

If we wait for a disaster to start planning the recovery, we will be too late

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Drive south along Father Capodanno Boulevard on the East Shore of Staten Island past the shadows of the Verrazano Narrows bridge that connects Brooklyn, New York City's most populated borough, to Staten Island, its least. On your left the view has not changed much in 100 years, the Atlantic Ocean stretches out before you. This shoreline forms the west half of a geographic feature known as the New York bight, a right angle of landmass on the Atlantic Coast. This feature worked just as scientists predicted during Sandy, as a funnel compounding storm surge in New York Bay. On your right, you will drive past a series of neighborhoods--South Beach, Ocean Breeze, Midland Beach, New Dorp, and Oakwood Beach. A hundred years ago, this shoreline was home to a scattering of vacation communities of seasonally-occupied bungalows. As the city grew, families from other boroughs and other countries found that these 600 square foot bungalows could offer a comfortable and affordable year round home.

As you make a right turn from the boulevard into one of these neighborhoods you go down a hill, almost down to water table into an area that is part tidal wetlands and part suburban sprawl. The houses are tightly packed together, often just a few feet from one another side by side and back and front. You might see some of the same characteristics of informal housing in rapidly urbanizing areas in other parts of the world, but the New York City legal term for this housing is non-compliant. That means that if you were to build here today, you would not be able to build such housing under current building code and zoning regulations. However, under certain conditions--namely when a house is destroyed by a disaster--the City allows non-compliant houses to be rebuilt as they were.

The street is narrow and strewn with gaping potholes filled with water. There are no storm sewers to drain these streets, they drain directly into a network of waterways that wind through the blocks, behind houses. Along the banks of these streams phragmites, an invasive species grows and eventually dries out and can be easily ignited by a cigarette butt to cause a raging wildfire. Some of the neighbors organize to cut the phragmites, but this is just one of many of the many things for people here to worry about, including subprime mortgages that have left many with sinking home values and mounting debt.

Hurricane Sandy brought 16' of storm surge into these neighborhoods. Waves battered these small homes, pushing many off their foundations. Seawater filled the neighborhood like a bowl and did not drain for several days. Hundreds of homes were completely destroyed and nearly all suffered significant damage. Most tragically a few people did not understand the risk, did not evacuate, and were drowned in their homes.

In New York City the places that were hardest hit by Hurricane Sandy also had some of the greatest challenges before the storm and will have the most challenges rebuilding. After Sandy I began working in the Mayor's Office of Housing Recovery. We understood that there would be significant challenges to rebuilding in these areas and that ultimately, putting back the same housing stock without addressing the underlying land use and infrastructure issues was probably in no one's best interest long term. We started conversations about how we could use the disaster as an opportunity to do better and change the development paradigm. Perhaps we could work with communities to rebuild stronger housing set back from the coast and the wetlands and coordinated with long term investment in transportation, drainage and coastal protections.

At the same time, people in these neighborhoods were living in dangerous situations and there was urgency coming from the community and felt at the highest political levels to getting people back into safe and sanitary housing as quickly as possible. There were also rules attached to the federal funding which the City was to receive to help storm victims that limited the ability to do much else besides rebuild what was there. Planning and design was perceived to be at least a distraction, or maybe even a dangerous diversion from the important work of getting everyone home. I began to doubt that it is possible to do any long term planning in the wake of a disaster. In fact, a few months after Sandy, "recovery" and "resilience" were split into two different offices under the Mayor with two different sets of priorities and funding.

At about the same time, Shawn Donovan the US Secretary of Housing and Urban Development worked with the Rockefeller Foundation to try to bring more long term planning into the recovery process through Rebuild by Design. When I first heard about it, it seemed like exactly what we needed. However, as the designs progressed, I found that the teams were moving away from comprehensive planning solutions that would involve re-thinking land use and housing; and focusing solely on the specifics of coastal protection. I was wrong to expect too much; in fact, these projects are commendably ambitious and innovative in themselves, without taking on the complexities of the housing market, land use patterns, and infrastructure

investment. We do not yet know how they will turn out. Will the people leading these projects be able to combat the retraction to the status quo that has happened after other disasters? I have high expectations that they will succeed, mostly because of the extraordinary leadership supplied at HUD, the Rockefeller Foundation, and also among the designers themselves.

Kate Orff's firm SCAPE has proposed a coastal protection measure that also will make a substantial contribution to the ecology and economy of the South Shore of Staten Island. This project called Living Breakwaters seems to be on a clear path to spending all the money in the allowed timeframe and achieving all of the project goals. Living Breakwaters benefits from having been in development for several years before Rebuild by Design. The team had already done much of the research, begun the public engagement (with the Rising Currents show at MoMA in 2008), and formed many of the strategic partnerships with government and advocates to get the project going long before Sandy hit the area. The competition supplied the opportunity for implementation.

To me this illustrates an important point: in order to have successful long term planning after a disaster, you must begin before the disaster. When Hurricane Katrina struck New Orleans in 2006, I was working the New York City Office of Emergency Management. We understood that a similar event could be devastating in New York, and the City worked hard on coastal storm plan that addressed all of the immediate operational concerns for how the City could respond to such an event: evacuation, sheltering, damage assessment, debris management, utility restoration, etc. However, the plan did not address what would happen next: how neighborhoods would rebuild and recover long term. For this we would have needed a much deeper public conversation. We did however take an important first step in 2007. We organized a design competition called "What if New York City..." The brief for the competition visualized how the people, buildings and infrastructure in a neighborhood would be affected by a hurricane. We then asked entrants to consider how design could be used to aid the recovery process, particularly how temporary housing could provide communities a place to live close to home to be part of the rebuilding process. The results of the competition allowed the city to develop a post-disaster housing plan. Not everything in the plan was used after Sandy, but the co-benefits of the competition. The competition process offered participants a base of knowledge of the hazards of coastal flooding and the particular vulnerabilities of building stock and infrastructure. It also created a platform for a network of advocates, officials, and citizens concerned with these issues to begin a robust public conversation about coastal storms in the city.

It is difficult to track all of the ways that the competition and subsequent pre-planning had a positive impact on Post Sandy recovery, but I can cite a few examples. For instance, the American Institute of Architects local chapter took an active role in the "What if New York City..." competition. They also helped the City work through much of the pre-planning for post disaster recovery. After Sandy, these same individuals helped the City immediately after the storm with damage assessments and surveying sites for temporary housing and recovery operations. Throughout the recovery, they played an important role supplying a critical public voice in weighing recovery strategies.

When we first proposed the "What if New York City..." competition to the Rockefeller Foundation in 2007, they were eager to participate with one stipulation: that the competition travel to other locations. They saw clear value in using the design brief as a way to explore the particular threats and vulnerabilities of a city and have a robust and rational conversation about risk and recovery. I believe such a competition would be extremely useful in Japan. What if Tokyo were hit by a magnitude 7 earthquake? How would different types of buildings and infrastructure be affected? What areas are the most vulnerable and what kind of damage could they expect? How many people would be displaced? Where would they live and for how long? How would the city be rebuilt?

An interdisciplinary design competition could serve the people of Tokyo to bring these questions and their potential answers to light. I believe we benefitted enormously from asking similar questions before Hurricane Sandy, but I wish we had done more, been more specific and had a deeper conversation with communities at risk.

Rebuild by Design has been a valiant effort to have this conversation after the fact, but with a clear and uncompromising eye to the future. I believe the projects and policies developed through this competition will serve us well when the next disaster strikes; although it did come too late for the people living off of Father Capodanno Boulevard in Staten Island. The people of Tokyo and other cities at risk should not wait to until it is too late to begin this conversation.