



Creating a Model for National Resilience

Newport, Rhode Island

Historic Newport, Rhode Island is poised to offer itself as a demonstration location for the development and implementation of an integrated national resilience model. Newport's goal is to use the next 22 years, in preparation for its 400th Anniversary, to position itself as the representative ecosystem for global thought leadership and the applied innovation center for integrated resilience.

As a result, Newport is partnering with a major global consortium as its Primary Project Advisor and Strategic Partner for its resilience initiatives.

This consortium includes:

- **Infralinx Capital**, a global project development and finance company
- **Louis Berger**, an Engineering News-Record top-20 ranked, \$1 billion global professional services corporation that helps clients solve their most complex infrastructure and development challenges
- **Gilbane**, the oldest privately owned major construction company in America based in Rhode Island

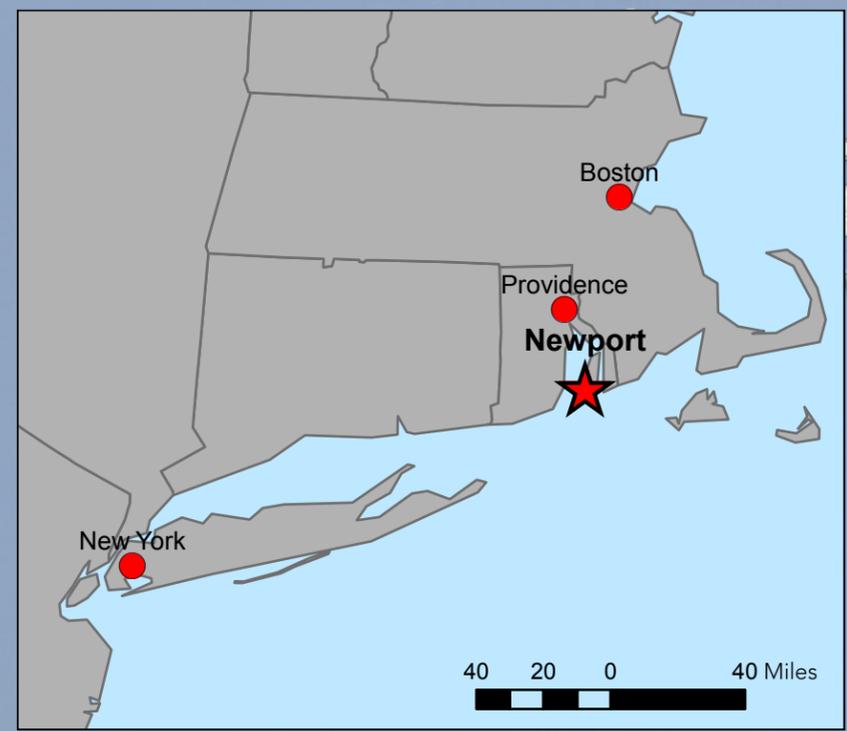


Development Opportunities

-  Innovation District Redevelopment Site
-  Microgrid Connected Facility
-  Pell Bridge Ramp Realignment
-  Naval Hospital Redevelopment
-  Innovate Newport Techworks
-  Urban Agriculture
-  Intermodal/Information Center
-  Cyber Security
-  Green Infrastructure
-  Solar Power Opportunities
-  Creative Live Space



Providence, Rhode Island



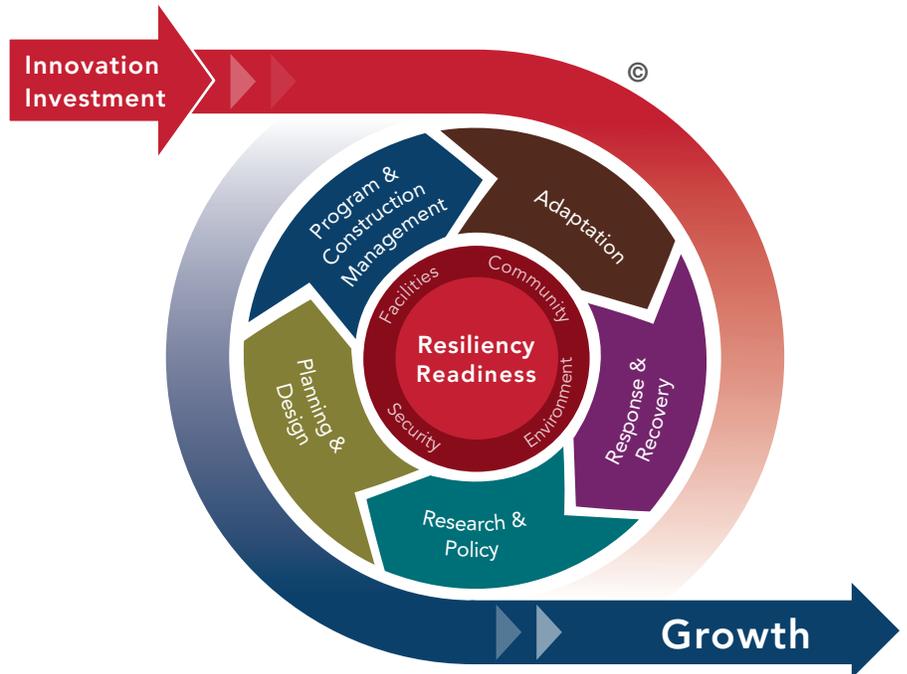
The Newport Resilience Engine – Precursor to a National and Global Leadership

The Resilience Engine is a sustainable, integrated development concept pioneered and first implemented by Louis Berger on large scale, complex recovery projects. The concept was first developed by Louis Berger through its support to federal, state and local agencies for the rebuilding of Lower Manhattan after the 9/11 terrorist attacks; a man-made disaster that severely tested the area's and in fact the Nation's resilience to extreme events.

This was subsequently followed by Louis Berger in its recovery and resilience planning efforts for multiple disasters in the United States and internationally. These included the firm's disaster management, recovery and resilience work for the 2009 Iowa Floods, the Katrina disaster, the BP Deep Horizon oil spill environmental disaster and other weather related disasters in the Northeast, including Hurricanes Lee, Irene and Superstorm Sandy and internationally with the long term resilience planning in the Philippines following the Super-typhoon Haiyan under the SURGE program, for which Louis Berger was retained by USAID and is currently being implemented.

Through its development of the Resilience Engine, Louis Berger continued to support public and private clients with its sustainability services, including support to the U.S. Department of Defense for its "Net Zero" initiative, integrated with security considerations.

Newport contains very high-level qualifications as a candidate for deploying the Resilience Engine. It has the security and resilience prerequisites, the data richness and technology innovation and a local government that is geared towards sustainable development. No other City in the United States, or for that matter, globally can match Newport in its unique combination of these assets. As such it is perfectly positioned for investment that leverages upon these unique characteristics combining private and government resources.



The City of Newport is proposing to create a model for resiliency that the Team recognizes as ideal to be a Resilience Engine. This diagram illustrates ways to see the enormous potential of the proposed model. Innovation and engagement shape the potential projects currently part of the planned resiliency portfolio; others to come would fire the "engine" from the same energy provided by innovation and engagement. This shows how conventional and impact investment pushes the engine toward value from the integrated project portfolio for both kinds of investment and provides desirable outcomes in terms of reduced risk, profitability/efficiency, social/environmental benefits and sustainability.

Creates Value from Innovation, Engagement, & Investment

As a test case, Newport and the other two communities on Aquidneck Island provide a platform that represents the challenges from ocean related climate change and the opportunities to address and profit from those challenges through an integrated resilience system. This platform, on an island 1/3 larger than Manhattan, provides a microcosm of national concern including urban, suburban and agriculture.

Newport recognizes that one major component of this new ecosystem will be the emerging role, function and mission of the public sector, specifically the role of city/local government, in relation to the involvement of and partnership with the private sector, impact investment, foundations and community stakeholder groups.

To develop and implement this test ecosystem, Newport will work closely with the global consortium as strategic partners to help visualize and begin to put in place the fundamental building blocks for the type of local government that will be needed to realize this national resiliency model.

Newport's aim is to be the leader in one of the country's first efforts to demonstrate how epic socio-economic change will be developed, financed, implemented and managed in an era of shrinking public sector budgets. Thus, Newport and the larger Rhode Island community present a striking opportunity not only to innovate technologically, socially, industrially and economically (trade, jobs), but also to show how the public sector will need to engage with other stakeholders to generate the urgently needed socio-technological projects involving coastal protection and resiliency.



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The resiliency work we are undertaking will importantly also provide jobs and economic growth for our community. In that respect immediately below are the **first 10 projects** the Infracore Consortium as the Strategic Advisor and Partner has been asked to structure and effectuate.



Innovate Newport Re-purposing the former Sheffield School

The City of Newport and the Newport Chamber of Commerce are partners in plans to re purpose a former 30,000 square foot school property as a technology accelerator and flex space. This project is a Public- Private Partnership (PPP) focused on resilience-related technologies; products and design, including ocean engineering, defense, particularly cyber security related; and alternative and/or renewable energy. An agreement has been signed between the city and Naval Undersea Warfare Center (NUWC) to be able to commercialize its underwater technology.

The City has also served as facilitator and connector for the University of Rhode Island's Graduate School of Oceanography (URI GSO) and the commercialization office at NAVSEA Naval Undersea Warfare Center Newport (NUWC) for opportunities to attract research and foreign ocean-related firms for cross-fertilization of R&D and commercialization efforts in Newport. The University of Rhode Island (URI) Foundation as the university's technology commercialization group has expressed an interest in the potential for both Sheffield and the Innovation District to serve as a platform for their commercialization efforts of URI research.

Current Partners: City of Newport, NAVSEA NUWC, URI GSO, Irish Maritime & Energy Resource Center, Marine Institute Ireland, Dublin City University, as well as the US Embassy Lisbon (to link with Portuguese centers of ocean technology and engineering excellence at the University of the Azores). The U.S. Commercial Service (the trade promotion arm of the U.S. Department of Commerce's International Trade Administration) has expressed an interest for Sheffield to serve as a base for Nordic tech firms interested in entering the US market, particularly with regard to the Navy and DoD.



Innovation District Redevelopment Site

The Innovation District Redevelopment Site is projected to be a national model for integrated resilience, located on a 60+ acre site for planned applied research and development (R/D) technology commercialization transfer and service centers, focusing on resilience/climate change, ocean, defense, cyber security, green infrastructure and digital industries, their support sub-sectors, and associated training and job creation centers, and their ancillary financial, commercial and retail/hospitality support services. The Innovation District will include land made available from the realignment of the Pell Bridge Ramps and the District's associated internal road, pedestrian and bike transportation systems.

- » **Newport Oceanography Technology** will be part of the core Innovation District project. The City of Newport is serving as facilitator and connector for the University of Rhode Island's Graduate School of Oceanography (URI GSO) and the commercialization office at NAVSEA Naval Undersea Warfare Center Newport (NUWC) for opportunities to attract research and foreign ocean-related firms for cross-fertilization of R/D and commercialization efforts in Newport.
- » **The City of Newport** is also developing a cooperative working arrangement with the City of Annapolis, MD to link the resilience initiatives and efforts of Newport with those of Annapolis in a collaborative competition called the Race to Resilience. In addition, The City of Newport has established a relationship with the Environmental Finance Center (EFC) at the University of Maryland as a strategic partner.



Pell Bridge Exits Realignment

Plans are moving forward for the realignment of the North End the exit ramps of the Pell Bridge. This roughly \$41M project will free up to 60 acres of land, which will include the Naval Hospital property upon acquisition, in the commercial development of the above mentioned Innovation District Redevelopment project.



Naval Hospital Site Redevelopment

As part of the Innovation District, the City of Newport currently is engaged in the acquisition process from the Department of Navy of the former nine-acre waterfront Naval Hospital as a City property for inclusion in the Innovation District development. The Naval Hospital property represents one of the most potentially commercially lucrative underdeveloped waterfront properties in Rhode Island.



Newport Waterfront Performing Arts Center (WPAC)

A WPAC has been identified as a potential opportunity to activate the North End Waterfront to create a year-round economy. The WPAC could be combined with a hotel at the naval base site or located near the current casino property. The waterfront and ocean views will create a dramatic backdrop for concerts, some of which could be open-air concerts. The WPAC could be configured to serve also as a convention center and sports facility. Potential partners include Lincoln Center.



Microgrid (multiple sites/connections to City facilities)

The City of Newport is looking at two opportunities to be a test case in Rhode Island for a community microgrid project. The first opportunity is an approximate mile and half project that would keep critical facilities and shelters online during a natural or man-made disaster. These facilities include the main fire station (and emergency management headquarters), City Hall, Thompson Middle School (potential shelter-in-place facility), police headquarters, as well as Newport City Hospital. The second opportunity is for a system to service the Innovation District as a permanent (not just emergency) grid. In addition, the existing rail right-of-way may function as a microgrid network spine along which multiple microgrids could be connected, providing resilient and renewable energy.



Fast Pyrolysis Energy Project

Working, in conjunction with the microgrid effort, with RINLA to recruit a fast pyrolysis energy firm that can utilize waste to produce both energy, at Tier 4 (California Standards) emission rates, and biochar that can be used as both a soil amendment for land productivity enhancement and as a component in new materials for advanced manufacturing. The Fast Pyrolysis plant can also be connected to a future microgrid.



Hot Water and Steam Facility

A biomass to hot water and steam project is under consideration. Rinla waste may be the feedstock. Likely customers include: city, military housing complex and the navy base.



Cyber Security

The City is pursuing, as mentioned in the above Innovate Newport (former Sheffield school) initiative, a series of cyber securities initiatives with local, national and global firms and organizations linking technology development firms and insurance firms in a co-located environment to address potential cyber-attacks on maritime and energy systems during a time of a natural ocean-related emergency, as well as critical facilities.



Visitors Center Potential Relocation (Parcel near Pell Bridge Ramp)

Relocation or creating an ancillary of the existing Visitor center to the Pell Bridge Area, possibly in combination with other activities and a transit system using the existing rail system via a monoline rail are under consideration, including a parking complex that could provide substantial revenue. The relocated Visitor Center will enable tour buses to directly access the Visitor Center from the (reconfigured) Pell Bridge ramps, avoiding impacts to the local street network and Downtown Newport where tour buses currently park.



Newport Live/Creative Space

The City of Newport is looking to re-purpose the former Cranston-Calvert grammar school into a microloft live/creative space for young tech and design individuals. Partners: City of Newport and the Catalyzing Newport Initiative. Current Status: Preliminary meetings and conceptualization ongoing. Project was presented as one of the items during the July 2015 Catalyzing Newport program, which included Carol Coletta of the Knight Foundation. Ms. Coletta is a national leader in visualizing and execution of re purposing of former schools in this type of project.



Catalyzing Newport

The City of Newport is assisting the Catalyzing Newport initiative (www.catalyzingnewport.org), a multi-year project that brings thought leaders from organizations such as Knight, Pew and Brookings Institute to assist Newport explore and utilize the place making, arts, culture and heritage as economic and civic building blocks and major contributors to a healthy and diverse community fabric. Newport as a living example of public private partnerships will be a crucible for municipal growth in an age of reduced public budgets.



Urban Agriculture

The City of Newport, through the Newport Project Development Company, is partnering with a global firm for the development of a state of the art hydroponic agricultural project. This will provide a year-round rather than seasonal opportunity to address inner city challenges to food security (both in disasters and ordinary time) and access to fresh produce for the economically challenged. The urban agriculture facility could also be connected to the proposed Microgrid thereby further enhancing energy and food security with sustainable energy sources. Employment opportunities would benefit local communities.



Green Infrastructure Job Identification and Placement Initiative

The City of Newport has been partnering with the Rhode Island Nursery and Landscape Association (RINLA), a trade association that represents Rhode Island's \$2.5 billion land based industries, and the Town of South Kingstown to develop a green infrastructure job creation and placement effort. This effort, in conjunction with a consortium of the state, local, national and global firms and organizations, targets 20-30 year old unemployed or underemployed citizens from economically disadvantaged groups.



Louis Berger

