The Challenge
Urbanization and climate change are on a collision course and infrastructure is their battlefield!

Urban Flooding
Phoenix, AZ, 8 Sept 2014 (10-15 cm in <24 h)

Coastal Flooding
NYC 100-y floodplain (FEMA)

Drought
NYC—Syracuse— Baltimore— Miami—San Juan— Portland— Phoenix— Hermosillo—Valdivia

Our Response: UREx Network
- A network of diverse cities
- A network of experts in Working Groups
- A holistic conceptual framework
- Inclusive, participatory approaches
- A workflow, education program, and evaluation plan that produce results and continually learn

Central Question:
How do SETS domains interact to generate vulnerability or resilience to climate-related extreme events, and how can urban SETS dynamics be guided along more resilient, equitable, and sustainable trajectories?

Example: Vulnerability mapping in Jamaica Bay

UREx SRN Work Flow

Solutions
Traditional Solution
“Fail safe” – low likelihood, High consequence of failure highly modified Infrastructure

UREx Solution
“Safe to fail” – failure, but with minimal consequence

Working with diverse stakeholders

Training the next generation of leaders

Our vision
A comprehensive network that will build the scientific basis to support existing and emerging city initiatives and incorporate fundamental and practical strategies to promote urban resilience from a SETS and sustainability approach.

- Assembling technical knowledge about infrastructure, climate, hydrology, demography, institutions
- Quantifying interactions and feedbacks in SETS models from diverse sources of information
- Understanding organizations that build and manage infrastructure and their contexts
- Considering social norms that shape acceptability of infrastructure
- Capturing values and visions of various stakeholders for a more desirable future