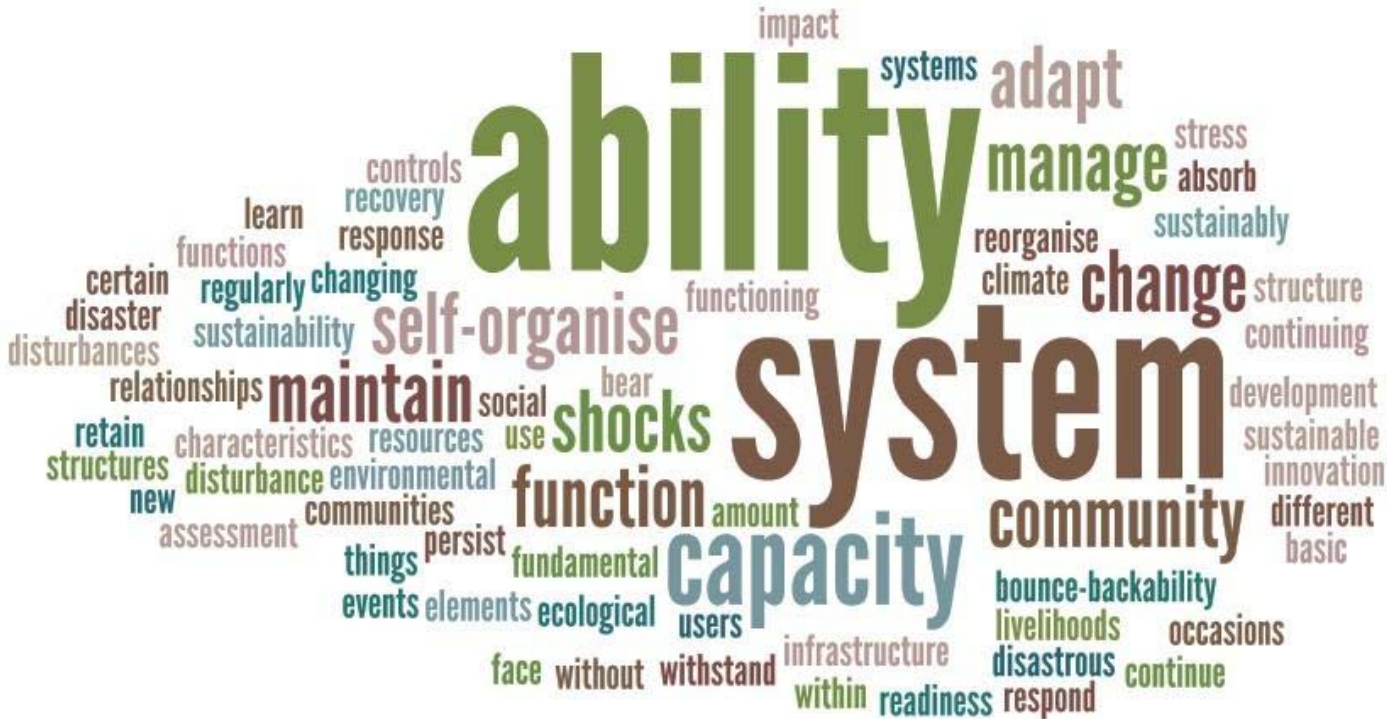


Resilience for Cities and Regions: What It Means, and Why It Is Important

Aidan Hughes | Arup

UCLA Lake Arrowhead Symposium on the
Transportation—Land Use—Environment Connection
October 19, 2014



Resilience: the capacity of cities to function so that the people living and working in cities – particularly the poor and vulnerable – can survive and thrive no matter what stresses and shocks they encounter.

City Resilience Framework. (2014).
The Rockefeller Foundation | Arup, p. 7.

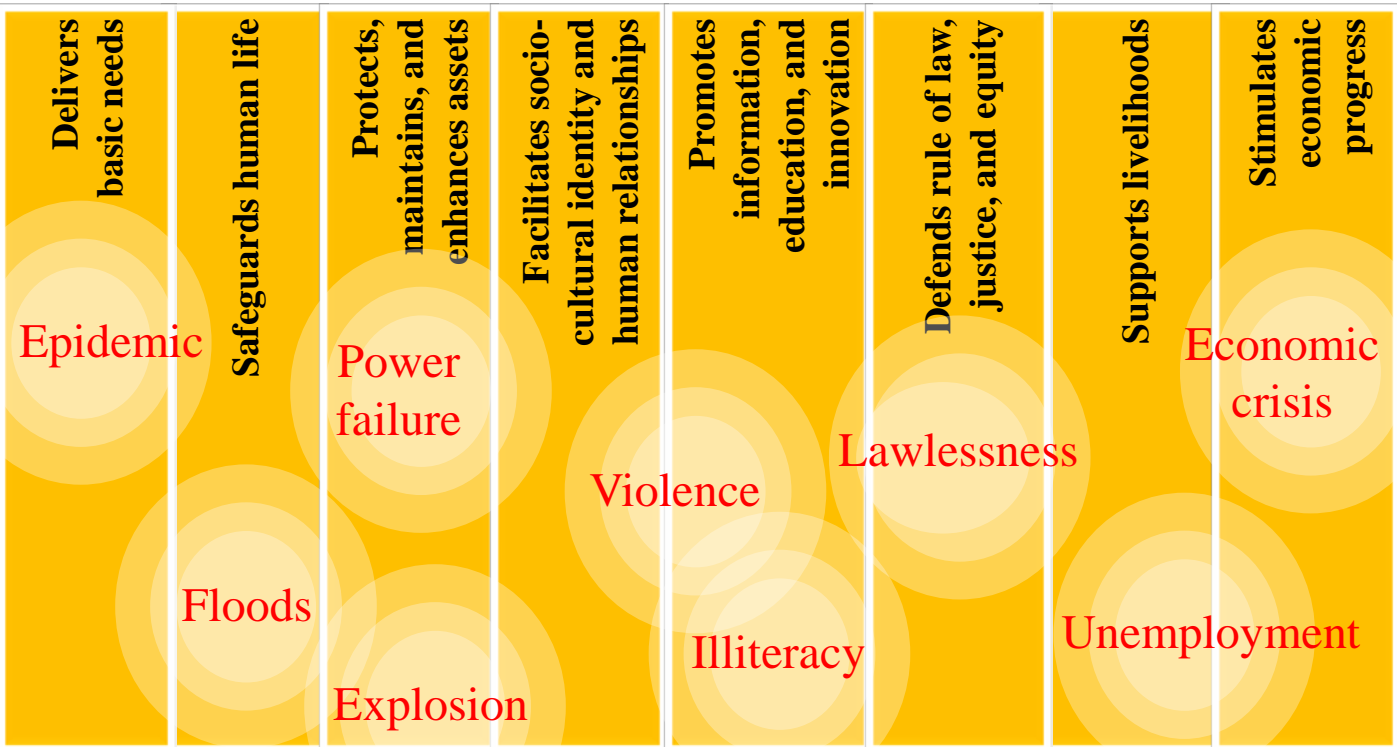
“In order to get a grip on it, one must be able to relate resilience to other properties that one has some means of ascertaining, through observation.”

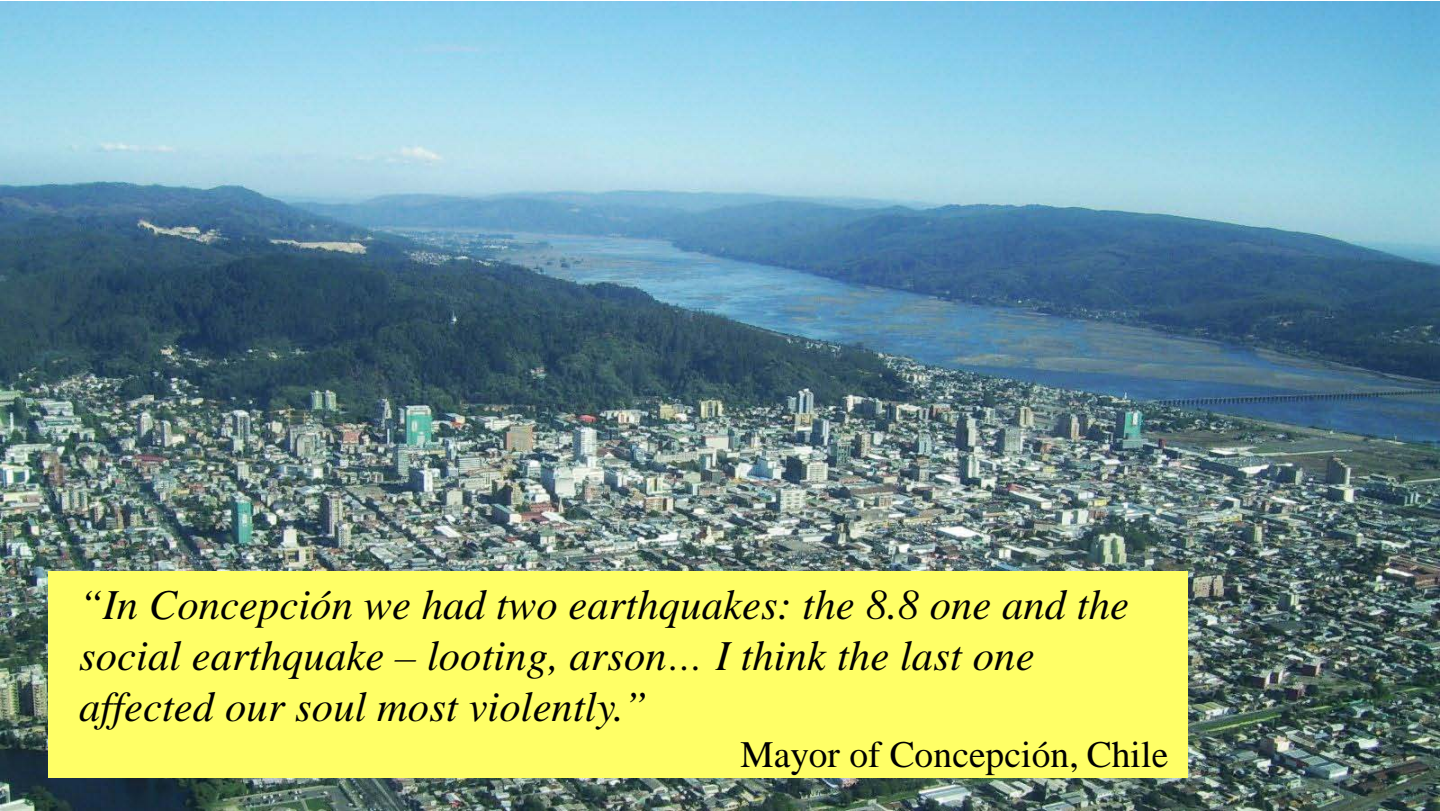
Martin-Breen & Andries. (2011). *Resilience: A literature review*.
The Rockefeller Foundation: New York City, p. 11.

- Resilience is not an antonym for vulnerability, or a substitute for disaster risk reduction.
- *Urban* resilience has limitations to address: power relations, the poor, unexpected impacts.
- *City* resilience is about performance: the ability of a “system of systems” to continue to function.



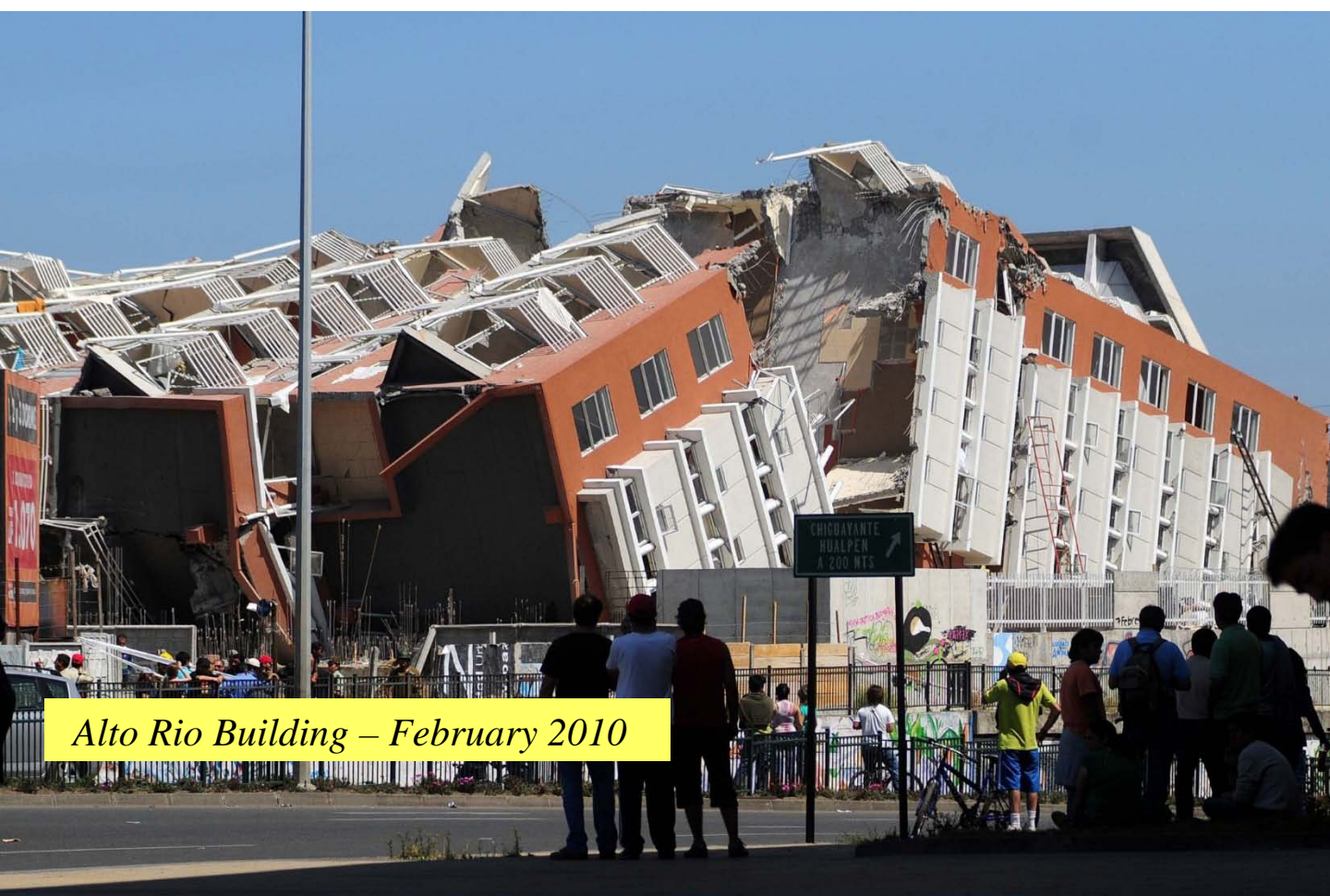
- Primary data
- Secondary data





“In Concepción we had two earthquakes: the 8.8 one and the social earthquake – looting, arson... I think the last one affected our soul most violently.”

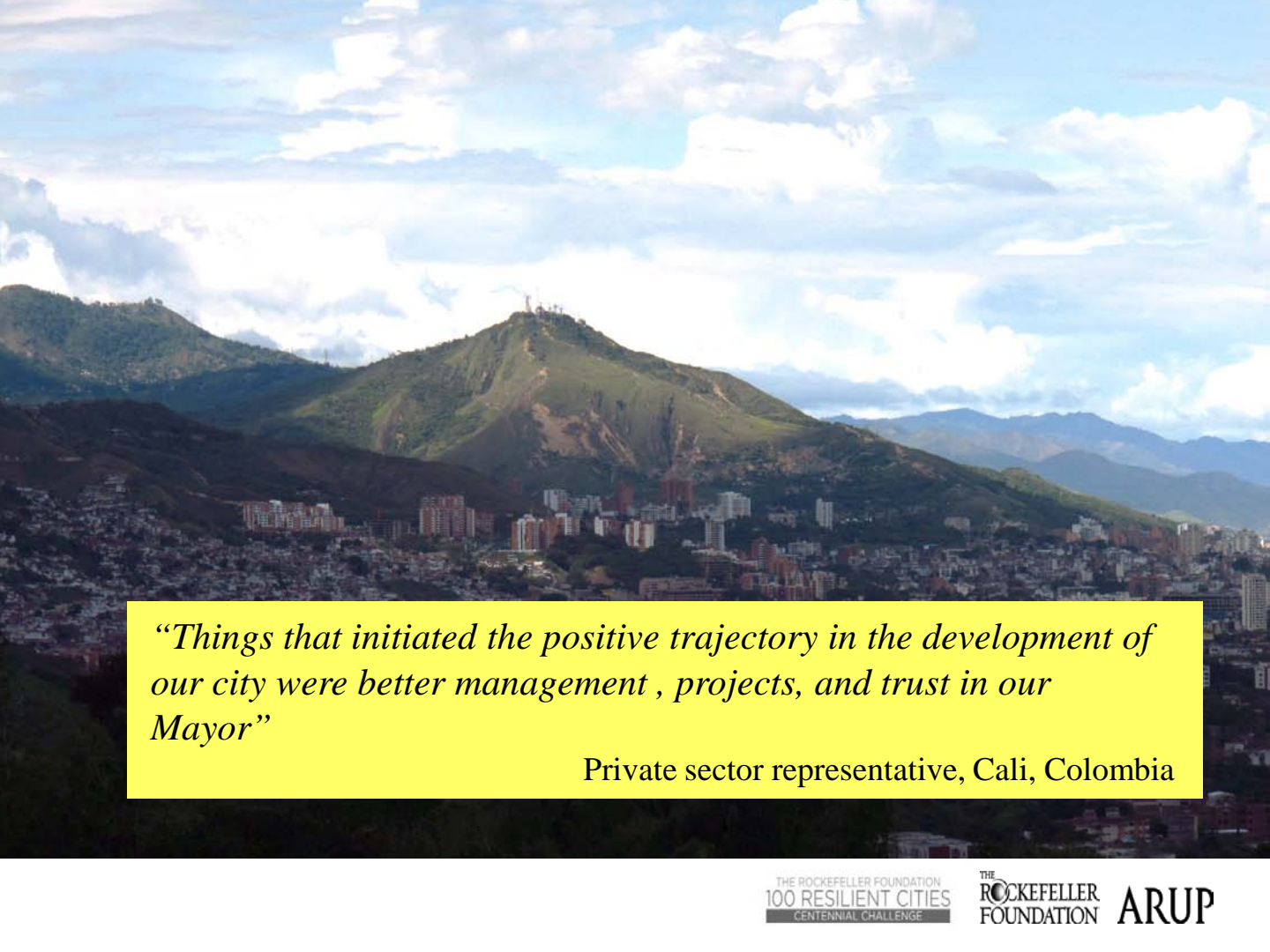
Mayor of Concepción, Chile



Alto Rio Building – February 2010



Army patrol in Greater Concepción – February 2010



“Things that initiated the positive trajectory in the development of our city were better management , projects, and trust in our Mayor”

Private sector representative, Cali, Colombia

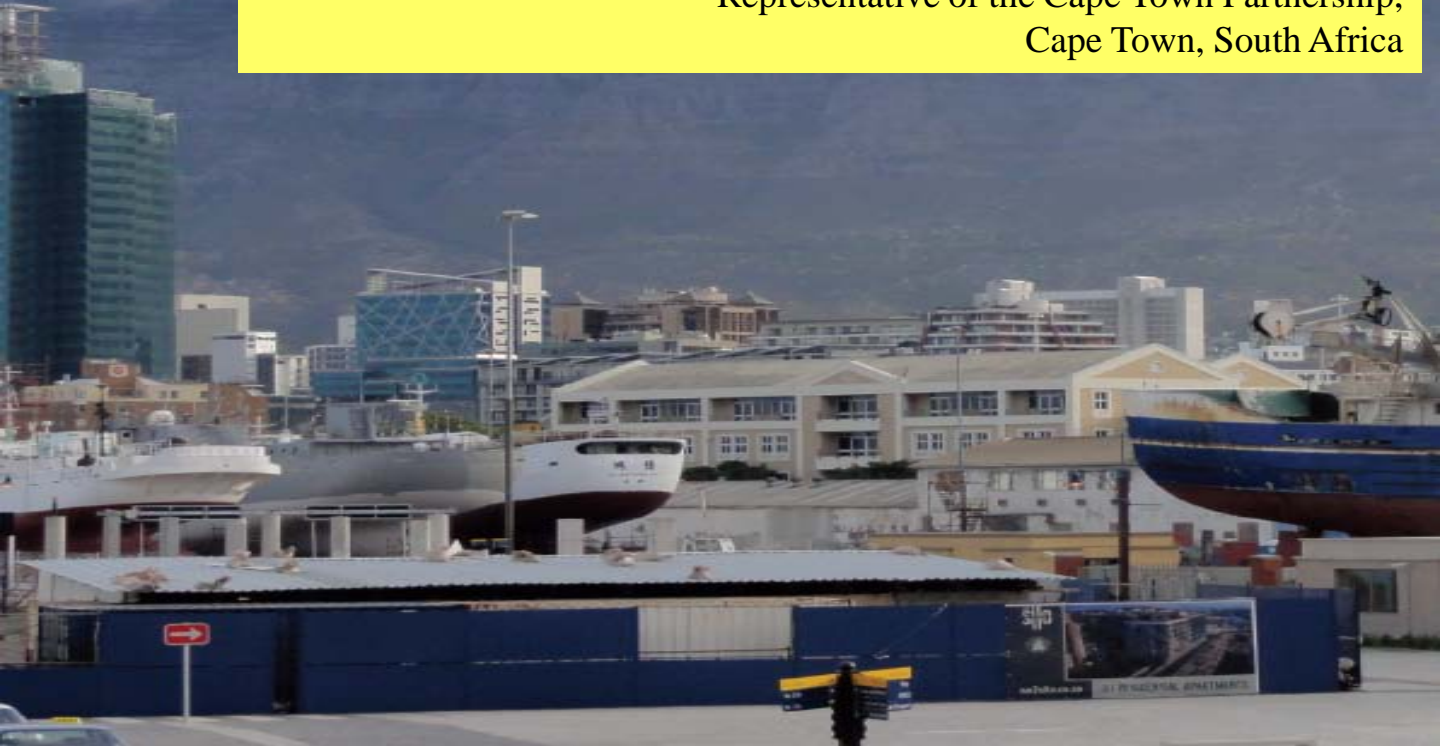


“How do we help? We try to get where the state is unable to reach. We listen, we support, and work with the social fabric of our community.”

Fundación Paz y Bien volunteer, Cali, Colombia

“The city wasn’t designed by economic forces; instead it was designed by social engineering. Maybe we need social engineering to change it again?”

Representative of the Cape Town Partnership,
Cape Town, South Africa



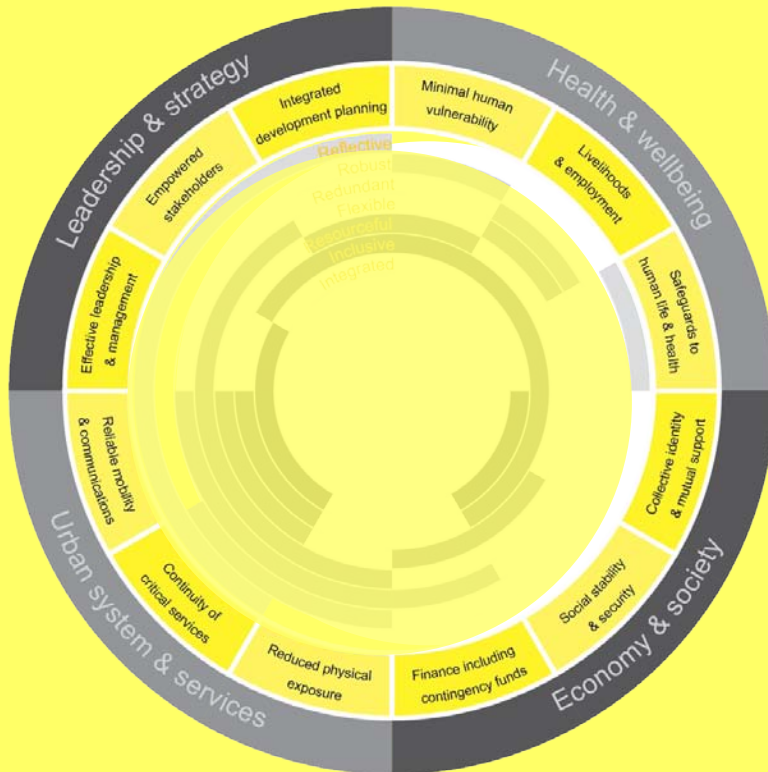
*“There are three water vendors in this area, including me...
There is limited water and the well is getting dry.”*

Water vendor in Semarang, Indonesia



A “resilient city” is one where the needs in these four areas are met:

- Health and wellbeing
- Urban system and services
- Economy and society
- Leadership and strategy



Health & Wellbeing: People



Minimal human vulnerability



Livelihoods & employment



Safeguards to life & health

Urban Systems & Services: Place



Reduced physical exposure



Continuity of critical services



Reliable communications
& mobility

Economy & Society: Organization



Collective identity & mutual support



Social stability & security



Availability of financial resources

Leadership & Strategy: Knowledge



Effective leadership
& management



Empowered stakeholders



Integrated development
planning

Qualities of a Resilient System



Reflective

Robust

Redundant

Flexible

Resourceful

Inclusive

Integrated



100resilientcities.org

**[rockefellerfoundation.org/our-work/
current-work/resilience](http://rockefellerfoundation.org/our-work/current-work/resilience)**

arup.com/cr