

What is Urban Resilience?

Cities face a growing range of adversities and challenges in the 21st century. From the effects of climate change to growing migrant populations to inadequate infrastructure to pandemics to cyber-attacks. Resilience is what helps cities adapt and transform in the face of these challenges, helping them to prepare for both the expected and the unexpected.

100RC defines urban resilience as “the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience.”

Building urban resilience requires looking at a city holistically: understanding the systems that make up the city and the interdependencies and risks they may face. By strengthening the underlying fabric of a city and better understanding the potential shocks and stresses it may face, a city can improve its development trajectory and the well-being of its citizens.

CHRONIC STRESSES

Chronic stresses are slow moving disasters that weaken the fabric of a city. They include:

- high unemployment
- overtaxed or inefficient public transportation system
- endemic violence
- chronic food and water shortages

ACUTE SHOCKS

On the other hand, acute shocks are sudden, sharp events that threaten a city, including:

- earthquakes
- floods
- disease outbreaks
- terrorist attacks

Of course, the challenges cities face often aren't a single shock or stress. Most cities face a combination of these challenges, which can contribute to further threatening a city's resilience. A good example of this is Hurricane Katrina, which hit the southeastern U.S. in 2005 with devastating consequences. But it wasn't Hurricane Katrina alone that led to such a crisis in the city of New Orleans. The storm's impact was exacerbated by stresses like institutional racism, violence, divestment and aging infrastructure, poverty, lack of macroeconomic transformation, environmental degradation, and other chronic challenges. The compounding pressure of these unaddressed stresses undermined the city's resilience and, when a terrible shock hit the city, it exposed and exacerbated these weaknesses—ultimately making it far more difficult for the city to bounce back.

Resilience Dividend

Applying a resilience lens leads to better designed projects and policies that address multiple challenges at one time, improving services and saving resources. This is known as the resilience dividend—the net social, economic and physical benefits achieved when designing initiatives and projects in a forward looking, risk aware, inclusive and integrated way.

To learn more about how building resilience helps cities become better in both good times and bad – for all citizens – review [The Rockefeller Foundation’s work on the Resilience Dividend](#).

The City Resilience Framework

What are the characteristics and capacities of a city that can adapt and grow in the face of these challenges? What distinguishes a resilient city from one that collapses in the face of disruption and adversity?

The Rockefeller Foundation partnered with the global design firm Arup to answer those questions. Extensive research and evaluation of cities’ experiences around the world revealed a common set of factors and systems that enhance a city’s ability to survive, adapt, and grow in the face of adversity. The City Resilience Framework (CRF) is the product of that work. It is an invaluable lens to help understand the complexity of cities, and it identifies a series of drivers necessary for a city’s resilience.

The CRF describes the essential systems of a city in terms of four dimensions: **Health & Wellbeing; Economy & Society; Infrastructure & Environment;** and **Leadership & Strategy**.

Each dimension contains three “drivers,” which reflect the actions cities can take to improve their resilience. To learn more about a Dimension and its Drivers, click on a portion of the circle below.

We also recommend you read the full text describing the City Resilience Framework [here](#), which includes more detail as well as case studies that apply these concepts to city examples. While the CRF isn’t a definition of urban resilience, it is a useful tool to help cities explore the strengths and weaknesses of its systems. 100RC uses several diagnostic tools based on the CRF in its work with cities to examine interdependencies and diagnose where to build their capacities.

EXPLORE THE CRF:

To learn more about a Dimension and its three Drivers, click on part of the circle.

Leadership & Strategy

Effective leadership, empowered stakeholders, and integrated planning.

Health & Wellbeing

The health & wellbeing of everyone living and working in the city.

Economy & Society

The social & financial systems that enable urban populations to live peacefully, and act collectively.

Infrastructure & Environment

The way in which man-made & natural infrastructure provides critical services and protects urban citizens.

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Leadership & Strategy

The processes that promote effective leadership, inclusive decision-making, empowered stakeholders, and integrated planning

Promote Leadership and Effective Management
Empower a Broad Range of Stakeholders
Foster Long-Term and Integrated Planning

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Health & Wellbeing

Everyone living and working in the city has access to what they need to survive and thrive.

Meets Basic Needs
Supports Livelihoods and Employment
Ensures Public Health Services

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Economy & Society

The social & financial systems that enable urban populations to live peacefully, and act collectively.

Promote Cohesive and Engaged Communities
Ensure Social Stability, Security, and Justice
Foster Economic Prosperity

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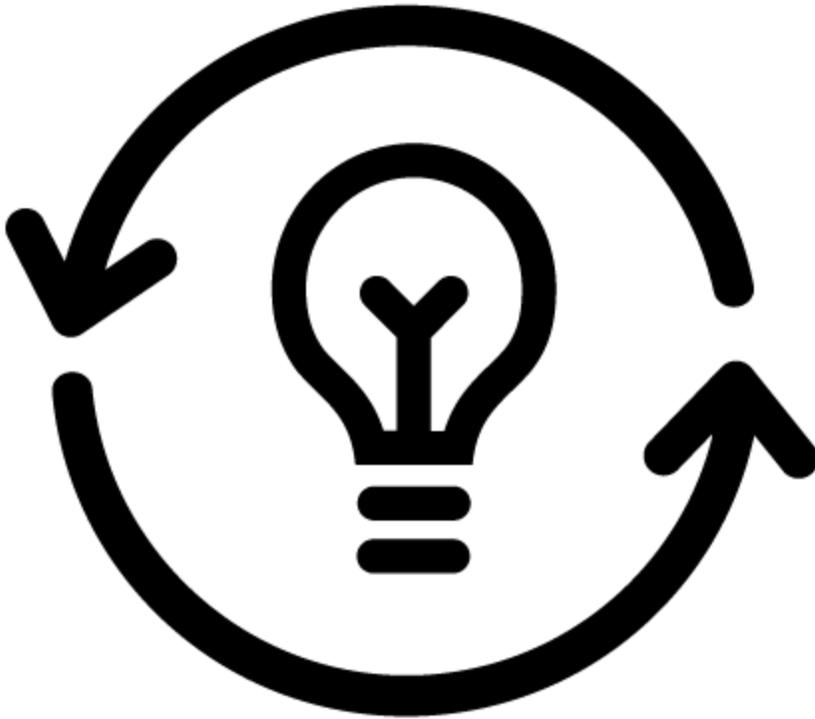
Infrastructure & Environment

The man-made and natural systems that provide critical services, protect, and connect urban assets enabling the flow of goods, services, and knowledge.

Provide and Enhances Protective Natural and Man-Made Assets
Ensure Continuity of Critical Services
Provide Reliable Communication and Mobility
What Makes a City Resilient?

Characteristics of Resilient Systems

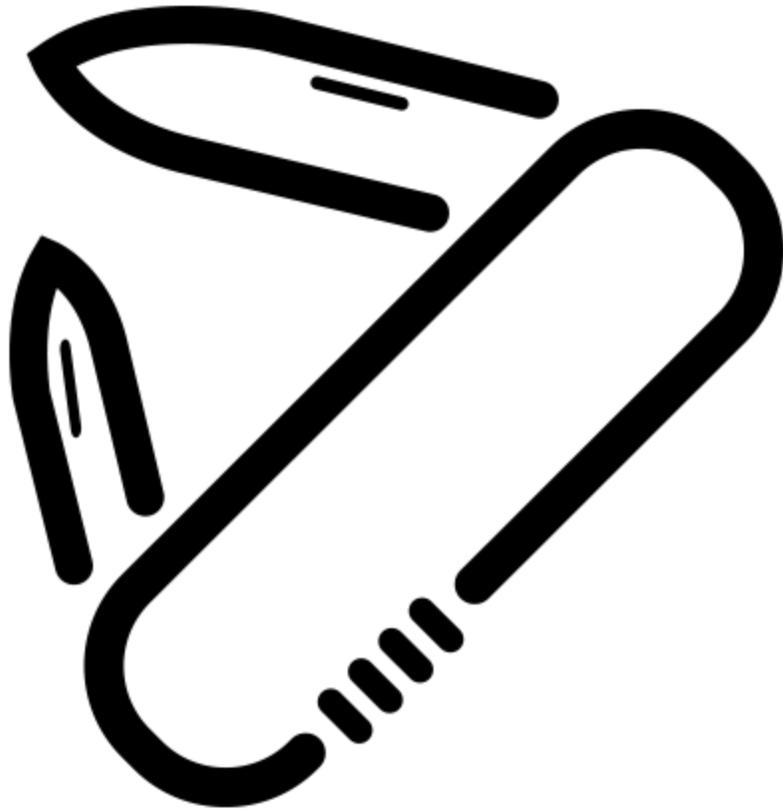
Finally, just understanding the systems of a city isn't sufficient. In order to build a city's resilience, those systems must be designed and functioning in a way that they can withstand, respond to, and adapt more readily to shocks and stresses. The CRF builds on decades of research on resilient systems, and identifies 7 characteristics that various city systems need.



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Reflective

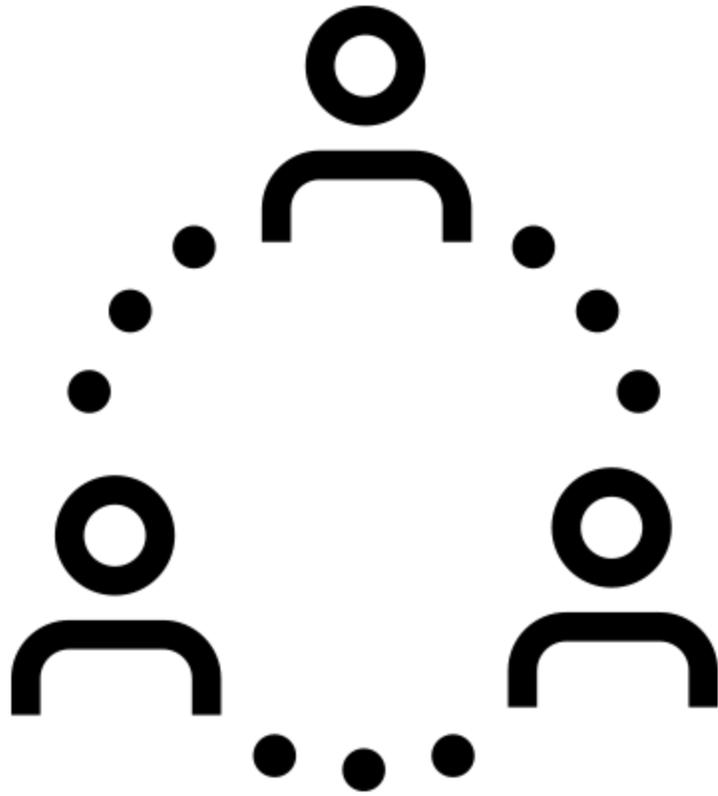
using past experience to inform future decisions



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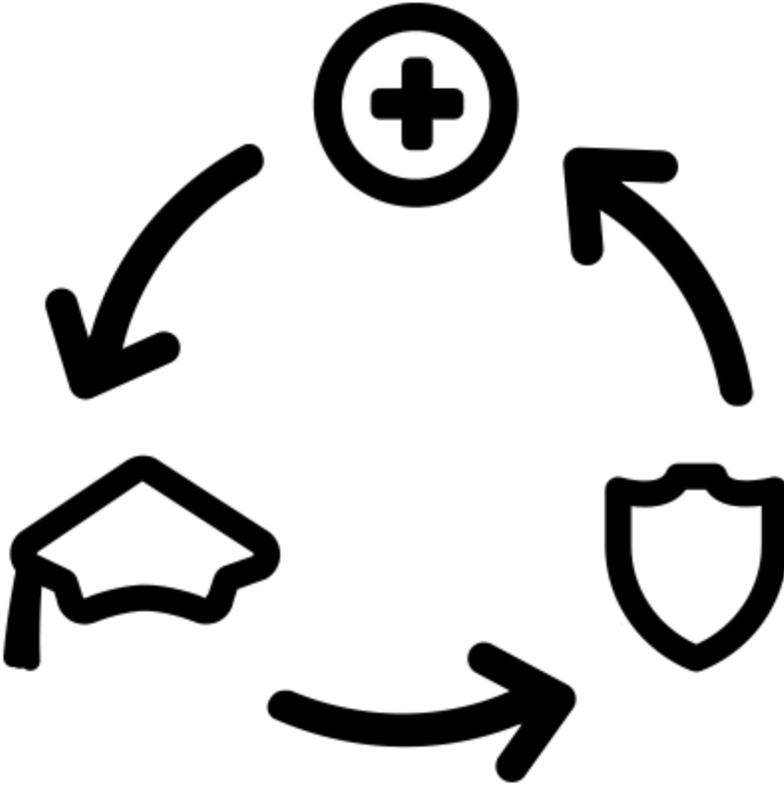
Resourceful

recognizing alternative ways to use resources



Inclusive

prioritize broad consultation to create a sense of shared ownership in decision making



• **Integrated**

bring together a range of distinct systems and institutions



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Robust

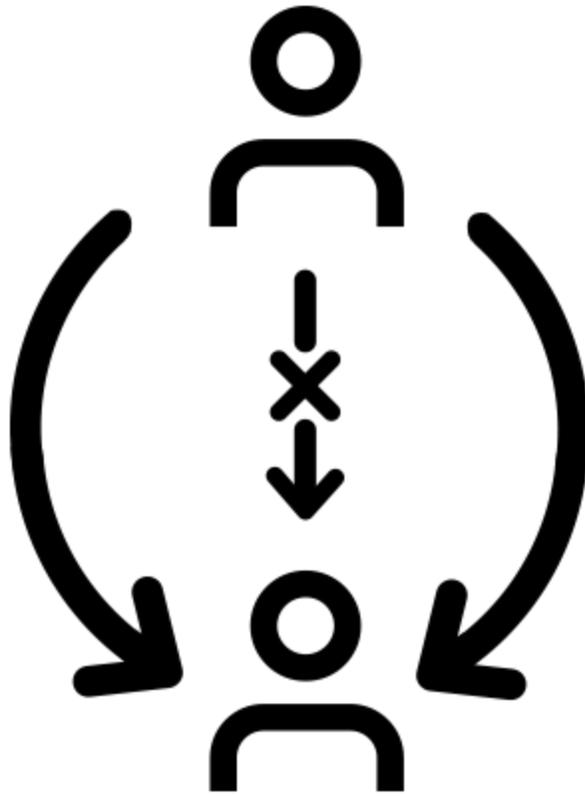
well-conceived, constructed, and managed systems



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Redundant

spare capacity purposively created to accommodate disruption



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Flexible

willingness, ability to adopt alternative strategies in response to changing circumstances