

Briefing Paper

Urban resilience for local government

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Authors: • Melanie Lowe • Sarah Bell • Jessie Briggs • Elissa McMillan • Merrick Morley
• Maree Grenfell • David Sweeting • Alison Whitten • Nikki Jordan

Executive Summary

Urban resilience has emerged and rapidly developed as a concept to assist cities to respond to acute shocks and chronic stresses. This briefing paper, which accompanies a more detailed [Issues Paper](#), provides an overview of the main concepts, definitions and qualities of resilience. We developed an urban resilience framework, based on the literature and researcher-practitioner workshops. The framework was designed for application by local governments in Australia, but may be relevant to other jurisdictions in Australia and internationally. Resilience focuses on system characteristics and processes, to ensure that cities can respond to growing ecological, economic and social uncertainty and change. Resilience thinking enables us to learn from past experiences as well as prepare for known and unknown future risks.

Key findings

- Urban resilience is the capacity of individuals, communities, institutions, businesses, and systems within a city to adapt, survive and thrive no matter what kind of chronic stresses and acute shocks we experience, and to positively transform as a result.
- Resilient urban systems have 10 core qualities: prepared, robust, spare capacity, diverse, reflective, integrated, inclusive, flexible, future-focused, and innovative.
- Sustainable development provides a purpose for resilience, seeking thriving, equitable and ecologically robust urban outcomes.
- A framework for urban resilience consisting of the definition, characteristics and qualities provides the basis for implementing resilience across local government policy and operations, and in partnership with communities and stakeholders.

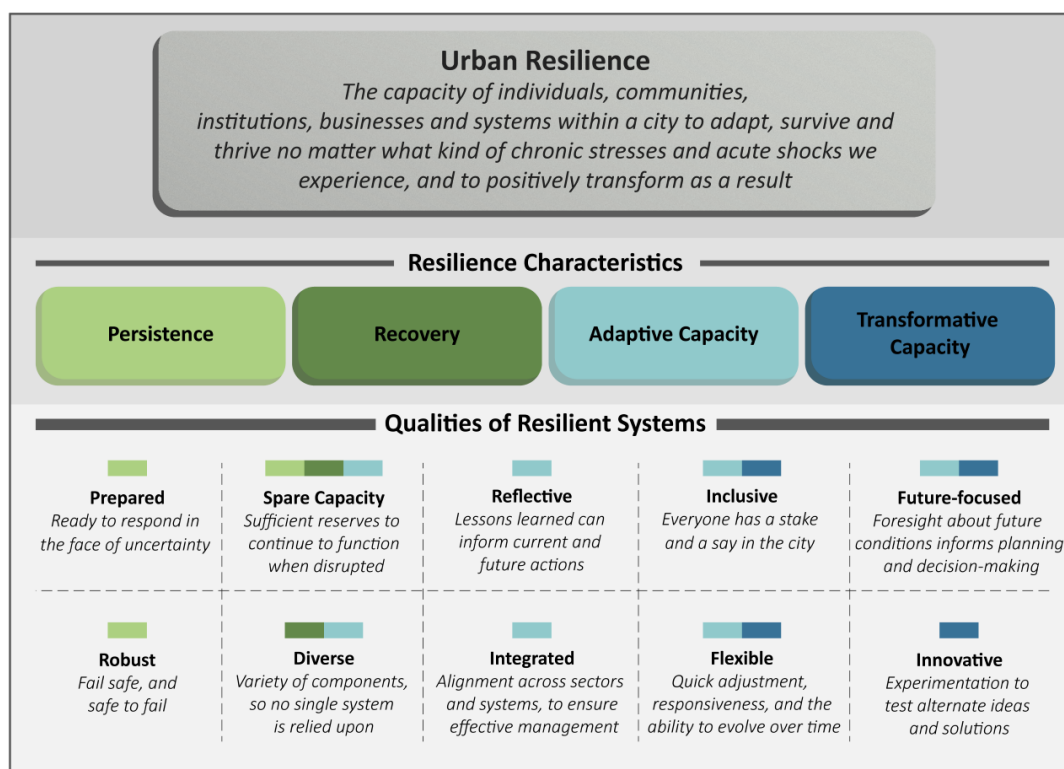
Urban resilience

Cities face significant challenges, as well as opportunities, when responding to disruptive events and change. Urban resilience concentrates on responses to disruptions or issues that impact cities and human settlements. These may be sudden or acute shocks (eg fire, heatwave, flood, economic recession), or long-term stresses (eg sea level rise, social inequality, unaffordable housing). Shocks and stresses can be linked (eg bushfire leading to increased mental health issues), and co-occurrences (eg heatwave during a pandemic) can exacerbate challenges or generate new ones. Urban systems must effectively respond to current threats, without this limiting general capacity to adapt to future conditions.^{1,2} Resilience-building should also incorporate mitigation alongside adaptation to shocks and stresses.

Urban resilience has been defined in different ways. Based on the literature and workshops with researchers and the City of Melbourne’s City Resilience and Sustainable Futures team, we adapted a definition from the Resilient Cities Network.³ The new definition emphasises the potential for transformation of urban systems. It reflects a holistic concept of resilience, aligning with contemporary understanding of the complexity and dynamism of cities, and the multi-sectoral nature of local government planning.

The urban resilience framework for local government includes the definition, 10 qualities of resilient systems adapted from the literature, and four key resilience characteristics that they enable. The qualities of resilience can be embedded in the planning, projects and structures of urban sub-systems (eg transport, food, healthcare, emergency services) as well as across cities as a whole.

Urban resilience framework for local government



Qualities of resilient systems

Resilience qualities (adapted from ⁴)		Example: Resilient transport system
Prepared	Ready to respond in the face of uncertainty	Transport system authority has planned and prepared for extreme weather interruption, and key actors know what they need to do in such an event
Robust	Fail safe, and safe to fail	Transport infrastructure can withstand extreme weather events
Spare capacity	Sufficient reserves to continue to function when disrupted	The train system can add services to accommodate additional passengers during an emergency
Diverse	Variety of components, so no single system is relied upon	Diverse transport options are available, so there are alternatives when one transport mode is disrupted
Reflective	Lessons learned can inform current and future actions	New bus routes are established based on what people currently need
Integrated	Alignment across sectors and systems, to ensure effective management	Active transport is connected to public transport and activity centres
Inclusive	Everyone has a stake and a say in the city	Transport options are available, affordable and accessible to everyone
Flexible	Quick adjustment , responsiveness, and the ability to evolve over time	Lanes and spaces for bikes are rapidly increased to support physical distancing during a pandemic; creating car-free zones
Future- focused	Foresight about future conditions informs planning and decision-making	Active and low-emissions transport are prioritised to achieve co-benefits for climate change mitigation, adaptation, and human health
Innovative	Experimentation to test alternate ideas and solutions	New transport technology (eg e-bikes) is supported and tactical urbanism trialled to reduce car parking

Resilience for sustainable development

Both desirable system-states (eg productive farmland, healthy ecosystems) and undesirable and unsustainable system-states (eg polluted waterways, institutionalised racism) can be highly resilient,⁵ so the overarching societal purpose of resilience-building activities need to be clear. Sustainable development (meeting the needs of the present without compromising the ability of future generations to meet their own needs) provides a key purpose for resilience.⁶ Resilience is explicitly embedded within UN Sustainable Development Goals 9 and 11. While sustainable development focuses on outcomes, resilience prioritises processes for handling and learning from disturbance, recognising that things will go wrong along the way.⁷

Resilience and sustainability policy actions can work synergistically to meet both objectives, if well considered.⁷ For example, building resilience should involve sustainable use of social and natural resources, which in turn will help mitigate human-made shocks and stresses. Local governments need to work with communities to ensure responses are inclusive, reduce inequities and build agency. Resilience approaches that place the burden of responsibility for risk management on communities have the potential to increase inequities. Resilience-building for current generations can impact future ones.

What could a resilient city look like?

There is no single vision of a resilient city, but the qualities paint a picture of how the elements that comprise a city can contribute to its resilience. A resilient city is socially inclusive and cohesive, with affordable, energy-efficient housing, diverse economic activity, and safe, walkable neighbourhoods where people can access open space, public transport, employment, education, and services; and where infrastructure meets basic needs, ecosystems are sound, natural resources are used sustainably, land use policy is coherent and future-focused, government leadership and management is transparent and strategic, and innovation is encouraged.^{4,8}



Photo credit: City of Melbourne. A flower meadow in Melbourne's CBD.

References

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Further reading

This briefing note is a summary of an MSSI Issues Paper 'Urban resilience for local government: Concepts, definitions and qualities'. The full paper can be found at: sustainable.unimelb.edu.au/publications/issues-papers/urban-resilience-for-local-government-concepts,-definitions-and-qualities

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Melbourne Sustainable Society Institute

Glyn Davis Building, Masson Road
The University of Melbourne
Parkville VIC 3010, Australia

Melbourne Centre for Cities

Grattan Street
The University of Melbourne
Parkville VIC 3010, Australia

About the Melbourne Sustainable Society Institute

The Melbourne Sustainable Society Institute facilitates interdisciplinary sustainability research across faculties and centres at the University of Melbourne, and promotes research in a way that maximises engagement and impact. MSSI emphasises the contribution of the social sciences and humanities to understanding and addressing sustainability and resilience challenges.

About the Melbourne Centre for Cities

The Melbourne Centre for Cities is designed to address the challenges that city leadership faces, and the information it needs, in an interconnected and increasingly urbanised planet. The University of Melbourne actively seeks to extend linkages between education, research and practice, and aims to inspire learning through interdisciplinary reflection, and its integration of research teaching and practice around the implications of all forms of urbanisation.