AECOM

Cities

What is urban resilience?

Urban resilience refers to the capacity of individuals, communities, institutions, businesses and systems within a city to survive, adapt and grow no matter what kind of chronic stresses and acute shocks they may experience.[1]

Chronic Stresses

Stresses weaken the fabric of a city on a daily or cyclical basis.
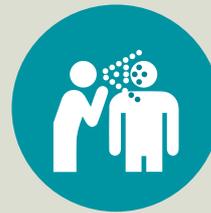Examples include:

Ineffective public transport system

Climate change

High unemployment

Acute Shocks

Shocks are sudden, sharp events that threaten a city.
Examples include:

Natural disasters

Disease pandemics

Extremist acts

Urban resilience and the built environment sector

In Australia, our population is rapidly growing and urbanising – in 2014, 89% of Australians lived in urban areas. Today, cities are engine rooms for knowledge-sharing, creativity and employment, and in many cases, the seat of regional politics and decision-making. Most of Australia's fastest growing sectors are based in our cities, attracting new visitors driving even further urban population growth.

Increased population and greater employment bring many challenges. Particularly the need to effectively manage competing demands for space, to move people and goods, and to keep people and communities safe, cohesive, fulfilled and happy. Growth also means increasing pressures on our natural environment and the crucial ecosystem services they provide (e.g. clean air, cooler urban areas). Climate change is expected to exacerbate these pressures.

The principles of urban resilience offer organisations a new lens through which to view their operations. It encourages those with a stake in cities to consider not only how to maintain functioning in emergency situations, but also how they can contribute to a higher quality of life by enhancing economic, environmental and social outcomes. It is a model for good times, as well as bad.

Throughout the development cycle – from design and planning of green infrastructure, to construction and facilities management – the built environment sector has a significant role to play in the future of our cities. This fact sheet has been designed to help organisations in this sector begin the journey of embedding resilience principles into their decision-making.

See overleaf for information on the attributes of resilient systems, along with a series of self-assessment questions for organisations.

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AUSTRALIAN SUSTAINABLE BUILT ENVIRONMENT COUNCIL

1   Definition from 100 Resilient Cities – Pioneered by the Rockefeller Foundation (100RC)

How can your organisation contribute to city resilience?

Resilient systems share certain attributes.

To help you embed resilience principles into your organisation's decision-making, consider these questions in relation to each attribute of a resilient system.

Flexible

Alternative strategies can easily be adopted to deliver critical services, depending on the circumstances.

How do customers access the built environment and our services?

In the event of a crisis, what are the alternative ways to deliver our city services (e.g. alternative supply chains)?

Do we have documented plans for business continuity, maintaining essential city services and functioning built environments?
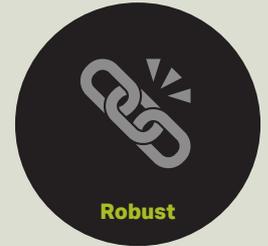
Reflective

Past experiences inform future decisions and actions.

How does our organisation measure its performance in delivering critical city services and built environments?

How have previous shocks or stresses affected the places and services our organisation provides?

What have we learnt from these events, and how have we changed the way these services are delivered accordingly?

Robust

Systems are well-conceived, constructed and managed. Any failure is predictable, safe, and proportionate.

What external inputs, systems and services does our organisation rely on?

Are our buildings or other infrastructure designed, constructed and managed in a way that ensures city residents are safe in any event?

How can our organisation take into account current climate change projections when delivering city services and built environments?
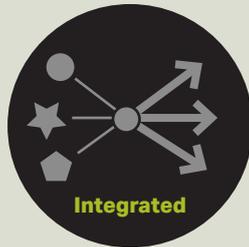
Inclusive

Broad and meaningful engagement – aiming to create a sense of shared ownership among stakeholders.

Who are all the stakeholders that rely on, or could benefit from, our services and places? How do our decisions and services affect the most vulnerable people in the city or cities?

What services do we currently deliver that could better support liveability, health and community safety?

How have stakeholder voices influenced how we provide places and services to date? What more can our organisation do to make stakeholder input meaningful?

Integrated

Connections between systems and institutions are harnessed to generate multiple benefits.

How is our organisation collaborating with other organisations and sectors to maximise benefits for cities?

Does our organisation have an internal culture of integration and collaboration?

In delivering our built environment services, how can our organisation support social cohesion and community connectedness?

Resourceful

Seeking better ways to use existing resources, both in good times and bad.

What resources does our organisation have (e.g. knowledge, people, equipment, natural capital) that could be shared to support city functioning in the event of a crisis?

How does our organisation identify new knowledge, business models and/or technologies that could deliver better city services?

Does our organisation's culture and investment support continual improvement (i.e. improving in good times, not in response to crisis)?

Redundant

Spare capacity exists to allow continued functioning even when disrupted.

Do our organisation's systems have spare capacity that allows continued delivery of city services even when disrupted?

How are we planning our systems and services to account for future demographic change (e.g. population growth, ageing population)?

The attributes on this page are adapted from the qualities of resilient systems, available through **www.cityresilienceindex.org.**

If you're interested in reading more about how cities around the world are building their resilience, see **www.100resilientcities.org.**