RESILIENCE IN ACTION
EARLY INSIGHTS INTO HOW CITIES ARE INSTITUTIONALIZING RESILIENCE
When The Rockefeller Foundation created 100 Resilient Cities (100RC) in 2013, its aim wasn’t just to build resilience in one hundred cities around the world – it was to create a global practice of resilience that every city could engage in, for the benefit of their citizens in both good times and bad. But this ambitious goal posed a problem: How can a time- and resource-bound organization, charged with partnering with 100 cities, actually reach the 10,000 cities around the world who would benefit from a global urban resilience practice?

One of several answers to this question, and the subject of this report, is institutionalization. If, during the time they are working with 100RC, our one hundred member cities embed resilience thinking into the decisions they make on a day-to-day basis about all matters big and small, the practice of resilience will effectively live and grow beyond 100RC’s funding commitment for the Chief Resilience Officer. Moreover, institutionalization will allow our 100 member cities to demonstrate what action looks like, and help spread resilience to their neighbors and networks, eventually touching the world.

As we approach the three-year anniversary of selecting the first round of cities, we reflect on progress toward this key goal: institutionalization and mainstreaming resilience in local government policies and practices.

This report offers a look at how three bold, cutting-edge member cities are leading the way in mainstreaming resilience into the everyday fabric of their cities, and the benefits they expect to reap from their efforts. This report is meant to both celebrate the work these cities are doing, and also to elevate their lessons learned for others that want to engage in the resilience building process.

Michael Berkowitz
President
100 Resilient Cities — Pioneered by The Rockefeller Foundation
WHO ARE WE?

100 RESILIENT CITIES - PIONEERED BY THE ROCKEFELLER FOUNDATION - HELPS CITIES AROUND THE WORLD BECOME MORE RESILIENT TO THE PHYSICAL, SOCIAL, AND ECONOMIC CHALLENGES THAT ARE A GROWING PART OF THE 21ST CENTURY.
100RC views resilience not just in terms of the obvious shocks – earthquakes, fires, floods, etc. – but also in terms of the stresses that weaken the fabric of a city on a day-to-day or cyclical basis. Examples of these stresses include high unemployment; an overtaxed or inefficient public transportation system; endemic violence; and chronic food and water shortages. By addressing both its shocks and its stresses with a unified, comprehensive strategy, a city is better equipped to respond to adverse events, and is overall better able to deliver basic functions in good times and bad, to all populations.

Cities in the 100RC network are provided with four core offerings:

1) Financial and logistical guidance for establishing an innovative new position in city government, a Chief Resilience Officer (CRO), who will lead the city’s resilience efforts

2) Expert support for the development of a robust resilience building strategy

3) Access to solutions, service providers, and partners from the private, public, academic, and NGO sectors who can help implement these resilience strategies

4) Membership in the global network of member cities, designed to allow CROs to help and learn from each other, thereby accelerating the development of the field.

Through these offerings 100RC aims not only to help individual cities become more resilient, but moreover to facilitate the creation of a global practice of urban resilience.

Our hope is that through this seed funding, global network, and technical and strategic support, cities will assume the mantel of resilience building and advance the field by institutionalizing resilience into their core operations and plans for the future. This institutionalization is key to catalyzing action for the long term, and to ensuring that the concept of urban resilience is adopted and embedded in such a way that cities are in fact better able to prepare for and recover from a range of shocks and stresses, and in particular that their poor and vulnerable populations are better off as a result.

Our partnership with our member cities is still relatively young—100RC has only been in operation for three years. But our deep engagement with them has already resulted in cities taking bold actions to restructure their governments to think differently about risk and plan holistically for an uncertain future.
WHAT IS URBAN RESILIENCE?

Urban Resilience is the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience.

HOW ARE CITIES INSTITUTIONALIZING AND MAINSTREAMING RESILIENCE THINKING?

Cities that institutionalize resilience will:

• Use their resources more efficiently, and for greater benefit
• Be more organized and coordinated to implement actions
• Be better prepared to deal with future challenges, both foreseen and unexpected
• Be better able to engage with and serve their citizens in both good times and bad.

Recognizing this, 100RC member cities are mainstreaming resilience into how they plan, make decisions and budget for the future in several ways.

Some have formalized the CRO position or CRO office as a permanent fixture of city government—making the CRO role equally as essential as the head of civil defense or director of city planning. Out of our 100 member cities, nearly a dozen have already taken this step to make the Resilience Office a permanent part of their city’s government, and many more are on their way.
Excitingly, recognition of the promise of a CRO or CRO’s office is spreading beyond the 100 cities in our network. Cities (and states) around the world—from the state of Virginia in the U.S.A. to the city of Bangoloda in Sri Lanka—are appointing CROs of their own to help identify risk, engage stakeholders, and take action for the future.

Along with formalizing the resilience office, cities are integrating resilience thinking into specific city plans and policies, in ways as varied as inserting a resilience lens into the design review of capital projects, to dedicating significant portions of their budget to resilience projects. Indeed, almost 30 of our member cities have taken 100RC’s “10% Resilience Pledge”, which commits 10% of their annual budgets toward resilience-building goals and projects, without raising additional funds or taxes. To date, this pledge has focused more than US$5 billion toward resilience projects in our member cities.

To illustrate how our member cities are putting resilience planning into action, we profile three cities’ efforts to institutionalize resilience thinking. We intentionally profile three different approaches to institutionalizing and mainstreaming resilience thinking into local policy-making:

- **New Orleans, U.S.A.** has embedded resilience thinking into the design, budgeting and planning of the city—adapting existing planning tools such as its zoning ordinance and its comprehensive plan to further the city’s resilience goals.
- **Melbourne, Australia** has mainstreamed a resilience practice by building coalitions with regional governments and by educating and empowering key sectors to adopt and integrate resilience thinking into their work.
- **Semarang, Indonesia** has taken a vertical integration approach—institutionalizing resilience by engaging with its national government and ministries to embed resilience thinking into national plans and priorities.

In each of these cities, the CRO role has also been made permanent and has been given additional resources to coordinate and implement the city’s resilience strategy. At the end of each section, we elevate replicable lessons that we hope others can learn from, in order for them to develop an urban resilience practice in their cities.

In this report we use “institutionalizing resilience” to mean both permanently establishing the function and structure of the Chief Resilience Officer, as well as integrating and mainstreaming the concept of resilience into city services, plans and initiatives.
NEW ORLEANS, U.S.A.

MAKING RESILIENCE CENTRAL TO HOW THE CITY DESIGNS AND PLANS FOR THE FUTURE
New Orleans, U.S.A.

New Orleans, U.S.A. has had the unique experience of dealing with and recovering from major urban emergencies. From Hurricanes Katrina and Isaac to the Deepwater Horizon Oil Spill to the city’s frequent “boil-water” advisories, New Orleans has learned important lessons about what it takes to become a vibrant, resilient city that serves all its residents—particularly its most vulnerable.

One of the first cities to release a holistic resilience strategy, New Orleans developed a vision and plan for the future on topics ranging from equity to energy, from education to emergency planning.

Their strategy, Resilient New Orleans, demonstrated the truly holistic nature of urban resilience, bringing together a vision and plan for topics ranging from equity to energy, from education to emergency planning. Specifically, the strategy articulated three key goals:

- **Adapt to Thrive:** We will embrace our changing environment instead of resisting it
- **Connect to Opportunity:** We will create equal opportunities for all New Orleanians
- **Transform City Systems:** We will strengthen our infrastructure to prepare for the future

Mayor Mitchell Landrieu quickly recognized that implementing this bold vision would require intense coordination across the city. To empower CRO Jeff Hebert to lead this work from the highest levels, he promoted the CRO to be First Deputy Mayor and consolidated the Mayor’s Office of Resilience and Sustainability under the Chief Administrative Office, uniting resilience planning with key existing sectors such as water management, energy, transportation, coastal protection, and climate change.

Indeed, under the leadership of Mayor Landrieu and First Deputy Mayor and CRO Hebert, the city of New Orleans is mainstreaming its resilience goals into how the city designs, budgets, and engages for all of its citizens.

“New Orleans faces significant challenges: climate change and rising sea levels, land subsidence and coastal erosion, and lack of equity and opportunity for all New Orleanians.

For our city, being resilient means more than levees holding back water and wetlands protecting us from storms. It means striking a balance between human needs and the environment that surrounds us while also combating the chronic stresses of violence, poverty, and inequality.”

- RESILIENT NEW ORLEANS
A key challenge of implementing resilience projects is that, by their very nature, they cross silos and sectors. This means that their implementation requires collaboration and buy-in from multiple agencies, which often lack a track record of cooperation or of leveraging each other’s investments. New Orleans has begun tackling this challenge by creating a Resilience Design Review Committee—an interdepartmental committee that reviews all capital projects that are meant to enhance resilience in order to ensure consistency, quality, coordination, and public transparency. These agency leaders meet once a month to review project designs (from pre-design through project development), and have already identified ways to streamline delivery and leverage single investments for additional benefit.

A further sign of New Orleans’ progress toward embedding resilience thinking into urban design: the city is developing and implementing new resilience design standards for public works and infrastructure, including re-examining its design standards for its streets to incorporate storm water management, multi-modal transit, and recreational amenities (which were identified as resilience challenges in the city’s strategy) as standard design components, rather than special features as they had been treated in the past.

Finally, the city updated its Comprehensive Zoning Ordinance—the regulation that governs how new development must be built—to require most new development projects to submit comprehensive landscape and storm water management plans that articulate how the design of the project will manage storm water runoff. By holding individual developments to a higher standard, the city has diffused the responsibility for managing water risk and achieved a more inclusive and widespread water management solution than would have been possible through a single, top-down infrastructure solution. Additional benefits of such parcel-level efforts to manage storm water include reducing the urban heat island effect, decreasing the incidence and severity of flooding, reducing strains on the drainage and pumping system, improving water conservation, and protecting public health, safety, and welfare.

Essentially, the institutionalization of resilience-building practices is helping New Orleans transform their public regulations and design in such a way that they will be much better equipped to meet their resilience challenges.
As New Orleans’ CRO Hebert assumes the role of Deputy Mayor and Chief Administrative Officer, one of his key priorities is integrating a resilience lens into the public budgeting process, in order to advance the goals of the 2015 strategy. Toward that end, New Orleans recently adopted a policy of embedding resilience outcomes – specifically, the pursuit of multiple long-term benefits, cross-departmental collaboration, and advancing the specific goals of Resilient New Orleans – within the city’s budgeting process.

The city’s resilience priorities, as outlined in the strategy, have been incorporated into the city’s Strategic Framework, which serves as the foundation of the annual public budgeting process. By integrating strategic resilience-building principles across city functions, it begins to encourage city departments to consider the following questions when submitting budget requests:

**General Questions**
- How does this offer create long-term benefits (25+ years) in addition to achieving the annual performance targets listed?

- How does this offer pursue outcomes in multiple result areas?

- How does this offer leverage other departmental offers or existing programs/projects to create collaborative opportunities and cross-departmental efficiencies?

**Goal-Specific Questions**
- Adapt to Thrive: How does this offer contribute to reduced risk, awareness, or responsible management of our local environmental conditions?

- Connect to Opportunity: How does this offer support the advancement of equitable economic, social, and health opportunities and outcomes for historically underserved populations?

- Transform City Systems: How does this offer contribute to organizational or infrastructural preparedness, operational efficiency, and adaptive capacity?

This budgeting policy represents a significant step towards institutionalizing resilience, by connecting the normal operations of city government agencies and departments to the pillars of Resilient New Orleans.
Finally, the city is focused on educating and advancing understanding of resilience principles at the local, regional and state level. To enhance inclusive outreach locally, the resilience team has added a dedicated outreach manager to act as a community liaison for building further awareness and getting feedback on resilience projects. For regional efforts, the city launched the region’s first Regional Resilience Committee, which brings together representatives from neighboring jurisdictions and agencies to discuss resilience priorities, including environmental protection, storm readiness, and transportation. And finally, the CRO was recently appointed to the Governor’s Coastal Advisory Board to continue advocating for urban water resilience at the state level.

A few months after the launch of Resilient New Orleans, the city was awarded more than US$141 million from the National Disaster Resilience Competition (NDRC), a federal competition to fund holistic resilience projects. Many of the NDRC-funded projects are already being implemented, and this work will continue for a number of years, led by the CRO.

One such project that embodies the strategy’s approach to building resilience is the Gentilly Resilience District, a consolidated effort to reduce flood risk, slow land subsidence and encourage neighborhood revitalization. This, the city’s first-ever Resilience District, combines various approaches to water and land management that have been successfully pioneered throughout New Orleans and, when implemented together, will create even greater neighborhood benefits.
The Gentilly Resilience District will pursue five distinct strategies:

- **Community Adaptation**
  Engaging local residents about on-site water storage and use and subsidizing small-scale investments in storm water management and home elevation for low- and moderate-income homeowners

- **Workforce Development**
  Training underemployed individuals to build and maintain Gentilly Resilience District projects

- **Reliable Energy & Smart Systems**
  Investing in micro-grids, energy redundancy at critical infrastructure sites, and a water-monitoring network to better manage subsidence and water quality with comprehensive data

- **Urban Water Infrastructure**
  Building parks, green streets and other green infrastructure that can accommodate excess water and complement the city’s system of pipes, pumps, and levees

- **ResilienceSTAT**
  Creating a transparent efficiency metric tracker to demonstrate to the public that the project is (1) being completed on time and (2) seeing results

The Gentilly Resilience District embodies the city’s approach to institutionalizing resilience thinking into the design, planning, and budgeting of the city. In order to address complex issues like crumbling streets and the overtaxed drainage systems and sinking soils that cause them, a suite of tactics is needed to deliver comprehensive benefits.

The projects of the Gentilly Resilience District will therefore take place in streets, parks, schoolyards, open lots, and even local homes. The projects are designed to reduce flood risk and subsidence, by creating spaces in the urban landscape to capture rainwater. The projects are moreover designed to beautify neighborhoods, improve health, and provide opportunities for recreation. The city will be able to accomplish its goal of adapting to thrive when all of the elements of a neighborhood are working together to reduce risk and enhance development potential.
NEW ORLEANS
KEY BEST PRACTICES LEARNED FROM INSTITUTIONALIZATION EFFORTS

• Ensure the Chief Resilience Officer has a senior position in the city, and is empowered to work across the silos of municipal government.

• Develop a multidisciplinary resilience team for strategy development and implementation.

• Rethink and reimagine the city’s existing regulatory powers (planning, taxing, design, etc.) to deliver greater resilience value for the city.

• Authorize and mandate interdisciplinary committees and partnerships with a broad range of experience and expertise to ensure that city investments strategically achieve multiple benefits and pursue a resilience dividend.

• Coordinate closely with state and national governments in order to maximize input and funding, and to leverage other investments.

• Leverage opportunities to pilot new solutions at the neighborhood scale.
MELBOURNE, AUSTRALIA
CATALYZING COMMITMENTS AND COLLABORATION FROM ACROSS SECTORS AND ACROSS THE REGION
MELBOURNE, AUSTRALIA

Melbourne, Australia is a diverse and culturally rich city, touted as an attractive and desirable place to live. But unlike many other cities around the world, Melbourne is made up of 32 local councils and therefore key functions such as transport, energy, and water systems are managed by various government and non-governmental bodies, all of which leads to often complex decision making. Moreover, the city is located in a region prone to extreme weather events, is likely to experience significant climate change impacts, and has many upstream dependencies.

In response to these challenges, the city has undertaken significant work to enhance its resilience, including developing adaptation strategies and plans, establishing networks, developing emergency management plans and undertaking risk assessments. Nevertheless, significant opportunities remain to further enhance Melbourne’s resilience, particularly through more carefully coordinated efforts.

Melbourne tackled these challenges head on in its resilience strategy, published in May 2015. The strategy was the product of extensive collaboration: the collective work of more than 1,000 individuals across all 32 Melbourne local councils, hundreds of local organizations, and departments of the state of Victoria.

The resilience strategy addresses Melbourne’s most pressing and interconnected challenges, from extreme heat to increasing pressure on healthcare services, from unemployment to broader social inequality. Specifically, the strategy articulated the following key goals:

- **Stronger Together**
  Empower communities to take active responsibility for their own and each other’s well-being, safety, and health.

- **Our Shared Places**
  Create and sustain buildings, infrastructure and activities that promote social cohesion, equality of opportunity and health.

- **A Dynamic Economy**
  Provide diverse local employment opportunities that support an adaptable workforce that is ready for the jobs of the future.

- **A Healthier Environment**
  Enable strong natural assets and ecosystems alongside a growing population.
To ensure that this vision is not only implemented, but rather integrated with all other aspects of city operations, for maximum impact and for the long term, the city established a Resilient Melbourne Delivery Office, which will be hosted by the City of Melbourne for five years, jointly funded by both local and state government. The office - an interdisciplinary team of at least 12 people, led by the CRO Toby Kent - is responsible for overseeing the delivery of the resilience strategy. In Melbourne, this means more than simply facilitating the projects and commitments in the strategy, it also means developing resilience capacities in metropolitan local government, and embedding resilience principles across metropolitan institutions.

Indeed, one of the office’s mandates will be to develop and deliver resilience training for staff across the region, helping develop the skills and capabilities of local government professionals to understand, apply, and practice resilience in their diverse functions.

The establishment of the Resilient Melbourne Delivery Office is supported by the 32 councils of Melbourne, as well as by Emergency Management Victoria, the Municipal Association of Victoria, the Metropolitan Planning Authority, the Departments of Environment, Land, Water and Planning, and the Department of Premier and Cabinet. This reflects a unique hallmark of how Melbourne has institutionalized its resilience work: by recognizing the important truth that resilience challenges don’t fit neatly within jurisdictional boundaries.

"Melbourne is a vibrant and proudly multicultural city of 4.3 million residents, originating from more than 180 different countries. A “city of cities,” Melbourne is made up of 32 local government authorities (councils) spread over 10,000 square kilometers around Port Phillip Bay, comprising hundreds of diverse local neighborhoods, each with its own character, cultural mix and set of advantages and problems.

To cope with increasing complexity and uncertainty, we need a new approach. This must be centered on our communities, supporting and enabling them to adapt to these accelerating changes and the associated stresses, to survive no matter what shocks occur, and to confidently thrive."

- RESILIENT MELBOURNE
MELBOURNE
BUILDING RESILIENCE CHAMPIONS ACROSS SECTORS

Melbourne’s resilience strategy states that it was “developed through collaboration across sectors, led by local government. If we are to realise its full potential, this collaboration will need to continue and grow, drawing in more organisations, communities and individuals. The launch of this strategy is just the starting point.” Correspondingly, the CRO in Melbourne has intentionally designed the structure and objectives of the Resilient Melbourne Delivery Office in a way that will foster cross-sector collaboration, training, and support, so that stakeholders will be able not only to contribute proactively to the implementation of the strategy but also to mainstreaming of resilience thinking within their own sectors. Some of the recent partnerships that have been established by the Resilient Melbourne team to this end include the Centre for Wellbeing and Resilience in South Australia, a global construction firm, various banks, the Australian Sustainable Built Environment Council, the Property Council of Australia, and the Planning Institute of Australia.

One of these unique partnerships—and a key way the City of Melbourne is mainstreaming resilience thinking and creating skilled resilience practitioners across sectors—is through the creation of a professorial chair in Resilient Cities at the University of Melbourne. This chair will coordinate academic work in the field of resilience between the university, the City of Melbourne and its metropolitan counterparts, and a range of external parties, including other universities across the region. The chair will play a key role in influencing and stimulating local and international debate and development of policy in urban resilience, as well as supporting the efforts of the Resilient Melbourne Delivery Office to institutionalize resilience.
Melbourne Flagship Project: Institutionalizing Resilience

Among the many projects and actions identified in Melbourne’s resilience strategy, one flagship goal for the near term that will concretely serve to institutionalize resilience not only in the city but beyond, is the development of a comprehensive community resilience framework for the state of Victoria’s emergency management sector. This had been identified as a priority of the Victorian Emergency Management Strategic Action Plan 2015–18, a three-year rolling plan that outlines the Victorian Government’s plans for creating safer and more resilient communities.

The Resilient Melbourne Delivery Office has now joined forces with state-level actors to innovate an approach to community resilience that is relevant to communities and the emergency management sector alike, and that is practical and consistent across local governments and their communities, including business and community organizations. By working across sectors and ensuring that activities across all the various emergency management agencies in the region have community benefits at the core of their design, Melbourne—as well as the State more broadly—will foster communities that are better prepared to manage shock events and to bounce back strongly.

Melbourne Key Best Practices Learned from Institutionalization Efforts

- Engage and empower local stakeholders and institutions to co-create the resilience movement with municipal government.
- Partner with neighboring jurisdictions who share common shocks and stresses to innovate together.
- Focus on training and building the capacity of future leaders across sectors and regions.
- Integrate holistic resilience planning into existing initiatives and organizational commitments at the local or state level for greater impact.
SEMARANG, INDONESIA

INTEGRATING LOCAL RESILIENCE PRIORITIES INTO NATIONAL DEVELOPMENT PLANS
SEMARANG, INDONESIA

As a coastal city in an Indonesian archipelago, the city of Semarang’s most pressing concerns are about water. In recent years, the impact of floods has worsened due to sea level rise, coastal erosion, and land subsidence. Though the city has already implemented innovative programs to harvest rain water, plant vetiver grass to prevent landslides, rehabilitated mangroves to protect coastlines, and invested in early warning systems for floods and vector-borne diseases, the formation of the CRO’s office and the release of the resilience strategy identified much further work to be done.

The city’s CRO, Purnomo Sasongko, dove into the work by leading an inclusive, participatory process to determine the city’s priority actions for enhancing its resilience. The resulting strategy, Resilient Semarang, articulated a strong vision for the future that held the institutionalization of resilience as a core tenet: “Semarang is paving its way to work together towards a great city. Through collaborative and inclusive efforts, we will become a much more resilient city with enhanced security, efficient mobility and excellent capacity, and will embrace practicing resilience as a part of our culture.”

The strategy is organized around six pillars, which support 18 Resilient Actions and 53 Initiatives. The pillars identify the city’s intentions toward tackling its major problems, while building capacities that will serve the city no matter what comes its way:

- Sustainable Water and Energy
- New Economic Opportunities
- Vigilance Towards Disaster Risks and Epidemics
- Integrated Mobility
- Public Information Transparency and Governance
- Competitive Human Resources
Following the launch of Semarang’s resilience strategy, Mayor Hendrar Prihadi recognized the need for greater coordination among departments and city and state leaders, and therefore elevated CRO Sasongko from the Planning Department to the Office of the City Secretary, where he will be better able to coordinate implementation across all city departments. The city also made the resilience office permanent and invested new staff resources to ensure it has a strong footing for the work ahead.

Like in many countries, the Indonesian national government sets the objectives and parameters for much of the development that takes place in its cities. Recognizing the need to integrate with and influence those national development plans in order to carry out its local resilience agenda, the city of Semarang worked with the Indonesian Parliament to educate them on the city’s resilience strategy and to integrate its findings and insights into the overarching National Development Plan.

Integrating local priorities and planning processes into a central governments’ requirements or goals is often difficult, and the city’s success is indicative of a growing recognition from Parliament of the value of resilience. The city was able to achieve greater integration and adoption by finding several champions in national ministries, in particular, the Ministry of Public Works and Housing, the Ministry of Environment, and the Ministry of Transportation.
Partnering with these national ministries helped the different stakeholders to coalesce around a few key and complex issues in the Semarang coastal area where the national government was working already, including tidal inundation and land subsidence. The city and country jointly selected a pilot area to implement some solutions to these challenges, and are working cooperatively to align the city and country’s resources to tackle the complex issues of building coastal resilience.

“Semarang must be prepared to face continuous changes and challenges.

The city is in a state of constant transformation. With the threat of sea level rise, we face flood risk. Rapid physical transformation poses many challenges, but we have others as well, including rapid urbanization and sprawl, and complex regional pressures.

Semarang must continue working to become adaptive, ensure adequate security, effective mobility and high capacity to the inhabitants and stakeholders; and build capacity in the government, community and institutions to increase empowerment and productivity.”

Perhaps the most significant sign of coordination between national and local actors in Semarang to-date is found in the establishment of a Bus Rapid Transit (BRT) system, which has had strong support from the national government through its Ministry of Transportation. This priority project, under the city’s key strategic pillar of “Integrated Mobility” has already been implemented in several main corridors and will be expanded to the regional level in upcoming years. The BRT project is expected to offer good insights and experience in cross-boundary resilience interventions.

Not only was the city’s resilience office able to align its strategy with the goals of the national government, it also worked at the local level to integrate projects such as the BRT into the city’s overall Midterm Planning Program for 2016-2021, thereby opening the door for those projects to get funding support from the broader city budget. A key insight that facilitated the success of this multi-stakeholder collaboration
was to align the BRT with a variety of goals held by the different actors. The BRT was presented not only as a way to improve urban mobility, but also as an opportunity to achieve greenhouse gas emission reduction goals, to support the concept of a compact city for the long-term development of Semarang, and improve access to opportunity.

The success of the parts of the BRT system that have been constructed to date make it a leading example of resilience building in Semarang, as not only is the system itself being well-received by citizens, it has also become a priority program of the city’s resilience office, the overall city planning process, and the national government, indicating the institutionalization of resilience among all those actors.

**SEMARANG KEY BEST PRACTICES LEARNED FROM INSTITUTIONALIZATION EFFORTS**

- Use diverse stakeholder engagement to identify possible champions at all levels of government.
- Partner with national governments to align investments and priorities on projects in your cities. And use those partnerships to further influence and educate national priorities to increasingly reflect holistic resilience and scale the impact further.
- Expand your thinking beyond administrative boundaries to look for regional solutions.
- Educate and integrate with different sectors to make efficient interventions with greater resilience value.
ADDITIONAL EXAMPLES OF INSTITUTIONALIZING AN URBAN RESILIENCE PRACTICE
SAN FRANCISCO, U.S.A.

As part of the city’s resilience strategy, issued in April of 2016, Mayor Lee of San Francisco, U.S.A. issued an Executive Order to institutionalize the Office of Resilience and Recovery—making it a permanent piece of City government empowered to work both interdepartmentally and closely with the public to spearhead implementation of the strategy. The resilience officer is charged with developing a tracking methodology to ensure that this process is effective, efficient, and transparent, providing accountability to all departments and divisions that play a role in meeting the city’s holistic resilience goals. The Office leads the community engagement and strategic partnerships necessary to advance the strategy’s work, and will update the strategy annually in order to measure the city’s progress.

THESSALONIKI, GREECE

Early in the process of developing their resilience strategy, Mayor Boutaris of Thessaloniki, Greece took action to institutionalize resilience into the core functions of the city. In May 2016, the Mayor appointed the CRO as Deputy Mayor for Resilience and Development Planning—giving her the tools to mainstream resilience and formalizing the CRO function within existing legal and regulatory instruments, as well as funding and financing mechanisms. A few months later, the opposition party of the city council appointed the first “Shadow Deputy Mayor of Resilience and Development Planning.” This is a meaningful step toward institutionalization, demonstrating that our work is gaining traction beyond the current Mayoral administration and their ruling party collation, and that the value of resilience thinking is transcending party lines.

MONTREAL, CANADA

The city of Montreal, Canada took the creation of a resilience office seriously from the beginning of their journey with 100RC, deliberately committing significant resources to the efforts from the outset of the strategy development process. Creating the office of the CRO was a joint commitment of Mayor Corderre and the Director General—a powerful gesture showing their intention to better unify the two sides of the government around resilience. The city has since committed three staff members and a dedicated budget for the “Bureau de la Resilience” (CRO office).

PORTO ALEGRE, BRAZIL

In Porto Alegre, Brazil a mayoral election followed close on the heels of the release of the city’s resilience strategy, potentially putting the institutional future of the Resilience Office into question. The Resilience Office instead seized on this as an opportunity, and in August 2016 held a Town Hall style meeting with the city’s 8 mayoral and deputy-mayoral candidates. The CRO and his team used the meeting to present the candidates with the results of the last three years’ of resilience work, and to seek the candidates’ commitments to the resilience building agenda, should they be elected.

At the end of the meeting, 8 of the 9 candidates signed a Letter of Commitment stating that they would: continue the implementation of the initiatives listed in the first Porto Alegre Resilience Strategy; honor the current commitment to invest 10% of the municipal budget in resilience; promote the annual review and updating of the Porto Alegre Resilience Strategy, including identifying, and supporting new initiatives for resilience; maintain and strengthen the CRO’s office.

Porto Alegre held its first round of municipal elections on October 2, and both of the two finalists who will progress to the second round signed this Letter of Commitment, ensuring resilience remains a priority into the new administration.
WHAT’S NEXT?

A resilience strategy is only as effective as a city’s ability to achieve tangible results. 100RC partners with cities to implement real projects, policies and programs that have lasting impact and make them stronger and better able to adapt, thrive and grow in the face of a range of shocks and stresses.

While many of the steps 100RC cities are taking to implement resilience initiatives and institutionalize resilience thinking will take years to realize their full impact, we see the innovations of the cities highlighted here (and many more around the world) as important evidence that an urban resilience practice is forming and cities are taking action for a better future. We are committed to partnering with these cities to ensure that impact is realized, and supporting them to spread learnings to other cities who want to join the movement.
FOR MORE INFORMATION ABOUT BUILDING RESILIENCE IN YOUR CITIES, PLEASE VISIT US AT WWW.100RESILIENTCITIES.ORG