# Executive Summary And Introduction

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# Envisioning a Better Outcome

- The situation:
  - Communities are overwhelmed with issues, policies, and regulations that need to be addressed.
  - Each demands time and investment to resolve.
  - Dealing with low probability-high consequence hazard events is often a low priority unless recent events focus community interests.
- The way forward:
  - Resilience planning allows community recovery to be rapid and even improve the built environment.
  - It should be part of normal planning and operations.

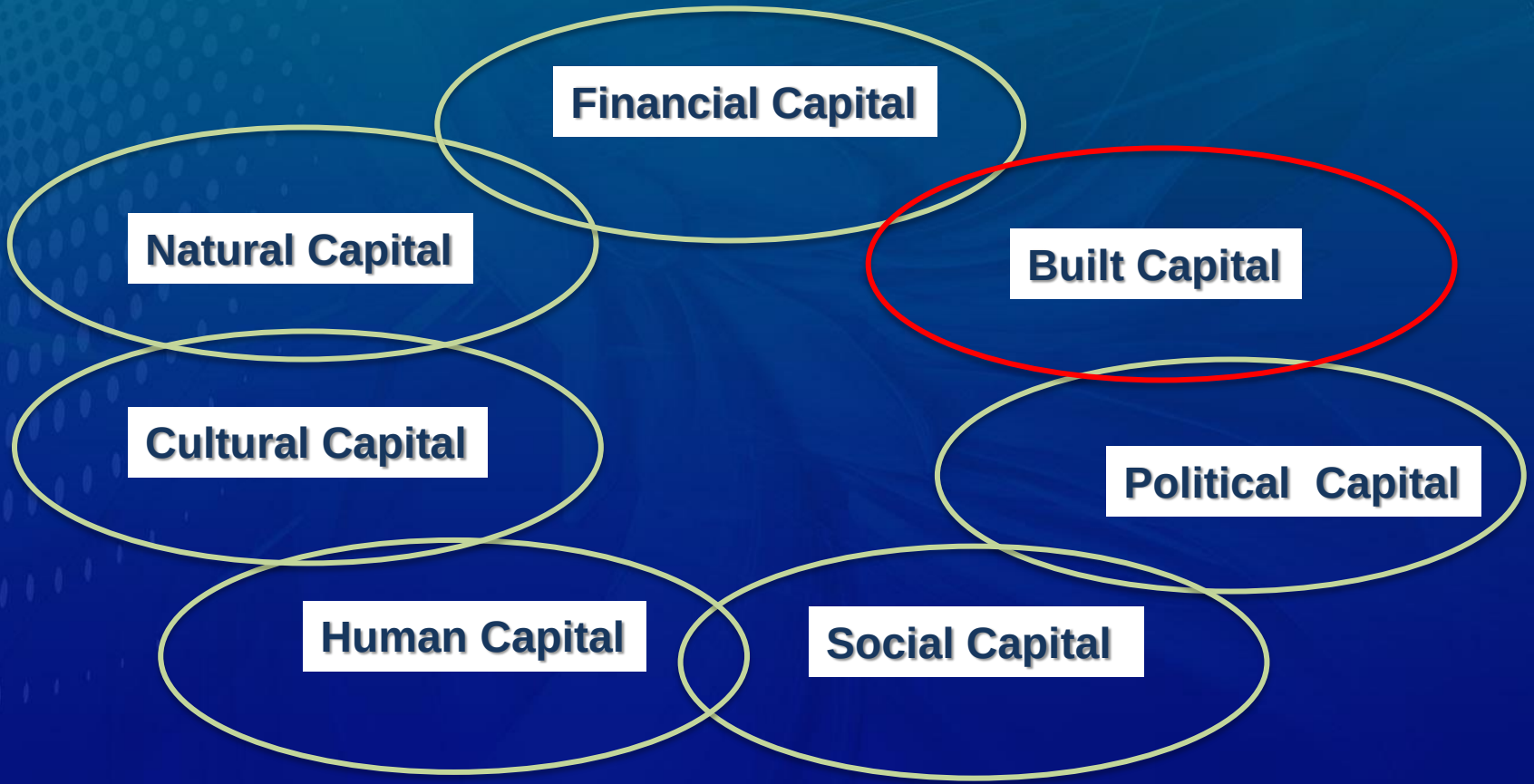
# Envisioning a Better Outcome: Cedar Rapids, Iowa

- The city has multiple hazards, including floods and tornadoes.
- The city is downstream from a nuclear power plant, so evacuation plans were developing in case there was ever an event at the plant.
- A flood crested at 31 Feet in 2008, well above the 500-yr flood level.
- The evacuation plan was used to move all residents to safety during the flood of 2008 – no lives were lost.
- Following the flood, the community developed a Recovery and Reinvestment Plan, with 3 focus areas:
- - Improve (mitigate) flood protection - with an interim and long term plans
- - Reinvest – improve housing, neighborhoods, businesses to make area highly attractive
- - Rebuild – rebuild better with construction that is flood resistant and sustainable
- http://www.cedar-rapids.org/city-news/flood-recovery-progress/floodrecoveryplans/Pages/default.aspx

# The Resilient Community

- Community resilience requires a governance structure that sets direction and provides services, and a built environment that supports the community's social institutions.
- Short term plans for emergency and interim solutions can be implemented if the event occurs tomorrow.
- Long term plans provide the roadmap for achieving community resilience.
- Resilience begins by envisioning a better outcome, understanding your community, developing a resilience plan, and initiating implementation.

# Community Capitals Framework




Based on: Flora et al, 2008

# Community Resilience of the Built Environment

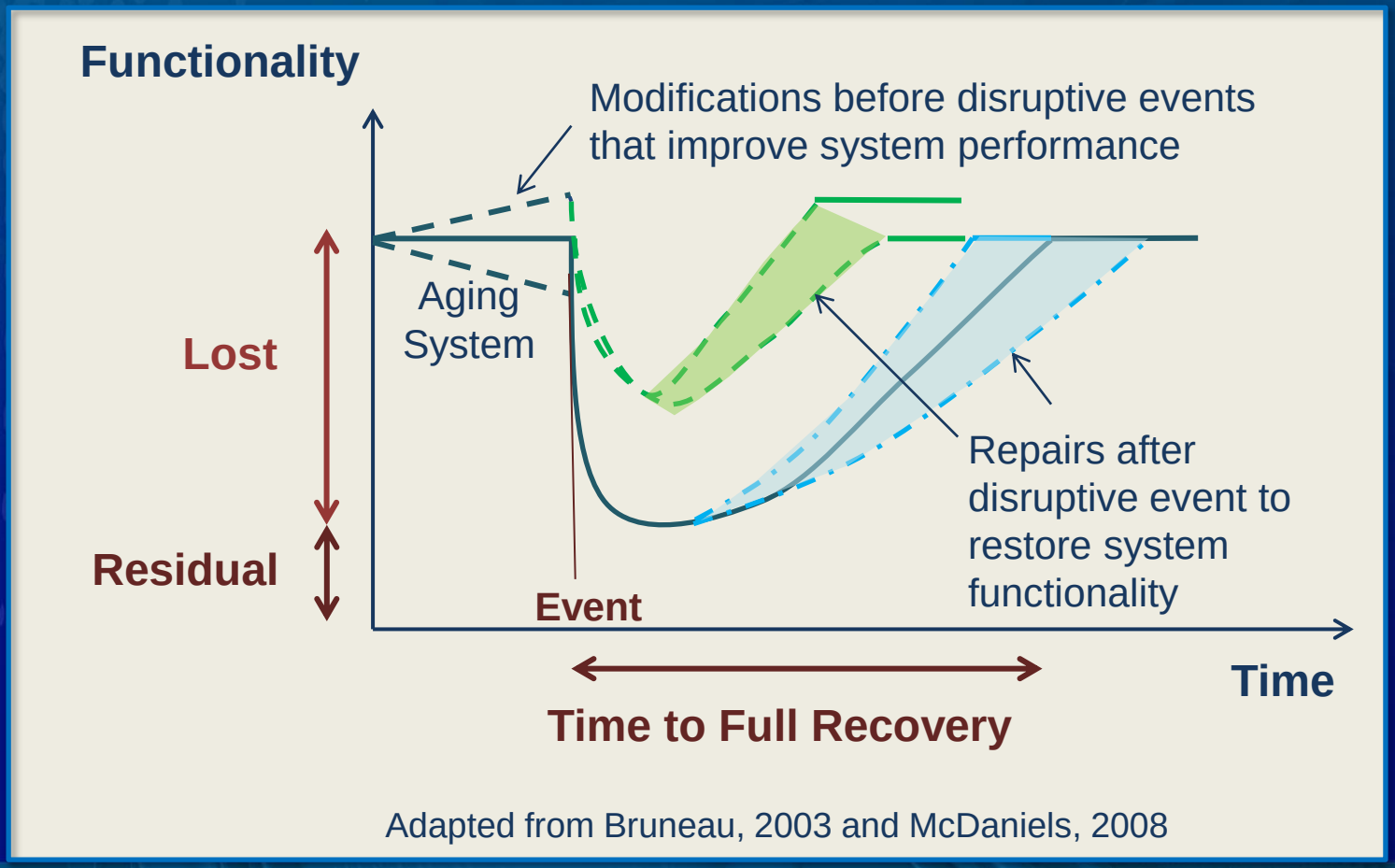
- Built environment includes
  - Buildings and facilities
  - Physical infrastructure for power, communication, transportation, water, wastewater systems
- Framework addresses the performance of all physical systems at the community level and how they support social functions, especially during recovery
  - Prior - planning, preparedness, mitigation, design, construction
  - Post - response, reconstruction, relocation, recovery of function

# Community Resilience and Other National Programs

- FEMA Mitigation Planning
  - Plans prepared for FEMA by emergency management office for mitigation grant requests.
- DHS National Preparedness – Roles and Responsibilities of local, state, federal programs
  - Prevention, Protection, Mitigation, Response, Recovery
- NIST Disaster Resilience Framework
  - Transformative process for the community
  - Prioritized development and recovery plan for built environment
  - Supports social needs during recovery

# Resilience Concept

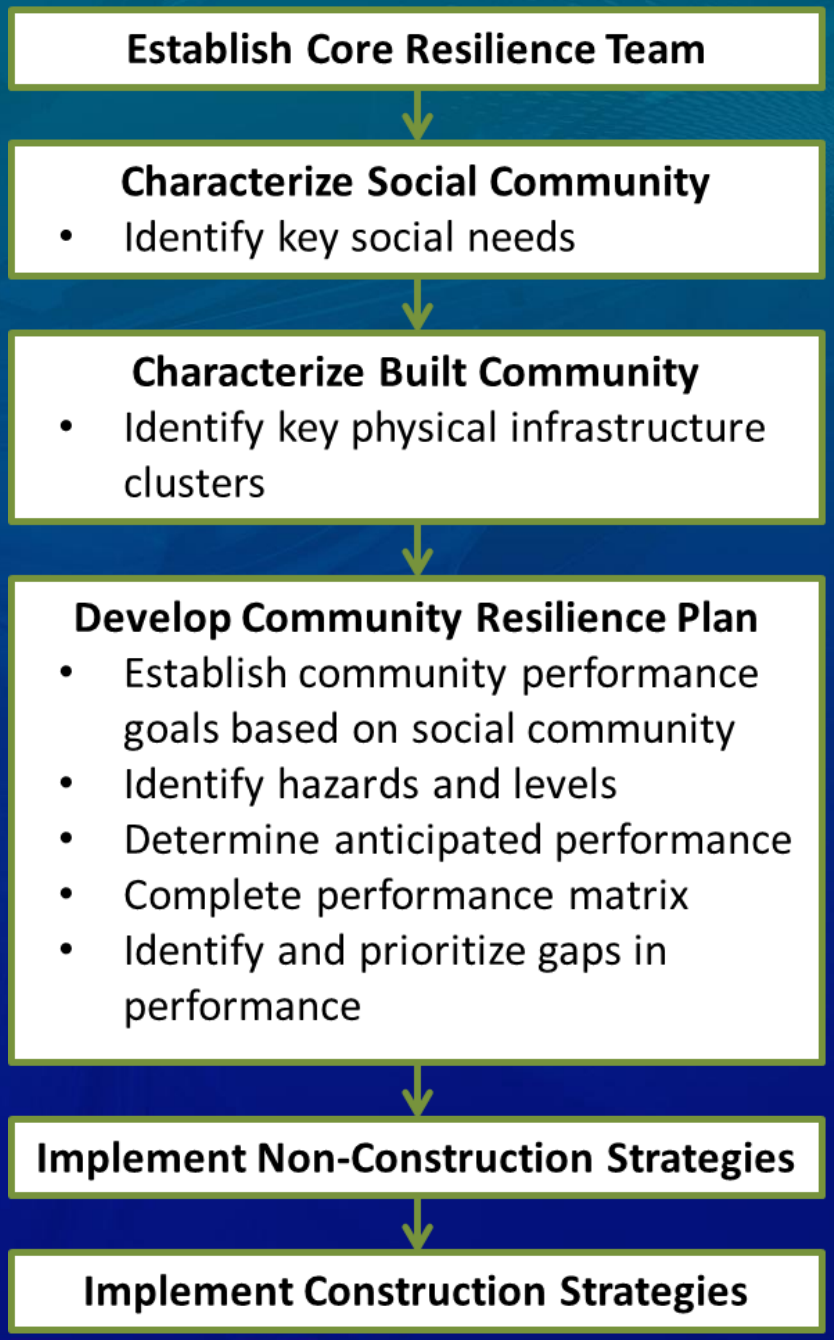
- Maintain acceptable levels of functionality during and after disruptive events
- Recover full functionality within a specified period of time




Adapted from Bruneau, 2003 and McDaniels, 2008

# Developing a Community Resilience Plan

- Striving for community disaster resilience need not be expensive, but the process is unique for each community and will take time both to implement and to accrue benefits.



# Framework - Overview Chapters

- Executive Summary
- Ch. 1: Introduction
- Ch. 2: The Social Context for Community Resilience
  - Social Community and Links to the Built Environment
- Ch. 3: Community Disaster Resilience for the Built Environment
  - Performance Goals
  - Mitigation and Recovery Strategies
- Ch. 4: Dependencies and Cascading Effects
  - Internal, External, Time, Space, Source
- Ch. 10: Community Resilience Metrics

# Framework - Infrastructure Chapters

- Ch. 5: Buildings
  - Typical:
    - Systems (Schools, Healthcare, Governance…)
    - Performance Goals
    - Regulatory Environment, Codes and Standards
    - Strategies for Implementation
- Ch. 6: Transportation Systems
- Ch. 7: Energy Systems
- Ch. 8: Communications and Information Systems
- Ch. 9: Water and Wastewater Systems

# Breakout Topics

- Executive Summary
  - Clear understanding of Framework goals and benefits
  - Actions required
  - What is needed to encourage your community to use the Framework