



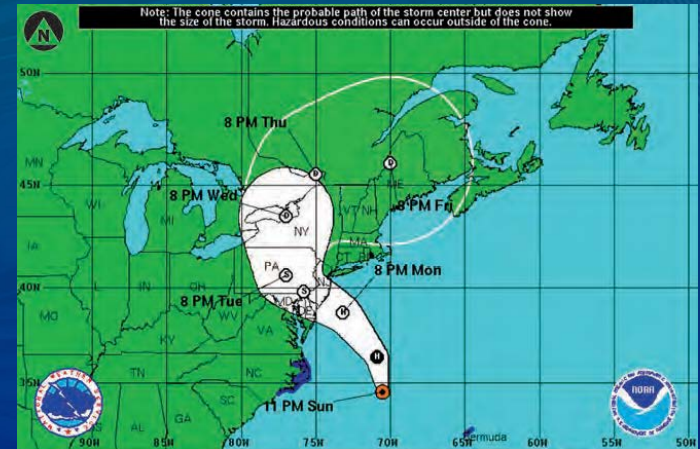
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NIST Community Resilience Guides and Activities

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Why Community Resilience?

- Communities are socio-technical systems. Buildings and infrastructure enable social and economic function. Therefore, social and economic needs and functions should drive the goals for performance of buildings and physical infrastructure.
- All communities face potential disruption from natural, technological, and human-caused hazards.
- Disasters take a high toll in lives, livelihoods, and quality of life that can be reduced by better managing disaster risks.
- Planning and implementing *prioritized* measures can strengthen resilience and improve a community's ability to continue or restore vital services in a more timely way – and to build back *better*.
- New tools and guidance are needed to measure resilience and plan and implement measures to enhance resilience.

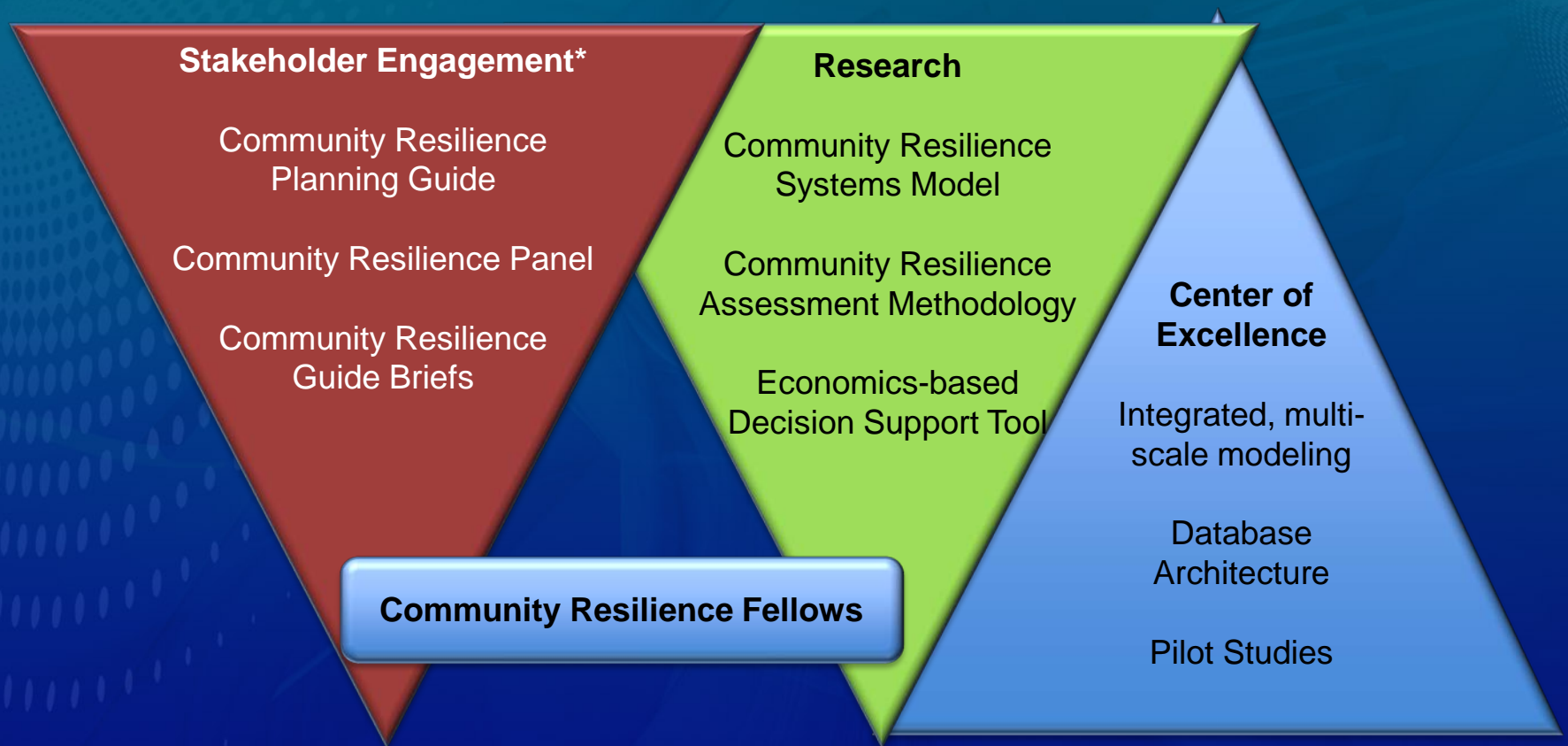


What is Resilience?

- *“the ability to adapt to changing conditions and withstand and rapidly recover from disruption due to emergencies”.* (Presidential Policy Directive (PPD) 8)
- *“the ability to prepare for and adapt to changing conditions and to withstand and recover rapidly from disruptions. Resilience includes the ability to withstand and recover from deliberate attacks, accidents, or naturally occurring threats or incidents.”* (PPD 21)
- Resilience addresses all activities through recovery:
 - Prevention, Protection, Mitigation, Response, and Recovery
 - Risk assessments address the potential consequences of hazard’s impact on existing construction and identify vulnerabilities
 - Emergency management addresses immediate response, with a focus on life safety



NIST Community Resilience Program



*Stakeholder Engagement component is called out in the President's Climate Action Plan



Planning Guide Outline

Volume 1 - Methodology

Executive Summary

- Introduction
- 6 Step Methodology
- Planning Example – Riverbend
- Glossary and Acronyms

Volume 2 - Reference

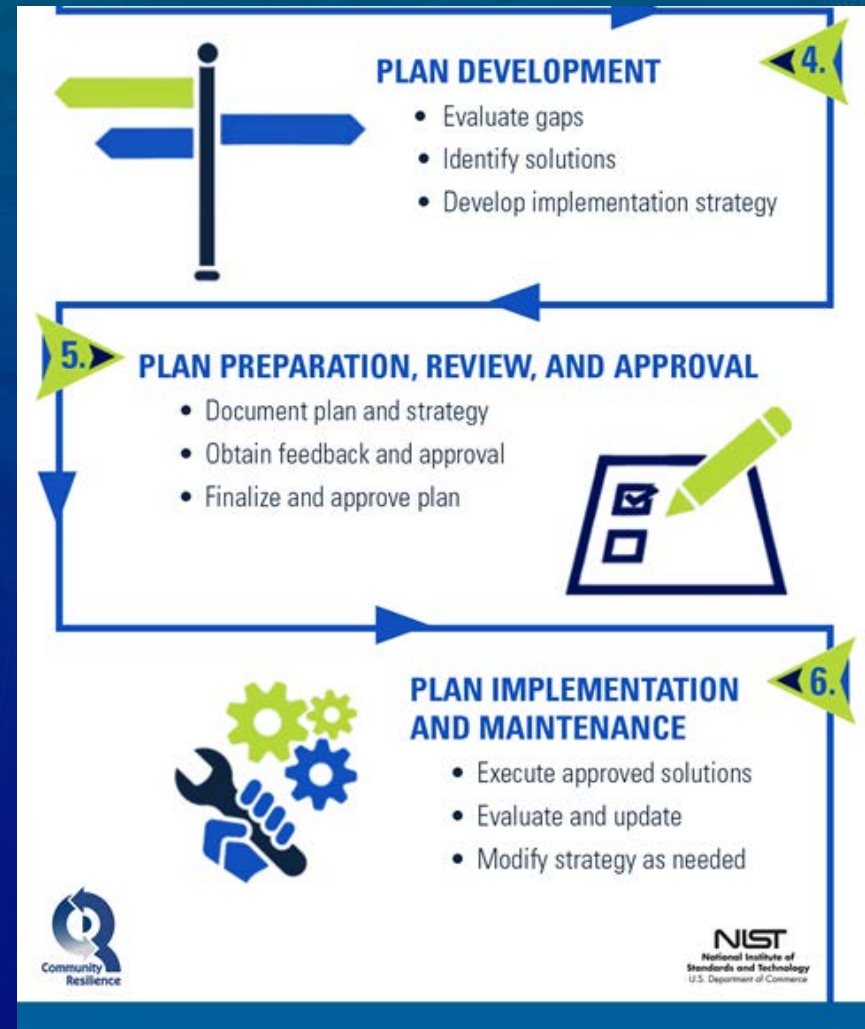
Executive Summary

- **Social** Community
- Dependencies and Cascading Effects
- **Buildings**
- **Transportation** Systems
- **Energy** Systems
- **Communications** Systems
- **Water & Wastewater** Systems
- Community Resilience Metrics



Planning Steps for Community Resilience

SIX-STEP GUIDE TO PLANNING FOR COMMUNITY RESILIENCE



Example Summary Resilience Matrix

Infrastructure	Recovery Time								
	Days 0	Days 1	Days 1-3	Wks 1-4	Wks 4-8	Wks 8-12	Mos 4	Mos 4-24	Mos 24+
Critical Facilities									
Buildings	90%							X	
Transportation		90%	X						
Energy		90%	X						
Water			90%		X				
Wastewater				90%				X	
Communication		90%		X					
Emergency Housing									
Buildings				90%					
Transportation				X					
Energy				X					
Water					X				
Waste Water				90%					
Communication				90%	X				
Housing/Neighborhoods									
Buildings						90%			X
Transportation			90%	X					
Energy			90%	X					
Water				90%				X	
Waste Water					90%			X	
Communication				90%			X		
Community Recovery									
Buildings								90%	X
Transportation				90%	X				
Energy			90%	X					
Water				90%				X	
Waste Water							90%	X	
Communication				90%			X		

Desired Performance

Anticipated Performance

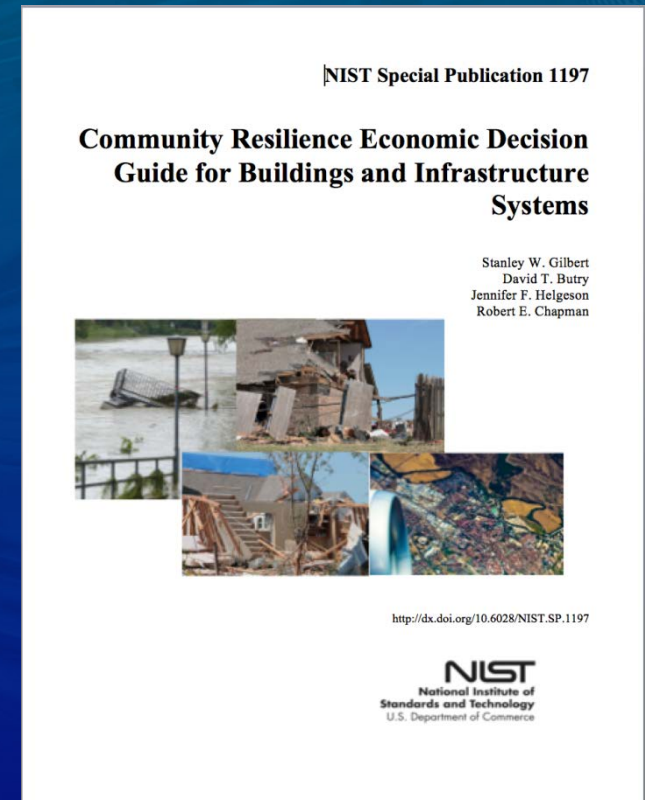


Superstorm Sandy



Economic Decision Guide (EDG)

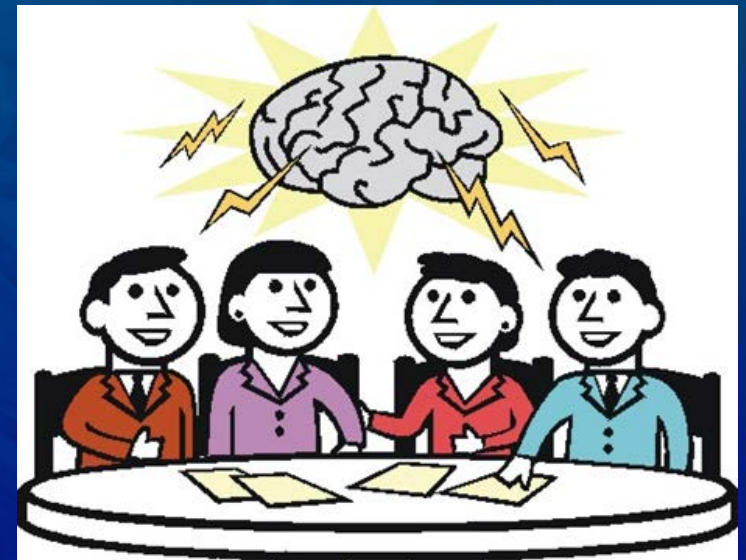
- Provides a standard methodology for evaluating investment decisions aimed at improving the resilience of communities
- Specifically designed for use with NIST's *Community Resilience Planning Guide for Buildings and Infrastructure Systems*
 - Provides a mechanism to evaluate the efficiency of resilience actions and to prioritize them
- Frames the economic decision process
 - Identifies and compares resilience-related benefits & costs
 - Across competing alternatives
 - Versus the status quo (do-nothing)



Next Steps...

Use of the Guide

- Encourage use of the Guide for community resilience plans.
- Develop training tools and user forum to support implementation
- Collect data on implementation of resilience planning to inform future versions of the Guide and other products.



Next Steps ...

Community Resilience Panel

- Engage and connect community and cross-discipline stakeholders.
- Identify policy and standards-related gaps and impediments to community resilience.
- Develop and maintain a Resilience Knowledge Base.
- Work with standards development organizations and their relevant committees to develop new or revised provisions to improve resilience.

Panel's Federal Co-Sponsors



NIST Contact

Website:

<http://www.nist.gov/el/resilience/>

Guide:

<http://www.nist.gov/el/resilience/guide.cfm>

Or google “NIST Resilience Planning Guide”

General E-mail: resilience@nist.gov



Questions?

