve the desired social outcomes.

The biggest overarching lesson is that adequate education and organizing are necessary precursors to site selection.
Challenges

Loss of institutional champions and allies. Anchor institutions typically have thousands of employees – NYCHA, for example, has over 11,000 – and it can be challenging to penetrate the layers of institutional bureaucracy. The ARC team was initially able to make contact with NYCHA through the community coalition’s relationship with New York City Councilmember Ritchie Torres, and we found a receptive audience.

But around the time the ARC team delivered its microgrid recommendation, an internal NYCHA reorganization resulted in the team’s internal contact being moved to another department, and NYCHA’s energy and sustainability department became much less receptive to the microgrid idea. When the conversation with NYCHA resumed, its representatives said several groups had approached them with similar ideas, and they requested significant upfront work – with no guarantee of a partnership down the line.

Need to coordinate with existing institutional capital plans and across multiple anchor institutions. Nearby Bronx-Lebanon and Lincoln Hospitals have their own capital plans, as do other potential sites throughout the South Bronx. The timing of these plans could make an investment in local energy generation opportune – or not at all viable. Ensuring coordination and finding potential alignment in capital programs across these multiple institutional actors is a key challenge of creating multi-stakeholder microgrids.

Difficulty accessing the data needed to make informed decisions about where to site a microgrid. Analyzing energy consumption data is one important first step in assessing the viability of a community microgrid; and even with NYCHA’s cooperation, partners had to overcome resistance to sharing energy consumption data. Detailed information about capital plans or financial documents will be even harder to access.

Next Steps

The initial investigation indicated that a community microgrid may not be feasible without significantly more funding, capacity and, crucially, anchor support. However, other community-owned energy models, like shared solar, can move forward without getting mired in the bureaucracy and capital planning processes of large anchor institutions.

New York State recently created regulations to make remote net metering and shared renewables – an energy system owned by multiple, offsite participants – viable for the Bronx. In that case, anchor institutions would still be potential hosts and financiers for community-owned energy systems, but they would not be directly responsible for implementing or taking energy from the system.

Next steps to pursue this sort of model include galvanizing tenants and residents around the vision of community-owned energy (using some materials from ECC’s Climate Change & Health curriculum); planning for the structure and location of such a system; and accessing new incentives and opportunities from the state and utilities to begin pursuing such models. We have begun working with The Point CDC and NWBCCC to investigate opportunities for popular education and shared solar across the Bronx.
**Demographics and Health Risks**

The Bronx has the lowest median income of New York City’s five boroughs, is overwhelmingly populated by Medicaid-eligible working-poor people and has a high percentage of minority residents – all of which are risk factors for asthma. Poor housing conditions exacerbate this risk. More than 80 percent of Bronx residents are renters, meaning they often cannot directly address issues such as the aeroallergens and rodent infestations that are primary contributors to asthma. Their landlords, moreover, have little financial incentive to invest in building upgrades.

The ARC Bronx Healthy Buildings program is focusing on the Northwest and Central Bronx (ZIP codes 10452, 10453, 10457, 10458, 10460, 10462, 10467 and 10468) for three reasons:

- The high prevalence of asthma and asthma risk factors in these areas. Nearly a third of the roughly 170,000 residents of the 15th Council District in the Central Bronx are under 18 and at serious risk for asthma. As noted, tenants in these neighborhoods face some of the worst housing conditions in the city, including high rates of housing code violations.
- ARC partners NWBCCC and Councilmember Torres already work in these neighborhoods, allowing the project to leverage existing networks to ensure maximum impact.
- These communities are the closest to Montefiore Medical Center, so a large number of asthma patients visit Montefiore’s emergency department. While this is a large geographic swath, ARC will target individual multifamily buildings that house a small target population to allow effective tracking of outcomes for those individuals.

**Who**

Mirroring its multi-faceted approach, Healthy Buildings brings together a host of partners from CBOs, public agencies, healthcare providers and technical experts in building science. In addition to ECC, MIT CoLab, NWBCCC and BDCI, core partners include the New York City Department of Health and Mental Hygiene (DOHMH), Montefiore Medical Center and many others.

**Bronx Healthy Buildings Program**

The Bronx Healthy Buildings Program (Healthy Buildings) is a cross-sector initiative to promote holistic community health by providing green and healthy building retrofits that will address upstream causes of asthma-related emergency department visits and hospitalizations in the Northwest Bronx. In addition to jointly addressing the root causes and triggers of asthma and ensuring a healthy Bronx, the partners share a vision of creating a borough where all stakeholders, including engaged and informed residents, strive for holistic community health. This involves investing in a safe built environment, high-road job creation, training for low-income residents and a healthcare delivery system that prevents health disparities before they emerge.

Another barrier to better health is the cost of care relative to income. An estimated 177,000 Bronx residents are uninsured, and, coupled with the high cost of housing (including energy consumption), their low incomes mean healthy lifestyle options that prevent disease are unaffordable. In addition, many residents are unaware of the role that housing conditions play in their family’s health, and/or they lack the proper training to self-manage their asthma or other diseases.

In the larger context of intergenerational poverty and unemployment that lead to stress and instability, these barriers further exacerbate Bronx residents’ poor health.
What: Goals, Objectives
The project, with its upstream and holistic nature, has various goals related to health, sustainability, leadership development and economic development. These include:

- **Reducing Asthma Severity/Improving Health**, measured by lowered rates of asthma-related emergency department visits and hospitalizations; other potential metrics include monitoring of indoor air quality.
- **Addressing Housing Issues** – Asthma triggers in the aging multifamily buildings that residents inhabit include pests (rats, cockroaches), mold, mildew and poor air quality, exacerbated by long waits for needed repairs and/or temporary fixes that do not address underlying problems.
- **Conserving Energy/Promoting Sustainability** – Many of these buildings must upgrade their boilers per New York City’s 2015 Clean Heat law. Buildings over 50,000 square feet must benchmark energy and water consumption annually and, every 10 years, identify no- and low-cost efficiency and performance improvements. The ARC project will help building operators meet or exceed these requirements and reduce overall carbon emissions.
- **Generating Financial Savings (for All Parties)** – The Healthy Buildings energy retrofits are an incentive for the landlords, who will incur savings on their utility bills and can invest the money saved in needed building upgrades. Indirectly, reduced resident turnover due to increased comfort and reduced medical bills will also generate landlord savings, as will avoided legal action from unmet tenant demands.

Importantly, housing will remain affordable for current tenants despite the upgrades, thanks to regulatory agreements that put buildings into rent stabilization over a specified period. Landlords cannot file for major capital improvements (MCIs), which would allow them to raise stabilized rents beyond a set rate, as a result of the work funded or financed through Healthy Buildings.

In the long run, Healthy Buildings should yield a greater return on investment for hospitals than existing approaches that deal with poor health outcomes but do not address underlying root causes. Because of cost savings associated with reduced hospital visits, there are also benefits for health insurance companies and the federal Medicaid program. This upstream, holistic approach also supports the healthcare industry’s shift toward prevention and cost-cutting.
• **Creating Jobs and Wealth** – To support the local economy and create jobs for Bronx residents, Healthy Buildings encourages the use of local contractors who would be paid living wages and adhere to high-road workforce standards. The project also plans to explore the feasibility of Community Workforce Agreements (CWAs), modeled after ECC’s RENEW program in other cities. In Seattle, for example, a CWA establishes goals for work hours on energy efficiency retrofits to be performed by low-income women and people of color, as well as for utilization of apprenticeships. Additional job-creation potential exists through community health worker positions – part of the home-based asthma intervention program.

• **Developing Local Leadership** – The program also aims to educate and empower residents and local leaders to identify needs and work with – or pressure – landlords for change, shifting the balance of power and increasing adoption of such policies as smoke-free housing, mold prevention, pest management techniques, green cleaning and energy-saving measures. Leadership development will happen through the formation of tenant associations, trainings on tenants rights and specific content like green cleaning techniques, as well as on the social determinants of health, which will demonstrate the connections between social, environmental and economic factors and poor health outcomes.

• **Improving Community Health** – ARC Healthy Buildings will educate residents facing substandard housing conditions to identify needed repairs and empower them to hold landlords accountable for addressing the conditions that have contributed to an unhealthy living environment. The scope of interventions, from eliminating mold and pests and addressing poor ventilation and air quality to providing energy efficiency retrofits all have health-related benefits beyond improving respiratory health.

By participating in the program, tenants who are on Medicaid will, through Montefiore's home-based asthma intervention program, have access to a community health worker who will provide individualized support to manage tenants’ asthma and mitigate triggers via integrated pest management (IPM), better trash removal and cleaning practices and elimination of mold and lead. By addressing needed upgrades and creating tenant associations, the project should also lead to better and more productive tenant-landlord relationships, ultimately improving related health conditions such as stress.

**How**
The Bronx Healthy Buildings Program consists of five major components:

1. Identifying target buildings
2. Outreach and organizing
3. Building analysis and baseline assessment
4. Capital improvement and home-based asthma intervention
5. Monitoring and evaluation

**Identifying target buildings** – Using electronic medical records from Montefiore Medical Center, partners have identified all multifamily buildings in the Northwest and Central Bronx with asthma patients who visited Montefiore between 2012 and 2015. Partners are currently working to secure additional electronic medical records for other healthcare providers across the borough through the Bronx Regional Health Information Organization (Bronx RHIO).
Outreach and organizing – For building owners and operators, the outreach team will primarily highlight the economic incentives of program participation:

- Future energy efficiency and water conservation savings
- Favorable financing options for building improvements
- Potential reduced tenant turnover due to residents being healthier, more comfortable and more satisfied with their housing
- Avoidance of litigation and penalties associated with the city’s Clean Heat Law, the Americans with Disabilities Act (ADA), building code and maintenance violations and tenant lawsuits

And as noted above, community organizers and community health workers will educate tenants on environmental triggers, asthma self-management, green cleaning and energy and water conservation, as well as on the social determinants of health. Additionally, residents will have the opportunity to learn about hospital community benefit requirements under the Affordable Care Act and New York State’s Medicaid reform process, enabling them to participate meaningfully in conversations on leveraging such investment in their communities. Another set of trainings will increase tenants’ awareness of their rights as renters and their sense of agency in addressing building-wide issues – core components of the Healthy Buildings Program.

Building analysis and baseline assessment – Provided that building owners/operators move ahead with the program, this stage will include a full building audit incorporating health, energy and general structural needs, as well as compilation of tenant-identified improvements and baseline information for monitoring and evaluation. The Healthy Buildings team will recommend that building owners/operators move forward with all impactful and cost-effective capital improvements identified by Enterprise Community Partners’s Healthy and Green Physical Needs Assessment and BlocPower’s in-house engineering team.

Home-based asthma interventions include:

- Integrated pest management (IPM) an approach focusing on long-term prevention by reducing food, water, access and places where pests hide. Modifications include replacing missing garbage lids, repairing leaky pipes and sealing cracks where pests can enter.
- Through a partnership with a.i.r. (asthma intervention and relief) nyc, community health workers will educate tenants on asthma self-management practices, behavioral interventions and home environmental assessments; serve as liaisons between tenants and the healthcare system; and provide referrals for IPM.
- Green cleaning training will reduce building staff and resident exposure to toxic chemicals and other irritants. Healthy Buildings will provide resources and trainings to facilitate a transition to green cleaning products.
Monitoring and evaluation
The Healthy Buildings team plans to use the following evaluation metrics:

- **Electronic medical record (EMR) data** – The team will look at changes in healthcare utilization and costs over time (through pre- and post-intervention comparisons) and between properties (through intervention-control comparisons).

- **Pre- and post-intervention surveys** – A questionnaire administered before and after the intervention will measure changes in self-reported respiratory health and overall health, behaviors, education, conditions in the home and residents’ sense of agency regarding their health and environment.

- **Energy savings** – This includes changes in electricity, oil, natural gas and water usage for the entire building (including tenant areas), as well as for areas for which only the building owner/operator is responsible.

As Healthy Buildings partners are committed to ensuring the most comprehensive and robust evaluation possible, the team is currently working to include the following additional evaluation metrics:

- **Indoor air quality monitoring**, which would show the impact on particulate matter, a major asthma cause and trigger.

- **Adherence** – Measuring asthma control by tracking inhaler use through electronic sensors.

Replication and scale
Once the Healthy Buildings model is proved successful, there is great opportunity for scaling the project in the Bronx and beyond and for making it financially sustainable through future consistent healthcare and public funding, as well as through self-generated revenue streams. In addition to investing Medicaid reform dollars in the short term, Montefiore and other nonprofit healthcare systems can utilize their community benefit dollars or pay-for-success models to strategically invest in upgrading community infrastructure and the root causes of poor health.

Outcomes/Lessons Learned: Success Elements
**Cross-Sector Collaboration**
The ARC partnership represents a true cross-sector collaboration among community organizations, healthcare providers, the Department of Health and other technical experts that understand the interconnection among social, economic and health issues. Through their collaboration, partners aim to create new paths of communication and coordination that can address health issues beyond asthma so the Bronx becomes a leader in innovative community health solutions.

**Partnership with Montefiore Medical Center**
The partnership with Montefiore has been particularly valuable. By treating the community as an equal partner and putting its needs at the forefront, it has shifted the traditional dynamic between hospital and community. The involvement and support of Dr. Marina Reznik, a physician and researcher focused on pediatric care and asthma, and Amanda Parsons, the hospital's vice president of community and population health, have put champions for the project within Montefiore’s walls. Further, Montefiore’s commitment to sharing EMR data has allowed for a data-driven project.
Leveraging Existing City Programs
Cross-sector collaboration has also meant leveraging New York City programs:

- The New York City Department of Health and Mental Hygiene’s (DOHMH) Healthy Homes initiative currently funds IPM and green cleaning training.
- The Primary Prevention Program, a joint program of DOHMH and the Department of Housing Preservation and Development (HPD), provides grants for lead remediation and other health improvements at low-income, multifamily buildings.
- HPD also provides forgivable, no-interest loans for energy efficiency and water conservation measures, as well as for general moderate rehabilitation at small- and medium-sized buildings.

Data-Driven Project
As noted, Healthy Buildings is a data-driven project that leverages EMRs to map repeat asthma patients’ residents in the Northwest Bronx. The project also looks at building condition to identify targets for the greatest impact. The project will leverage NWBCCC’s existing relationships with building owners and tenants to get greater participation and leadership development. This approach not only leads to greater buy-in from stakeholders, it also allows robust evaluation of project interventions to demonstrate success and scalability.

Additional elements of success:

- Having a community organization as the project lead has driven a more community-oriented, holistic and integrated intervention.
- Leveraging NWBCCC’s track record with successful community organizing, landlord relationships and sustainability (due to its experience with the federal Weatherization Assistance Program).
- Working with sophisticated community partners that recognize the value of collaborating with anchor institutions and using upstream approaches, rather than direct services, and who see the long-term connections among energy, health and wealth.

Outcomes/Lessons Learned: Challenges
Montefiore Partnership
While productive, the partnership with Montefiore was not without its challenges. To meet the required match to its $250,000 BUILD Health award, the hospital committed to provide EMR data, research and program design support and to coordinate with Healthy Buildings partners on home-based asthma interventions at target buildings. Although leveraging Medicaid dollars to invest in Healthy Buildings is an innovative way of addressing the root causes of asthma severity and has great potential as a steady stream of future investment, the timeline of and participation in DSRIP’s asthma project is partly contingent on the state’s timeline for disbursing DSRIP funds.

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1 In summer 2015, NWBCCC received a $250,000, two-year implementation grant from BUILD Health Challenge, a consortium of funders that seek to “identify, accelerate and spotlight best practice models and innovative approaches that reorient the field toward upstream factors that influence health.” The grant is primarily supporting organizing, partner coordination and program development. BUILD Health Challenge additionally provided $2 million in low-interest loans and a $2 million loan loss reserve for permanent financing, which BlocPower has successfully leveraged to create an $8 million loan fund to finance construction.
In March 2016, Bronx Partners for Healthy Communities (BPHC), the coalition that includes Montefiore, launched a home-based asthma intervention program. Further alignment must occur to ensure that tenants who participate in Healthy Buildings will also be able to take advantage of this valuable resource.

Another challenge of working with Montefiore was not receiving the EMR data in a timely manner. Despite the success in developing a data use agreement between MIT and Montefiore to enable targeting of buildings with high numbers of residents with asthma, legal and ethical requirements around sharing such data and the need to navigate the related bureaucracy caused substantial delays in beginning the project in earnest.

Another challenge is that the hospital's internal champions for Healthy Buildings are not always able to be at the table; and it can be difficult to get needed information about processes like DSRIP, as well as access to decision makers who can deploy needed resources.

**Fundraising**

As mentioned above, the main source of funding for Healthy Buildings is from the BUILD Health implementation grant and Montefiore’s in-kind match. Yet this multi-faceted project, with its many key components, has required additional fundraising to support outreach, organizing and evaluation.

In addition, financing predevelopment of building upgrades and repairs has been a particular challenge. While predevelopment expenses can be paid back through permanent construction loans as part of overall project costs, these expenses are difficult to finance up front, due to the risk that some building owners/operators will not move forward with retrofits. The Healthy Buildings team is currently working to develop instruments that can mitigate this issue, such as a loan loss reserve – accounting entries that banks make to cover estimated loan losses due to defaults and nonpayment.

**Balancing Partner Interests and Perspectives**

A final challenge to note is the need to balance project partners’ various interests and perspectives while keeping the community’s best interests front and center. The diversity of perspectives and levels of expertise is a major asset, and the Healthy Buildings team understands that everyone has particular incentives for participating and varying notions of the ideal program design. The team is continuing to negotiate how to develop the most robust program design given capacity, resources and the interests of partners.
ANCHORS IN RESILIENT COMMUNITIES
(ARC)

A FUNDER’S PERSPECTIVE
On Community Health, Wealth and Climate Resilience

Excerpt from The Kresge Foundation’s 2016 Annual Report

REPORT FUNDED BY
THE KRESGE FOUNDATION
2017
Connecting the Dots to Promote Health and Well-Being in Miami

Fredy Garcia leads a youth ministry at St. Joachim Catholic Church in Miami, Florida. The parish is in an underserved area of the city and many of its parishioners work in agricultural fields harvesting fruits and vegetables. Most of the adults – Latin American and Haitian immigrants – speak little English. It gets hot doing field work, increasingly so as climate change makes Florida warmer and wetter.

But the connection between climate change and the health of workers was largely opaque for many until a Kresge-funded project by Emerald Cities Collaborative taught the youth ministry members how the hotter and more volatile climate affects their health and well-being.

“The kids are dealing with high temperatures, and this impacts the families working in the fields,” Garcia says. “They are trying to understand the impact of climate change and the relationship to health, like heat stroke and related illnesses.”

Youth who participate in the St. Joachim ministry attended workshops and wrote call-to-action letters to their parents, urging them to help protect the environment for future generations. Next up, they are planning a tree-planting project to provide shade to help cool the community and act as a buffer against climate change.

“They want to change the impact on the community they live in and society in general,” Garcia says.
An Interdisciplinary Approach

The approach – integrating both environmental and health concerns into the same initiative – made perfect sense, given the increasingly clear and troubling connection between the two.

Many of the same activities that plague the health of communities – like air pollution produced by burning fossil fuels, vehicle emissions and the destruction of forests and green landscapes – also accelerate climate change. Add to the equation more record-high temperature days, extreme weather events and flooding, and the health threats to communities grow exponentially.

Addressing issues in an integrated manner that breaks down traditional sector silos is increasingly common at The Kresge Foundation. It’s an interdisciplinary approach that advances the Environment Program’s goal of helping cities implement comprehensive climate-resilience approaches grounded in equity, while keeping the big picture in mind, says Lois DeBacker, the program’s managing director.

“A lot of people think climate change is just an environmental issue,” she says. “It is so much more. It has implications for public health, the economy and the energy systems and food sources we depend upon.”

DeBacker notes that creating integrated solutions is helpful in myriad ways.

“When we can help communities address their health concerns, slow the release of pollution and perhaps also provide a greenspace that includes cultural amenities and art in the same initiative, we’ve provided multiple benefits,” DeBacker says. “Each is good. Together they help build a whole that is larger than the sum of its parts.”

The Anchors for Resilient Communities (ARC) project by Emerald Cities Collaborative works to engage public and nonprofit health institutions to advance climate resilience at the community level.

Interdisciplinary

Taking Aim at College Completion in Newark

Arts and education join to support students

How can cities encourage more low-income students to pursue and attain postsecondary degrees?

Newark, New Jersey, offers one example. That’s where Kresge works with Rutgers University to combine arts and education in a college access program that supports high school students – and benefits the entire community.

Giana Cook is building college readiness in Newark’s PAS program.

Together, Kresge’s Education and Arts & Culture programs provided a $422,000 four-year grant in 2016 to support the Pathways to Achievement and Success (PAS) program, part of the Newark City of Learning Collaborative.

The program provides educational support and mentoring to about 150 sophomores in Newark to help them apply to and attend college.
eventually complete degrees at two- or four-year colleges. Students also attend workshops at the recently renovated Hahne’s building, a 50,000-square-foot arts space that houses local artists and creative services, including video production and 3-D printing studios.

Nancy Cantor, chancellor of Rutgers University-Newark, says the signature of the PAS program is its emphasis on using creative arts to energize and engage students, who are given the opportunity to participate in activities such as filmmaking or 3-D modeling while also completing SAT prep and academic enrichment.

“This is a real melding of creative voice and education attainment,” Cantor says. This aligns with Kresge’s mission to increase postsecondary access and success for underrepresented students, says William F.L. Moses, managing director of Kresge’s Education Program. It also provides a physical, economic and educational anchor institution for the community and serves as a model for other universities and programs.

level. Health institutions and their clients have much to gain from mitigating air pollution, heat strokes, vector-borne diseases, deaths and injuries from extreme weather and other climate-change impacts.

At the same time, health institutions bear responsibility for serving vulnerable populations unprepared for climate risks. ARC focuses on leveraging the mission and assets of health institutions to serve as catalysts in building community resilience and driving investments that address climate vulnerabilities in low-income communities.

The project is administered in three climate-impacted communities that face extreme environmental and socioeconomic challenges: San Francisco East Bay (Oakland and Richmond), California; Bronx, New York; and Miami.

“About 70 percent of health problems have less to do with genetics than with social and environmental factors,” says Denise Fairchild, Emerald Cities Collaborative president. “Increasingly, those environmental factors, particularly in low-income communities of color, are correlated to conditions that also contribute to climate change.”

To overturn this reality, Kresge is incentivizing its partners to consider the full range of community assets that may be brought to bear on a problem or series of problems – anchor institutions, the business community, neighborhood groups, artists and culture organizations, nonprofits and developers, to name a few.

That is happening in Miami, where ARC is working with the local chapter of the Service Employees International Union (SEIU), the largest local union representing health care workers. Together, they collaborated with the University of Miami Hospital (UMH) on a needs assessment of low-income communities of color to help the hospital determine how it will reinvest in the community.

“This labor union is made up mostly of people of color … who actually live in the communities that UMH serves,” Fairchild says.

Working together, ARC and SEIU persuaded hospital management to recognize climate impact and how it makes communities vulnerable. The union also conducted community surveys, community education and outreach to include resident voices in UMH’s community health needs assessment.

“It was helping the hospital redefine what health is — not about illness, but about wellness,” Fairchild says. “And it was helping the community understand that health care is not just about health services. It is about primary preventive approaches to health care and the role of the environment in this.”

Hundreds of people – including St. Joachim parishioners – received training on health and climate resilience. An artist worked with another church youth group to create art about environmental preservation. Training sessions were held with high school students and adults in the Latino, African American and Haitian communities.

Ultimately, the work is expected to benefit the hospital and the community members it employs and serves by creating better individual...
health outcomes and enabling neighborhoods to be more resilient to climate change impacts.

ECC is implementing localized approaches across the three project sites. In California, ECC has partnered with another Kresge grantee, Health Care Without Harm (HCWH) to focus on leveraging the purchasing power of Kaiser Permanente – an integrated managed care consortium – and other anchor institutions to increase health, wealth and climate resilience for the communities of East Oakland and Richmond. The project team is working to build a local sustainable food economy as a way to adapt to extreme drought by localizing food production and improving farming technologies. It also will help ensure healthy food access and affordability for low-income households.

In the Bronx, ECC and its partners analyzed Montefiore Medical Center emergency room data to identify buildings that generate repeat asthma patients. The data is being used to engage staff to develop a green and healthy buildings program to help tenants reduce risks associated with extreme heat. The program will also encourage property owners to help lower building energy costs through energy efficiency retrofits.

Engaging in the Conversation
After Kresge grantee Catalyst Miami saw the impact of climate on health and well-being, the Florida human services nonprofit sought ways to teach community members about climate resilience and give them a voice to effect change.

For example, in low-income neighborhoods, some people can’t afford to pay their electrical bills. That means their air conditioners stay off and windows are opened, paving the way for mosquitoes to enter homes and spread illnesses like Zika, says Catalyst Miami CEO Gretchen Beesing.

Combining traditional human services work with climate resilience and policy issues was natural. “Our mission under the Kresge grant program is to engage low-income communities in the climate resilience conversation, and to ensure that local policy about climate resilience has incorporated local voices,” she says.

Catalyst Miami built a climate leadership program called CLEAR, which stands for Climate.
Leadership on the Environment, Advocacy and Resilience. The 12-week program draws participants from low-income neighborhoods and includes a parallel children’s program.

“We talk about climate policy, the latest science and we provide seed money for participants to complete a community project,” Beesing says. “Our goal is to inspire them to become advocates and effect policy change.”

A fellowship program allows CLEAR graduates to earn stipends to complete their community project. Plans are to build a resident advisory council to be a collective voice for the community in policy discussions.

Catalyst Miami also works with the Miami Climate Alliance to distribute hurricane/disaster preparedness kits. They collaborate with government officials to ensure that underserved communities are heard.

“What Kresge helps us do is focus on work that is central to our mission,” Beesing says. “They’re very responsive to what we need and quick to provide connections and support (from intersecting fields).”

Empowering at the Grassroots Level
Community-level engagement combining environmental health and climate resilience is critically important, as residents understand best the assets their communities possess, the risks they face and the solutions that would benefit them most. While grassroots leaders fight for cleaner energy and healthier neighborhoods, their voices can be overshadowed by national environmental groups with different agendas.

Kresge grantee Building Equity and Alignment for Impact (BEA) is working to change that by better aligning the priorities and strategies of grassroots and national organizations, says Bill Gallegos, who serves on BEA’s steering committee.

Grassroots environmental advocates active in BEA help low-income and minority communities become empowered, effective voices in the movement for a cleaner environment.

“Historically, the big green sector and the environmental justice community have had different approaches to climate concerns,” Gallegos says.

In 2013, leaders from across the U.S. participated in a retreat to identify ways to help three distinct communities – grassroots organizations, national environmental groups and philanthropy – work together more productively. BEA formed as a result.

“Our mission was to contribute to the development of a much stronger, unified environmental movement,” Gallegos says. “And because there is a disparity in philanthropy between the funding allocated to big greens and the grassroots, we decided to try to get more resources to the grassroots so they can fully fulfill their role.”

BEA distributes case studies about the effectiveness of grassroots organizations and provides trainings. It held a national meeting in November 2016 to bring all the players together.

“We can’t win unless all of these groups are with us,” Gallegos says. “We absolutely need their participation and expertise.”

BEA also aspires to channel at least $10 million in new philanthropic funding to grassroots efforts.

“Historically the Kresge grant is extremely important on several levels,” he says. “In part, it’s helping to resource our research on the grassroots landscape, so we know exactly where the groups are, what they’re doing and what their needs are.”

The Greening of Health Care
People trust doctors and nurses to take care of their health. Health Care Without Harm wants to harness that power by encouraging health care professionals to advocate for a cleaner environment and, ultimately, better health. Their goal is to effectively merge climate resilience work with greener health care.

“Our mission is to reduce the environmental footprint of the health care sector worldwide and to position health care providers as anchors for
“There are a lot of foundations that fund either climate change or health. Kresge is ... funding the intersection.”

—Gary Cohen, Health Care Without Harm

sustainability and as advocates for environmental health and justice,” says Gary Cohen, president of Health Care Without Harm, noting that the health care industry represents 18 percent of the U.S. economy. “We are trying to leverage that sector to lead the transition away from fossil fuels, toxic chemicals and industrial agriculture.”

The nonprofit also wants to improve the communities’ climate resilience.

“People around the world experience climate change through the health of their families,” Cohen says. “There will be extreme weather events and climate-related disasters, and health care needs to be prepared.”

Kresge funds helped produce a climate resilience toolkit published by the U.S. Department of Health and Human Services, with checklists and case studies about hospitals that are redesigning operations to prepare for climate change. Part of the Kresge grant covered implementation training.

The grant was also used to expand the Health Care Climate Council, a leadership body of 17 of the largest health care systems in the country. The council is focused on helping members reduce their carbon footprint, being more resilient in the face of climate change and building advocacy muscle.

“There are a lot of foundations that fund either climate change or health,” Cohen says. “Kresge is one of the only foundations that is funding the intersection, and the power of this intersection is extremely important.”