



Before buildings can change and adapt in new and renovation design, communities must address these:

1. Understand Vulnerabilities

Every community is vulnerable to hazards, whether natural or manmade. These hazards and extreme events can include floods, storms, heat waves, earthquakes, infrastructure failures, and other crises such as terrorist attacks or economic disruptions. Acknowledging the potential for disruption by, and the cascading consequences from, peak events like these is the first and foremost component of Resilience.

2. Strengthen Job and Housing Opportunities

Climate vulnerabilities and natural disasters are often front and center in discussions of Resilience, but social and economic ecosystems are extremely important contributors to the ability to recover and bounce back. Long-term stresses from a lack of jobs and economic opportunities make communities more vulnerable: places with a diversity of jobs and housing choices are better prepared for challenges.

3. Promote Equity

Increasing equity is critical to achieving Resilience. Those with the least financial resources are typically most at risk in times of extreme events, are least likely to have sufficient resources to support needs after an event, and have the least job security which affects preparedness before an event. Many cannot handle an the resulting cost, even with subsequent federal aid or support from recovery programs.

4. Leverage Community Assets

Communities must identify their assets, and strengthen, leverage, and protect these assets – from their geographical location to economy to culture to skills of the local population – to be more prepared for eventual shocks and to improve a local economy and quality of life. Categorizing these assets, alongside relevant vulnerabilities, is a critical early step for any Resilience planning process

5. Redefine How and Where to Build

Vulnerable homes, businesses, and government buildings must be made ready for potential impacts to the economy and to residents' safety, health, and welfare. While cities increasingly acknowledge risks and vulnerabilities, they need to do so in land use and development. Zoning, building codes, standards, overlays, incentives, and infrastructure investments are among the most effective tools available.

6. Build the Business Case

Communities need to look at the economic costs of “business as usual” versus cost savings and revenue generation from dedicated investment in Resilience. For developers investments in Resilient energy and water systems can reduce construction costs and operating expenses, Resilient design can lower insurance premiums, and Resilience may offer branding benefits and enhance property values.

7. Accurately Price the Cost of Inaction

For some investors, the current “cost” of not preparing for disasters is not perceived to be large enough to meaningfully influence development decisions. But a recent Congressional Budget Office (CBO) report recommended a shift of recovery costs from the federal government to states, cities, and the private sector. A change like this will radically shift how or whether property owners invest in preparedness.

8. Design with Natural Systems

Designing with nature systems should address the geography of a site in a holistic way, to understand the history of systems, resources, and use. Flooding, heat, and the other cascading impacts of climate change will not respect jurisdictional boundaries. Natural systems could include green infrastructure, native landscaping and drought-tolerant plantings, and natural coastal and riparian systems.

9. Maximize Co-benefits

Physical infrastructure intended to protect a community from hazards should strengthen a community against potential shocks and enhance a community’s environmental performance, economic development potential, and social cohesion. For example, a riverfront park designed to incorporate flood storage offers public benefits such as enhanced recreation, public health, and green spaces.

10. Harness Innovation and Technology

Change comes from a broad range of shocks and stresses that communities face, but also from promising new technologies like renewable energy, district-scale utilities, on-demand transportation, communications, public health, real-time information tracking, enhanced project management and performance measurement, and dynamic logistics for delivery of goods and supplies.

