

BUILDING A RESILIENT FUTURE FOR PROVIDENCE

BUSINESS AND CIVIC LEADERS FORUM 2019

PROCEEDINGS



INSTITUTE AT BROWN FOR ENVIRONMENT & SOCIETY | THE UNIVERSITY OF RHODE ISLAND
COASTAL RESOURCES CENTER | RHODE ISLAND SEA GRANT | RHODE ISLAND SCHOOL OF DESIGN | WATERFIRE PROVIDENCE

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Introduction

On January 15th and 16th 2019, Providence-based business and civic leaders came together to catalyze thinking and action towards planning now for climate change impacts, challenges, and opportunities to make Providence a more resilient, prosperous, healthy and equitable city.

More than 75 leaders came together for the two-day event to learn about the proactive and positive efforts underway to increase resilience in Providence, explore opportunities to weave the efforts into a unified – and thus more powerful – framework, and identify a critical action plan for moving forward. Organized by a team of partners from host entities Brown University (Brown), the University of Rhode Island (URI), the Rhode Island School of Design (RISD), and WaterFire Providence, the event included an evening panel, a morning forum, small group discussion groups, and networking – focused on critical elements for moving forward in a collaborative way.

Purpose of the Forum

The two-day event was designed for business and civic leaders to:

- Ignite interest about the importance of engaging in building resilience in Providence.
- Introduce how rising seas and extreme weather associated with climate change will affect the City and efforts underway to build resilience.
- Share information about resilience initiatives in other cities were start resilience initiatives in other cities.
- Identify the information gaps and questions coming from the community and ways to begin to answer them.
- Explore ways to move forward collaboratively with the entire community in making the City more resilient to the impacts of sea level rise and changing climate.



Opening Remarks

Curt Spalding, Professor of the Practice; Institute at Brown for the Environment and Society

The physical transformation of Providence is an example of resilience thinking in action. To ensure this investment sustains Providence far into the 21st century resilience thinking must be extended to consider how sea level rise and more frequent extreme rain events, emerging conditions incontrovertibly associated with climate change, will affect the city. To secure a prosperous future, civic and business leaders need to work together to grow and sustain resilience work in Providence.

Russell Carey, Executive Vice President for Planning and Policy at Brown University; Chair of the Providence Foundation Executive Committee

Brown's enthusiasm and commitment for moving resilience work forward in Providence is demonstrated by recent Brown investments along the Woonasquatucket River and the university's longstanding commitment to collaborations and partnerships that strengthen Providence. Also speaking as Chair of the Providence Foundation and in reference to the Providence Foundation's track record as a champion of infrastructure projects that transformed Providence, Mr. Carey said that the Foundation welcomed the focus on resilience building and expressed their enthusiasm for the opportunity to facilitate discussions and move the resiliency dialogue forward in the business community.

A River of Change: Preparing for Climate Change with an Evolving Civic Culture

The [short documentary film](#), developed by a team of Brown students under the direction of lead producer Celia Hack, sophomore, highlighted successes of the past that can help inform future directions. Interviews revealed how a collaborative civic culture contributed to "moving the rivers" – the project that transformed downtown Providence and effectively catalyzed revitalization of the city. The film highlights how the make-up of the Providence civic leadership has changed and poses the questions about how new leadership will rise to the challenges associated with accelerating climate change in the 21st century.

Sabina Matos, Providence Councilwoman (Ward 15)

In the Ocean State, local government has not been addressing the issue of climate change to its fullest capabilities. "For too long, too many people have thought of climate change as something that doesn't affect them, and has no bearing on their daily life or routine. Sea levels are rising at unprecedented rates." Resilience in Providence is critical; understanding and managing climate change is as essential as understanding and managing government and business. It is important to figure out what steps to are needed to address this both in the State of Rhode Island and in the neighborhoods. To do this, leaders need to be engaged at all levels, including at that of the City Council. "We want to be part of the solution."



Presentations

Providence's Future in the Face of Sea Level Rise

Barnaby Evans, Creative Director/Founder, WaterFire Providence

Setting the stage for linking multiple dimensions together (cultural, social, environmental, and economic) Evans reflected how the City of Providence is in a remarkable renaissance and is also the heart of the economy of the entire state. The civic leadership of the community has a responsibility to do the research, design and infrastructure improvements needed that will assure the capital city's bright future. "Making progress in our fight against climate change is the existential battle facing our species. To win this battle we need every arrow in our quiver and this includes the arts, literature, psychology and religion all joining science, good public governance and thoughtful policy process." Citing current sea level rise projections of at least 9.6 feet by 2100 used by the Rhode Island Coastal Resources Management Council, the flooding that occurs today along the riverbanks at extreme high tide will become more and more frequent, affecting transportation, businesses, and historic buildings. Evans pointed out that Providence has a great advantage in its geography, with much of the City built upon hilly terrain that can protect much of the city from sea level rise. All of downtown is threatened, but the natural dike of the hills leaves only a limited area of exposure to rising sea level for all of downtown. This is the same principle that allows the Fox Point Hurricane Barrier to protect most of the city. The Barrier is designed for a "500-year flood" (or a .02% annual chance storm), and currently provides protection for the core downtown area from hurricane flooding today. The Barrier has been increasingly used to stop the encroachment of extreme high tides for Downtown. This is not a long-term



solution. With accelerating sea level rise, higher storm surge, and more intense hurricanes the current Barrier will become less and less effective. But a similarly sited infrastructure solution could provide protection for Providence from several centuries. Noting that climate change is a "wicked problem", it is essential to build upon the foundation of efforts in Providence to develop partnerships among civic, business, and academic institutions to better understand risks, consequences, and options. "We need to see these challenges as an opportunity to once again reinvent Providence. Such an investment now in our future will place Providence among the foremost coastal cities in the nation and reap great additional benefit and acclaim, leading forward thinking companies to be more likely to choose Providence as their home."

The Global Urgency for Resilient Cities

Bryna Lipper, Co-Founder/Senior Vice President, 100 Resilient Cities

Urban challenges are global challenges. Today over 50% of the world's population lives in cities and are responsible for 80% of the global gross domestic product. In the coming decade, over \$50 trillion will be invested in infrastructure, creating "a once in a lifetime opportunity to invest" in a resilient future. "Cities need to radically rethink behavior and investments", emphasizing that opportunities

Urban Resilience, as defined by 100 Resilient Cities, is "the capacity of individuals, communities, institutions, businesses and systems within a city to survive, adapt and grow, no matter what chronic stresses and acute shocks they experience."

to address climate adaptation must be accompanied by progress to address inequity and social cohesion, incorporating people with long standing social stresses when designing our future. Urban economics will change as we see increased water from rising seas, increased storms and flooding, and one hand, and at the other extreme, an increased demand for clean water supply. Given that that cities are the hub of multiple stressors and shocks that tend to weave together, it is time to integrate public safety, new jobs in the marketplace and sense of community. "You don't do just one, you need multiple dividends—that's smart business."

To build resilience, cities must address and integrate among four dimensions – leadership and strategy, health and wellbeing, economy and society, and infrastructure and environment. The City Resilience Framework further outlines these critical elements within its 12 drivers, providing an opportunity to envision how a city can integrate resilience as a "lens" to their critical functions.

SEVEN QUALITIES OF RESILIENT SYSTEMS

REFLECTIVE - ABLE TO LEARN
RESOURCEFUL - CAN EASILY REPURPOSE RESOURCES
ROBUST - LIMITS SPREAD OF FAILURE
FLEXIBLE - HAS ALTERNATIVE STRATEGIES
REDUNDANT - HAS BACKUP CAPACITY
INTEGRATED - SYSTEMS WORK TOGETHER
INCLUSIVE- BROAD CONSULTATION & COMMUNICATION

Planning Long-Term Resilience: Lessons from the Boston Green Ribbon Commission

John Cleveland, Executive Director, Boston Green Ribbon Commission

Boston's Green Ribbon Commission engages business, institutional, and civic leaders to develop shared strategies for fighting climate change in coordination with the City's Climate Action Plan. Working side-by-side with the City, the Commission's role is to advise on plan implementation, advocate to align sector strategies with the plans, and to highlight and share best practices.

The top 50 largest property owners, many of which are "Meds and Eds", occupy approximately 28% of Boston's square footage and 75% emissions. With the goal of carbon neutrality by 2050, the Commission works to motivate "first movers", showing the way for others to align their strategic planning initiatives with the City's targets outlined in their Carbon Free Boston plan.

"Push the change without getting controversial so that the systems could be put in place. If updates need to be made to these systems further down the road, it won't be as difficult to implement because the foundation is already there."

On the adaptation front, the Commission provides a forum for input to the City's preparedness planning process for a more tangible, long-term resilient strategy. "There is no magical solution where you can go for answers. This is an opportunity to invent."

While the Commission helped design, raise the funds, and hire staff to oversee development of the Climate Ready Boston plan, it was then "handed off to the City for them to own implementation". The Commission's approach contributed to the success of the plan: 1) Build a university consortium across institutions where a team of climate scientists established a science-based consensus of risks of the three top issues seen today—sea level rise, extreme

heat, and extreme storms; 2) Compile a baseline understanding and develop a high-level vulnerability assessment, providing a quantitative view of what impacts would look like; 3) Identify resilience actions—11 strategies and 39 initiatives—to be implemented by the City; and 4) Layout an implementation roadmap for the next 5 years to aid with the planning and execution of each task.

Speaker Panel with Community Discussion

With the goal of applying this experience to Providence, the speakers were joined by Bonnie Nickerson, City of Providence Director of Long Range Planning and City Director of Sustainability Leah Bambrugger. Moderated by URI Coastal Resources Center Coastal Manager Pam Rubinoff, who also represented Rhode Island Sea Grant, discussion among the panelists and attendees highlighted some key messages:

- Thinking resilient is thinking forward
- Find, enable, and feed the innovators—these are the people who will push and pressure their peers
- Leverage the “good stuff” that the city already is doing
- Outline and communicate current plans to show how resilience can be integrated within them
- Plan for disruption by learning to change before changes happen
- What’s made can be remade—stop holding on so tight to the idea of loss
- Work to uplift the voices of people who are not at the table—those who need to be at the table but can’t be due to environmental and social hardships
- Be urgently patient—we need time to bring everyone in



Small Group Discussions

Setting the Context

University of Rhode Island’s President Dooley set the stage for the second day of the Forum, reflecting upon the opportunities and challenges globally, from Indonesia to Providence, related to changing climate. Siting the role of leaders, stakeholders, and academia President Dooley encouraged continued collaboration to enhance resilience in Providence and beyond. Dennis Nixon, Rhode Island Sea Grant Director, spoke to the importance of bringing education, research, and extension to address society’s challenges along our valuable coastal shores.

Leadership and Strategy

Challenges

“The greatest challenge has been the failure of political, civic and business leadership to face climate change despite frequent, specific and clear warnings over 20 years. We can still act but action must be collective and immediate. We have no more time to waste.”

Regarding leadership in Rhode Island on resilience, teams could benefit from turning to other places near and far, especially the successful progress of varying European countries. When viewing Rhode Island (or even the United States as a whole), it seems that there is little motivation to define the specific problem. Basic challenges in Providence include the need to share a consistent definition of the initiative and identify a dependable leader who will own it and work with a team to implement all necessary steps. The current mentality is to focus on isolated issues rather than thinking of the process as a more holistic and strategic endeavor.

DISCUSSION HIGHLIGHTS: LEADERSHIP AND STRATEGY

Challenges

Opportunities

There tends to be more short-term interest rather than long-term—plans seem to die out before they even get started

Change the psychology to focus on opportunity, while attempting to get rid of the negative mindset, “I can’t do anything about it”

There is insufficient public knowledge around what projects are being implemented or discussed

By providing “chewable” pieces there will be a greater return on educational investment

Currently there are no inclusive voices that represent all social classes, this is causing voices to be misrepresented or unheard

We are surrounded by creative minds and energy; we have the means to bring everyone together to create a large and noticeable impact

There are many constraints on time as well as funds; it is difficult for people to attend meetings or become the leaders that we need

We do not have a consistent narrative about the problem and the course of action needed

Opportunities

Rhode Island does not need to reinvent anything but instead, start using the creativity and energy that exists for the cause and rally the right individuals. We should look outside of Rhode Island and take note of what is happening in cities as close as Boston and as far away as Sweden to find inspiration and to learn what could be done locally. Resilience efforts around the world are already yielding positive and impactful results in both short-term and long-term endeavors. We have time to get an effective strategy in place, if we move quickly.

The U.S. is not a global leader when it comes to climate change and resilience efforts. When committed leaders and strong community stakeholders are put in charge; that could be a game changer.

Actions

Leadership Oriented

- Engage with civic leaders from the business community; a diverse leadership can provide a network of unique resources
- Recognize the complexity of the issue, then start planning and implementing for policy to resolve those issues
- Create and hold accountability to taking action
- Provide leaders access to experiences (e.g. study tour in Boston) so that leaders can naturally integrate this information/stories into their daily communications
- Utilize existing vehicles (e.g. Providence Urban Innovation Partnership) to help implement this effort



Strategy Oriented

- Include both private and public stakeholders to get a wider range of leadership, resources, and investment opportunities
- Work with Universities for providing resources, ideas and/or strategic materials; go beyond charts and maps
- The C40 Cities initiative can inform our narrative

Economy and Society

Challenges

Every neighborhood is unique with its challenges to be more resilient. People must be engaged to address their distinct challenges. Economic development in the city is not based on the lens of sustainability and resilience. Historically, it seems that “change only happens after disaster.” Investing in “clean up” is much less effective than thoughtful preparation. Money is wasted, efforts are rushed and rebuilding takes priority over long term planning. Communities need to see the big picture and understand the benefits of a greener economy.

When this is the rationale, it tends to cause greater economic strain on communities who are reeling from the effects of said disaster. When there is so much “mess to clean up and little time to do it”, the system tends to get overwhelmed. Recognizing time and money constraints, efforts tend to be more Band-Aid oriented instead of forward thinking and rebuild oriented; this causes inconsistencies and weakness in the infrastructure. Given this, there is a need to have more appropriate procedures, policies, and structures in place to avoid the long-term effects of natural disasters. In order for that to happen, the disconnect between regulations and resilience needs to be addressed. It is hard for both business and homeowners, to understand what the benefits of resilience are, both long-term and short-term. The up-front costs to ensure appropriate and impactful tools to prevent the decay of local

communities are viewed as more of a luxury expense than a necessity. Communities need to start thinking of these changes as a more big-picture benefit rather than an immediate inconvenience.

Opportunities

Aligning public education and new policies to localize and expand resources like energy and food will address weaknesses in the economy and society. With programs in place to provide the education and expand the job market, Rhode Island will be able to advance localization in a very dramatic way allowing for more resilient aligned programs to take place. Once the understanding and policies are in place, there will be more encouragement of incentive programs to create a more positive experience and appreciation towards this initiative. This will provide a greater chance to strengthen Providence and other local communities.

DISCUSSION HIGHLIGHTS: ECONOMY AND SOCIETY	
Challenges	Opportunities
There is no consensus on the issues	Providence is in a great position to align education with resilience
It is not explicitly understood how changing the status quo will help the economy—will this create jobs? Will this cause more financial strain than gain?	Offshore wind will clean the ports, lower emissions, and create a healthier community
There is an “us vs. them” state of mind that needs to be overcome	Local energy and food production will be strengthened and help to grow the economy
There is a very limited amount of space that remains available (ports and land space). How do we tackle this?	With the conversation of climate change and flooding, it allows us to open up the conversation of housing and transportation issues (to name a few)
	Providence Port and the adjacent areas must become an economic driver

Actions

Economy Oriented

- Make the data-driven case for why enhanced resilience is an economic development and value add issue, especially to real estate in flood prone areas along the waterfront and the rivers in the city
- Develop pilots in two flood prone areas—the Port of Providence and India Point Park
- Develop future oriented, go-forward building standards for resiliency in flood prone areas
- Launch a speaker’s bureau for communities to tap, where each speaker makes the case for the independency between the economy and social well-being
- Put financial programs, including incentives, in place to build up resilience efforts
- Identify financial incentives for bringing “green” companies to Providence that can support new jobs and innovations utilizing local systems of production
- Develop a robust package of potential funding for resilience efforts, including municipal bonds
- Tax shipping to encourage local commerce forcing localization
- Procure private investments for public benefit
- Develop an entirely new model of municipal finance to fund climate change oriented infrastructure

Society Oriented

- Develop ways to make the cultural shift toward more long-term thinking
- Get private sector focused on resiliency

Infrastructure and Environment

Challenges

Rhode Island is known for its rich natural resources and strong communities. While we celebrate what's best about our state, it's increasingly at risk from the impacts of climate change. We are already seeing changes within our communities, placing our infrastructure, environment, and residents at risk. From coastal erosion and riverine flooding to increased urban heat, the City of Providence is acutely impacted. Many city and state initiatives are already underway to address these issues and prepare for a changing climate, but strong leadership has been inconsistent, and leaves key stakeholders disengaged. This coupled with rapidly aging infrastructure assets and limited investment in maintaining critical natural areas leaves room for a bold collective vision and engagement of key civic leaders.

Opportunities

Providence is well positioned in Rhode Island and benefits from many geographic and economic advantages; increased economic development over the past decade, a cleaner Narragansett Bay, and the hurricane barrier present opportunities to address climate change in the Capital City. A strong framework for economic and environmental progress is taking shape in Providence. Leveraging infrastructure investments already being made such as, expanding stormwater and wastewater infrastructure, to address multiple problems at once allows for stretching the impact and benefit of limited resources. The academic institutions and civic leaders in Providence have the agency to shape the vision for climate ready Providence.

Greener infrastructure plans will help increase economic development as well as build stronger and more resilient communities.



DISCUSSION HIGHLIGHTS: INFRASTRUCTURE AND ENVIRONMENT	
Challenges	Opportunities
Ensure we build on work already underway in Providence to leverage existing investments	We know a lot already, we just need to engage the city and start developing the plan
Build political will and identify priority projects by using available science and data	A comprehensive green infrastructure plan will help increase economic development as well as build stronger and more resilient communities
One funder or funding source is not going to solve all problems; we need a funding quilt that identifies sustainable public and private investment	Stormwater management is a key infrastructure and environment opportunity across the city
The hurricane barrier is not a complete solution and may cause problems and complacency through over reliance as a protective measure	Great ideas are already being implemented internationally; we should be building off of these
Engage the private property owners in Providence; findings ways to incentivize participation is critical	There are a lot of opportunities for private investment for public benefit. We need to start scoping this out before we get too ahead of ourselves
The state is spending billions of dollars on infrastructure projects to treat wastewater and clean Narragansett Bay. Leveraging these types of generational investments for economic development and community improvements is critical	Providence could develop an entirely new model of municipal finance to fund climate infrastructure

Actions

Infrastructure Oriented

- Develop/revise building standards to incorporate resilience elements
- Rethink the hurricane barrier—there are worries of complacency/design flaws. It will not be able to save us forever
- Build like Europe—they're doing it right
- Increase green/gray pervious systems to catch storm water where it falls rather than collect it
- Focus on self-sustaining households to increase household resiliency
- Investigate if/how governance change be made to encourage green infrastructure

Environment Oriented

- "De-Pave" Providence to reintroduce nature into the city
- Review lot size considerations to determine what can be done for green infrastructure
- Rely on what exists already; do not build on more ground
- Better land use planning

In thinking about how to stretch limited capacity and resources, we should think "leave no benefit behind," where, for example using green infrastructure to reduce flooding can also enhance recreational parks.

Shaun O'Rourke, RI Chief Resilience Officer and RI Infrastructure Bank

Health and Wellbeing

Challenges

Many parts of Rhode Island are still suffering from the environmental legacy left from the industrial revolution. The state, particularly the urban areas, also has one of the oldest building stocks in the country. These issues present significant challenges for our collective health and wellbeing, especially in the face of climate change. Furthermore, meaningful civic and government leadership on this issue has been lacking. This is arguably the cause and/or effect of a lack of public awareness and basic education of the issue. Many low-income, communities of color are already impacted by the pollution and industries that are the leading contributors to climate change. Out of necessity, these communities often establish hyper-local solutions for survival. It should be noted that these communities were not engaged in this discussion, given the targeted audience of this forum.

Opportunities

Rhode Island's small size and growing number of involved and active climate leaders can help move this issue to the center of political and civic conversations. We have many existing networks that can be tapped to address this issue and have good data on the risks and vulnerabilities. Furthermore, community members are often highly connected to one another and we tend to operate at small, hyper local scales. Our robust local food infrastructure is an example of this. We should work to help sustain and replicate such systems and focus on the bridge buildings between networks and communities.

As a community and faith leader, I experienced this conference as a clear call to action. Our city's response to the pressures caused by a changing climate can't just be technical; it will need to be adaptive and multipronged. We will need strong and healthy neighborhoods and resilient relationships to manage what is coming creatively. The time to begin this work is today while we still have time to make changes and build relationships across difference and division."

The Rt. Rev. W. Nicholas Knisely, Bishop of the Episcopal Diocese of Rhode Island

DISCUSSION HIGHLIGHTS: HEALTH AND WELLBEING

Challenges

Opportunities

Meaningful engagement with communities is lacking

Need to help communities shift from surviving to thriving

Large segments of the population do not feel affected

Existing land use and development policies needs to be updated and then be enforced

The cost is high and there is no dedicated funding

Redundant, interconnected systems at multiple scales is the best way to get the message across

Short planning and budget timelines do not promote resilience and sustainability

Safe and healthy housing is a critical need for many individuals in our community

Climate change and resilience are not adequately addressed

Strong, interconnected networks will provide a successful program for reaching out and getting things done

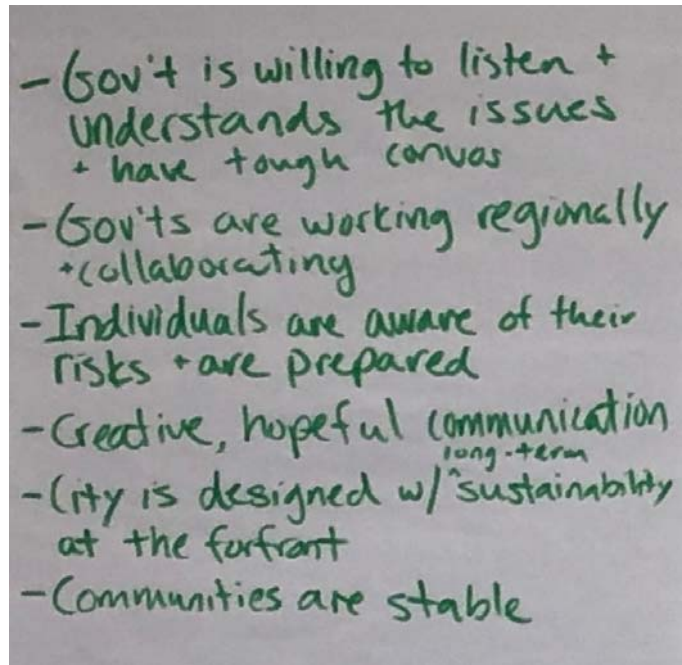
Actions

Health Oriented

- Create organizational programs to provide tools in order to live healthy and resourceful lives, including safe and healthy housing, sustainable homes for cleaner communities with access to clean transportation services
- Utilize local food production, including aquaculture systems
- Expand clean energy programs

Wellbeing Oriented

- Promote experiential learning and access to education
- Stop fighting nature and use it to enhance resilience (e.g. green infrastructure for stormwater)
- Design the city with long-term sustainability at the forefront



Communication, Education, and Outreach

Challenges

As a whole, the main challenge revolves around trying to figure out 1) the message, 2) the target market, and 3) the language. The end goal of this outreach is to inform and motivate; however, the problem lies with not being too aggressive. With that, it needs to be noted that there is a very high quantity of “cynics” that will be introduced to this messaging campaign. The challenge faced is speaking to individuals who do not trust their local government council members. Additionally, most small business owners and community residents only see profit loss for the changes that need to be made and therefore are those currently putting up a fight, causing more red tape.

Opportunities

“The platform is there but people aren’t connecting – we need to be persistent.” Once identifying the target market, messaging and language, this will allow for campaign strategizing. Currently, many private leaders are willing to be the voice to their communities under the umbrella of key groups such as, religion, business, elders and student/educational leaders. This makes the platform more inclusive than it has been in previous decades. However, we are still missing the political voice in that. The goal is to start utilizing a foundation or coalition (still to be determined) for a way to obtain and channel that voice, this team has the resources and contacts necessary to pull in all key stakeholders. Providence needs to pool its resources and set an example for the rest of the state. Such a coalition can connect with a diverse group of leaders in the City with influential power and become a role model for all.

DISCUSSION HIGHLIGHTS: COMMUNICATION, EDUCATION, AND OUTREACH	
Challenges	Opportunities
Too much red tape makes it difficult to motivate or get tasks accomplished in a timely manner	Show people there IS a capacity to move forward
The business community is unhappy and resistant to change—they think these changes mean immediate profit loss for them	Band-Aids vs. REAL solutions—we need to stop thinking of quick fixes and start thinking more big picture
There are a lot of cynics who don't trust what is being said or acted on. How do we change this thought process?	"At a core level, people need to see it's valuable". Make people want to be a part of this, make them feel like they are the key to change
How do we make people want to be a part of this?	Current resource networks are large, there is a niche group and many ways to communicate to each of these community members, let's create an effective strategy that reaches as many people as possible

Actions

Communication Oriented

- Demographic: Identify who is the target audience and the best way to reach the
- Is there a generation gap? If so, fill it in
- Messaging: Refine what the issue is; provide better messaging to/from government representatives; promote a message that the city is thriving, not surviving
- Keep communication open before, during, and after to help build trust with communities and avoid trust issues
- Provide unification with a single narrative
- Provide information in "chewable" pieces and be inclusive, no matter how big the goal is
- Engage and communicate with property owners in a compelling way for them to act

Education Oriented

- "At a core level, we need people to see it's valuable" —show people there is a capacity to move forward
- Share Providence's story, where change has been integral throughout history — include both successes and failures

Outreach Oriented

- Use allies to reach out, including business networks, interfaith coalitions, and school programs
- Rallies—when people want to be heard, they will rally

Proposed Path Forward

Reflecting upon insights and information of the keynote speakers, the panel discussion, and the small group thematic discussions, three themes consistently emerged that when woven together, would create a strong foundation for building resilience in Providence. The three themes were: sustain dedicated leadership, take proactive measures towards planning and implementation, and organize a platform of consistent and strategic methods of communication. Each one of these, when fleshed out and integrated within the robust foundation of activity already taking place in Providence, provides some direction for a path forward.

APPROACHES FOR MOVING FORWARD	
What	How
Convene	Support and organize a financially sustainable framework for moving forward
Collaborate	Share and support learning and research
Communicate	Peer to peer, through new and old media

Convene

By linking together in a viable organization a group of leaders representing a diverse group of business and civic organizations, there will be a powerful entity to support a coordinated approach to resilience building. To be most impactful, we need an energized and committed core group of leaders that will work to develop an organizational framework that works to support resilience building across all of Providence. This group would be responsible for the initial project of mapping the work of the connected organizations, their constituencies and their individual missions/contributions. The work will be ongoing as new groups emerge with that share and interest resilience building. With an inspired, committed and organized group in place, key projects being taken on at the city and state levels can be supported and linked together within a comprehensive and cohesive scope for resilience planning and action. Potential Actions will likely include:

- Expanding the group by inviting leaders of diverse organizations with a genuine commitment to resilience building and in so doing creating a diverse foundation for resilience building
- Surveying the “field” by mapping organizations and their efforts, and noting synergies and overlapping activities
- Growing the capacity to share information and recruit support
- Identifying potential adaptation strategies, such as renovations to the Hurricane barrier, enhancing storm water management and other nature-based strategies that have multiple benefits socio-ecological benefits



- Quantifying the full range of socio economic risks to public and private assets
- Expanding awareness and build commitment among a cross section of stakeholders
- Developing partnerships to leveraging grow resources to support resilience building
- Provide and work off of relevant/working strategies
- Assemble the science in relatable forms with areas identified at risk from sea level rise, storm surge, and flooding

Collaborate

To further understanding of the emerging climate conditions that increase risks to the well-being of Providence, collaborations that leverage the relevant capabilities of the various institutions that have expert knowledge should be actively promoted. Collectively we have various resources and organizations working on these issues and their work can be deepened, expanded and translated into more easily understood information for citizens, businesses, and government actions. Collaborations of this sort should help with detailing scenario projections, providing more clarity on economic projections, and integrating actions into existing and new strategies to enhance the resilience benefits. Opportunities for collaborative work include:

- Securing commitment from the academic institutions to share and support each other's research
- Coordinating URI Capstone projects and RISD Spring studios that link student learning to real world applications
- Consistently translating research for general use in public outreach work
- Organizing events like RISD Coastal Futures symposium (April 2019) on design alternatives
- Creating incentives to bridge a chasm between research and public audiences
- Finding way to gain input from communities about researchable questions that address resilience building challenges
- Developing strategies for moving resilience thinking and action forward that include but are not limited to:
 - Funding infrastructure projects and linking to multiple community benefits
 - Improving employment opportunities and reducing income inequality through resilience building actions.
 - Reworking land use and tax policies in way that promote resilience building

Climate change is a critical global issue, but its effects are especially pronounced in our cities. The Providence Foundation and our members recognize this and are committed to working with partners in business, government, and the nonprofit communities to build a resilient Providence." Cliff Wood, Executive Director

Communicate

A greater capacity to communicate about issues connected to resilience thinking and action needs to be strategically developed and implemented. A broader identification of target audiences is needed especially with regard to communicating consistent information on seal level rise, more intensive rainfall and other ways climate change will impact Providence. Priority needs to be given to audiences that are not currently involved in the resilience conversation with attention given to diversifying channels of communication and developing "storytelling" know-how. A growing ability of communicate about resilience work should start with:

- Broadening the audiences to include: older audiences, youth perhaps through schools/programs, and religious groups through interfaith alliances
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- Establishing more diverse pipelines for two-way information sharing
- Building relations with reporting resources in both old and new media
- Building relations with communication teams within area universities to expand learning networks and harvest new ideas and relevant research findings
- Developing and maintain a Website clearinghouse or newsletter connecting efforts
- Creating “stories” and language competencies that facilitate communicating with all of Providence
- Leveraging resources through resilience communication trainings and effective use of social media



For More Information

Resources

For more detailed information: prep-ri.seagrant.gso.uri.edu/municipal/providence-resilience-forum/

Forum Organizers

Pam Rubinoff, rubinoff@uri.edu

Curt Spalding, h_spalding@brown.edu

Teresa Crean, tcrean@uri.edu

Barnaby Evans, barnaby@waterfire.org

Anne Tate, atate@risd.edu

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