

Bouncing Back



Albert Cho

How cities & utilities can amp up their resiliency

Resiliency is becoming a new buzzword in city planning departments across the country as federal, state and local officials look to prepare for an unpredictable future. *SWS* Managing Editor Mary Beth Nevulis recently spoke with Albert Cho, vice president of strategy and business development for Xylem, about urban resilience and the steps a city can take to prepare for weather events.

Mary Beth Nevulis: How is urban resilience defined?

Albert Cho: Urban resilience refers to a city's ability to prepare for, respond to and recover from disruptions and disasters with minimum damage to health and safety, the economy and the natural environment. Cities account for the majority of the world's population and economic activity; this growing concentration means that they are acutely exposed to natural disaster risks, many of which are experienced through water-related impacts of flooding, water contamination or drought.

Nevulis: How can resilience be built through innovation in technology and business models?

Cho: Cities can enhance their resilience by strengthening early warning capabilities through investments in sensor and communications networks. Doing so helps decision-makers more efficiently inform the public about the location of a storm, how severe the damage is likely to be and where there might be safe havens. Similarly, technologies that link sensor networks, large-scale data analysis and communications systems provide timely information to guide response activities.

Nevulis: What steps can a city or utility take to prepare for events like floods, water scarcity and aging infrastructure?

Cho: Many cities and utilities are using scenario analysis to identify

potential failure modes under various disaster scenarios and develop operational or technological solutions. For example, in a storm situation, failure of a sewage lift station can generate dangerous sanitary sewer overflows if power goes out or a pump fails. Building redundancy into the system with diesel power and backup pumping can ensure that critical pump stations will continue to function, even under highly disruptive conditions. Information technology also is becoming a powerful lever for helping decision-makers safely monitor evolving conditions to target responses.

Nevulis: What are some examples of cities that are taking steps toward infrastructure resilience?

Cho: In North America, New York and Vancouver have conducted comprehensive long-term planning studies to assess the resilience of their infrastructure to adapt to a changing climate. Philadelphia has done great work investing in green infrastructure to absorb storm water as it falls. Chicago is making significant strategic investments in upgrading its water and sewer networks to make them more robust. Internationally, Singapore is constantly experimenting with new innovations in water and sewer systems to make these systems intelligent and adaptive networks. In all of these cases, strong leadership at the top is driving the resilience agenda, and municipal officials, community leaders and the private sector are working together to ensure we succeed. **SWS**

Albert Cho is vice president of strategy and business development for Xylem. Cho can be reached at 914.323.5700. Mary Beth Nevulis is managing editor of SWS. Nevulis can be reached at mnevilis@sgcmail.com.

For more information, write in 809 on this issue's reader service form on page 45.