

Christiansted St. Croix, U.S. Virgin Islands

June 24–29, 2018



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Strategies for an Equitable and Resilient St. Croix

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About the Urban Land Institute

THE URBAN LAND INSTITUTE is a global, member-driven organization comprising more than 42,000 real estate and urban development professionals dedicated to advancing the Institute's mission of providing leadership in the responsible use of land and in creating and sustaining thriving communities worldwide.

ULI's interdisciplinary membership represents all aspects of the industry, including developers, property owners, investors, architects, urban planners, public officials, real estate brokers, appraisers, attorneys, engineers, financiers, and academics. Established in 1936, the Institute has a presence in the Americas, Europe, and Asia Pacific regions, with members in 80 countries.

The extraordinary impact that ULI makes on land use decision making is based on its members' sharing expertise on

a variety of factors affecting the built environment, including urbanization, demographic and population changes, new economic drivers, technology advancements, and environmental concerns.

Peer-to-peer learning is achieved through the knowledge shared by members at thousands of convenings each year that reinforce ULI's position as a global authority on land use and real estate. In 2017 alone, more than 1,900 events were held in about 290 cities around the world.

Drawing on the work of its members, the Institute recognizes and shares best practices in urban design and development for the benefit of communities around the globe.

More information is available at uli.org. Follow ULI on Twitter, Facebook, LinkedIn, and Instagram.

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About ULI Advisory Services

THE GOAL OF THE ULI ADVISORY SERVICES program is to bring the finest expertise in the real estate field to bear on complex land use planning and development projects, programs, and policies. Since 1947, this program has assembled more than 700 ULI-member teams to help sponsors find creative, practical solutions for issues such as downtown redevelopment, land management strategies, evaluation of development potential, growth management, community revitalization, brownfield redevelopment, military base reuse, provision of low-cost and affordable housing, and asset management strategies, among other matters. A wide variety of public, private, and nonprofit organizations have contracted for ULI's advisory services.

Each panel team is composed of highly qualified professionals who volunteer their time to ULI. They are chosen for their knowledge of the panel topic and are screened to ensure their objectivity. ULI's interdisciplinary panel teams provide a holistic look at development problems. A respected ULI member who has previous panel experience chairs each panel.

The agenda for a five-day panel assignment is intensive. It includes an in-depth briefing day composed of a tour of the site and meetings with sponsor representatives, a day of hour-long interviews of typically 50 to 100 key community representatives, and two days of formulating recommendations. Long nights of discussion precede the panel's conclusions. On the final day on site, the panel makes an oral presentation of its findings and conclusions to the sponsor. A written report is prepared and published.

Because the sponsoring entities are responsible for significant preparation before the panel's visit, including sending extensive briefing materials to each member and arranging for the panel to meet with key local community members and stakeholders in the project under consideration, participants in ULI's five-day panel assignments are

able to make accurate assessments of a sponsor's issues and to provide recommendations in a compressed amount of time.

A major strength of the program is ULI's unique ability to draw on the knowledge and expertise of its members, including land developers and owners, public officials, academics, representatives of financial institutions, and others. In fulfillment of the mission of the Urban Land Institute, this Advisory Services panel report is intended to provide objective advice that will promote the responsible use of land to enhance the environment.

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planning and construction division, from VIHFA, and Colette Monroe, senior adviser to the governor.

The panel also acknowledges and thanks the more than 60 individuals who were interviewed as part of the panel's community stakeholder interviews. Representing public agencies, the local business community, community activists, artists, entrepreneurs, community organizations, and residents, these stakeholders provided valuable information and insights through their passion and deep understanding of complex issues, greatly helping the panel in its analysis and ultimate recommendations.

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The ULI panel team.



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Background, Assignment, and Key Recommendations

*Ubuntu et Primum non nocere: I am because you are, and you are because we are; first we shall do no harm.*¹

The island of St. Croix has withstood recurring and major shocks to the island and the community's way of life. As the panel went through its week of briefings, community interviews, and tours, it found that St. Croix is a strong and resilient community of survivors. However, the historic weight of slavery, colonization, and imperialism still lingers for many. More recently, the closure of the Hovensa Refinery and the subsequent economic depression along with the regular concern about and rebuilding from hurricanes, highlighted by hurricanes Irma and Maria's devastating impact in 2017, have increased the burden and social anxiety carried by many. As the panel spoke with community members about the future and future investment, it was confronted by attitudes of cautious suspicion, distrust, and unease—perhaps influenced by a more deep-rooted social trauma. Despite these widespread concerns, the panel was also met with a more deep-rooted sense of pride in community, creativity, and an overall sense of optimism for the future.

With these considerations in mind, the panel began its observation, listening, study, and deliberation for this assignment. The panel concluded that the need for immediate action is significant, and it believes that moving forward quickly but deliberately is critical.

For this panel, *Ubuntu* means:

- Beyond environmental impact assessments in the participatory planning processes, make interventions that support the existing physical, social, cultural, economic,

and environmental fabric with a clear-cut plan and strategy for improving each.

- Make interventions that leave the existing community stakeholders with more financial, physical, environmental, social, cultural, and human capital assets than before the intervention was made.
- Deploy capital with a strategy for leveraging other financial and human capital investments with the expectation of reasonable risk-adjusted returns.

Planning and evaluating every decision against the preceding factors is necessary to ensure successful outcomes rather than simply hoping for the best. The panel believes that St. Croix has the unique assets, talent, and will to innovate that can drastically change the future for residents'

The U.S. Virgin Islands includes three main islands with a total population of 104,913.



1. *Ubuntu*, a less commonly known word from the Bantu language meaning "I am because you are, and you are because we are," when combined with the medical profession's mantra "first, do no harm," had special meaning for the panel in relation to St. Croix, where the island and its residents experience constant environmental, social, and monetary hurdles. Harm has come in the form of climate disasters that have affected and will continue to affect St. Croix into the distant future. The vulnerability and limitations for most Cruzans are not a reflection of ability, but a function of significant structural challenges. Thus, the panel approached this assignment with care and in the spirit of community.



ULI BRIEFING BOOK

The primary study area for the ULI panel was downtown Christiansted; however, the panel's recommendations take into account the entirety of St. Croix as well as the other U.S. Virgin Islands.

resilience and well-being. The panel believes that strong leadership based in regular and consistent community engagement will provide the opportunity to make thoughtful, well-informed, and equitable decisions as investment is realized.

Study Area and Surrounding Context

The U.S. Virgin Islands (USVI) is an unincorporated territory of the United States located between the Caribbean Sea and the North Atlantic Ocean. Approximately 1,100 miles from North America and just 40 miles east of Puerto Rico, its total population is 104,913. Comprising three main islands—St. Croix (population 49,109), St. Thomas (population 51,634), and St. John (population 4,170)—the territory has about one-fifth the population and double the land area of Washington, D.C., and includes 68 separate islands and cays.

The panel's primary study area is the town of Christiansted; however, the panel also examined St. Croix and the rest of the USVI for additional context. St. Croix, the largest of the three islands, is about 84.17 square miles (28 miles long and seven miles wide) and home to two major towns, Christiansted, often recognized as the economic center of St. Croix, and Frederiksted. During the island's "Golden Age" from 1755 to 1871, Christiansted was the thriving capital of the Danish West Indies; the town's harbor served

as the business and trading center, and it was the largest exporter of sugarcane in the world.

The panel's primary study area is bounded by the Caribbean Sea, Christiansted Harbor, and Gallows Bay to the north; the seaplane, boardwalk, and commercial district to the east; and additional commercial districts to the south and west.

The study area encompasses a mix of housing, including apartments and single-family homes; vacant land; and community assets, including an elementary school, a junior high school, a nonprofit youth center, neighborhood retail and restaurants, parks, a health clinic, a police station, and the offices of the Governor. The Water and Power Authority's Richmond Power Plant is also located in the study area. Within the study area is a significant amount of land owned by the Virgin Islands Housing Authority (VIHA) and the Virgin Islands Housing Finance Authority (VIHFA), including John F. Kennedy Terrace, Ralph de Chabert Place, D. Hamilton Jackson Terrace, Ruby M. Rouse Apartments, and Alphonso Gerard Housing Complex. The study area also includes beautiful historic building stock, the Christiansted Boardwalk, which is home to a number of restaurants and bars, the Christiansted National Historic Site (including Fort Christiansvaern, circa 1738), and open spaces.

2017 Hurricanes

St. Croix's Eastern Caribbean location makes its communities especially vulnerable to extreme environmental events, particularly to the short- and long-term physical and economic damage from storms. In September 2017, hurricanes Irma and Maria hit the USVI as two back-to-back Category 5 storms, causing tremendous housing and infrastructure destruction along with economic disruption estimated at over \$10.76 billion.

The impacts to the USVI include the following:

- Many government offices became unusable.
- All primary health care facilities needed reconstruction.
- Over 85 percent of households reported damage.



ULI BRIEFING BOOK

- Residents had no potable water and electricity for weeks.
- The St. Croix and St. Thomas airports were closed for two weeks.
- All seaports were shut down for three weeks.
- Roadways were severely damaged.
- More than 825,316 cubic yards of storm debris needed to be disposed of.
- Almost all public schools were damaged, and over half of them suffered more than 50 percent damage.

Though Christiansted was affected less severely than other parts of St. Croix, the storms highlighted the vulnerabilities of the island's rapidly increasing senior population as well as the urgent need for more affordable housing. The island is currently working with the Interagency Recovery Coordination team through the Federal Emergency Management Agency (FEMA) to plan for how to withstand future storms. The USVI is receiving \$1.2 billion from FEMA and \$1.6 billion in Community Development Block Grant (CDBG) funds toward its recovery.

The Panel's Assignment

The VIHA and the VIHFA asked the panel to address the following questions related to economic development, affordable housing, mobility, and placemaking.

■ Economic development:

- What are optimal strategies to help diversify the economy of St. Croix with a specific focus on Christiansted?

- What industries or economic sectors for the primary focus area are a good fit for the local economy, will be resilient, and create employment opportunities?
- How should St. Croix begin to develop an equitable economic development vision for the next five, 10, and 15-plus years? What financial tools and incentives should be used to bolster St. Croix's economic development vision?
- What economic investments are needed to align training programs for high school and post-high school programs to prepare a diverse, resilient, and sustainable workforce that allows Cruzan households to earn a living wage?
- How can St. Croix leverage its natural assets to create a tourism driver that attracts visitors locally, regionally, nationally, and internationally?
- Affordable housing development:
 - How can St. Croix ensure that moving forward a strategic economic development vision also drives housing affordability goals and innovation?
 - Superblocks of distressed public and assisted housing exist (both VIHA and VIFHA have large assisted housing projects in the area); how should St. Croix determine the housing mix, location, design, and scale of family and senior supportive housing?
 - How can the design and development of workforce (family) housing be a catalyst for revitalization of the primary focus area?

In 2017, St. Croix was severely hit by hurricanes Irma and Maria. The most critical damage occurred in the northern areas of the island and Frederiksted, though the panel's study area of Christiansted continues to recover from the storms.

■ Mobility:

- How can pedestrian and transportation links be improved for residents and visitors to access neighborhood assets, Christiansted's central business district, the beach/harbor, and the boardwalk?

■ Placemaking:

- What are resilient strategies to diversify the economy of St. Croix to help strengthen Christiansted and surrounding neighborhoods? Which strategies can be scaled to implement and stimulate investment islandwide?
- What design principles would brand the area of Christiansted as a unique location with a strong sense of place that would draw both Virgin Islanders and travelers to the area?

Summary of the Panel's Major Recommendations

The panel's recommendations are a plan for how St. Croix can incorporate innovative approaches to address what the panel believes are the most critical topics in ensuring a resilient future for the island. Following a week of briefings, site tours, review of previous plans, and community stakeholder interviews, the panel devoted significant time to refocusing the original scope to more sharply focus on five major topics: equitable economic development, infrastructure, mobility, placekeeping, and housing.

The panel's recommendations identify many small- to large-scale steps laying out replicable strategies that can be implemented in the study area, across St. Croix, and throughout the USVI. All of the panel's recommendations keep in mind the following guiding principle: *focus on causing no harm by unintended consequences*. A summary follows of the panel's major recommendations:

■ Equitable economic development:

- Instead of focusing on "big idea" large-scale investment, consider smaller, sustainable, equitable and incremental investments.

- Meet people where they are with opportunities scaled to grow human capacity. Consider small, worker-owned co-ops and artisanal businesses as both economic development investments and investments in the people of St. Croix.

- Foster an agribusiness sector.

■ Infrastructure:

- Invest in resilient, efficient, and renewable electrical generation and distribution systems to reduce energy-related barriers to economic development.
- Consider privatization of utilities to transfer the high capital cost of upgrades to the private sector. If privatized, use the power of the government regulatory system to ensure delivery of low-cost, high-value utility services.
- Consider opportunities to rethink waste as a closed-loop system to generate energy and revenues.
- Improve water management systems by deploying permaculture methodologies, greenway water management, softscape parks and recreation spaces, and water recovery systems.

■ Mobility:

- Make the mobility systems work with incremental investment of recovery funds.
- Make transportation investments in different modes of transport, including a bike-share system, motorized scooters, and jitney services.

■ Placekeeping:

- Develop St. Croix's story and market it vigorously.
- Enhance and grow tourism around the island's undervalued assets: land, sea, and other natural environments; historic architectural fabric; unique cultural character, history, and emerging cottage industries.

- Develop parks, waterfront and greenways, public plazas, public outdoor markets, and other public spaces (and the connection between these assets) to serve all communities and enhance the human experience for residents and visitors.
- Housing:
 - Engage residents in the design of the public realm and public housing.
 - Phase new construction around the development of the panel's proposed waterfront park, and use this project to pilot and implement new designs, construction methods, material modalities, and development models that jointly export less capital off the island.

Five Calls to Action

The panel has developed five guiding calls to action. Each of these is detailed throughout the panel's recommendations in this report and summarized below.

1. Engage—build transparency and openness in your processes and all interaction among government, citizens, and the private sector. This is the first way to break out of misperceptions and cycles of distrust.
2. Build sustainable infrastructure.
3. Create jobs—a sustainable job strategy and incremental and diverse equitable economic development approaches are critical to ensure a sustainable future.
4. Leverage your existing strengths, whether historic preservation, entrepreneurship, history and culture, natural landscape, further opportunities for connectivity, or others.
5. Build people, particularly the next generation.

Key Focal Areas and Observations

THE PANEL based its recommendations around eight major themes: the island, Christiansted, leadership, territorial debt, jobs and economic development, infrastructure, housing, and the people. To begin transforming St. Croix's built environment into a better place to live and visit, the panel believes that each of these existing conditions must be addressed as opportunities or *building blocks*—in other words, those assets that must be leveraged and enhanced as part of a comprehensive approach to meeting the *challenges* faced by both St. Croix and the USVI.

The Island

The panel identified St. Croix's natural island environment, unique sense of place, and vibrant Cruzan culture as the most fundamental asset to build from. Although its island location makes St. Croix vulnerable to environmental events and their associated economic impacts, its geographic location also gives St. Croix its special character. The island's location south of its sister islands St. Thomas and St. Johns, however, tends to isolate it physically and economically, rendering it a secondary visitor destination with limited transportation and tourism infrastructure.

Building Blocks

- Natural:
 - Natural tropical island climate and amenities;



The island's mountainous terrain side by side with its turquoise waters exemplifies St. Croix's natural beauty. The island is particularly known for Buck Island National Reef Monument and its two bioluminescent bays.

- A natural environment that is home to beautiful amenities, including underused beaches and mountains;
- Abundant natural waterfront beaches and sea life that surrounds the island; and
- Significant available undeveloped and underdeveloped land.
- Constructed:
 - Preservation of many historic buildings in downtown Christiansted;
 - Authentic places that form a unique Cruzan atmosphere in and around Christiansted; and
 - The Christiansted waterfront infrastructure, including its boardwalk, which can be expanded to create more connections and mobility options to and from downtown Christiansted.

Challenges

- Natural:
 - Frequent flooding with increasing risks of damage and frequency due to increased global warming;
 - Flooding risks increased by poor drainage infrastructure;



- Short supply of natural potable water;
 - Unusually high cost of fossil fuel–generated electricity; and
 - Broad-based environmental pollution.
- Constructed:
- Lack of a defined island town center and gathering places;
 - Aging and deteriorating roads;
 - Highly visible disaster legacy; and
 - Failure to prioritize historic preservation across St. Croix.

Christiansted

St. Croix’s natural environment, distinctive sense of place, and Cruzan culture are significant strengths from which to build; however, the island’s location also makes St. Croix vulnerable to environmental events and their associated economic impacts.



Despite these concerns, Christiansted, the island’s largest city, maintains its historic character and serves as host to many new and expanding small businesses.

Building Blocks

- Reestablished downtown vibrancy through successful preservation of Christiansted’s unique and historic building stock;
- Growing concentration of strong and successful entrepreneurs operating businesses in and around Christiansted; and
- Waterfront is preserved and accessible with tremendous opportunities to create stronger connections from the downtown waterfront to adjacent neighborhoods.

Challenges

- Well-preserved but underused built and natural environments;
- Insufficient resident and tourist activity to support and sustain vibrant retail activity in the city’s historic core and waterfront districts; and



Downtown Christiansted’s unique feel stems from its history, proximity to the sea, and celebration of Cruzan culture. As part of its recommendations, the panel suggests growing tourism by enhancing St. Croix’s undervalued assets, such as its historic architectural fabric, emerging cottage industries, and distinctive natural environment.

AMIE MACPHEE/OLI

- Lack of a comprehensive and innovative business development strategy that has focused plans for downtown Christiansted.

Leadership

While in St. Croix, the panel witnessed many examples of leadership coming from a broad spectrum of Cruzan citizens. The panel experienced this firsthand throughout the panel week both from the diverse cross section of people in leadership positions who attended the sponsors' reception and from the community members who participated in the panel's stakeholder interviews. Although the island has many successful examples of leadership strength to build on, a lack of trust in island and territorial institutions poses a significant challenge for St. Croix.

Building Blocks

- A strong and trusted network of community leaders, advocates, and champions;
- Private-sector champions;
- Strong local entrepreneurs, including retailers, restaurateurs, and small business owners; and
- A dedicated nonprofit sector.

Challenges

- Perception that government officials lack a clear and long-term vision for the future of St. Croix in a manner accessible to all Cruzans;
- Perception that the government needs to more fully engage at the community level to build trust and gain consensus on future plans for St. Croix; and
- Police force that is considered by many residents to be inconsistent, unreliable, territorial, and untrustworthy.

Territorial Debt

The U.S. Virgin Island's territorial debt burden limits growth opportunities in St. Croix and across the USVI. This burden is not only seen by analysts, but its repercussions are

felt by most residents and is considered unsustainable. According to 2016 financial statements, the USVI government's long-term debt in 2016 totaled \$2 billion, which does not include the \$3.4 billion in unfunded pension liability and Water and Power Authority (WAPA) debt. In 2017, the USVI ran a \$110 million budget deficit, as well as ongoing annual structural deficits of about \$170 million.

Poststorm FEMA funding represents a unique opportunity to fund significant and sustainable investments in St. Croix if the funds are invested strategically not only to jump-start critical immediate needs, but also to fund sustainable infrastructure improvements that produce sustainable long-term efficiencies.

Building Blocks

- Excellent community development work already being done by the St. Croix Foundation and other community organizations;
- Many prominent local benefactors that can be further cultivated as champions and investors in the island's success;
- Plans by the Danish Government Foundation to initiate work in St. Croix;
- FEMA post-hurricane funding that can provide the opportunity for thoughtful, long-term investment across St. Croix; and
- Potential to leverage public funding with private investment funds.

Challenges

- Existing \$5.4 billion of public debt and unfunded pension obligations;
- Territorial "junk bond" debt rating; and
- Inability to raise funds in capital markets to replace aging and obsolete water and electrical utility infrastructure.

Jobs and Economic Development

Jobs in St. Croix and economic development initiatives are inextricably linked, with overall island prosperity contingent on the creation of a diverse and sustainable economy, strong regional cooperation, access to a skilled workforce, and cultivation of home-grown entrepreneurship.

At present, St. Croix's economic vitality is tied most closely to the success of the Hovensa oil refinery, which closed in 2016. The closure resulted in the loss of nearly 2,000 jobs and the loss of millions of dollars in tax revenues; it caused countless secondary negative effects. Although new investors are currently planning to invest up to \$1.4 billion to restart the refinery to produce low-sulfur marine fuel, creating up to 700 jobs, St. Croix must diversify its economy through equitable economic development strategies to create long-term sustainable job growth and economic benefits for its citizens.

Building Blocks

- Vibrant emerging small business ecosystem;
- A strong and growing arts community;
- Many opportunities to join the new economy, especially around e-commerce (see page 19, "Focus on Small Business Growth and Entrepreneurship Pathways" subsection); and
- Existing underused U.S. Department of Labor programs.

Challenges

- Jones Act exemption minimizing U.S. trade opportunities and stunting growth of St. Croix's port;
- Past and potential future dependency on the oil refinery;
- Secondary tourism industry;
- Few emerging businesses; and
- Inadequate workforce development initiatives.

Infrastructure

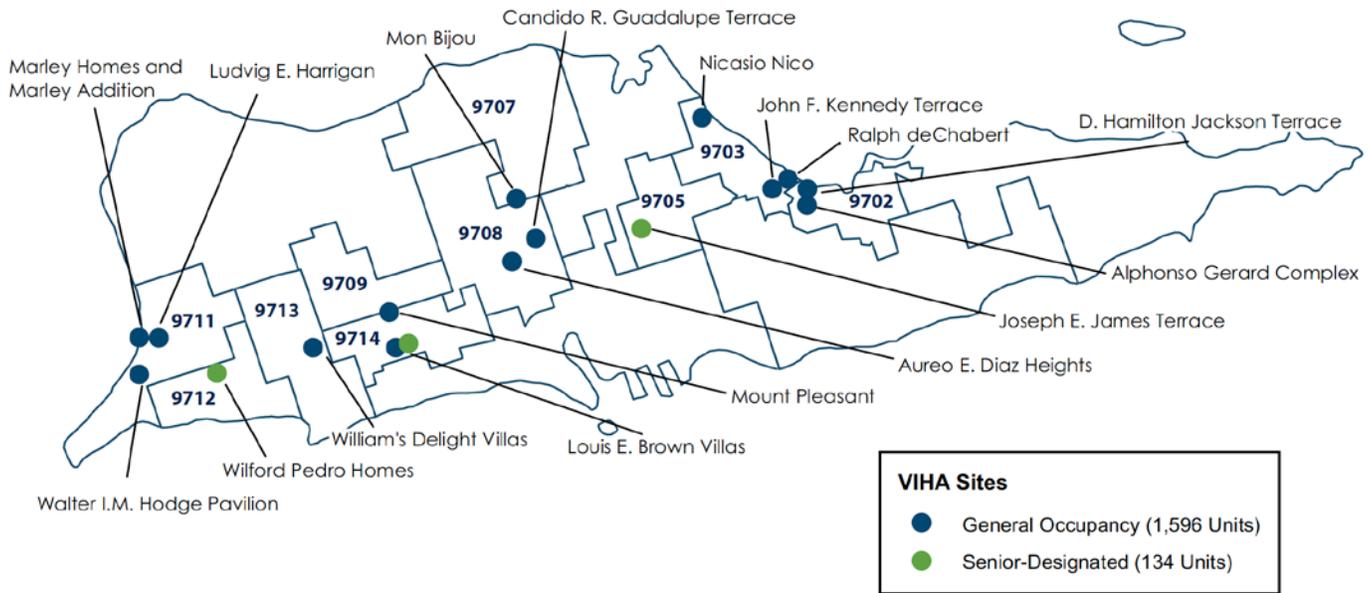
Aging infrastructure poses one of the island's most pressing challenges but also presents real opportunities to further enhance and connect Christiansted and St. Croix. Innovative investment in transportation systems, mobility options, utilities, and resilient public systems will be necessary to ensure a sustainable future for St. Croix.

Building Blocks

- Innovative work from WAPA;
- University of the Virgin Islands School of Nursing;
- Pending FEMA funding;
- Opportunity to sell public electric and water utility companies to private utility corporation with commitment from private sector to modernize the infrastructure and reduce public debt; and
- Access to federal historic tax credits, New Markets Tax Credits, and Opportunity Zone tax credit funding to build upon the preservation work that has already been done in downtown St. Croix.

Challenges

- Deficient medical facilities and care;
- Aging and damaged schools and low educational attainment;
- Inefficient and aging water and electric utilities;
- Overstaffing at public electric and water utilities and political hurdles to rightsizing or sale of utility; and
- Insufficient transportation infrastructure, including
 - Damaged and deficient roads;
 - Substandard airport;
 - Antiquated port facilities and underused ports;
 - Lack of public transportation; and
 - Insufficient and unconnected bicycle lanes and trails.



The VIHA owns 16 public housing sites on St. Croix, almost all of which experienced significant damage from the 2017 storms. The primary focus area includes four public housing sites—John F. Kennedy Terrace, D. Hamilton Jackson Terrace, Alphonso Gerard Complex, and Ralph de Chabert Place—as well as two affordable housing communities, Lyndon B. Johnson Gardens and Watergut. All together, these six sites include 813 units.

Housing

Housing is a critical part of any community's infrastructure, not only providing shelter for island residents but also creating communities and serving as the impetus for instilling community pride and spawning community change and stability. Like many aspects of St. Croix's strained economy, Christiansted's housing stock presents a great opportunity for piloting innovative new approaches and changing the paradigm around affordable housing.

Building Blocks

- The tireless and dedicated VIHA and VIHFA staff;
- Increased private investment;
- Recent projects such as Louis E. Brown that include upgraded amenities and community facilities and provide a strong example of public/private partnerships;
- Anticipated FEMA funding; and
- Public housing resident advocates dedicated to building stronger communities.

Challenges

- More than 45 public and private subsidized housing developments;

- Aging and disconnected public housing;
- Few services and amenities;
- Operating deficiencies;
- Unproven demand for market-rate housing
- Elevated unemployment among public housing residents;
- Concentrated poverty in low-income families;
- High cost of building materials and building new public housing; and
- Limited skilled labor pool.

The People

The people of St. Croix are the island's most valuable asset. Throughout the week, the panel met champions for youth, seniors, the arts, agriculture, food enthusiasts, bike paths, architecture, history, and many other community initiatives. Nonetheless, the island lacks adequate skilled labor needed to create sustainable economic growth or attract investment in St. Croix.

Building Blocks

- St. Croix enjoys a rich history and tremendous love of the island.
 - Cruzans, both new and old, love their island home.
 - St. Croix has a diverse mosaic of cultures and talents.
 - Cruzans are resilient survivors.
 - Despite its challenges, the island is spawning a new generation of hard-working entrepreneurs.
- Generational talent flight;
 - Declining and aging population;
 - Dependent and undereducated population;
 - High poverty rate (about 26 percent of the population below the poverty line); and
 - Double-digit unemployment rate of 13 percent as of March 2018.

Challenges

- Perceived secondary status of St. Croix in the USVI;
- Prevalent social issues, including substance abuse, crime, and violence;

Equitable Economic Development

THE KEY TO FUTURE ECONOMIC SUCCESS on St. Croix is to create opportunities for people. Whereas a big economic play—such as building a theme park or major tourist attraction, extending the boardwalk for expanded retail use, bulldozing and reconstructing major land areas, or attracting a major corporation—may feel like an answer, it is unlikely to be a sustainable option. Each one of those options comes with unintended consequences, and a “build it and they will come” approach is unlikely to work in St. Croix. The island is a special place, and its economy must reflect that delicate connection between the environment, the island’s history, and its culture and people.

The panel’s “big idea” for economic development is to implement incremental strategies that cumulate in a sound, sustainable, and equitable economic foundation that will serve the interests of St. Croix and its residents for generations to come. This strategy will not be easy to implement, and as reflected in the existing conditions section of this report, some difficult challenges must be overcome, but a lot has already been done to help St. Croix prepare.

The 2014 *Targeted Competitive Industry Study* prepared for the USVI government explores the opportunities, challenges, and growth potential of different market sectors, and the USVI 2015 *Comprehensive Economic Development*

Strategy collected data, considered specific projects, and established a framework for moving forward comprehensively. Together, these reports provide a strong foundation to support an island economic action agenda. The panel recommends a further economic development study that is specific to St. Croix, which keeps in mind the prior studies and the insights needed to initiate action.

Create the Basics for Equitable Economic Development

In *The Death and Life of Great American Cities*, Jane Jacobs wrote: “Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody.” The panel believes the best way for St. Croix to spur economic development is equitably, meaning it is all about the people.

Economic development officials often look to the outside for ideas. They want to bring in wonderful, big generators like theme parks, casinos, or companies such as Amazon. However, bigger is not always better. For St. Croix, success will come from incremental strategies that focus inward and look at the incredible assets the island already has. This is the island of opportunity, and to take advantage of that, St. Croix has to focus on what assets are here today and what realistic goals focus on the premise of helping each other. An economic development strategy that grows from that basis will focus on how people can help each other.

The first step and basis of the panel’s recommendations is listening. The panel spent the week listening to many incredible community stakeholders and hearing stories about every aspect of the island. From that listening, the panel’s takeaway was that everyone really wants to contribute. Community spirit is strong, and people want to

Unintended consequences often happen during times of rapid change in the urban form. One pervasive example is the introduction of highways in the 1950s to 1970s in the United States. Although highways were built with the intention of making cities more accessible for workday commuters, their construction often disrupted existing neighborhoods, ripping apart many communities’ social fabric. The Cross Bronx Expressway in the South Bronx part of New York City’s Bronx borough, pictured here, is an often-cited example of this dynamic.



NATIONAL ARCHIVES AND RECORDS ADMINISTRATION / WIKIMEDIA COMMONS

be heard, but they do not feel heard and do not know how to remedy that situation.

The second step is focusing on the fundamentals. St. Croix needs to celebrate its successes and focus on the basics. Getting the basic things right—like repairing the potholes or putting working resilient infrastructure in place—is an important focus, not only to spur economic development but also to regain people’s trust. Focusing on these basics rather than on shiny new ideas will lead to a long-term partnership between people and the island’s economy that can withstand future challenges.

Focus on Small Business Growth and Entrepreneurship Pathways

The panel suggests a focus on opportunities that introduce and reinforce pathways to entrepreneurship and small business creation that will lead to growth for residents. Small business creation can serve as a viable way to overcome barriers to traditional employment or a lack of employment opportunities. The panel suggests that St. Croix take the following steps:

- Establish a coworking space in downtown Christiansted that provides basic office equipment to prospective entrepreneurs and an informal networking space to facilitate idea sharing and partnerships.
 - Maintain and seek to expand and bolster existing business incubator space and aim to create incubator spaces on other parts of the island as demand grows.
 - Track success stories of companies that spin out of incubator spaces and measure the economic impact of locally supported businesses to support future policy, program development, and economic development planning strategies.
- Increase small business lending and provide tax and regulatory relief for small businesses opening and operating in Christiansted.

- Invest in expanded technology access and improve broadband reliability in Christiansted and surrounding areas.
 - Use technology as a tool to capture the export potential of locally produced goods through online marketplaces such as Etsy’s Craft Entrepreneurship Program or Facebook’s Level Up.
 - Continue to explore the feasibility of an online USVI marketplace.
- Promote participation in the sharing economy through platforms such as AirBnB or develop locally generated options such as RideAustin, an Austin, Texas–based nonprofit ride-sharing company.



Ride Austin Non-Profit TNC

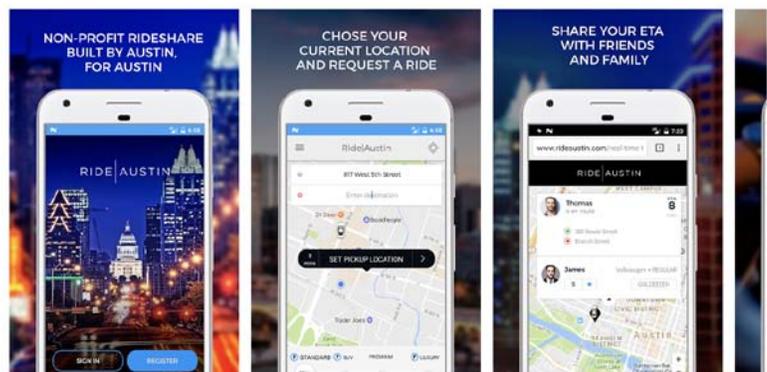
Ride Austin Non-Profit TNC Travel & Local

★★★★★ 657

Everyone

Add to Wishlist

Install



RideAustin is a non-profit rideshare built for the Austin community. We offer the ability to ‘round-up’ your fare for local charities and organizations. RideAustin now covers the entire greater Austin area - from Round Rock to Kyle to Lakeway to COTA. Thank you Austin community for the incredible support thus far!

Founded in 2016, RideAustin is a locally based nonprofit ride-sharing company in Austin, Texas. One of its unique features is rounding fees up to the nearest dollar to donate to a local charity of rider choice; this has raised more than \$100,000 for local charities to date. An example of sharing-economy innovation, RideAustin creates local jobs, and invests and reinvests money back into the community. As of May 2018, Uber and Lyft came to the Austin area and created more competition for the service, significantly affecting RideAustin’s ridership.

APPLE APP STORE

Worker Co-ops: An Equitable Economic Development Strategy

Worker cooperatives (co-ops)—where businesses are collectively owned and democratically governed by their workers—are gaining traction as an equitable economic development strategy, a way to tackle income inequality, increase wealth, and stabilize neighborhood-based businesses.

Worker co-ops typically have two central characteristics:

- Workers own the business and participate in its financial success based on their labor contribution to the cooperative.
- Workers have representation on and vote for the board of directors (i.e., one worker, one vote).

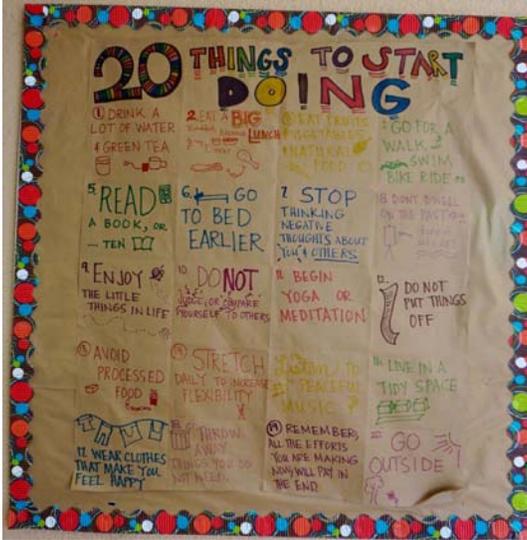
According to Democracy at Work Institute, in the United States 300 to 400 worker cooperatives employ some 7,000 people. Approximately 26 percent of worker co-ops began as traditional for-profit enterprises, and 31 percent of worker co-ops have annual revenues over \$1 million. The worker co-op model can be an effective tool for creating and preserving jobs, creating wealth, improving workers' quality of life, and promoting community and local economic development, especially for those who do not have access to business ownership or sustainable work options. Some of the benefits of worker coops include the following:

- *Worker cooperatives build local wealth.* At a worker co-op, profits go directly to workers instead of to distant investors. Thus the money stays in the local economy, building community wealth.
- *Worker cooperatives create good-quality jobs.* Workers have a meaningful role because they contribute to and benefit from the successes of a business they share ownership in. In addition, jobs at worker co-ops are often longer term, with wide skills training and generally better wages than traditional companies.
- *Worker cooperatives create meaningful change for underserved populations.* More than 50 percent of worker cooperatives in the United States were created

to help build wealth in those communities with the least resources by helping vulnerable workers gain skills and increase their earning potential and household income.

Following are some examples of worker cooperatives:

- *Black Star Co-op Pub and Brewery:* Based in Austin, Texas, Black Star—a consumer cooperative with a democratic workers' collective—is a brewpub that is owned by more than 3,000 individuals and organizations and democratically managed by workers through a Workers' Assembly. The co-op currently employs 27 workers, including 18 who have fully invested voting rights.
- *Cooperative Home Care Associates (CHCA):* CHCA is a nationally recognized, worker-owned home care agency in the Bronx, New York. Founded in 1985 to provide high-quality home care to clients by providing quality jobs for direct-care workers, CHCA started with 12 home health aides. The cooperative now employs more than 2,000 staff. Together with PHI, a nonprofit founded by CHCA in 1992, CHCA maintains an employer-based workforce development program that provides free training for 600 low-income and unemployed women annually and serves as a significant driver of employment in the Bronx.
- *Select Machine Inc.:* Founded in 1994 by Doug Beavers and Bill Sagaser, Select Machine manufactures, sells, and distributes machined products and equipment for installation on construction and demolition equipment. When the founders started looking to sell the business, several interested potential buyers surfaced, but all of them wanted to buy the business for its customer list and equipment, and consolidate production into underused facilities elsewhere. Shutting the plant and leaving their employees out of work was not an acceptable outcome for the founders, who then started exploring alternatives to a traditional sale. After research, they determined that a worker cooperative was the best option for their company and transitioned in 2011.



During their visit, panelists toured many places throughout Christiansted, including the University of the Virgin Islands, where they conducted community stakeholder interviews. This hallway poster at the university illustrates habits that support healthy and productive lifestyles.

Encourage People and Workforce Development Opportunities

The people of St. Croix are the island’s greatest asset. St. Croix is home to its own unique culture, creating the opportunity to do workforce training around what is distinctive to the island.

- Overcome some of the “island life” mentality by expanding programs that educate people on the rewards and opportunities of financial self-sustainability as well as the fundamental requirements of a contributing employee, such as timeliness, commitment, and a positive attitude.
- Establish educational and online partnerships to provide more equitable access to training and education for those who wish to expand their skills.
- Maintain job training and local hiring requirements of business tax incentive programs, which provide a strong public benefit.

A longer-term opportunity for St. Croix is to explore native construction techniques using locally sourced materials

Etsy Craft Entrepreneurship: Creating New Opportunities for Creative People to Benefit from the Etsy Economy

Craft Entrepreneurship’s mission is to “to expand access to microbusiness education for under-represented creative entrepreneurs. By empowering organizations to utilize our curriculum, we are able to create pathways for entrepreneurship within the Etsy marketplace.” Etsy offers the Craft Entrepreneurship curriculum to nonprofit and public organizations that work with creative people in underserved communities. The curriculum is an educational toolkit that helps makers leverage their existing craft skills to start, manage, and grow a microbusiness and earn extra income.

The main goal of Craft Entrepreneurship is to increase access to microbusiness education for under-represented creative entrepreneurs, allowing makers to experiment with entrepreneurship while they earn extra income through the businesses they create. Using a train-the-trainer model, classes are taught by local Etsy sellers who have a deep understanding of Etsy and the tools and experience of managing a microbusiness. Etsy provides a training toolkit and resources to help an organization identify possible candidates from their community; however, partner organizations are responsible for choosing an instructor and arranging compensation. Past partners have used a variety of funding sources, including municipal funds, foundation grants, and private donations, to execute the craft entrepreneurship programing.

Source: <https://www.etsy.com/craftentrepreneurship>.

such as stone and stabilized rammed earth. These materials are readily accessible on the island and can reduce the cost of construction. In addition, some primitive building techniques are proven to be more resilient and storm resistant than more modern products. Fort Christiansvaern, built in 1738 by the Danish using all local materials, is still standing and in use as a national historical site. It requires no mechanical air conditioning to maintain human comfort. There are lessons in looking back for building



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Mongoose Junction in St. John is an example of applied native trades at work in the USVI. The shopping center was designed and built by local architect Glen Speer, who employed local craftsmen and stonemasons to help with construction. The building also used local stones, brick, and coral and is landscaped with native flora.



JOHNJRD/WIKIMEDIA COMMONS

techniques that can eliminate off-shore manufacturing and transportation costs while creating a cadre of well-paid craftspeople.

In the short term, the panel recommends that the Housing Authority hold a design competition for architects to design a small multifamily development in which a majority of the materials are sourced locally using sustainable building techniques. Numerous architectural firms focus on this work globally, and architecture schools in the United States and Europe could assist in organizing the competition along with foundation support. Through 2016, \$4.3 billion in foundation support had been awarded 112,000 grantees for sustainable development in North America.

The panel believes that a competitive grant could be funded to support the proposed design competition. Performance objectives for evaluating the competition would include but not be limited to energy consumption for operations, imbedded energy including transportation energy in the materials used for construction, community and stakeholder engagement, on-island job creation, local material use, cost to construct, and least cash exported off-island.

Foster an Agribusiness Sector

As described in the 2014 *Targeted Competitive Industry Study*, “Agribusiness encompasses both farm production and value-added processing of agricultural products.” Although the island today has some working farms and food business incubation, the panel believes this sector presents a significant opportunity for future growth. Not only does this industry help preserve land in its natural state, but it also revives a historic sector that was once very strong on the island and served to provide a sustainable food source for residents and the surrounding areas.

The panel offers several recommendations to advance this sector, but the panel also acknowledges that an improved water infrastructure system is vital to the success of this industry and must be addressed. Because the island must first improve its water infrastructure or adapt innovative solutions to adequately service the industry, the panel’s recommendations should be considered as medium- and longer-term strategies.

Short-term, low-intensity water consumption agricultural techniques like drip irrigation outdoors and vertical aeroponic farming in greenhouses should be considered



Aerofarms are indoor vertical farms that provide an innovative solution to a growing population and a scarcity of viable farmland. Using aeroponic technology, plants can be located in many different indoor locations. An example of aerofarms in a noncommercial setting is at the Philip's Academy Charter School in Newark, New Jersey, where First Lady Michelle Obama toured the school's aerofarm.

as a demonstration project for determining the feasibility of a larger-scale rollout. Both approaches minimize water consumption and can incorporate other renewable strategies such as small-scale solar desalination and solar electricity for pumps or lighting to mitigate the high cost of water and electricity. Companies like Aerofarms are rolling out aero-farming systems designed specifically for island economies.

The following are recommended medium-term strategies:

- Engage an experienced food hub partner to explore opportunities to expand upon existing agricultural products, value-added production, and commercialization and distribution of local products.
- Make small-scale interventions like improving marketing of the experience and authenticity of the existing Frederiksted fish market and replicating and expanding it in the study area.
- Seek opportunities for landside restoration that supports ecotourism and creates unique employment opportunities for residents. An example of this is the Green Belt Movement, a Kenyan nonprofit organization that engages women to plant trees and seeds to restore the environment that has resulted in a transformative land-

scape, economic condition, and human spirit condition for participants.

- Establish a strong partnership with federal government agencies such as the U.S. Department of Agriculture to leverage all available administrative resources and funding sources for planning. Federal resources are likely to be available to further research water challenges and solutions.

The panel's long-term recommendations are as follows:

- Consider opportunities to export food products to the surrounding islands.
- Explore opportunities to open a Christiansted food market that sells local agricultural and value-added products, and consider the potential to open a food market as a worker-owned cooperative.

Leverage Historic and Cultural Assets for Tourism

The panel believes that St. Croix can be more systematic about how it leverages existing tourism activity. To do so, St. Croix needs to differentiate itself from other USVI and Caribbean tourism destinations. The panel does not believe that Christiansted is well positioned to attract more cruise ships nor that cruise ships are a near-term solution for economic stability. Instead, the panel recommends the following near-term strategies that can help St. Croix leverage existing opportunities with very little effort:

- Conduct historic and cultural asset mapping in Christiansted that includes existing and planned assets such as the Hamilton Museum, Alexander Performing Arts Center, downtown arts district, natural amenities, businesses, and “experience” destinations (water tours, mountain hikes, rainforest exploration, food and beverage tours, and the like).
- Develop specialized cultural and heritage tourist offerings that build off existing and planned resources and appeal to the “detourist,” a travel model that is increasingly popular among millennials.

What Is Detourism?

Detourism is an approach to travel that promotes slow and sustainable tourism, encouraging travelers to go beyond the usual tourist attractions and destinations and opt for unique experiences authentic to a particular place. One of the main ideas behind detourism is to invite visitors to travel through a place slowly and experience its more authentic and lesser-known parts much like a local does.

The Detourism campaign run by the city of Venice, Italy, encourages visitors to wander through Venice, leaving the typical tourist routes and destinations. The Peggy Guggenheim Collection is one of the many suggestions offered in the campaign's more than 20 magazine publications.



The Peggy Guggenheim Collection in Venice.

JEAN-PIERRE DELBÉRA/FLOICKR

- Develop specialized ecotourism packages.
- Develop a professional brand that truly reflects the destination and the authentic opportunities for travelers to immerse themselves in Cruzan culture.

Only after all the short-term strategies have been deployed and tourism demand has been measured and proven to be growing, should St. Croix consider developing stronger infrastructure to support larger-scale tourist activity, such as improving the airport to increase capacity; dredging the Christenstead harbor, upgrading port facilities; or increasing hotel rooms and conference facilities in Christiansted.

Promote Innovation

St. Croix is a small island and Christiansted a small city within it; residents and local businesses can take advantage of the global economy to expand their customer base and increase their profits. The fundamental requirement for participating is access to reliable technology and education.

A short-term strategy for promoting innovation involves continuing the pursuit of new and expanded research and

development partnerships between academia and the private sector to leverage the island's natural water assets, changing environmental conditions, and marine life.

Long term, the panel recommends considering long-term planning strategies that build on best practices and innovative thinking, such as aspiring to make Christiansted a smart city that uses technology to collect and share data to improve the quality of life and generate an interactive experience.

Many of the sectors identified in recent reports provide near-term opportunities for the people of St. Croix, while also preserving the rich history and cultural authenticity of Christiansted, which in turn will drive the area's appeal as a destination for residents, businesses, and visitors. Now is the time to implement a comprehensive action agenda that leads to measurable results and equitable access for all residents. A strong economic strategy requires continuous retooling, reshaping, and reevaluation, and this moment in time should be considered just the beginning of a bright economic future for St. Croix.

Financial Tools

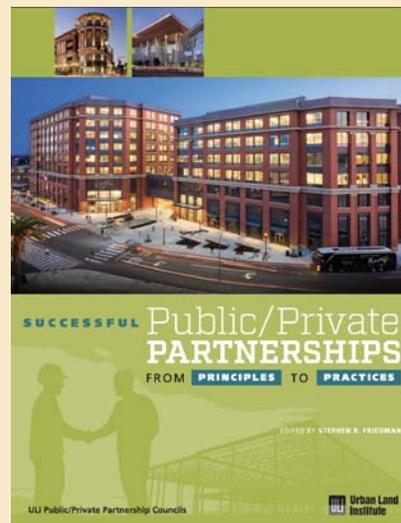
Many financial tools are available that can help promote and strengthen economic development initiatives; however, having a master blueprint for where the island is headed is also important to ensure the appropriate strategic tools are put in place. The panel recommends St. Croix explore the following tools:

- **Economic Development Agency (EDA) planning grants:** The panel recommends St. Croix explore and apply for an EDA planning grant to help secure financial resources to hire a consultant or staff to create a master blueprint for St. Croix, with specific focus areas on Christiansted.
- **Tax-advantaged financing tools:**
 - **New Markets Tax Credits**—The New Markets Tax Credit (NMTC) program was established as part of the Community Renewal Tax Relief Act of 2000. The program's primary goal is to encourage community development and economic growth through the use of tax credits that attract private investment to distressed communities across the United States and its Territories. The NMTC program attracts private capital into low-income communities by allowing corporate and individual investors to receive a tax credit against their federal income tax in exchange for making equity investments into a specialized financial intermediary called a community development entity (CDE). The credit totals 39 percent of the original investment and is claimed over a seven-year period.
 - **Historic Tax Credits**—The Federal Rehabilitation Tax Credit, also known as the Historic Tax Credit (HTC) program, encourages private-sector investment in the rehabilitation and reuse of historic buildings. The tax credit permits participants to claim 20 percent of eligible improvement expenses against their federal tax liability. First established in 1976, the tax credit has resulted in the preservation of over 42,000 buildings and more than \$84 billion in economic development.
 - **Opportunity Zones**—Created in the Tax Cuts and Jobs Act of 2017, Opportunity Zones is a new federal program that provides tax incentives for new investments located in economically distressed communities. According to the Internal Revenue Service (IRS), Opportunity Zones are an economic development tool—designed to spur economic development and job creation in distressed communities. Opportunity Zones are designated by the state and certified by the Secretary of the U.S. Treasury and allow investors to defer tax on any prior gains invested in a Qualified Opportunity Fund (QOF) until the earlier of the date on which the investment in a QOF is sold or exchanged, or December 31, 2026. Further details are still being released by the Treasury Department and the IRS.

- **Public/private partnerships:** Public/private partnerships generally describe a cooperative arrangement and collaborative relationship between the public and private sectors to combine each of their strengths and resources most effectively and achieve a common purpose. These partnerships are often used in economic development, infrastructure development, building schools, delivery of social services, among other uses.

In 2005, the Urban Land Institute published *Ten Principles for Successful Public/Private Partnerships*, enumerating the following principles:

1. Prepare properly for public/private partnerships.
2. Create a shared vision.
3. Understand your partners and key players.
4. Be clear on the risks and rewards for all parties.
5. Establish a clear and rational decision-making process.
6. Make sure that all parties do their homework.
7. Secure consistent and coordinated leadership.
8. Communicate early and often.
9. Negotiate a fair deal structure.
10. Build trust as a core value.



ULI's Ten Principles for Successful Public/Private Partnerships is a helpful resource on the fundamentals of public/private partnerships.

Infrastructure

INFRASTRUCTURE IS AN ESSENTIAL building block of any community. It is the foundation for a strong economy, workforce, and overall connectivity, and it includes everything from innovative energy projects, investment in transportation, mobility and telecommunications systems, and piloting new approaches to buildings and parks. Successful places are those that connect workers to jobs, close the digital divide between high-income and low-income neighborhoods, and invest in resilient technologies for the future.

This section focuses primarily on St. Croix's energy and mobility systems today and lays out a blueprint of recommendations to create a more resilient and connected St. Croix.

Energy Infrastructure

Energy is one of the major factors affecting economic development, health, education, transportation, quality of life, and the environment. People understand the importance of having access to affordable, reliable energy, but the fuel source is also a critical priority. The high costs of fuel on St. Croix have limited its economic development opportunities, quality of life, and overall resilience.

St. Croix Energy Profile

St. Croix is served by a single electrical grid run by WAPA that serves a total of 54,000 customers (45,000 residential and 9,000 commercial) across the territory. In fiscal year 2015, WAPA's operating expenses were \$333.7 million, of which \$231.5 million (69.4 percent) was fuel costs. The residential and commercial electricity rates in the USVI tend to be 40 to 67 percent higher than the Caribbean regional average of \$0.33 per kilowatt-hour (kWh). Electricity rates in 2015 were \$0.47 per kWh, but at the peak of oil price costs, rates increased to \$0.57 per kWh. A histori-

cally unreliable grid and a dramatic decrease in solar and battery storage prices are driving customers to install their own generation systems. Consequently WAPA's electricity sales dropped 15 percent between 2010 and 2016.

The good news is that WAPA is currently implementing strategies not only to reduce energy costs by harnessing renewable resources, but also to build out a more resilient utility grid by decentralizing power generation and making the transmission network more robust. WAPA has developed the U.S. Virgin Islands' Clean Energy Goals, which include reducing fossil fuel-based energy consumption by 60 percent by 2025 and generating 30 percent of peak capacity from renewables by 2025. In addition, WAPA has installed a thousand distributed renewable energy systems to the WAPA grid. These systems met about 10 percent of peak demand on St. Croix. Thirty-four megawatts are under construction or approved for construction across the territory. And solar hot water systems are required for all new construction and government buildings until 2020.

More sobering is that WAPA does not have the capital to undertake the changes at the scale required to significantly reduce electric costs and increase reliability. WAPA's largest challenge is aggregating the capital needed to make the improvements to the electrical system to strengthen the grid and switch to renewable distributed generation. As a heavily debt-burdened government-owned utility, WAPA has less ability to raise money in the capital markets than privately owned regulated utilities. Until this hurdle is overcome, the high cost of electricity will continue to be a drag on sustainable economic development in St. Croix. The panel believes options should be explored to privatize the utility through a sale to a utility company with the technical and financial means to transform the generation and distribution of electricity in St. Croix.

Impact of Hurricanes Irma and Maria

The unprecedented landfall of two Category 5 hurricanes in 2017 decimated St. Croix’s electrical grid. This caused the kind of damage from which even a well-positioned utility system would struggle to recover, thereby exposing a number of the vulnerabilities throughout St. Croix’s infrastructure. Damages include the following:

- Ninety percent of WAPA’s above-ground power lines were damaged.
- Over 20 percent of WAPA’s generation capacity was affected.
- Power restoration took more than three months across the territory and in some cases even longer.

To mitigate future risks, the island is already working on or planning the following:

- Seven new, more efficient, nine-megawatt propane generators to be sited across the island to decentralize power production;
- Composite utility poles that are able to withstand 200 mile per hour winds; and
- Installation of all new electrical cable underground and implementation of a one-dig policy to install telecommunication cables along with the electrical ones.

Diversify Renewable Energy Portfolio

Although a lot of great forward-thinking work is already in motion, still more needs to be done to stabilize St. Croix’s energy, both to improve reliability and affordability for residential and commercial users and to prepare the island

for the next storm. And one big aspect of this work is to diversify the renewable energy portfolio.

The panel recommends the following actions:

- Stabilize fluctuations in electricity prices (for example, the localized cost of energy from utility-scale wind projects ranges from \$0.08 per kWh to \$0.14 per kWh generated cost).
- Implement large-scale wind turbines on the southwest of St. Croix.
- Increase the reliability of energy production and delivery.
- Reduce carbon emissions.
- Reduce the cost of water production (about 10 percent of WAPA energy is used for desalination).

Biofuels plus Waste-to-Energy plus Biogas

The panel recommends exploring two promising low-carbon technologies: advanced pyrolysis and gasification. These combined systems could process up to 60 tons per day of municipal solid waste.

- *Advanced pyrolysis* turns plastic waste (polystyrene, polypropylene, polyethylene) into a refined biodiesel that can be used in typical diesel engines found in cars, trucks, boats, and generators. Using this technology also brings the potential to reduce the volume of the municipal dump site by mining the landfill.
- The *gasification* option primarily processes organic and food waste streams and produces biochar (organic fertilizer) in addition to energy. If implemented, it can be sited across St. Croix in five- to ten-megawatt distributed generation plants.

Potential Energy Sources

	Short to long term	Medium to long term		Long term	
Energy source	Solar	Wind	Waste to energy	Biomass	Geothermal
Potential	To be determined	34 megawatts	16.5 megawatts	Less than 10 megawatts	Very low
Installed capacity	Over 8 megawatts	0	0	0	0

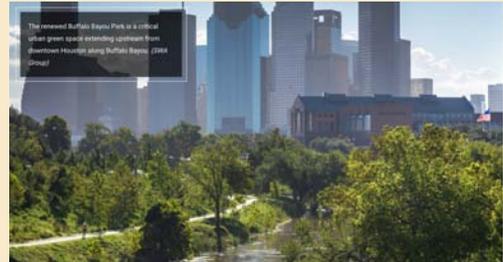
Source: R. David Gibbs/ULI.

Buffalo Bayou Park

Buffalo Bayou Park is a 160-acre linear park stretching for 2.3 miles west of downtown Houston, along the region's primary river. A \$58 million capital campaign transformed the park from a neglected drainage ditch into a citywide showpiece.

Its 10 acres of trails wind past seven major public art installations, through three gardens of native flora, and over four pedestrian bridges; two festival lawns, a dog park, a skate park, a nature play area, a restaurant, and an art exhibit hall draw visitors from afar. Applying green infrastructure techniques, Buffalo Bayou Partnership carefully sited structures above the path of potential floods, whereas park elements in the valley were designed and built to be submerged during future floods—requiring cleanup, rather than reconstruction, after the inevitable inundation.

ULI's Developing Urban Resilience website is a great resource for more information on Buffalo Bayou Park as



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well as other case studies on successful projects around the world: <https://developingresilience.uli.org/>.



Founded at MIT in 2011, Renewlogy is a Utah-based company that is committed to finding solutions for landfill-bound waste. Renewlogy is funded by partners in the government and private sectors through grants, awards, and capital debt. Renewlogy both develops its own solution-oriented technology for plastic waste and gives grants to other innovators. These technologies can be used in St. Croix to help reduce and repurpose some of its plastic waste.

- **Anaerobic digestion** is the process by which organic matter such as animal or food waste is broken down to produce biogas and biofertilizer. This approach can be used at a variety of scales (individual homes, neighborhoods and subdivisions, or utility scale) for processing organic waste into biogas (methane).

All of these approaches essentially create a closed-loop system where waste product becomes fuel that generates electricity and then gets sold back to the consumer. This technology also offers the opportunity to create a broad range of job opportunities from low-skilled to technically skilled jobs and align with a strategic workforce development plan.

Green Infrastructure and Policy

To achieve resilient energy and green infrastructure goals, the panel recommends exploring possible incentives for business and residences to invest in these approaches. Policy can be a great tool to encourage behavior changes that ultimately achieve impact, and the panel recommends taking a sharp look at what policies are in place now, whether they are working, and what might need to shift to achieve resilient energy goals and targets.

Green Infrastructure. The following green infrastructure strategies can help strengthen infrastructure as well as help decrease one of the greatest financial burdens for farmers. These strategies also leverage St. Croix's natural environment by using what is already there. The panel recommends planning and design to incorporate the following practices:

- Use water retention techniques taking advantage of the landscape, such as retention ponds, swales, and other strategies commonly used in permaculture.



Taking advantage of St. Croix's natural environment by using natural water retention techniques, as shown here, is a great way to connect the natural and built environments.

- Mitigate runoff and soil erosion and provide water catchment for irrigation.
- Integrate softscape and hardscape.

A Resilient Energy Future for St. Croix. To help build a more resilient energy future, the panel recommends the following:

- Increase distributed power generation (on-site generation and microgrids).
- Mitigate inefficiencies inherent in centralized power systems.

Piloting new technologies is a great way to test equitable solutions to St. Croix's energy challenges and foster community engagement. Solar phone-charging stations (below) can charge up to 80 phones at once, and if located in key public spaces and around key community events can help residents learn about and use a sustainable energy source while interacting with others.



Net Metering in St. Croix

St. Croix's net-metering program reached its cap in 2016 and no longer allows the benefits of exporting electricity for new residential or commercial renewable energy installations. The panel strongly recommends that St. Croix reintroduce net metering. Along with other factors, this situation is encouraging customers to decouple from the utility and opt for installation of on-site power generation systems. However, reintroducing the program would incentivize customers, thereby saving them money and reducing demand. WAPA has expressed an intention to reinstate the program.

- Reduce dependency on transmission lines.
- Create a more storm-resistant energy infrastructure.
- Explore the potential for energy storage integration for demand response and emergency backup.
- Create processes and systems for reliable energy production and delivery.
- Site seven new nine-megawatt liquefied petroleum gas engine generators across the island.
- Locate locally fabricated solar phone-charging kiosks along the Greenway to raise public awareness of WAPA's renewable energy initiatives.
- Create energy efficiency incentives to reduce demand and save consumers money.
- Reintroduce net metering.

Mobility

THE STATE OF THE ROAD and transportation infrastructure throughout St. Croix presents a significant challenge to any economic or community development strategy. Throughout the week, the panel observed the physical state of the road network and public realm, noting significant safety concerns for all modes of transportation, including pedestrian, bicycle, and vehicular.

The panel recommends directing resources to address and improve these assets in the early stages of any recovery strategy. Historic underinvestment in the transportation network has created real barriers to the mobility and movement of residents and visitors throughout the island and continues to negatively affect quality of life on St. Croix. The lack of a reliable public transportation network is a missed opportunity to help facilitate better mobility in a universally accessible and affordable fashion. For residents who do not own cars or for visitors to the island, the only alternative to rental cars and taxis (which appear

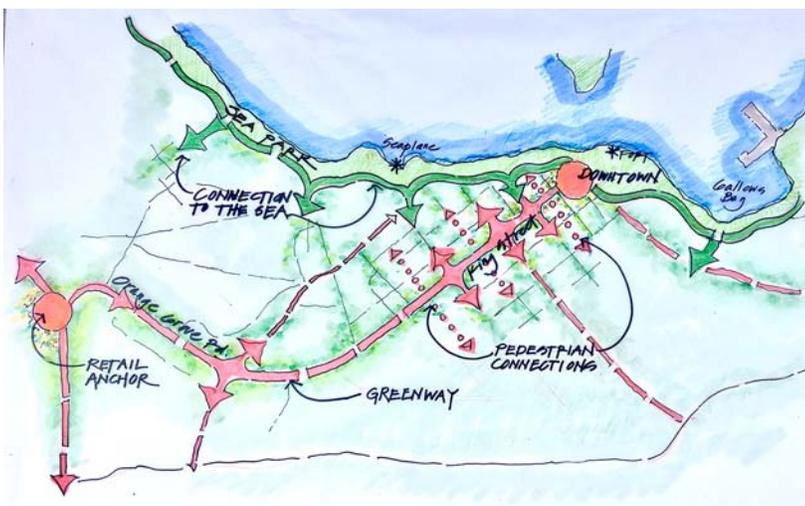
prohibitively expensive) is an informal hitchhiking system that raises safety and accessibility concerns.

Symptoms of this lack of accessible, affordable transportation options both within and between neighborhoods throughout the island revealed themselves in the panel's observations and stakeholder interviews and result in feelings of isolation, a greater disconnect between Christiansted and Frederiksted, restricted access of customers (both residents and visitors) to retail and commercial assets, and heightened concerns of displacement from public housing residents regarding redevelopment.

Vision Forward: Creating a Sustainable Urban Mobility Plan

To address these barriers, the panel recommends the creation and implementation of a Sustainable Urban Mobility Plan (SUMP) for the Christiansted study area. By making a series of investments to improve the transportation and mobility infrastructure within the study area, the government can quickly and tangibly strengthen connections between residents and visitors; help enhance and revitalize existing commercial, retail, park, and ocean assets; and lay a strong foundation for mobility that will significantly magnify the impact of new developments and ensure their success.

As people's ability to move throughout the study area is improved, retail assets will see more customers and thrive, parks will have more users and become safer and more active places, the power of cultural districts to teach and affect both visitors and residents will increase, and the barriers noted in the previous section will begin to shrink. Although investing in things like roads and sidewalks may be less exciting than large-scale infrastructure projects, these smaller infrastructure elements can be powerful tools to connect people to other people and to the assets that already exist in the study area.



As illustrated here, the panel developed a plan that creates new greenways, establishes new pedestrian connections, and increases the variety of transportation options available to residents and visitors. The panel believes these will also establish the foundations for the recommended equitable economic development and housing strategies.

A Strategic Urban Mobility Plan for St. Croix

1. Create new greenways

- Improve mobility throughout the study area
- Connect people to assets (retail, parks, ocean, etc.)
- Explore car restrictions
- Connect the bookends of the study area (people should be able to get across it in 10 minutes)

2. Create pedestrian connections

- Special focus *within* commercial districts
- Special focus *between* housing districts
- Special focus *between* housing and park/ocean

3. Go multimodal

- Enhance bike and other noncar options
- Establish a better public transportation system
- Explore car-sharing options

ADAM WEERS/ULI

When implemented well, a transportation and mobility strategy can expand the sense of community from isolated pockets around the island throughout Christiansted. Moreover, these projects represent tangible investment opportunities that can be thoughtfully planned and executed in a very short time frame and that, once in place, will be visible to and used by residents and visitors immediately. This short-term improvement can help build a sense of movement and momentum toward recovery and transformation as well as trust between residents and the government.

This SUMP can also be a useful framework for a larger transportation and mobility strategy. If desired, the government could begin with this portion of the SUMP that focuses on the panel's study area only and later expand out and tie into an island-wide strategy. Furthermore, some of these ideas, improvements, and connections may be carried through to a territory-wide view. In this way, the SUMP recommendations have the capacity not only to help improve Christiansted, but also to provide powerful examples of ways that St. Croix can assume a leadership role in the territory-wide recovery and transformation of the entire USVI into the future.

The SUMP is made up of three simple yet powerful elements:

1. Create new greenways as foundational elements for the **efficient movement of people** and the connection of key retail, commercial, park, and ocean districts;
2. Create new pedestrian connections to **strengthen ties between residents and visitors** that populate the

study area and the key retail, commercial, park, and ocean districts; and

3. Increase the variety of transportation modes, including bikes, car sharing, and public transportation, to enhance the **accessible, affordable movement** of residents and visitors throughout the study area.

Element 1. *Create new greenways as the foundation to move people and connect key retail, commercial, park, and ocean districts.* Prioritizing investment in greenways first is an important symbolic and functional step, given its potential prominence throughout the study area and impact in connecting the bookend historic and retail districts of Christiansted. Initial steps should include a more detailed planning and engineering study that considers some sig-



AMIE MACPHEE/ULI AND ADAM WEERS/ULI

The creation of new greenways will make it easier for people to move around Christiansted; create connections to key retail, commercial, ocean, and open-space districts; and strengthen ties between residents and visitors.



The proposed pedestrian walkways connect within and between different neighborhoods as well as to other assets.



Going multimodal creates more options for people to move around by increasing the variety of transportation modes, enhancing bike and other non-car options, and creating more affordable and accessible choices.

nificant modifications to the existing road network; a significant widening of certain existing roads (e.g., Northside/King); the adjustment of traffic flows or removal of cars on certain greenways; and the installation or undergrounding of utility improvements. Other smaller, yet effective changes to consider include installation of new sidewalks; creating space for bike lanes and other noncar modes of transportation; beautification efforts to enhance the physical and vehicular experience along the greenways; and installation of alternative energy components.

Element 2. Create new pedestrian connections to strengthen ties between residents and visitors in the study area and the key retail, commercial, park, and ocean districts. The panel recommends creating improved sidewalks and road crossings at connection points highlighted in the plan that are designed primarily to improve movement and connections between housing districts and existing retail, park, and ocean assets. This should include special, concentrated improvements in the historic commercial district to encourage the movement and flow of pedestrians inside this area. It should also include special, concentrated improvements to create pedestrian pathways between the John F. Kennedy (JFK) Terrace, D. Hamilton Jackson Terrace, and Ralph de Chabert Place housing areas to provide an enhanced connection from neighborhood to neighborhood and expand the sense of community throughout the entire study area.

Element 3. Increase the variety of transportation modes available, including bikes, car sharing, and public transportation, to facilitate accessible, affordable movement of residents and visitors throughout the study area. Invest in and create new modes of transportation throughout the study area, including bicycles, car sharing, and public transportation, to encourage easy movement of people between the historic/commercial and retail districts that bookend the study area. This should include the creation of new paths and lanes throughout the study area, emphasizing connections along the panel's proposed new greenways with a goal of helping people travel from one end of the study area to the other in less than 10 minutes.

The panel recommends that the USVI government explore investing in a free bike-sharing program. By placing 15 to 20 bike-sharing stations throughout the study area and by making them available to all as a free resource, the government would allow all residents and visitors in the study area to see improved access and mobility. Consideration should also be given to investing in an improved public transportation system and the introduction of a car-sharing system in the study area.

Implementation and Timing

All three SUMP elements can be studied and implemented in the study area by July 2020. If pursued immediately, this strategy could improve mobility and enhance connections between existing residents and the study area's retail, historic, ocean, and park districts, thereby providing an immediate and tangible positive impact to Christiansted. In addition, making early investments in the SUMP elements will build a foundation that directly supports the other components of the panel's economic development and housing strategy for the study area with longer time horizons.

Extension throughout St. Croix

Once the panel's recommended transportation and mobility strategy is established in the study area, focus can turn to replicating the model across the entire island. The primary goal of an expansion is to create a Christiansted/Frederiksted connection, though thoughtful consideration should also be given to additional areas, such as the university and airport, that can benefit from the enhanced mobility provided by an overlay of this strategy.

Once the cross-island extension begins, the panel recommends exploring how to incorporate new modes of transportation, with specific focus on public transportation and an improved bus system. The panel also recommends looking at how to incorporate complementary maritime transportation and water taxis to enhance the proposed cross-island extension. Wrapping a water taxi or other maritime transportation mode onto the pedestrian and bicycle strategy will create a comprehensive system with multiple modes of access and options, thereby reducing

the overall dependency on cars and parking on the island as well as traffic.

Extension throughout USVI

Beyond the proposed transportation and mobility strategy and cross-island extension, consideration should be given to addressing the challenges of moving among and between the individual U.S. Virgin Islands. The panel received significant feedback about the barriers that exist in moving among St. Croix, St. Thomas, and St. John, particularly on the prohibitively high cost and limited choices. Although a significant challenge to tackle, unlocking this component of the transportation and mobility strategy can harness important enhancements to quality of life and economic development strategy for the territory and inter-island interactions. The government should explore the possibilities of establishing a public fleet of ships and planes to provide transportation between islands at an affordable and accessible cost.

While ambitious in nature, the benefits of a successful territory-wide strategy could be powerful and could include the following:

- Reconnection of families and residents between islands;
- Enhancement of the territory-wide tourism industry by establishing viable connections from boats in St. Thomas to retail and economic destinations in St. Croix;
- Potential for connections outside the territory, including with Puerto Rico and other surrounding islands and countries; and
- Significant expansion of the St. Croix economy through establishment of a major transportation industry with multiple layers:
 - Manufacture of ships and planes;
 - Public/private partnership options for manufacturers and operators; and
 - Increased employment resulting from a large fleet.

The Benefits of Greenways

Greenways are corridors of protected open space generally managed for conservation and recreation purposes and known for their ability to connect people and places. Most greenways also have some sort of open space and recreational element to them, whether repurposing an old rail track into a pedestrian path or reimagining underused land into community open space. They can be public or privately owned, and some are the result of public/private partnerships. Greenways benefit communities not only by providing recreational amenities and transportation opportunities, but also by influencing economic and community development. Following are some of their chief benefits:

- Enhancing a community's quality of life but preserving and creating open spaces;
- Promoting active and physical lifestyles;
- Creating new opportunities for outdoor recreation and nonmotorized transportation;
- Strengthening local economies;
- Protecting the environment through serving as vegetated buffers protecting natural habitats or by improving water quality and reducing the impacts of flooding in floodplains; and
- Preserving culturally and historically valuable areas.



The Atlanta BeltLine is a sustainable urban redevelopment project that connects 45 neighborhoods through a 22-mile multiuse loop in Atlanta, Georgia. The loop is reusing a former railroad corridor that circled the city. Atlanta BeltLine Inc. and the Atlanta BeltLine Partnership worked together to partner with organizations across the city, region, state, and country to make this project happen. Although the Atlanta BeltLine is an urban greenway, many of the same design, development, and social principles can be applied to a waterfront greenway in St. Croix. For other examples of open spaces and why they should be invested in, see <https://americas.uli.org/healthy-places/the-case-for-open-space-why-the-real-estate-industry-should-invest-in-parks-and-open-spaces/>.

Placekeeping

THE FIRST STEP TO UNDERSTANDING A PLACE

is to listen. Throughout the week, the panel team asked, *What does St. Croix mean to you?* The panel met with a diverse cross section of St. Croix—residents, local business owners, artists, entrepreneurs, students, public officials, and more. Unsurprisingly, one of St. Croix’s greatest assets is its people: nearly all of the recommendations detailed in this report have come from the residents of St. Croix. A number of strategic *placekeeping* recommendations are described in this section to help preserve St. Croix’s unique cultural and community assets and to build momentum off the great work that is already happening.

The panel recommends four strategies—preserve, connect, design, and gather—which are described in detail in the following subsections.



In each stakeholder interview, the panelists asked what words come to mind when they think of St. Croix. The most popular words are represented in the largest-size type. The panel heard people talk most about their love of their home and community and an excitement for St. Croix to thrive.

Creative Placemaking and Placekeeping

Creative placemaking approaches can help build strong, healthy cities by promoting the integration of arts and culture as part of community revitalization strategies. Often thought of as a philosophy about public space, creative placemaking is contingent on the premise that logic cannot be superimposed on a city but must grow organically from people. However, it also can have the unintended consequences of supporting gentrification, unequitable economic development, and real estate speculation.

According to cultural activist Robert Bedoya, *placekeeping* is somewhat of a revision of placemaking, defined as “a call to hold on to the stories told on the streets by the locals, and to keep the sounds ringing out in a neighborhood populated by musicians who perform at the corner bar or social hall.” This might include preserving the aesthetic of existing neighborhoods, their vibrant storefronts, and murals or holding community workshops to collect oral histories of a neighborhood. Very similar in intention to placemaking, *placekeeping* makes existing aesthetics—and most notably the people responsible for them—visible.

Strategy 1: Preserve

First, focus on honoring and preserving St. Croix’s unique architectural and cultural heritage.

- Document and map the sites of historic significance across the city.
- Identify key government-owned lots and strategize creative uses for them, such as how they could be used to solve drainage issues or become places for new civic spots (parks, markets, shelters, pop-up vendors). Host a



TINY WPA



TINY WPA



TINY WPA



TINY WPA

Tiny WPA's mission is to "grow and empower an army of talented community-design leaders—Building Heroes—that will make Philadelphia the national model for how to engage people of all ages in the design of their cities and help lay the foundation of an incomparable future for community-generated civic innovation." Tiny WPA is a great example of placemaking and placekeeping programming that could be piloted in St. Croix.

request for proposals to generate ideas and spur action for pop-up interventions on these vacant lots.

- Start with easy wins on beautifying; for example, remove the chain link fence at the boardwalk on government-owned lots.
- Build on the momentum from the ideas in the Town Plan created by the community charrette process in 2013.
- Intensify the work around the "missing teeth/missing owners" initiative.
- Engage the community to partner with the National Park Service to amplify awareness, education, and training on the importance of historic preservation and island legacy.

Strategy 2: Connect

Connect Christiansted through social and physical opportunities.

- Explore ways to move around—beyond the car.
- Address unsafe streets, specifically by tackling speeding and infrastructure.
- Address parking challenges; for example, give tickets to people who park for over the two-hour limit.
- Engage a bike champion to help grow the biking community and facilities, such as the following examples:
 - Turn Cruzin Scooters into a "bicycle kitchen": a place that teaches kids how to repair bikes, helps bike owners learn to fix their bikes, and creates a hub for the biking community.
 - Host a CicLAvia-style "open streets" event.
 - Support community efforts for a comprehensive bike path system.
- Identify the best places for plazas, markets, and sports activities in the map of downtown.



STEVE AND JULIE/FICKRA

According to its website, “CicLAvia is a 501(c)(3) nonprofit that catalyzes vibrant public spaces, active transportation and good health through car-free streets.” Since 2010, CicLAvia has closed down streets in the Los Angeles area, allowing people to bike, walk, and play safely in the streets for a day. Inspired by Bogotá, Colombia’s ciclovia, CicLAvia is the biggest open-streets event in the United States.

- Make it easy for everyone to get to the ocean, and increase accessibility for disabled users.
- Amplify programs such as the plastic bag/turtle campaign that builds respect for the island and the sea through marine resources and education, and expand these programs for children and schools.
- Use the boardwalk extension from Gallows Bay to the Power Station to be multiuse for local residents and for tourists.
- Get people downtown: host “Walks with Your Senator,” potlucks and conversations with the National Park Service, “Clean up the Town” days with the kids, and storytelling events by elders.

Strategy 3: Design

Design a comprehensive open-space and parks system that includes parks, greenways, sea parks, flood control retention, and a path system. The panel’s Open Space Framework can be used as a jumping-off point for what can be included.

- A well-designed system can help reduce flooding, create places for young and old to play and socialize, and link up the community in healthy ways, off the streets.

The Power of Story

StoryCorps’ mission is “to preserve and share humanity’s stories in order to build connections between people and create a more just and compassionate works.” As noted frequently throughout this report, the panel believes that St. Croix’s greatest asset is its people and, by extension, their stories. StoryCorps is an example of a creative and innovative approach to collecting, sharing, and preserving people’s stories. A similar effort or collaboration in St. Croix could help create a forum for community dialogue, preserve the island’s past and present histories, and—best of all—give residents a chance to share their stories.

Formed in 2003, StoryCorps was modeled after the efforts of the Works Progress Administration of the 1930s, which recorded oral history interviews. StoryCorps uses several approaches: story booths, which are conveniently located and publicly accessible recording studios; mobile booths, which travel through various cities throughout the year; and additional recording services—including the door-to-door service, which sends teams of StoryCorps facilitators to temporary recording locations; the StoryKit service, a portable recording device sent to participants; and the Do-It-Yourself service, which allows individuals to download free step-by-step interview instructions, equipment recommendations, and a “Great Questions” list to conduct interviews using their own recording equipment. Most recently StoryCorps added the StoryCorps app, which allows people to record interviews on a smart phone.

For further information, visit <https://storycorps.org/participate/host>.



ANNA FRODESIAK/WIKIMEDIACOMMONS

The StoryCorps MobileBooth works with partner organizations to facilitate conversations and collect peoples’ stories from within their communities.



ANNE MACPHEEDOU

The panel's proposed Open Space Framework is designed to create opportunities that enhance resilience, community connections, community health and wellness, and overall tourism infrastructure.

- Engage current high school students in the planning and visioning process and get their input on what would bring them downtown.
- Create a place, such as a market hall, to catalyze agriculture and the expanding food infrastructure and agribusiness sector discussed earlier in this report.
- Add a school or satellite spot for off-island schools to host classrooms while in town. Look for partnerships with mainland schools for week-long outdoor education field trips focused on marine biology or island history.
- Bring a small grocery store or *bodega* into the historic downtown.
- Engage downtown business owners and artists on what they need downtown to build successful businesses.
- Use social media as a tool for driving momentum downtown. Highlight upcoming events, special deals, and connection opportunities.
- Celebrate the success of St. Croix's Food and Wine Experience by hosting smaller festivals throughout the year and increase marketing.
- Think creatively about how civic places can become community gathering places beyond traditional uses; for example, find strategies for how the library can be used after hours and on Sundays.
- Locate bike and path systems within the open-space and park system.
- Make this a cornerstone for health and wellness opportunities in Christiansted.
- Link the town to the rest of the island through a trail system.
- Use the strategies developed in this plan, and find opportunities to expand them to other parts of the island and the territory.

Strategy 4: Gather

Take what is already working and amplify it by focusing on *placekeeping* rather than *placemaking*.

Urban gardens are a wonderful way to transform underused land into a community hub, a place to teach life skills, and a healthy food source. To read more about Washington, D.C.'s urban gardens and their community impact, visit <https://www.npr.org/sections/health-shots/2018/07/20/630615148/replacing-vacant-lots-with-green-spaces-can-ease-depression-in-urban-communities>.



U.S. DEPARTMENT OF AGRICULTURE/FLICKR



TASTEOFSTCROIX.COM

Bringing together more than 50 local chefs, restaurants, and farms, Taste of St. Croix has run for 18 years and celebrates the spirit and flavors of the island. A large draw for international guests, the festival is an example of an event whose success should be built upon.

Case Study: SEE/CHANGE DC

SEE/CHANGE DC is an example of a successful, creative, community-engagement project to encourage community building and foster dialogue about rapid neighborhood change. A similar endeavor in St. Croix could help create meaningful discussion about community change while also celebrating residents.

What. The video art project puts a human face on how population change and revitalization are affecting two Washington, D.C., neighborhoods, Park View and Pleasant Plains.

When. During fall 2016, video portraits of community members were projected on storefronts and on street corners along a main corridor—Georgia Avenue, N.W.—in the Park View and Pleasant Plains neighborhoods.

Who. SEE/CHANGE DC was imagined and produced by the Pink Line Project + Citizen Innovation Lab, created by Composite Company and BellVisuals, and is funded by the D.C. Office of Planning (OP) and the Kresge Foundation.

How. SEE/CHANGE DC is part of the OP's comprehensive creative placemaking initiative, Crossing the Street: Building DC's Inclusive Future through Creative Placemaking, funded by a grant from the Kresge Foundation. The grant is intended to "promote community building in neighborhoods that are experiencing rapid demographic and social change, to engage residents in conversations about the future of the District as the OP embarks on an update of D.C.'s Comprehensive Plan, and to demonstrate or test select placemaking recommendations articulated in the OP's neighborhood plans and District Department of Transportation transit corridor studies and livability studies," according to the OP. In December 2015, the OP released a request for applications seeking qualified curators and project managers to work with it and other District and community stakeholders to define and implement temporary creative placemaking projects. Curators were selected in early 2016, and projects such as SEE/CHANGE DC were implemented that year.

For further information, visit www.seechangedc.com.



Housing

AFFORDABLE AND WORKFORCE HOUSING are in great demand, according to a VIHFA housing demand study conducted in 2015, and demand has only become more acute since the two devastating hurricanes in fall 2017. USVI had about 43,000 occupied housing units, with 20,000 on St. Croix (pre-2017 hurricanes); 20 percent of renter-occupied units are considered substandard. A variety of housing types are desperately needed on the island, including affordable rental and paths to ownership opportunities as well as senior, supportive, and homeless housing facilities. Housing is extremely challenging for the territory's people and should be a priority for the Governor's Advisory Task Force. The panel recommends that any plan should include a comprehensive, integrated, and coordinated strategy addressing the production and rehabilitation of the housing stock, reduction in energy costs, and a more hardened and resilient infrastructure.

According to the most recent census data, the ratio of rent to income on St. Croix for the population ages 15 to 64 was greater than 35 percent and greater than 50 percent for the over-65 age group. Slightly more people rent than own homes territory-wide, and many homeowners do not have mortgages because of a general avoidance of debt. In addition, energy, water costs, and home insurance are very high for homeowners.

Two USVI public agencies provide affordable rental and homeownership housing units for low-to-moderate-income residents and families. The VIHA is the public housing authority and provides subsidized public housing for the territory. The VIHFA is the primary provider of rental and homeownership through a variety of efforts, including new construction, redevelopment, ownership assistance, and housing rehabilitation. Together, the two agencies oversee

the public and assisted housing units throughout the USVI. Over the last 20 years, hurricanes and obsolescence have reduced the housing inventory to about 3,000 units in 26 communities. VIHA administers just over 2,000 housing-choice vouchers on the three islands and wants to convert public housing units on St. Croix and in the primary focus area to project-based vouchers. This would allow VIHA to access private financing for construction, although the allocation to the VIHFA is just \$3 million in low-income housing tax credits (LIHTC) per year, which will produce only 50 to 70 units of new housing at current costs.

Although the panel sees opportunities for small-scale development, infill housing, and historic preservation in the study area, the panel's primary focus is on the challenges, constraints, opportunities, and strategies for rebuilding the public housing west of Christiansted town center. In this context, the VIHA has a once-in-50-year opportunity not only to replace decades-old and substandard public housing, but also to reimagine low-income homes as diverse and inclusive, thriving communities of safe, healthy, and energy- and water-efficient housing.

The funding for recovery (FEMA, CDBG-Disaster Recovery, Sheltering and Temporary Essential Power [STEP]) allocated to the public projects located on the west side of Christiansted provides the VIHA and the VIHFA the opportunity to reimagine the neighborhood context, mix of housing, open space, resident needs and desires, and connections to the neighborhood, town, and island. The housing is slated to be rebuilt on existing sites owned by VIHA/VIHFA consisting of John F. Kennedy Terrace, D. Hamilton Jackson Terrace, Alphonso Gerard Housing Complex, Ralph de Chabert Place, and Lyndon B. Johnson (LBJ) Gardens, totaling nearly 500 housing units.

Housing Challenges

Myriad challenges have halted construction and pose a hindrance to potential planned new development. These issues need to be addressed, and strategies for both short- and long-term solutions should be implemented to make the VIHA's plans as cost-effective as possible. These challenges include the following:

- Urban neighborhoods have multiple property owners, hindering change because of a lack of consensus about making improvements.
 - The prevalence of vacant and deteriorating buildings affects the availability of safe and affordable housing and inhibits redevelopment of vibrant historic districts that would bring in businesses, employment, housing, and other opportunities.
 - Currently no comprehensive land use plan exists in the USVI. Rather, land use is managed under a cumbersome 1972 zoning code. Although land is designated for residential development in most zones, and areas are set aside for planned developments, they are rarely used.
 - Construction costs are prohibitively high.
 - Local builders and developers and even construction personnel are in limited supply, driving up the cost of housing development.
 - A lack of indigenous building practices and products as well as high shipping costs drives up construction costs.
 - A lack of infrastructure makes any potential building sites infeasible for moderately priced construction.
 - Because the Virgin Islands are outside the U.S. customs zone, imports from the mainland as well as foreign countries are subject to excess duty charges.
 - People outside existing cities rely primarily on cisterns for water and septic systems for sewage disposal. Extending the existing systems is very expensive, and putting in new cisterns is even more so.
- About half (48 percent) the USVI's occupied housing units are occupied by the owner and less than half of these have a mortgage. Just 26 percent of occupied housing units are occupied by households that have a mortgage. Even without the expense of principal and interest associated with a mortgage, owners must pay for utilities, insurance, taxes, and maintenance.

Housing Opportunities

St. Croix is in a unique position with funding, new technology, and interested investors to tackle the challenges described in the preceding section and start building resilient housing. As a first step, the panel recommends leveraging the following opportunities.

- Governmental:
 - Take advantage of available recovery funding (as much as \$1.9 billion) and leverage recovery funding to build up workforce and entrepreneurship programs.
 - Use existing VIHA and VIHFA assets.
 - Reimagine public housing in Christiansted.
 - Create public/private relationships between VIHA, the private real estate development community, and the construction and labor industries.
- Environmental:
 - Energy: Harness wind and solar technologies.
 - Water: Maximize the benefits of water capture through treatment and reuse.
- Infrastructure:
 - Integrate networked, flexible systems into new buildings.
 - Focus building orientation to take advantage of trade winds and topography.



LISA PARKER/FLICKR



LIBBYHASLAM/WIKIMEDIA COMMONS

Rammed earth is a natural construction process that uses local materials such as earth, chalk, shells, and gravel. This is a historic process that has been brought back into use by the focus on sustainable building practices. Rammed-earth construction can be used for a variety of building types and purposes.

- Private sector:
 - Engage and partner on mixed-income housing development, and deconcentrate poverty.
 - Seek new sources for procurement.
 - Develop best practices with public/private partnerships, designing, and building.
- Design:
 - VIHA should consider a design competition to solicit best design concepts, including passive design for redevelopment of projects. The design competition should include the construction of the first 50 to 100 mixed-income homes to replace the existing housing and be used to establish performance metrics for the remaining new housing.
 - Use indigenous building practices such as rammed earth construction.

Reimagining Housing: Public Housing Redevelopment Strategy

Any strategy for the redevelopment of public and assisted housing must prioritize ensuring that the residents who currently enjoy the prime location of Christiansted and are close to the ocean continue to have the opportunity

Reimagining Housing through Best Practices

A variety of opportunities exist to bring in outside thought leadership to help develop creative strategies for housing solutions, which could include the following:

- Enterprise Rose Architectural Fellowship partners emerging architectural designers with local community development organizations to facilitate an inclusive approach to development that results in green, sustainable, and affordable communities.
- Enterprise Green Communities aligns affordable housing investment strategies with environmentally responsive building practices, to ensure that people living in affordable housing are healthier, spend less money on utilities, and have more opportunities through their connections to transportation, good quality food, and health care systems.
- Create a Housing Authority Fellowship Exchange Program that could supplement staff capacity at VIHA.
- Explore hosting a design competition such as Bay Area: Resilient by Design to generate innovative approaches centered on resiliency, design, community engagement, and private/public partnerships.
- Bring in a partner like Stanford University's Design for Extreme Affordability program, which brings together the school's design, business, and engineering programs to design products and innovations that address specific affordability challenges.
- Bring in partners such as the Center for Maximum Potential Building Systems, a nonprofit education, research, and demonstration organization specializing in life-cycle planning and design. It undertakes projects based on their potential contribution to site, regional, and global sustainability and human health and actively pursue collaborations with associate organizations, businesses, and professional firms.

to remain in their community and benefit from future economic and community development activities. Shifting the socioeconomic demographics of this community is of equal importance to generating the economic growth desired by the community.



The panel recommends a phased approach to the redevelopment of the island's public and assisted housing to mitigate displacement while improvements and expansions are taking place. This plan should also be coordinated with St. Croix's Open Space Framework and Urban Mobility Plan.

To achieve these objectives, the panel recommends a housing development strategy that takes advantage of the vacant agency-owned properties and creates new mixed-income residential communities. Critical to the success of this redevelopment plan is the engagement of the community to reimagine how their housing community can be the impetus and economic driver for Christiansted.

Phase One: Ralph de Chabert Place and LBJ Gardens

Begin the redevelopment of Ralph de Chabert Place and LBJ Gardens with the goal of creating at least 363 new public housing and affordable homes. Relocate 200 public housing residents from JFK Terrace using project-based Section 8 vouchers and the U.S. Department of Housing and Urban Development's (HUD) Rental Assistance Demonstration (RAD) program, and add 163 LIHTC units during phase two. Engaging public housing residents and local stakeholders in a series of visioning sessions is vital for the successful redevelopment of Ralph de Chabert Place and LBJ Gardens and should happen early and often.

The panel recommends using the following redevelopment best practices to help transform existing public housing into vibrant communities:

Breaking Down Barriers to Engagement: Keys to Equitable Engagement

- Meet people where they are.
 - Work with community advocates (as engagement liaisons).
 - Make it worth their time.
 - Measure success.
 - Leverage each opportunity to cultivate champions.
 - Communicate using multiple methods.
 - Send a diverse team.
 - Focus on shared decision-making, co-creation, and seeding of community-driven efforts.
 - Engage in less planning and talking, more implementation and action.
 - Understand that trust takes time.
- Design and create a neighborhood through a range of architecture styles and building types.
 - Create ample open space, including a beachfront park, programmed play area, recreation space, and community gardens.



ABODE COMMUNITIES

Community engagement is a key element to making any successful development project happen, regardless whether it is done by a for-profit, nonprofit, or public entity. These images are from community outreach meetings hosted by Los Angeles-based Abode Communities. Abode Communities is a nonprofit social enterprise that provides service-enhanced affordable housing and socially beneficial community facilities.

- Reintroduce the street grid.
- Create gathering places, including a community center and a multipurpose space.
- Focus on connectivity within the community, along the boardwalk, and to the downtown.

Phase Two: John F. Kennedy Terrace and D. Hamilton Jackson Terrace

Begin the development of JFK Terrace with the goal of creating at least 200 units. Temporarily relocate residents from JFK Terrace to Hamilton Jackson Terrace, and add 90 LIHTC units during phase three. During construction, work to provide temporary housing for these residents in the same area, keeping the community together and mitigating feelings of displacement.

Engage in a comprehensive master planning and community engagement process for the redevelopment of all agency-owned property in Christiansted.

Use phased redevelopment of JFK Terrace and D. Hamilton Jackson Terrace to create mixed-income communities for existing public housing residents and new homes affordable to low- and middle-income residents.

The panel recommends using the following redevelopment best practices to help transform existing public housing:

- Begin to identify opportunities for economic development in the commercial areas adjacent to and surrounding the agency-owned sites.
- Build a mixed-use community that has the infrastructure to be resilient in the face of future challenges.

Phase Three: Alphonso Gerard Complex and Ruby M. Rouse Apartments

Redevelopment should include at least 136 units and create a mix of public housing, LIHTC, and moderate-income units.

Redevelop Alphonso Gerard Complex and Ruby M. Rouse Apartments to create mixed-income communities of new homes affordable to low- and middle-income residents. Build upon the momentum from successes in phases one and two.

Use best practices of building communities and ensure connections to a thriving downtown Christiansted.

Build a mixed-use community that has the infrastructure to be resilient in the face of future challenges.

Renewal, Preservation, and Production Opportunities

With the strategies listed throughout this report as well as the preceding housing strategies, an influx of funding and community support can lead to a renewed focus on redeveloping and preserving downtown Christiansted. These efforts should focus on the following areas:

- Historic restoration for downtown Christiansted;
- Restoration of the historical residential community in downtown Christiansted; and
- Low-interest loans and grants to restore and rehabilitate existing single-family homes around Christiansted.

These efforts should be made in partnership with the placekeeping and equitable economic development recommendations described earlier in this report.

Conclusion

THE GUIDING PRINCIPLE for all the panel's recommendations revolves around the simple premise of doing no harm. Thoughtfulness about how to truly connect communities and begin to break down some of the physical, social, and economic barriers that exist in St. Croix is the linchpin of this report. Resilience is not just about the electricity coming back after a storm, but about how well we respond to each other, how we make investments in people, in infrastructure, and in connectivity, and how to put capital where capital works best.

The panel believes that if the government teams up with local residents through thoughtful community engagement, the many recommendations outlined throughout this report can have meaningful, sustainable, and equitable outcomes

for change. St. Croix is positioned to use FEMA funds to make it an island for its people by repositioning its assets and plans to center on strengthening and growing from the current community. If St. Croix succeeds, this will lead to further investment and a renewed interest from outside the island. St. Croix can become a model and thought leader not only for other Caribbean islands, but also for communities across the world that are looking to reinvent themselves after tragedy.

Additional Resources

Housing

- Enterprise Rose Architectural Fellowship, <https://www.enterprisecommunity.org/solutions-and-innovation/rose-architectural-fellowship>
- Enterprise Green Communities, <https://www.enterprisecommunity.org/solutions-and-innovation/green-communities>
- Stanford University's Design for Extreme Affordability

Equitable Economic Development

- Etsy Craft Entrepreneurship, <https://www.etsy.com/craftentrepreneurship>
- Facebook Level Up Program, <https://www.facebook.com/fbgaminghome/creators/levelup>
- Greenbelt Movement, www.greenbeltmovement.org
- The Shared Equity in Economic Development Fellowship, <https://institute.coop/sites/default/files/SEED%20Fellowship%20v03.01.pdf>
- Stabilized rammed earth, <https://www.google.com/search?q=stabilized+rammed+earth&ei=Zez2W520JMqzgge5qbT4Ag&start=10&sa=N&ved=0ahUKEwjd-oSFyOjeAhXKmeAKHbkUDS8Q8NMDCLUB&biw=1600&bih=772>
- Aerofarming:
 - <https://aerofarms.com/story>
 - <https://modernfarmer.com/2018/07/how-does-aeroponics-work>
 - <https://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=34517.wba>

- Economic Development Agency Planning Grants, <https://eda.gov/funding-opportunities/>
- New Markets Tax Credits, <https://www.cdfifund.gov/programs-training/Programs/new-markets-tax-credit/Pages/default.aspx>
- Historic Tax Credits, <https://savingplaces.org/historic-tax-credits>
- *Ten Principles for Successful Public/Private Partnerships*, http://uli.org/wp-content/uploads/2005/01/TP_Partnerships.pdf

Placekeeping

- Tiny WPA, www.tinywpa.org
- SEE/CHANGE, www.seechangedc.com
- StoryCorps, <https://storycorps.org/about>

Infrastructure + Mobility

- CicLAavia, www.ciclavia.org

Bookshelf for St. Croix

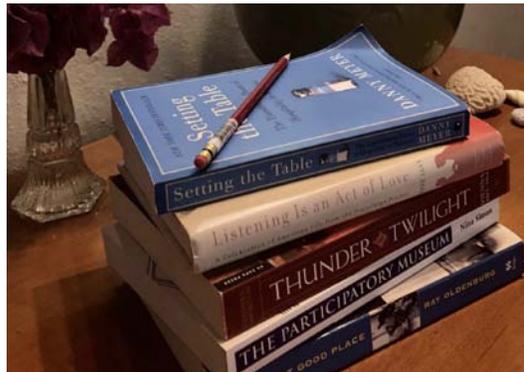
THE PANEL REFERENCED A NUMBER OF BOOKS

that helped inform some of the recommendations that are described throughout this report. The following is a list of those books that the panel hopes can also be a guide for the sponsor teams continuing work to help build a more resilient St. Croix.

- *Setting the Table: The Transforming Power of Hospitality in Business*, by Danny Meyer. Danny Meyer shares the lessons he learned developing the dynamic philosophy he calls Enlightened Hospitality.
- *The Participatory Museum*, by Nina Simon. A practical guide to working with community members to make cultural institutions more dynamic, relevant, and essential places and a strong case for participatory practice.
- *Listening Is an Act of Love: A Celebration of American Life from the StoryCorps Project*, by Dave Isay. A collection of stories from StoryCorps' collection.
- *The Death and Life of Great American Cities*, by Jane Jacobs. First published in 1961, this book covers

everything from what makes streets safe or unsafe to what makes up a neighborhood and its role in the larger ecosystem of the city, and the dangers of too much development and too little diversity.

- *Thunder at Twilight: Vienna 1913/1914*, by Frederic Morton. A look at Vienna from 1913 to 1914. The author noted that this vibrant city had two things that all great places have: one foot in memory and one foot in prophecy.



SANDRA KULLI/OLI

This group of five books is the start of a small library that provides lessons on how to think through a major project from hospitality, creative placemaking, storytelling, planning, and historic perspectives.

About the Panel

Carlton Brown

Panel Chair

New York, New York

As a principal at Direct Invest, Brown focuses on developing strategies to bring capital markets to disinvested communities to invest in the development of sustainable restorative human settlements. He sees investment in sustainable human settlement as the most important strategy for stemming climate change, adapting to climate change, and creating resilient and equitable communities.

This strategy of sustainable restorative development addresses human social, economic, and cultural development while at the same time preserving environmental resources for future generations and returning a market rate of return for investors. Whereas many believe these are contradictory objectives, Brown's work has continuously pointed the way forward.

Before there was a U.S. Green Building Council (USGBC) with a focus on green housing, Brown was exploring these strategies in the development of low-carbon-footprint affordable housing in economically devastated communities of Brooklyn, New York, and developing mixed-income condominiums in Harlem that were heated and cooled by geothermal extraction and injection. This triple-bottom-line approach has continued to demonstrate that you can do good while doing well.

Brown is spearheading Direct Investment's initiative in helping community-based organizations mine value from their underused real estate assets through sustainable development strategies. The deployment of cost-effective sustainable development practices contributes to bringing value to all markets in which the firm is working. Brown has had a long-term focus for much of his career on developing

strategies for creating sustainable restorative human settlement that heals the physical human fabric of communities.

He has been leading Direct Invest in its explorations of strategies to develop "closed loop" triple-bottom-line developments in the developed northern hemisphere and in rural sub-Saharan Africa. The closed-loop developments Direct Invest pursues address strategies for adapting to climate change, reducing climate impacts from human settlement, and creating communities in which all people can be self-actualized and share equitably in economic benefits.

April Anderson Lamoureux

Panel Vice Chair

Boston, Massachusetts

Lamoureux is president of Anderson Strategic Advisors LLC, a consulting firm that specializes in land use and development, government incentives, and the building of productive public/private partnerships that grow economies. Since starting her firm in 2013, she has helped her private-sector clients secure more than \$25 million in grants and incentives and has helped her municipal clients identify and implement key economic development strategies and local government reforms to support economic growth.

Lamoureux has spent her career working to increase the effectiveness and efficiency of government and to assist businesses in successfully managing their interactions with government at all levels. She has held executive management roles in the administrations of Massachusetts governors Deval Patrick and Mitt Romney, has served as the Pioneer Institute's director of public affairs and director of the Center for Urban Entrepreneurship, and has served in senior staff roles in the Massachusetts state legislature.

She has extensive experience navigating federal, state, and local government regulations, with particular expertise in

land use and development, and specializes in economic development strategy and incentives, infrastructure financing tools, public/private partnerships, and government relations.

During her time in the public sector, Lamoureux was the state's permitting ombudsman, responsible for breaking down silos within government and enhancing interagency collaboration to support economic growth and to improve government efficiency. She was Massachusetts's first state regulatory ombudsman, implementing a comprehensive regulatory reform agenda that eliminated or streamlined hundreds of state regulations across all secretariats of the state government. She created and implemented an expedited local permitting program, enabling six-month local permitting in more than 80 cities and towns. In addition, she created and implemented the MassWorks Infrastructure Program, a \$350 million infrastructure grant program to support housing and economic development projects.

Lamoureux was a 2013 judge for Pioneer Institute's nationally recognized Better Government Competition. She sits on the Milton Hospital Board of Overseers and is active in her local government, serving as an elected member of the Planning Board and Town Meeting in her hometown of Milton, Massachusetts.

Nick Egelanian

Annapolis, Maryland

Considered a leading expert on retail and the shopping center industry, Egelanian introduced the concepts of "commodity and specialty retail" and "department store deconstruction" as the author of the retail chapter of the Urban Land Institute's widely used *Professional Real Estate Development*, third edition, text and handbook in 2012.

Before forming SiteWorks, Egelanian served as vice president of real estate and new store development for retail chains Crown Books and Zany Brainy. As president of SiteWorks, he has advised a wide array of retail clients from Stuart Weitzman and Balducci's to Jos. A. Bank, Justice, and Lane Bryant.

Egelanian also advises an array of shopping center owners and developers, including Related Company, Vornado Realty Trust, Cadillac Fairview, Madison Marquette, Ramco-Gershenson Properties Trust, and Bayer Properties, with whom he partnered in the development of over 1.5 million square feet of specialty retail. He recently completed a two-and-a-half-year assignment as the chief retail strategist to Sagamore Development Company, the owner of more than 300 waterfront acres in Baltimore, Maryland, that will house Under Armour's new 4 million-square-foot headquarters and up to 1.5 million square feet of retail in a 20 million-square-foot mixed-use development.

He is an active speaker around the world and has written numerous articles on retail and the shopping center industry. He is a frequent contributor to industry publications, including *Retail Dive*, *Shopping Centers Today*, *Chain Store Age*, *Shopping Center Business*, and the ULI's *Urban Land* magazine. Egelanian is an adjunct professor in the University of Maryland's Graduate School of Architecture, Planning and Preservation in College Park and a faculty member at the ICSC's Riordan School.

He earned his JD at the George Washington University in 1982 and a BS in finance from the University of Maryland in 1979.

R. David Gibbs

Queens, New York

Gibbs specializes in design, engineering, installation, and project management of photovoltaic, solar hot water, and wind systems, as well as education. He was introduced to sustainable design as a student at the Art Center College of Design in Switzerland and developed a passion for renewable energy and remote, off-grid living as the general manager of Susitna Energy Systems in Anchorage, Alaska.

He recently cofounded Brick by Brick, a social impact investment fund that is presently engaged in the post-Hurricane Maria rebuilding efforts in Dominica. Gibbs is also a partner in the technology research and development firm T4D (Technology for Development) Laboratory. He

was the executive director of the Coastal Marine Resource Center, as well as a founding member of Power Rockaways Resilience, honored as a White House Champion of Change for its relief work after Hurricane Sandy.

Gibbs created and cowrote a proposal for the RISE:NYC Competition, which was awarded \$3 million from the NYC Economic Development Corporation. He continues to foster the development of a local work force and entrepreneurship, particularly in underserved communities; he was an adjunct professor at New Jersey Institute of Technology, an instructor at Pace University (NABCEP PV Entry Level & PV Installation Certification Course), and a Green Jobs trainer at Solar 1.

Gibbs has a background in mechanical engineering and earned a bachelor's in industrial design from Pratt Institute. He is certified in various green construction methods and numerous USGBC GPRO classifications. He continually collaborates with nongovernmental organizations, such as Engineers without Borders, Build.Found. Haiti, Youth Build International, Global Resilience System, and the Barbuda Research Complex, where he consults on resilient built environment and infrastructure projects in developing countries.

Robin Hughes

Los Angeles, California

Hughes is president and CEO of Abode Communities, a nonprofit social enterprise rooted in community development since 1968. Abode Communities is the longest-established affordable housing provider in southern California and has invested more than \$600 million in economic activity throughout the state, having developed more than 45 residential and mixed-use communities with some 2,700 high-quality apartment homes affecting nearly 8,000 low-income residents.

She has been actively involved in affordable housing and community development for over 30 years, and in her 22 years as leader of Abode Communities, she has transformed the organization into an Affordable Housing Finance Top 50 Developer and the premier provider of environmentally sustainable affordable housing in California.

Hughes is considered an expert in the field of community development and serves in many leadership roles that shape and promote housing policy at the local, state, and federal levels. She is board chair of Housing Partnership Network, a national consortium of nearly 100 of the leading housing and community development nonprofits in the country; co-policy chair of California Housing Consortium, a nonpartisan advocate for the production and preservation of housing affordable to low- and moderate-income Californians; board member of California Community Reinvestment Corporation, a premier multifamily affordable housing lender responding to California's statewide affordable housing crisis; and board member of the Community Development Trust, a national investor in affordable housing that provides long-term debt and equity capital for the creation and preservation of affordable housing and charter schools. Hughes also serves on the Los Angeles Homeless Services Authority Ad Hoc Committee on Black People Experiencing Homelessness.

In addition to her service as chair of the Affordable Housing Advisory Council for the Federal Home Loan Bank of San Francisco, as well as board member of the JPMorgan Chase Community Advisory Board of Los Angeles, her experience is highlighted by four years as City Planning Commissioner for the city of Los Angeles.

Hughes was recognized by Huffington Post as Person of the Day and by Women in Business as Outstanding Nonprofit Director. She was also recognized by Black Business Association's Executive Leadership Award and was featured on the cover of *National Real Estate Investor* as a Champion of Affordable Housing.

She received her master's and bachelor's degrees in public administration from the University of Southern California and received a certification from Harvard University's John F. Kennedy School of Government Executive Program.

Sandra Kulli

Los Angeles, California

Kulli consults with builders, master-planned communities, mixed-use developers, and cities on marketing strategy,

working with over 100 companies on 183 communities with a sales volume exceeding \$5 billion throughout the United States and in Japan, Dubai, New Zealand, Sweden, England, and Mexico. She is passionate about collaboration with great teams and loves her native city of Los Angeles as well as her exploration across California, the United States, and the world with fellow placemakers and visionaries.

Kulli has served on ULI national advisory panels including the Memphis Riverfront Development, Philadelphia Main Street in Ardmore, and Malden/Everett Revitalization in Boston. She chaired the Sears/Boyle Heights Technical Advisory Panel. She was on the ULI teams that wrote *Ten Principles for Successful Development around Transit*, *Ten Principles for Rethinking the Mall*, and *Ten Principles for Building Healthy Places*. And Kulli contributed to ULI's 2016 *Cultivating Development: Trends and Opportunities at the Intersection of Food and Real Estate*.

With an office in the Arts District at the Los Angeles Cleantech Incubator, Kulli is surrounded by entrepreneurs, inventors, scientists, and policymakers working on the future of the green economy. She is also surrounded by dozens of great places to eat, just a walk or a bike ride away!

Kulli is a graduate of Wellesley College and holds a master's degree from Boston University. She has served on the boards of KCRW, the Vine, ULI-Los Angeles, Abode Communities, and CicLAvia. An ardent city bike rider and traveler, she remains endlessly curious about how we can create ever-better communities.

Amie MacPhee

San Francisco, California

MacPhee's training in landscape architecture and environmental design at the University of California, Berkeley, gives her a broad background in conservation, community planning, and landscape design. Together with her 30-year history as a principal at Hart Howerton, an international planning and architecture firm best known for large-scale

conservation-based development, MacPhee brings a rich history of experience, knowledge, and thoughtfulness to all design and project endeavors.

She founded Cultivate in 2011 to bring together her interests in reinventing the way we improve land to deliver beautiful, resilient places around a successful economic model. Outside work, MacPhee is busy finding great hiking spots, playing with her camera, sipping a warm cup of coffee, and chilling with family and friends. If she could have a conversation with her heroes, Maira Kalman, Abraham Lincoln, and Randall Arendt, she would.

Kim Morque

Norwalk, Connecticut

Morque is a principal and president of Spinnaker Real Estate Partners, based in Norwalk, Connecticut. He has been a principal with Spinnaker since 1998 and has over 30 years of experience in land use, real estate development and management, and commercial construction. He is currently working on several mixed-use projects from Stamford to New Haven that focus on placemaking and urban redevelopment.

Currently chairman of the Downtown Special Services District in Bridgeport, Connecticut, Morque also serves on the Lockwood Mathews Mansion Museum board of trustees in Norwalk. He is past chairman of the Urban Land Institute Westchester/Fairfield County District Council and past president of the Westchester/Fairfield board of the National Association of Industrial and Office Parks. In addition, Morque is a frequent speaker at industry forums and conferences on topics ranging from historic preservation to adaptive use, affordable housing, and transit-oriented development.

Morque earned a BS from the Pratt Institute in Brooklyn, New York, and completed the Real Estate (Diploma) Program at New York University. He is a licensed real estate broker in New York and Connecticut.

Mehul Patel

New York, New York

Patel is currently the chief operating officer of Midwood Investment & Development and works closely with the CEO and executive leadership team to maximize the value of over 125 residential, retail, office, and mixed-use properties across Midwood's primary markets of New York City, Boston, Philadelphia, Pittsburgh, Washington, D.C., and Los Angeles.

Before joining Midwood, Patel was the chief operating officer and chief of staff at Empire State Development, New York state's real estate and economic development agency. Previously, as a vice president of the Moynihan Station Development Corporation, Patel worked with various public- and private-sector stakeholders to expand New York's Penn Station into the historic James A. Farley Post Office Building. Prior to that, he was a senior project manager at the Hudson Companies, where he oversaw the development of J Condominium in DUMBO and was responsible for managing all aspects of the 33-story, 267-unit new construction project. Before joining Hudson, Patel was a senior analyst at HR&A Advisors, which specializes in real estate, economic development, and public policy consulting.

Patel is currently a board member of the Coro New York Leadership Center, is a governing trustee of the Urban Land Institute, and was recently named to the Global 40 under 40 by *Urban Land* magazine. He also serves as a director on the Moynihan Station Development Corporation, the Lower Manhattan Development Corporation, and the Brooklyn Bridge Park Development Corporation. Previously, Patel served as president of the Columbia Real Estate Development Alumni Association, co-chair of the Yale Alumni Real Estate Association, and co-chair of the ULI New York Young Leaders Group. He received a bachelor's degree in architecture and urban studies from Yale University and a master's degree in real estate development from Columbia University.

Adam Weers

Washington, D.C.

Weers is a principal at Trammell Crow Company with over a decade of commercial real estate development and finance experience. He currently manages the Shops at Dakota Crossing, a 430,000-square-foot shopping center in Washington, D.C. The development's high-profile tenants include Costco, Lowe's, Dick's Sporting Goods, PetSmart, and Marshalls. Weers also manages the McMillan Healthcare Campus, a 1 million-square-foot component of the multiphased, mixed-use redevelopment of the former McMillan sand filtration site in Washington, D.C. Weers has worked on a variety of projects and product types, including the St. Matthew's redevelopment in southwest Washington, D.C.; the Gateway Grand condominium in Ocean City, Maryland; the Shirlington Village Condominium in Arlington, Virginia; and the acquisition and development of the 96-acre South Kitchener Industrial Park outside Toronto, Ontario.

In addition, he manages the company's New Market Tax Credits platform, which has received eight allocations from the Community Development Financial Institutions Fund since 2004, totaling \$650 million, and has placed about \$600 million of those tax credits into real estate projects across the country.

Weers serves on Trammell Crow Company's Diversity and Inclusion Initiative Steering Committee, which is tasked with advising the firm's executive committee on matters related to diversity and inclusion and assisting in the creation of programs to attract more diverse pools of professionals, capital, and projects to the firm.

He has an MBA from Harvard University, a master's in financial accounting from Georgia State University, and a bachelor's in business administration from Morehouse College. He is a member of the Urban Land Institute and has been deeply involved in ULI Washington, including work with UrbanPlan. In 2014, he was recognized as one of *Urban Land's* 40 under 40, representing the best young land use professionals from around the globe.

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