Shore to Core

Visions for a Waterfront City

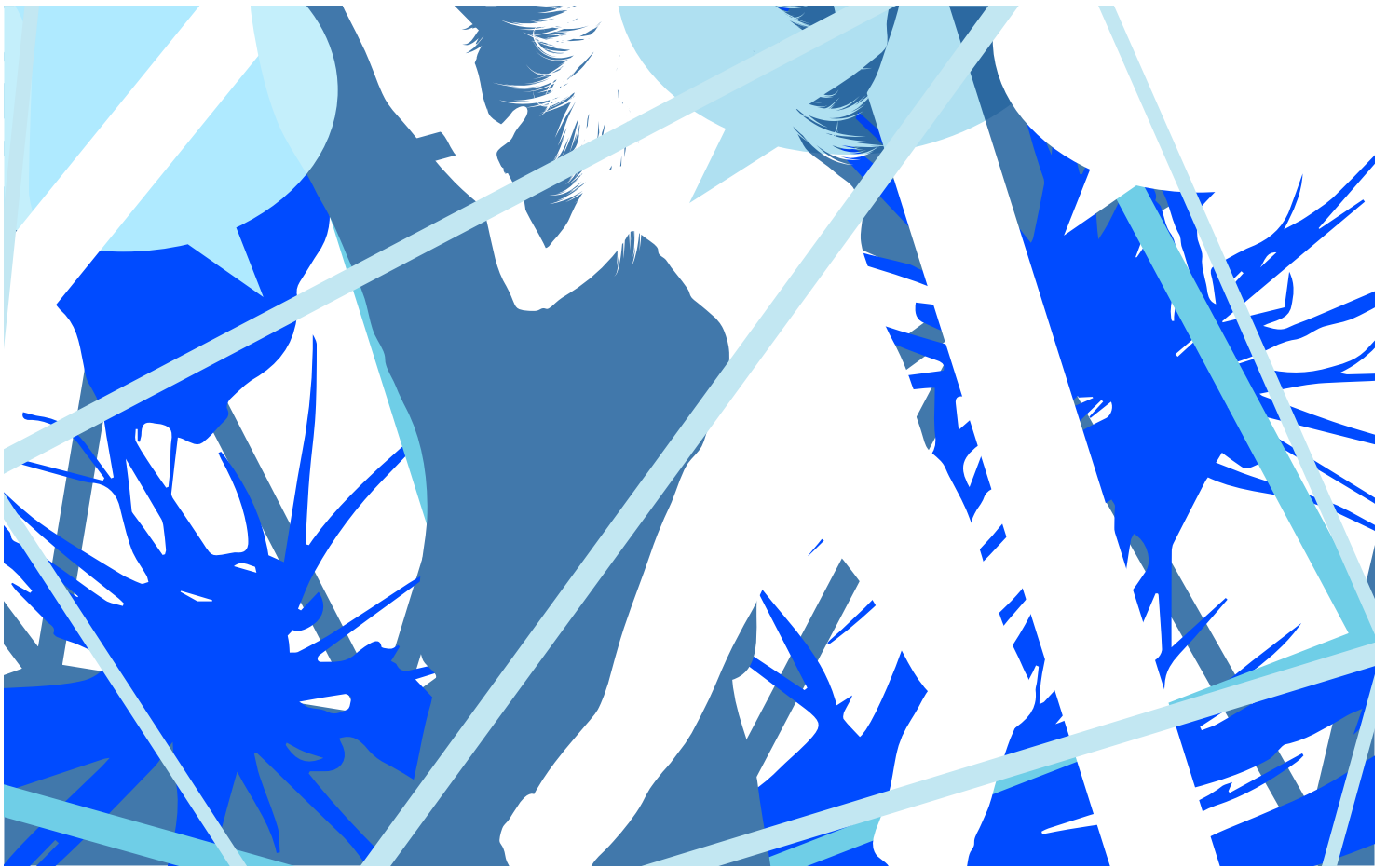# A Shore Thing:
Key Findings from the Shore to Competition

Strolling on the Waterfront. Photo Credit: Ecosistema Urbano

As more and more people move to waterfront cities, designers, urban planners and municipal leaders are responsible for redesigning cities so they support health and wellbeing. Many cities often focus only on current needs, but there is growing value in creating healthier spaces that adapt to shifting demographics, changing weather, and sea level rise. Van Alen Institute and West Palm Beach Community Redevelopment Agency sought to identify these opportunities in their *Shore to Core* design and research competition. Building from Van Alen's exploration of public space's impact on wellbeing and

resiliency, the initiative looks at West Palm Beach as a model waterfront city and asks how can we create healthier, more vibrant cities that are intelligent, flexible, and responsive. The competition teams - Ecosistema Urbano (winning design team), Perkins + Will (finalist design team), and Happier By Design (winning research team) - each created proposals and recommendations on how West Palm Beach can address these challenges. Below are key findings from the competition that can help guide the development of cities to support the wellbeing of residents and visitors.

Key Findings

Complexity Fosters Sociability

It's time to throw away the "one-big-idea" designs once and for all, and develop more dynamic spaces. We need to build spaces that are complex, offer a range of uses, and are more tactile. These types of spaces speak to diverse interests and therefore diverse demographics – thereby bridging gaps and reinforcing a sense of community. How can design move beyond the big idea, and focus on creating more interactive environments?

The Happier by Design research team identified a range of social and physiological benefits for people when they are in spaces that boost feelings of fascination. The team found that designs combining multiple components that provide- comfort, visual intrigue, and nature create more active spaces. Combining movable seating and shade using plants and public art can induce feelings of calm, belonging, and trust among strangers. These types of places foster dialogue between diverse groups and a sense of ownership over space. Ecosistema Urbano also adopted this approach in its proposal for multifaceted spaces. Their waterfront domes would create spaces for economic activity intertwined with seating, shading, a pool, and a climbing wall - or any of 20 other ideas for multiple uses. Hybrid programming allows for diverse users: By mixing commercial, recreational and civic uses, places can dramatically increase the range of users and the level of activity. Complex spaces can accommodate the interests and needs of multiple demographics, thereby creating more sociable landscapes.
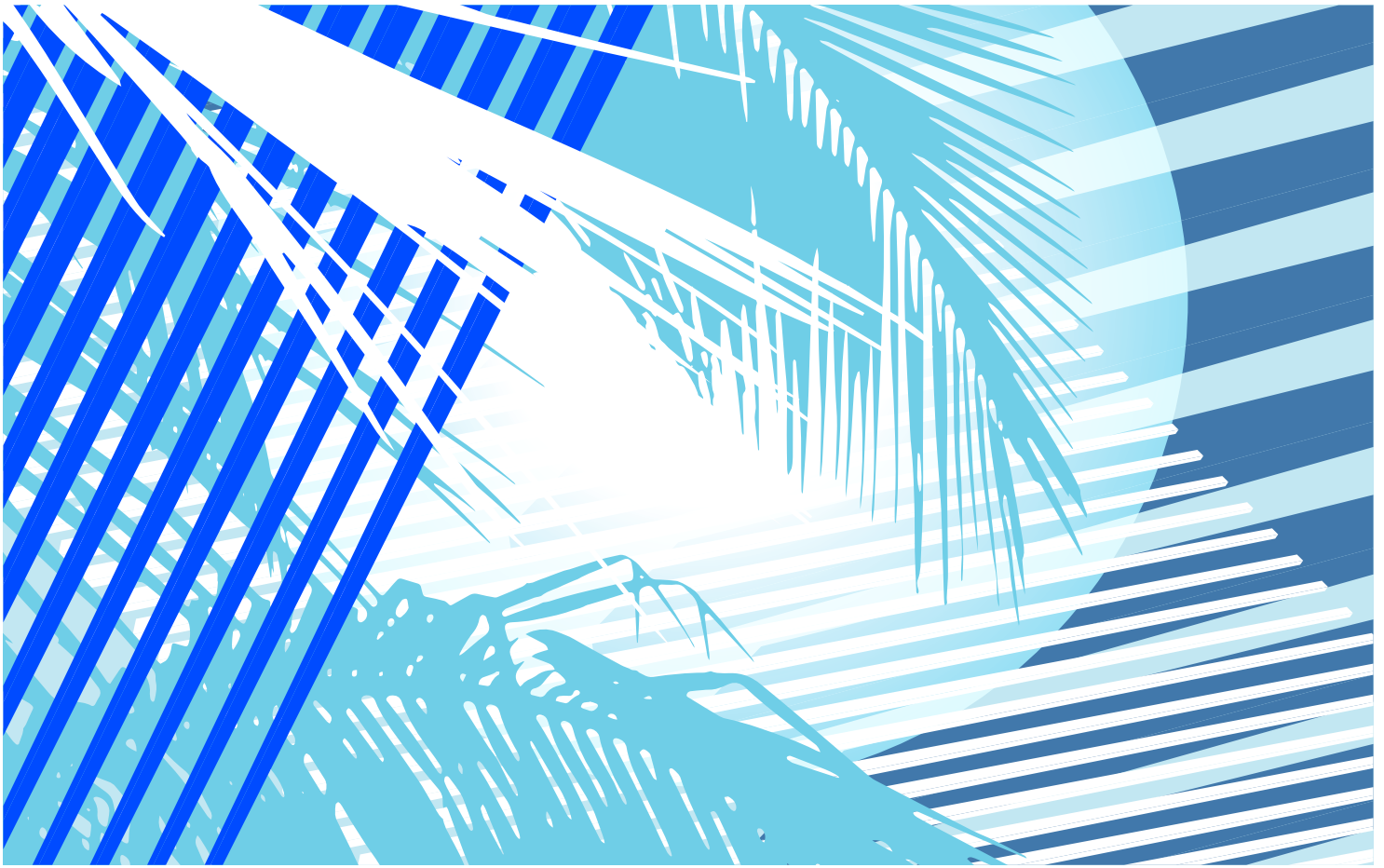
Activate Overlooked Spaces

Overlooked spaces can be more than meets the eye. West Palm Beach's alleyways are used for truck deliveries, trash, and recycling, but they have much greater potential. Alleyways are often used as back-end infrastructure for businesses and organizations, but they could also serve as public spaces. How can we uncover and revitalize our unseen spaces?

Overlooked spaces can offer a great public service. Both design teams proposed strategies that would activate the alleyways and create economic opportunity. To do so, the storefronts along the main road would be reduced in size: The buildings would remain the same size, but- the square footage of the stores would be cut in half, thereby creating storefronts facing both the main road and the alleyway. This creates a broader range of storefront spaces at lower rents, so new entrepreneurs would be better able to afford rental spaces, allowing for greater diversity of business types and

owners. Ecosistema Urbano also proposed the creation of second stories along alleyways to create another layer of commercial space, while providing shade to pedestrians below. Both proposals completely reactivate what had been overlooked and treated as a place for garbage. It is always valuable to take a step back and rethink a city's overlooked spaces in a city.

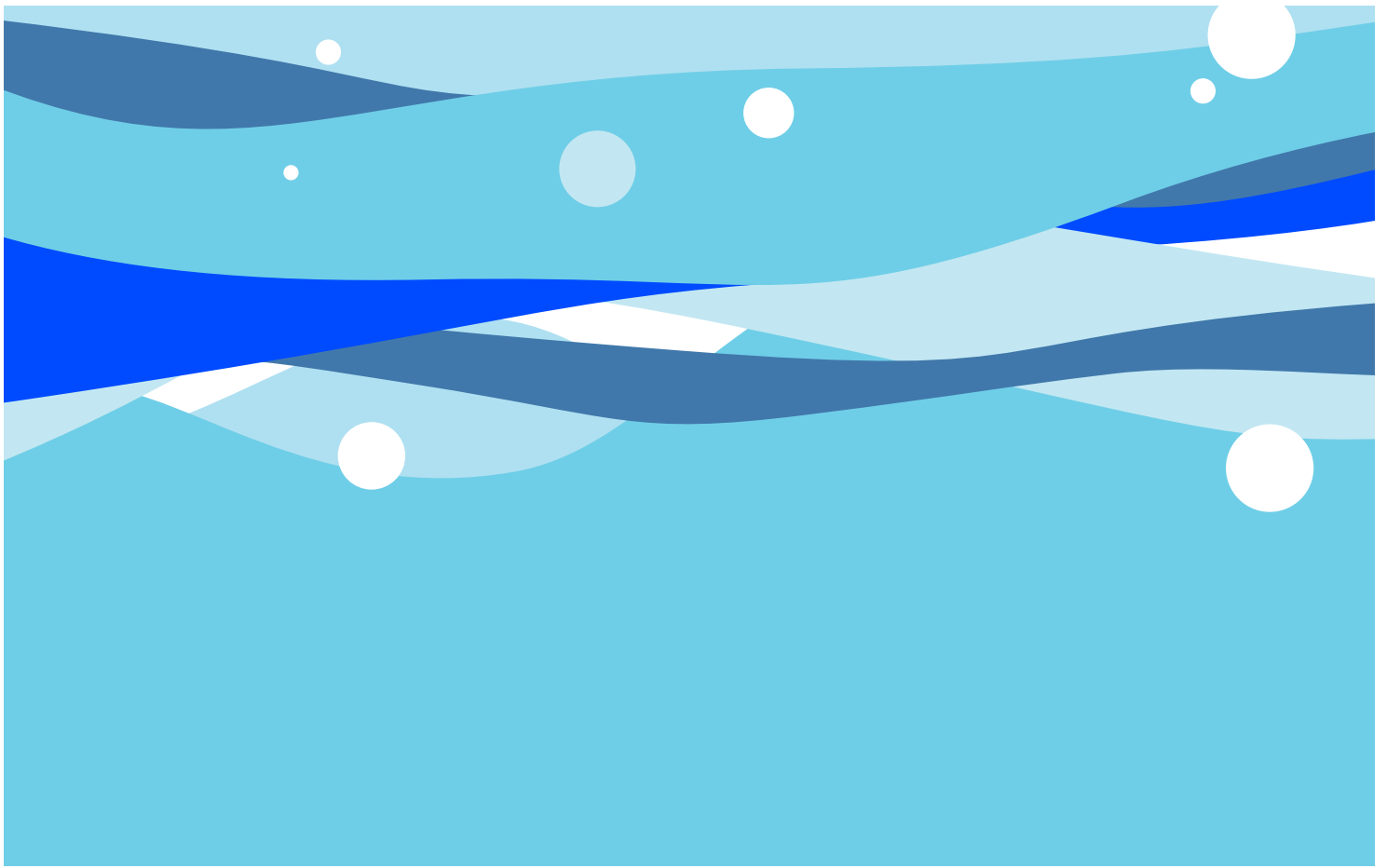View of the Banyan Hub. Photo Credit: Ecosistema Urbano

Design for Weather

Weather needs to be a consideration for every city. Air conditioning and heating are not the only opportunities to adjust the temperature of public spaces. Often people think of adjusting weather conditions as high tech and resource intensive, but these changes could be modular and cost-effective. How can we design low-tech ways of creating comfortable weather, indoor and out, all year round?

Ecosistema Urbano proposed outdoor spaces that are climatically controlled, creating new micro-climates within the city, while requiring little infrastructure or energy. The waterfront domes would include fans and other bioclimatic devices to improve environmental conditions, taking advantage of the lagoon's steady breeze. There would be shade through the integration and growth of plant life across the domes, which would allow for light while still providing protection from the sun. These strategies make outdoor spaces more attractive year round. This means people are more active, which supports positive physical and mental wellbeing. This parallels the work of Happier by Design, which found that an intervention providing environmental comfort induced more lingering on the waterfront and was associated with increased social trust and sense of belonging. Their design intervention, which also included elements of shade, decreased stress in visitors. Considering the impacts of weather in design and creating more comfortable environments can transform a city that is inhospitable during some seasons into one that offers climatic comfort year round, enhancing local and visitor experiences.
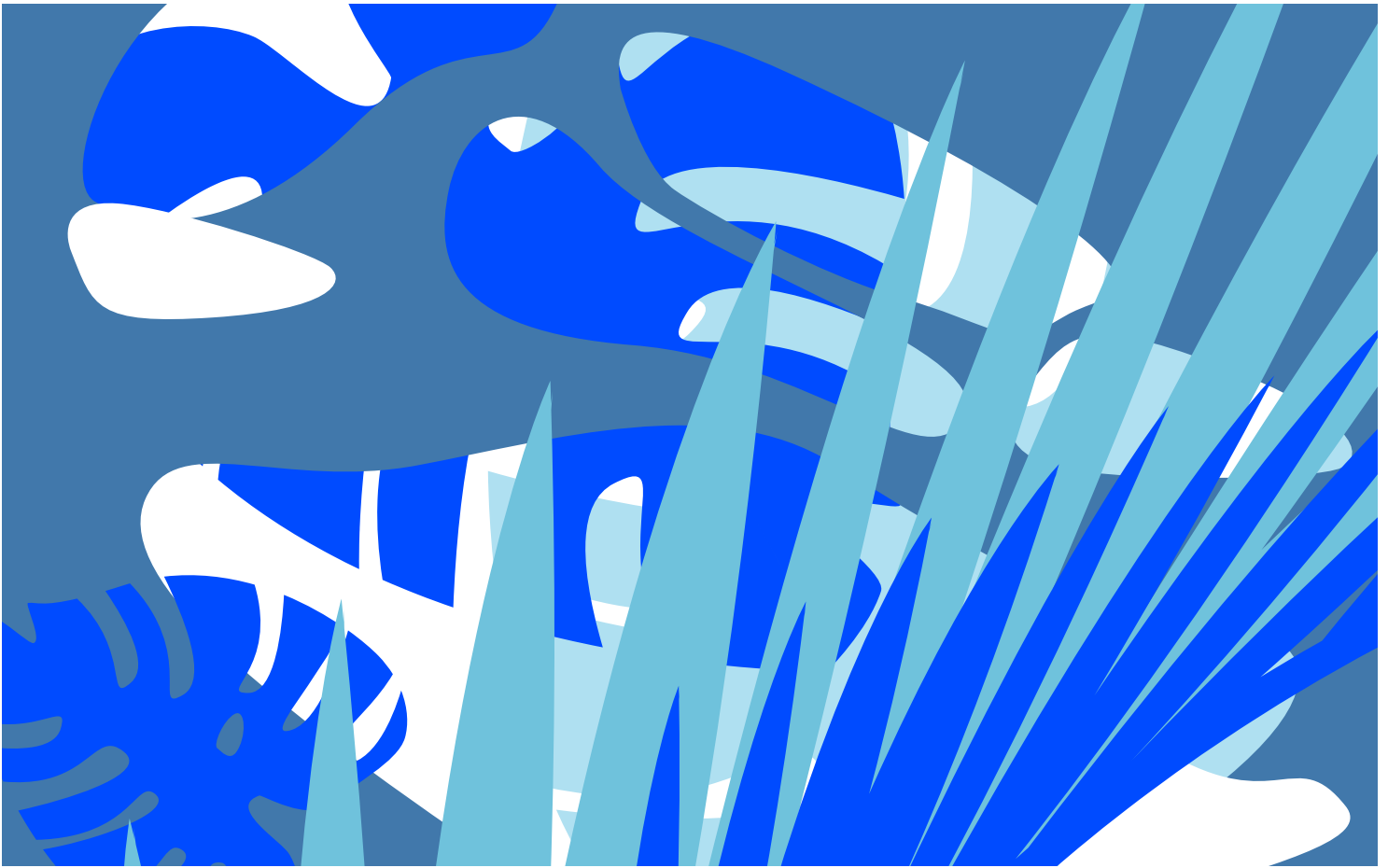
Tangible Solutions for Sea Level Rise

Leaders in many cities are aware of the challenges presented by climate change, but it can be hard to advocate for devoting limited contemporary resources to solving a long-term problem. Incorporating real and tangible public amenities that can be used today into long-term resiliency measures makes it easier for municipalities to justify future-oriented resiliency policies. How can we act now on long-term impacts of climate change?

*Shore to Core d*esign teams looked to address resiliency using short- and long-term strategies. Perkins + Will developed a design that incorporated barrier islands as a way to absorb impacts of sea level rise and storm tides. They also proposed the redesign of the alleyways to allow for better drainage and raising buildings to decrease the effects of flooding. Ecosistema Urbano suggested something similar with a three-foot "free board"requirement for all new projects in floodable areas. Their proposal

incorporated the city's stormwater master plan and recommended increased landscaping to reduce runoff into the lagoon. Developing tangible solutions to sea level rise, supports long- term economic and social sustainability.

Forming a new relationship between the city and the water by replacing the hard, straight-edge concrete bulkhead with a more organic, natural solution that creates a variety of new, interesting opportunities to enjoy the water. Photo Credit: Perkins+Will

Nature Knows Best

Nature can often act as a model, showing us how to protect ourselves from storms and sea level rise. While many look to technology as the solution, nature can also act as a guide. Both proposals looked to the previously existing regional landscape to help address pressing environmental challenges.

Both of our design teams incorporated previously existing natural elements in West Palm Beach as opportunities for the future city. Ecosistema Urbano's winning proposal used local fauna to create shade at every turn, making the city more habitable year-round. Perkins + Will, the finalist team, took this in another direction, suggesting the construction of barrier islands similar to the islands and marshes that once acted as protection for the coast. This approach would prevent storms and absorb some of the challenges presented by sea level rise. Both proposals looked to local plant species to help inform the types of fauna

that could be reincorporated into the city's landscape – in doing so creating a landscape that is less resource-intensive to maintain. The Happier by Design team also focused on the role of nature in their research. They chose to boost the inherent healthiness of the waterfront, creating frames that lured visitors to focus their attention on the water. They also incorporated fragrant plants into their design intervention. Previous research suggested that this would support individuals' feelings of "being away" from everyday life, allowing visitors to relax and de-stress. But this restorative dose of nature also caused them to feel more welcome and to improve their trust in strangers. Nature can create beautiful, sustainable and low-cost solutions that technology can't always provide.

Water as a Place to Play

Everyone talks about bringing people to the waterfront, but few people are talking about putting people in the water. Water is often seen as a restorative feature that can improve well-being, but our designers suggested taking it a step further and incorporating programming. In warmer cities like West Palm Beach, water is not just a place to play or relax but also a place to cool down. How can we design more interactive waterscapes?

The *Shore to Core* proposals looked at actively engaging individuals in waterfront activities and restorative behavior. As Happier by Design's report affirms from previous research in environmental psychology, water can support mental health and wellbeing. Design can enhance this feature of the city or turn away from it. The design team's work showed that by emphasizing the feature of water, we can improve a sense of wellbeing and decrease self-reported stress levels. West Palm Beach's current

waterfront has a berm (an earlier resiliency measure) that prevents people from facing the water. Each of the teams' designs' oriented residents' views toward the water in order to connect them with the restorative effects of nature. Ecosistema Urbano and Perkins + Will both proposed kayaking, creating a waterfront pool and dining experience along the water, in addition to its existing use for sailing and boating. The waterfront presents a great opportunity for passive recreation and relaxation, but the water itself can also be a place for people to get exercise and play. Design can make water features much more readily available and appealing while also protecting individuals from it.

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Flexibility is the Future

As folks become more mobile and, the demographics of cities shift along with the technologies we use, so do the city's needs. Municipal resources are too limited to serve short-term needs. Therefore it is crucial for designers to incorporate strategies that allow spaces to evolve over decades. We can't predict the future, but design can amplify opportunities to adapt to future change.

As car ownership drops among young people and many cities adopt policies to encourage more sustainable modes of transportation, facilities like parking garages will be less useful. The Banyan Parking Garage in West Palm Beach is a prime example of this. As the city's need for parking spaces decreases, both teams created designs and programming that anticipates the changing use of the space. Perkins + Will proposed the construction of an entirely new structure to address this shift in civic priorities today, whereas Ecosistema Urbano retrofitted

the existing garage for maximum flexibility, allowing for a gradual shift in use from parking to public space. Ecosistema Urbano proposed a "city in a building," a space that could serve a varying set of public needs at any given time, as well as being able to change over time. Their proposal included courtyards incorporating technological and sustainable features, as well as a mix of recreational and social services. There is mix of potential programming allowed for flexibility, while also acknowledging a new use: a building that served varying publics. Looking ahead at changing needs requires us to think about infrastructure creatively and to re-imagine existing spaces that allow for new uses and changing needs.

Conclusion

Design and architecture have the opportunity to increase wellbeing and health for residents and visitors. The strategies proposed by the design and research teams magnify the importance of consideration for the role that complexity, flexibility, weather, and resilience play in design.

By incorporating these elements into a city's landscape, we can create more attractive spaces that are amenable to residents, visitors, and diverse populations. The proposals created for West Palm Beach can act as a guide for waterfront cities everywhere.

Creating new opportunities for residents and visitors to engage with the water – including boardwalks, pavilions, dining, entertainment, additional day docking opportunities, etc. Photo Credit: Perkins+Will

The waterfront intervention was designed to invoke feelings of soft fascination, curiosity and being away from everyday life (together we call these restorative fascination). The intervention also provided elements of comfort in order to allow people the ease to linger and focus their attention on these restorative elements. Photo Credit: Beju

Transforming the outdated Banyan Street parking garage and adjacent back-of-house service alley into a new civic building with a shared, open, active public space. Photo Credit: Perkins+Will

Experience nature up close at Mangrove Plaza. Photo Credit: Ecosistema Urbano

Day Vision of the Aquatic Plaza.
Photo Credit: Ecosistema Urbano

About
Shore to Core

Shore to Core launched in July 2016 with an open Request for Qualifications for both the research and design competitions; over 50 proposals were submitted. An esteemed jury reviewed the proposals and selected two finalists for the design competition, Ecosistema Urbano and Perkins + Will, and one winning research team, Happier by Design. The three teams launched their work in October 2016 with a public charrette, which allowed the teams to learn from community input. For the next three months, the design teams worked closely with Van Alen to develop their proposals, and the research team conducted a pilot study in January 2017. The three teams presented their work at an exhibition in downtown West Palm Beach in March 2017. Because community input was a factor for the jury, the public was provided a text-in number and email to provide feedback on the teams' work. This feedback was compiled and shared with the jury, which selected the winning design team, Ecosistema Urbano in March 2017.

October 2017 workshop with competition teams and public

West Palm Beach residents reviewing *Shore to Core* exhibition.

Competition Jury

- **Raphael Clemente** Executive Director, Downtown West Palm Beach
- **Colin Ellard** Associate Professor, University of Waterloo – Department of Psychology
- **Patrick Franklin** President and CEO, Urban League of Palm Beach County
- **David van der Leer** (Jury Chair) Executive Director, Van Alen Institute
- **Jeri Muoio** Mayor, City of West Palm Beach
- **Penni Redford** Sustainability Manager, City of West Palm Beach

- **Terry Riley** K/R Architects
- **Manuel Clavel Rojo** Clavel Arquitectos (substitute for Terry Riley, K/R Architects)
- **Jon Ward** Executive Director, West Palm Beach Community Redevelopment Agency
- **Lilly Weinberg** Director of Community Foundations, Knight Foundation
- **Claire Weisz** Founding Principal, WXY Studio
- **Nancy Wells** Professor, Cornell University, College of Human Ecology, Design and Environmental Analysis Department

Jurors and competitions team by the Great Lawn in West Palm Beach.

Competition Teams

Ecosistema Urbano (design team winner): Directors: Belinda Tato, Founder and Principal; Jose Luis Vallejo, Founder and Principal; Design Team: Marco Rizzetto, Carlos León, Antonella Milano, Luisa Zancada, Jorge Toledo, Marta Muñ oz, Pablo Santacana, Lola Pouchin, Maria Vittoria Tesei, Andrea Bertán, Ana Patricia Maté, Lucía De Retes Cascales, Cristina Rodríguez, Elizabeth Kelleher, Lorena Tselemegkou, Luana Scarpel, Silvia Sangriso, Daniela Menedez, Julia Casado, Constantino Hurtado, Andrés Walliser

Perkins + Will (design team finalist): Cesar Garcia-Pons, Associate Principal and Senior Designer; Cassie Branum, Senior Associate

and Senior Urban Designer; Janice Barnes, Principal and Global Resiliency Director; Gerry Tierney, Associate Principal; W. Thomas Lavash, Managing Principal, WTL+a

Happier by Design (research team winner): Charles Montgomery, Principal and Houssam Elokda, Project Lead at Happy City; Sherryl Muriente, Project Director, Street Plans Collaborative; Jennifer Roe, Director, and Jarrett Thibodaux, Graduate Student at the Center for Design and Health at University of Virginia; and Laura Barnes in Systems and Information Engineering at the University of Virginia; Anna Rose, Director and Stephen Law, Researcher at Space Syntax

Van Alen Institute

At Van Alen Institute, we believe design can transform cities, landscapes, and regions to improve people's lives. We collaborate with communities, scholars, policymakers, and professionals on local and global initiatives that rigorously investigate the most pressing social, cultural, and ecological challenges of tomorrow. Building on more than a century of experience, we develop cross-disciplinary research, provocative public programs, and inventive design competitions.

Shore to Core is part of Van Alen Institute's broader inquiry into how behavior and wellbeing are shaped by the built environment, also explored in such initiatives as Justice in Design, a study of how the design of jails impacts the health and wellbeing of both the people inside them and the communities in which they sit; Ecologies of Addiction, a data-collecting research initiative exploring how the built environment impacts addiction, organized with Imperial College London's Sustainable Society Network; and Opportunity Space, a design-build competition for a temporary pavilion to promote social inclusion and economic opportunity in Malmö, Sweden

West Palm Beach Community Redevelopment Agency

Created in 1984 and authorized by Florida's Community Redevelopment Act of 1969 (F.S. 163, Part III), the West Palm Beach CRA is nationally recognized as one of the most innovative and effective Community Redevelopment Agencies (CRAs) in the country and is setting the standard for redevelopment. The downtown core has gone through a rebirth with substantial private investment including commercial and residential development. Public investment dollars total in the millions with a new state-of- the-art library, photo museum, parking garages and waterfront. The CRA continues to coordinate with the city and other agencies to market and revitalize the downtown.

At the heart of the intervention were "Fascination frames" -- picture frames fitted with translucent images of waterfront scenes from the early 20th century. These were designed to provoke fascination and curiosity, reminding visitors of the aesthetic and cultural history of the waterfront. Photo Credit: Charles Montgomery