

FOREWORD

In a world of mounting climate risks, urban resilience is no longer a theoretical ambition—it is a pressing necessity. Yet even as the need becomes more urgent, the path toward building and financing resilient cities remains complex. Cities must not only plan for long-term shocks like sea-level rise or extreme heat, but also address immediate barriers like fragmented governance, limited funding mechanisms, and capacity gaps in project delivery. City resilience is a costly endeavour but not nearly as costly as ignoring your risks and dealing with the consequences. Cities that invest in the systems that provide essential services to their citizens are better off when crisis hits.

The Resilience Finance Knowledge Exchange convened representatives from nine cities to tackle these challenges head-on. Through honest, peer-to-peer dialogue, site visits, and expert input, city leaders shared what's working—and what's not—as they work to fund and scale projects that make their communities safer, more equitable, and more resilient.

What emerged from this Exchange was more than a list of tools and strategies—it was a shared understanding that resilience cannot be built in silos. It requires alignment across agencies, buy-in from finance teams and elected officials, and creative partnerships with the private sector. By creating space for collaboration, cities uncovered new ways to navigate budget priorities, portfolio management, and long-term investment in resilience.

This report captures the insights, lessons, and ambitions of the Resilience Finance Exchange. It is a reflection of the collective momentum we're building as a Network—and a call to action for others to join in advancing resilient finance as we look forward. The time to scale impact is now.

LAUREN SORKIN

Executive Director

Resilient Cities Network



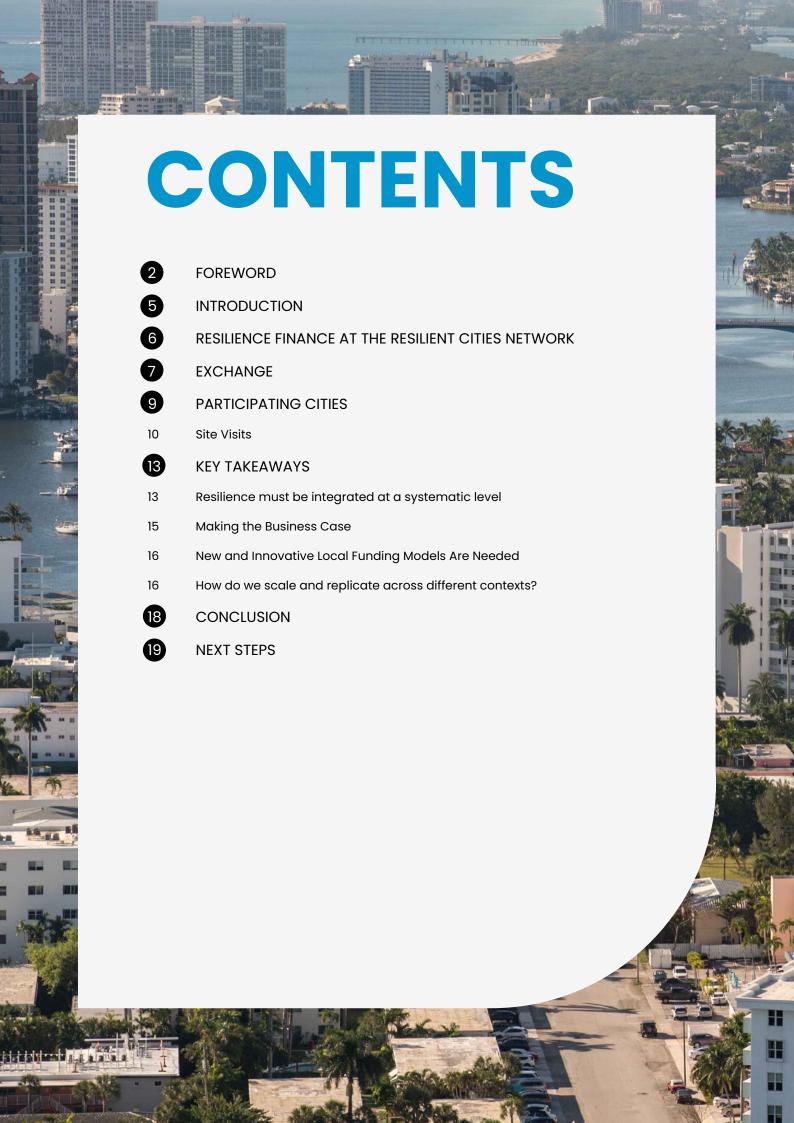
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Citical projects, shaped by risk assessments and robust policies, are needed as near and long-term investments to achieve measured risk reduction. Timely project implementation — and sourcing the capital required to action each project — is the next great hurdle local governments must leap.

Rather than view resilience as an overall cost and expenditure, cities and counties are seeking to capitalize on the opportunity to reinvest in communities, enhance infrastructure, innovate through technology and industry, and drive strategic skill-building to catalyze strong economic outcomes. **Resilience is poised to become the next major economic development opportunity for communities across the globe.** Still, the costs are sizeable and will require long-term investment, an evolution in funding strategies, novel tools, and innovative partnerships.

JENNIFER JURADOChief Resilience Officer and Deputy Director,
Resilient Environment Department, Broward County







INTRODUCTION

The Resilient Cities Network (R-Cities) builds on over ten years of investment in resilience from The Rockefeller Foundation and a network of Chief Resilience Officers in more than 90 cities around the world. R-Cities is dedicated to helping cities around the world become more resilient to the physical, social and economic challenges that are a growing part of the 21st century. R-Cities supports the adoption and incorporation of a view of resilience that includes not just the shocks—earthquakes, disease outbreaks, fires, floods, etc.—but also the stresses that weaken the fabric of a city on a day-to-day or cyclical basis.

Present in over 40 countries around the world, R-Cities member cities have created an innovative position in city government, the Chief Resilience Officer (CRO), to lead the city's resilience efforts and they have adopted a City Resilience Strategy to guide their resilience efforts. Through these actions R-Cities not only helps individual cities become more resilient but facilitates the building of a practice of urban resilience globally.

As the field of urban resilience evolves and integrates within city functions, cities are moving from planning toward action. The capacity to fund and finance projects is critical for the delivery of projects at the speed and scale required. This suite of skillsets, operational approaches and data-driven analysis constitute the totality of the Portfolio Approach, a concept that has developed at the Network and was further developed and refined at the Knowledge Exchange.

Contained within is a summary of the Resilient Finance Knowledge Exchange held in Broward County, Florida in March 2025. In many ways, this exchange "met the moment" in terms of brining cities together during times of drastic changes to the federal funding landscape. As Resilient Cities Network continues to engage around this topic, it is the innovation, grit and exchange of our network cities that will undoubtedly come through as cities work to implement adaption projects at-scale.

RESILIENCE FINANCE AT THE RESILIENT CITIES NETWORK

esilience Finance was launched as a strategic thematic of R-Cities following the March 2024 convening 'Investing in Resilience for All' held in Bellagio, Italy.

Following this event, 34 organizations and individuals signed the New Urban Resilience Action Agenda, advocating for a shift in the global approach to financing and delivering urban adaptation projects. The first initiative of the thematic launched at New York Climate Week in September 2024, when R-Cities established the Resilience Finance Taskforce. Consisting of public-sector leaders and private-sector stakeholders from across the insurance, non-profit and banking sectors, the Taskforce aims to empower cities with the skills to develop and advance portfolios of projects by catalyzing investments that enable them to scale urban resilience solutions internally and across multiple cities. To achieve this vision, the Taskforce has identified goals to drive the direction of this initiative.

- → Leverage evolving multi-level governance action and policy commitments to stimulate resilience finance
- → Study, refine and develop consolidated typologies, frameworks & tools for city portfolio management
- Define and develop opportunities and pathways for public and private sector collaboration to unlock and expand funding options for cities

The Taskforce complements and integrates with existing work within R-Cities, including the Global Risk and Resilience Fellowship in partnership with Howden, finance working groups of the Federation of Canadian Municipalities in which R-Cities participates, and partnership with the Cities Climate Finance Leadership Alliance.

Additional Resilience Finance workstreams include Events and Convenings, Research and Thought Leadership, and the establishment of an ongoing multi-sector Community of Practice, detailed below.

EVENTS AND CONVENINGS

A key strength of the Resilient Cities Network is its ability to convene city officials, resilience practitioners and multi-sectoral partners via participation in Knowledge Exchanges. The first Resilience Finance Knowledge Exchange is explained in this report, with a second exchange planned in the Asia-Pacific region in 2026. In addition, global events such as London Climate Action Week, New York Climate Week, COP, etc. provide a platform to share the work and insights from our network cities with a global audience and bring a sense of urgency to find scalable solutions.

RESEARCH AND THOUGHTLEADERSHIP

New tools, frameworks and research are essential to improving the general understanding and definitions of current and future challenges that cities face in funding and implementing resilient solutions at scale. As part of the Resilience Finance workstream, we are developing a Resilience Finance Maturity Assessment, a research paper which explores pathways for concrete action that cities can take to access and leverage finance for resilience building.

COMMUNITY OF PRACTICE

As cities work to fund and deliver projects that build resilience at scale, peer-to peer support and learning is critical to success. As the Resilience Finance theme develops at R-Cities, regional working groups and communities of practices are forming to begin dialogue about how best to address the challenges ahead.



EXCHANGE

The Resilience Finance Knowledge Exchange brought together city officials from nine cities to discuss topics and challenges around funding and delivering projects at-scale. Through peer-to-peer exchange, site visits, guest speakers and facilitated discussions, participants developed a shared understanding of various tools and methodologies being utilized across the R-Cities Network.

A lack of funding and financing options, and challenges around project delivery, are some of the key barriers to implementing initiatives and projects that build holistic urban resilience today. The Exchange emphasized the importance of engaging across departments and technical teams when developing projects and explored strategic ways to engage various resilience stakeholders – from city finance teams to the business community, elected officials, etc. Through peer-to-peer exchange, participating cities shared examples of their work with the goal of better understanding budget priorities, mechanisms, and opportunities to creatively fund and deliver projects.

Themes included building resilience through strong governance, stakeholder engagement and budget planning. Participating cities brought case studies, reports and shared learnings that contributed to the exchange of best practices. These shared learnings will contribute to a wider Resilience Finance research agenda, led by R-Cities.

Key objectives of the Resilience Finance Exchange:

- Explore Capital Planning and Resilience Finance Strategies: Identify and document portfolio management approaches, implementation strategies, enablers, and challenges in scaling investments.
- Engage with Finance and Private Sector Partners: Gain insights into the current state of resilience finance, including tools, key considerations, challenges, commitments, and ongoing research. Examine emerging themes and tools for building portfolio approaches.
- Advance the Resilience Finance Agenda Toward COP30: Further mature the Resilience Finance Agenda and shape the pathway toward COP30, driving forward collaborative action and scaling impact.

THE EXCHANGE IN NUMBERS



engaged

PARTICIPATING CITIES



Broward County Cape Town

Representative:

Jennifer Jurado

Summary:

Broward County shared their work developing the recently launched Resilience Strategy, with a focus on strategic private-sector engagement and the use of quantitative data to build a strong business case for resilience.

Representative: Daniel Sullivan

Summary:

Cape Town shared their experiences developing a sophisticated capital planning and budgeting process that integrates holistic resilience thinking throughout the project development cycle.



Oakland

Representative:

Joe DeVries, Tiffany Kirkpatrick

Summary:

Oakland shared work from their Local Hazard Mitigation Plan, as well as experiences integrating equity-scoring within their capital planning process. Representatives from both the Resilience Office and Office of Financial Management provided insights.

San Francisco

Representative:

Brian Strong, Eric Vaughan

Summary:

San Francisco shared various resilience capital projects in development, as well as overall how the department functions as an integrated resilience and capital planning/delivery office.



New York City

Representative:

Anna Ponting, Joshua Goldstein

Summary:

New York shared their finding from a recent working group that explored innovative financing and funding models towards resilience. Ideas such as a Shoreline Protection District tied to an assessment district, and other innovative revenue sources were explored.



Miami 305

Representative:

Patricia Gomez, Sonia Brubaker, Amy Knowles

Summary:

The group provided insights into their regional partnership for resilience, as well as specifics about their various projects. Miami-Dade County shared their work navigating the various federal funding incentive programs at the federal level, and how they were able to strategically leverage these programs.

SITE VISITS

Participants in the Knowledge Exchange visited innovative adaptation, mitigation, and community development project sites across Broward County and the City of Hollywood that have utilized blended finance to make these large-scale projects a reality. The sites provided an opportunity to see the results of successful multi-level financing in action and to speak to participating partners who underscored the importance of strong city leadership in making these ambitious projects a reality.

BROWARD COUNTY'S HOLLYWOOD NORTH BEACH PARK TIDAL FLOOD RESILIENCY AND MITIGATION PROJECT

The Hollywood North Beach Park project includes both seawall and living shorelines installations with a design that accounts for five pocket parks employs the function of green infrastructure to complement the hard infrastructure. This USD 18 million project is considered a showcase of shoreline resilience improvements, challenged by a narrow available right-of-way and the presence of valued critical habitat, including mangroves and seagrasses. It is being undertaken alongside a multi-agency project involving state, county and city funds to mitigate tidal flooding impacting the only roadway serving the length of the barrier island, requiring the installation of large stormwater pumps and additional seawalls. The combination of partners, alignment of projects, and diversity of funding represented within the project footprint showcase the forward thinking project planning and multi-jurisdictional cooperation needed to execute holistic solutions that address both current and future flood risk in an urban area with complex infrastructure interests and high vulnerability to sea level rise.

TIDAL FLOODING MITIGATION AND SHORELINE PROTECTION PROJECT- CITY OF HOLLYWOOD

The City of Hollywood's Shoreline Protection project includes a large-scale implementation of tidal flooding barriers across 22 shoreline segments. Funded through a Florida Department of Environmental Protection grant and a general obligation bond, this USD 32 million project will provide protection for vulnerable, low-lying communities in the face of sea-level rise and recurring flooding.



ARMORY COMMUNITY CENTER-CITY OF HOLLYWOOD

With strong community backing, the City of Hollywood secured a \$500,000 Historic Preservation Grant and additional funding through a general obligation bond and city capital, totaling \$4.5 million, to refurbish an armory building constructed in 1955. The project emphasizes sustainable development through adaptive reuse—preserving historical elements while introducing modern facilities like a multi-sport gym, meeting rooms, and ADA-compliant amenities. In doing so, the Community Center balances sustainable goals with cultural heritage and promotes community resilience.





Executive Director Lauren Sorkin speaks about mobilizing finance as a critical enabler to move from strategy to implementation.



Mayor of Broward County, Beam Furr shares on the Importance of cities and counties to keep momentum going on climate and resilience and demonstrating the value of resilience and return on investment



Jennifer Jurado, CRO of Broward comments that where we are today means partnerships are changing as are models for traditional funding.



Exchange participants, featuring representatives from 8 cities, on March 25, 2025.



KEY TAKEAWAYS

RESILIENCE MUST BE INTEGRATED AT A SYSTEMATIC LEVEL

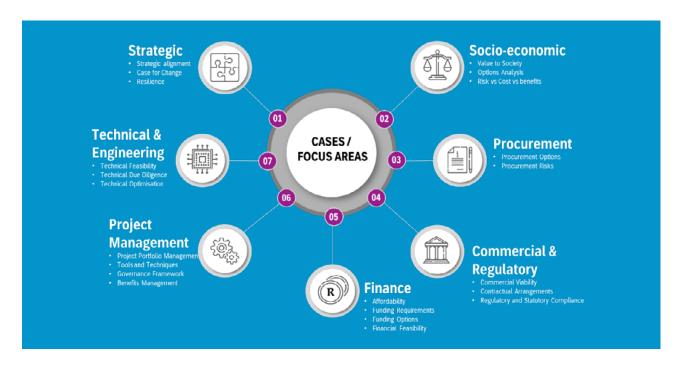
Arobust project management and capital planning process is fundamental for building urban resilience city-wide, and necessary to attract the amount of capital required to do so. This process underpins the way a city financially plans the allocation of resources over time, articulates investment needs and opportunities to potential funders, and delivers critical services to its communities. Integrating holistic urban resilience into internal processes for project preparation, delivery, and management is a key enabler to develop the forward-looking plans and projects that address risk.

A portfolio that includes projects from every sector (transport, housing, water, etc) is a crucial resource that enables city leadership to visualize and articulate the co-benefits of projects and how these contribute to the strength and resilience of the city, both spatially and across time. It is also a valuable resource for understanding current and future capital needs, increasing efficiency in securing the capital.



Strong and efficient governance is a critical enabler for developing and implementing a strong portfolio of projects that attract investment. The City of Cape Town has codified this as a process that integrates resilience deeply into governance and project planning. The City's capital planning process and portfolio presents projects that align with the strategic goals of the city, streamlining the projects from strategy to execution. This process is grounded in a robust project evaluation system based on a localized 7-case model, ensuring transparency, efficiency, and prioritization of high-impact initiatives. A mature planning system and strong political leadership support the integration of resilience into all core city functions. Through a combination of diversified funding, rigorous evaluation, and interdepartmental collaboration, the city balances risk, performance, and equity in infrastructure investment. Cape Town represents a mature city in terms of integrating resilience with capital planning and budgeting processes.

Resilience- as a practice and outcome- must be embedded into financial systems, not as a siloed initiative, but as a guiding framework for budgeting, infrastructure investment, and governance. Resilience is not a budget line item, nor should projects be considered as 'resilience projects'. Defining resilience as an outcome acknowledges that many budget items already serve resilience goals even if they aren't labeled as such. Integrated resilience requires consistent evaluation of project co-benefits and risk-reducing contributions, aligned institutional vision, and careful capital planning.





In San Francisco, the Office of Resilience and Capital Planning plays a key role in coordinating planning and policy work across city departments to promote the long-term sustainability of capital assets and holistic resilience. Resilience has been deeply institutionalized, as made evident through the Hazards & Climate Resilience Plan, 10-Year Capital Plan, and Climate San Francisco Program in which the department plays a crucial role. This has enabled a holistic, cross-agency approach to development and risk management, that aligns with building, community, and infrastructure priorities to ensure alignment with city-wide resilience objectives. The integrated approach provides a strong foundation for exploring financing options. The SF Waterfront Resilience Program brought together key stakeholders to develop a layered financing plan that includes primary sources (e.g., general obligation bonds), secondary sources (e.g., port contributions), and creative supplementary funds like philanthropy or advertising.



The City and County of San Francisco Proposed Capital Plan

MAKING THE BUSINESS CASE

Cities face a complex landscape when attempting to attract investment—particularly for projects that do not generate direct revenue. Understanding how to leverage public funds and attract the private sector investment that fills the finance gap is a key aspect of implementing a city portfolio. Many projects do not have easily identifiable financial return on investment, which is typically required for securing private investment and private–sector support. However, these projects reduce risk and provide social and environmental benefits that are crucial for building resilient cities. Yet, limited resources limit the ability of a city to implement these projects at the speed and scale required.

The global conversation around mitigation and adaptation is beginning to unpack the ways in which adaptation returns can be calculated as avoided loss or risk reduced, but there is no one-size-fits-all formula. There is a need to rethink and rebrand the way that value is measured in order to build a business case for investment in adaptation and resilience.

The importance of translating holistic urban resilience outcomes into economic and financial language that resonates with the private sector and city leadership was a clear takeaway from the Exchange. Unlocking investment requires compelling economic cases, founded in clear, data driven information, collaborative public-private partnerships, and clearly identified ROIs (both financial and societal). Aligned public and private interest around shared risks and returns can improve communication of the avoided losses and co-benefits of projects.



CITY SPOTLIGHT:

BROWARD COUNTY, USA

Broward County is one of the newest members of the Resilient Cities Network, joining the network prior to completing their new Broward County Resilience Plan. The release of the plan came after a thoughtful and extensive process that engaged residents, businesses, municipalities, water managers, the economic development community, and various experts. With a highly vulnerable landscape characterized by dense coastal development, the County outlined an adaptation strategy backed by a strong economic case developed in 2020—showing returns of 4:1 for building-level adaptation strategies and 2:1 for community-wide adaptation strategies. The \$28 billion, two phased plan includes performance based economic metrics for interventions such as average annual property damage avoided, increased economic activity, preservation of flood insurance coverage and affordability, increased property tax collected and real estate values countywide, relative to no action. The plan emphasizes a mix of engineered and nature-based solutions, and diverse funding and financing options including grants, bonds, and special taxing districts.

The CEO of the Fort Lauderdale Chamber of Commerce and the Assistant County Administrator attended the Exchange and emphasized the importance of building a business case for investment for mitigation and adaptation. The Broward County Resilience Plan is underpinned by strong engagement with the local business community across different forums to develop shared goals between the public and private sectors. This has enabled discussions on the financial mechanisms to pay for the plan, and how the cost can be shared and leveraged between public and private investment. Broward's approach highlights the importance of continuous stakeholder engagement and of demonstrating the long-term cost-saving benefits of resilience.



The Business Case for Resilience in Southeast Florida

NEW AND INNOVATIVE LOCAL FUNDING MODELS ARE NEEDED

ecuring funding and financing for projects requires coordinated governance, bold leadership, and a systemic approach. The Exchange provided an opportunity for resilience practitioners to engage with city finance teams to discuss the challenges and opportunities for increasing investment in resilience.

The scale and speed of investment needed for cities to build resilience requires innovative and creative solutions to the barriers that currently exist. Less traditional financing mechanisms such as Tax Increment Financing (TIF), (green) bonds, development fees, conditional grants, and off-balance sheet sources like public-private partnerships were introduced as successful ways for cities to access capital for projects. The City of Miami's, "Miami Forever Bond" a \$400 million general obligation bond, demonstrates how dedicated funding and transparent oversight can advance mitigation, infrastructure upgrades, and urban greening.

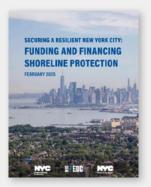


CITY SPOTLIGHT:

NEW YORK, USA

In NYC, post-Hurricane Sandy efforts drove the formation of a Resilience Finance Taskforce aimed at engaging the business and finance sectors in developing new strategies to raise revenue to fund coastal resilience projects. Modelling and analysis through 2100 shows a capital need of \$50 billion for costal resilience projects that would provide \$222 billion in avoided losses. However, securing the required capital is a major challenge as the city is already navigating significant borrowing constraints, with a \$170 billion 10-year capital plan (excluding coastal resilience project needs).

With limited autonomy to raise revenue—property taxes being the only lever not requiring state approval—the city is exploring alternative mechanisms to create new revenue streams such as Business Improvement Districts (BIDs), Shoreline Protection Districts (SPDs), utility-based models, and leveraging its vast real estate footprint. The many competing city priorities, and limited funding availability have pushed NYC to consider new ways to coordinate efforts and increase capital for critical risk-reducing projects.



Securing a Resilient New York City Funding and Financing Shoreline Protection

HOW DO WE SCALE AND REPLICATE ACROSS DIFFERENT CONTEXTS?

The process for identifying and prioritizing urban projects is critical because it provides a strategic, continuous roadmap that aligns public goals with private investment opportunities. For city officials, this process ensures that resources are directed toward the most impactful and equitable projects—those that address urgent needs, advance resilience, and reflect community input. It also improves transparency and accountability in budgeting and planning. City teams need the skills and systems to compare, prioritize and analyse project outcomes. Delivering on these outcomes is crucial to building accountability, key for external

investment. Tools and collaboration across and within cities aid stakeholders in delivering on the identified priorities. At the Exchange, city representatives shared examples of successful collaborative planning in their local contexts. The Resilient305 Strategy, supported by Miami-Dade County, City of Miami Beach and City of Miami, includes a total of 34 municipalities and facilitates regional coordination to maximize resilience in all capital projects and existing assets. Miami-Dade County utilizes tools like a development review checklist and performance tracking platform that ensures compliance for projects in 6 key performance areas. Additionally, Oakland emphasized the importance of strategic integration of and measurable mitigation goals within local hazard plans.

For private investors, a well-structured prioritization process signals that the city is managing risk thoughtfully and is committed to long-term value creation. It reduces uncertainty, enhances predictability, and highlights opportunities where investment can generate both financial returns and public benefit. Ultimately, aligning public planning with private capital unlocks greater potential for transformative urban development. Every city has a unique regulatory and governmental landscape which dictate the actions that a city can take directly. Exploring the role that national governments, credit rating agencies, and insurance companies can play in incentivizing and enabling investment into cities is a crucial step to financing resilience in cities. Discussions during the Exchange emphasized that while North American cities benefit from mature municipal finance systems and bond markets, many municipalities globally face legal, institutional, and financial barriers that limit their ability to borrow, raise revenue, or manage large-scale projects. Legal, political, and institutional infrastructure needs to evolve to support flows of finance into cities. The Exchange examined how strong governance frameworks, like Cape Town's integrated planning system, transparent business cases and rigorous stakeholder engagement in Broward, and innovative strategies for raising revenue are critical to managing risk, increasing investment and building resilience.





CONCLUSION

Cities are in a constant state of evolution, in which they are adapting and responding to shocks and stresses. Holistic urban resilience requires that each system within the city reflects the qualities of resilience, strengthening the overall urban structure and enabling cities to face multiple shocks and stresses at any given time. The City Resilience Framework, a foundational resilience framework, outlines 22 goals within four dimensions of resilience: Health & Wellbeing, Economy & Society, Infrastructure & Environment, Leadership & Planning. Strength in all four dimensions is critical for a city to be resilient, and for local governments to provide vital services to communities. The challenges we face today, however, demand a bold approach—one that addresses the critical barriers cities face in accessing the financing needed to quickly and efficiently implement projects and initiatives that build resilience.

Despite the rapidly growing acknowledgement of the need to and opportunities for investing in cities, there is a significant shortfall in funding. From 2017 to 2018, cities globally received less than 1% of the annual global climate finance required between USD 4.5 trillion and USD 5.4 trillion. In light of recent shifts in funding priorities from major national and international development actors, the imperative for subnational investment in adaptation and resilience has become even more pronounced. In an increasingly fragmented global landscape, public sector budgets may face further pressure due to reduced funding from national governments. Consequently, to meet the financing demands associated with urban resilience, it is essential to mobilize greater private sector capital. Although this necessity has long been recognized, it is now more critical than ever that the non-traditional actors step in to fill growing gaps in urban finance

The need for 'resilience finance' goes beyond climate and beyond infrastructure. Resilience finance enables cities to implement across timescales, political cycles, and across the urban system, whether they are implementing a sea wall, park, or waste management system. This approach empowers cities to direct investments towards urban transformation and mobilize finance to address risk.

¹ https://citiesclimatefinance.org/publications/2021-state-of-cities-climate-finance

NEXT STEPS

The Resilience Finance Knowledge Exchange was a pivotal moment for the Network, in which city practitioners shaped the direction around the Resilience Finance workstream. To build on this momentum, our collective effort will focus on creating and convening a Community of Practice, widening stakeholder engagement, and developing tools and frameworks to accelerate adoption of a holistic portfolio approach across cities.



Community of Practice

Among the participants of the Exchange, there was a strong agreement on the importance of creating a Community of Practice (CoP) to bring together resilience practitioners and city finance representatives. Breaking silos within municipal structures will catalyze deeper discussion around financing barriers and opportunities. The CoP will provide opportunities for cities to continue learning from peers by sharing innovative approaches, success stories, curated case studies, in addition to attending facilitated webinars and collaborative sessions with experts. CoP efforts will also prioritize effective advocacy at both state and local levels, equipping partners with materials and approaches that support policy alignment and resource mobilization. This platform also provides an opportunity to document different city experiences and identify critical gaps in capacity and alignment with emerging federal priorities, ensuring that future strategies are informed by local context and need.



Widening Stakeholder Engagement

Essential to this work is the continued engagement with the extensive ecosystem of partners, experts and organizations who support cities. Widening collaboration with budgeting, capital planning, and finance departments will also be essential to embedding portfolio approaches into operational and financial systems. Participation in events such as NY Climate Week, ULI events, or similar engagement points create opportunities to broaden and deepen the conversations around resilience finance.



Tools and Frameworks

To support implementation, emphasis will be placed on the development of practical tools and delivery systems informed by best practices reviewed at the Exchange. This includes refining a maturity assessment framework, advancing technical collaboration, and exploring the creation of a standardized impact quantification model, informed by insights from pilot projects in Broward County and Cape Town. These next steps aim to establish the enabling infrastructure, knowledge base, and cross-sector alignment necessary for scaling integrated, resilience-aligned investment strategies across diverse urban contexts.



