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Rails to Recovery in a post-Katrina Environment

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Global warming has changed the way we perceive risk, as more and more cities are facing new threats or an increasing frequency of existing risks and extended periods of risk. Floods, hurricanes, or droughts are only the more common types of events that cities and regions now face. Therefore, in disaster prone areas, it is now incumbent on municipal and state officials as well as private sector leaders to develop new solutions and apply new concepts to disaster response and recovery. Resilience is a twenty year old concept with today's most accepted definition being developed by Holling in 1973. The concept is described as "the capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedback". [Holling et al, 2004]

To ensure that the system (here the city) is going to be able to effectively deal with a threat, it is necessary to consider different applications of the concept of resilience. These may include the following: "integrating disaster prevention, mitigation, preparedness, and vulnerability reduction perspectives into sustainable development policies; increasing local capacity (institutions and mechanisms) for building hazard resilience; incorporating risk reduction into the design and implementation of emergency preparedness, response, recovery, and reconstruction programs in affected communities." [Cutter et al, 2008]

It is now common to apply resilient solutions to risk assessment and post-catastrophe reconstruction. In New Orleans, devastated by Hurricane Katrina in 2005, this catastrophe highlighted many deficiencies , but lives could have been spared if an efficient evacuation procedure would have been in place, as part of normal preparedness and disaster prevention planning. Transportation assets such as buses, streetcars and trains were minimally used during the mandatory order to evacuate the city although almost 20% of the people did not have access to a car. Developing the existing network of public transportation assets (buses, streetcars, paratransit vehicles) and creating new options (passenger trains) to reach emergency destinations, like Baton Rouge, seems appropriate, and will contribute to greater resiliency.

Resilience is just one part of sustainable development but it combines 3 different parts (economic, social, environmental). It also incorporates numerous concepts including disaster resistant design, evacuation planning / execution and sustainable networks and systems. Relative to evacuation, in disaster prone cities or regions, it is important to ensure that everyone will be able to evacuate safely, and provide solutions that are both economic and effective. Public transportation provides a more efficient, environmentally superior and a more accessible mode to a greater numbers of people than the car for evacuation. Regarding its economic benefits, public transit can also provide new jobs (construction, maintenance, service…) and potential developmental spinoffs. Studies have shown that having a streetcar and/or a train in a city helps to develop real estate and can increase real estate values adjacent to a service corridors. Compared to the cost of building additional lanes of interstate, public transportation is considerably cheaper with minimal environmental impact. Finally, public transportation, such as passenger trains, provides an efficient way to evacuate, as roads can easily be over crowded.

In the efforts to rebuilding the city post disaster in a more sustainable and resilient manner, developing new transportation networks is just one aspect that should not be overlooked. Public transit can provide new ways for evacuating the car less population as well as seniors and others requiring specialized transportation. Public transit can also provide alternatives to accessing job's in the affected areas as well as schools, stores, etc... post-event.

Examples of the application of the concept of resiliency will be given to rebuilding New Orleans in a more sustainable way (risk proof architectural design, new transportation networks, use of natural barriers to protect the city, etc.) as well as examples of what has changed since Katrina (risk assessment, flood-proof houses, evacuation procedures, etc.) The potential use of public transit in evacuation and recovery will be highlighted.

References

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