RESILIENCE:

A Framework For Planning and Design In The Coming Century

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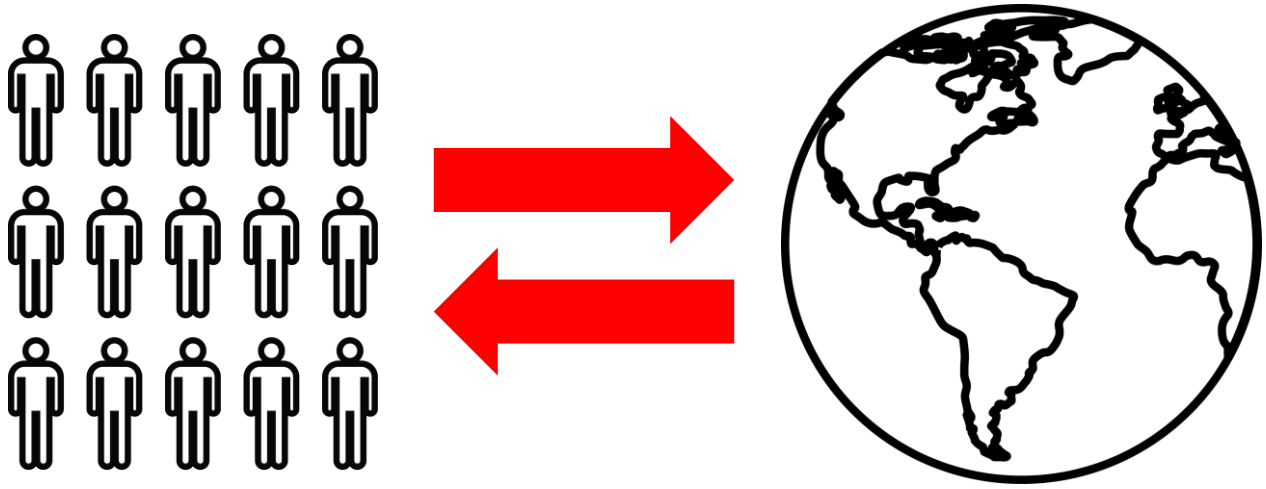
DIALOG™

"cities magnify humanity's strengths."

Edward Glaeser, *Triumph of the City*

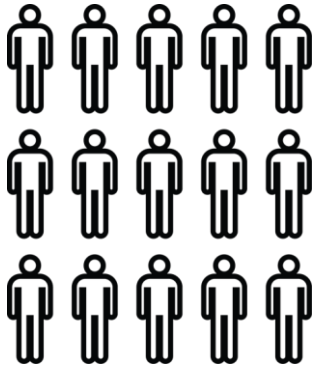


*"**Resilience** is the ability to absorb disturbances, to be changed and then to re-organize and still have the same identity (retain the same basic structure and ways of functioning). It includes the ability to learn from the disturbance. A resilient system is forgiving of external shocks."*

Source: The Resilience Alliance, http://www.resalliance.org/

*"A **Resilient City** is a city that has developed the systems and capacities to be able to adsorb **future shocks and stresses** over time so as to still maintain essentially the same function, structure, systems, and identity, while at the same time is mitigating potential causes of future shocks and stresses."*

Source: Working Definition, ResilientCity.org

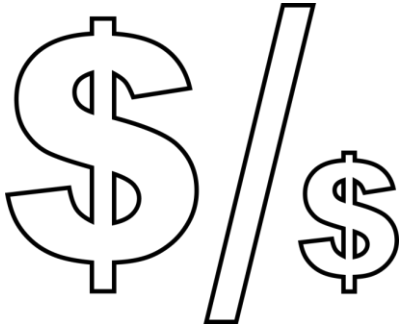


POPULATION

CLIMATE CHANGE

ENERGY SCARCITY

ENVIRONMENTAL DEGREDATION



INCOME DISPARITY

SOCIO-POLITICAL

E
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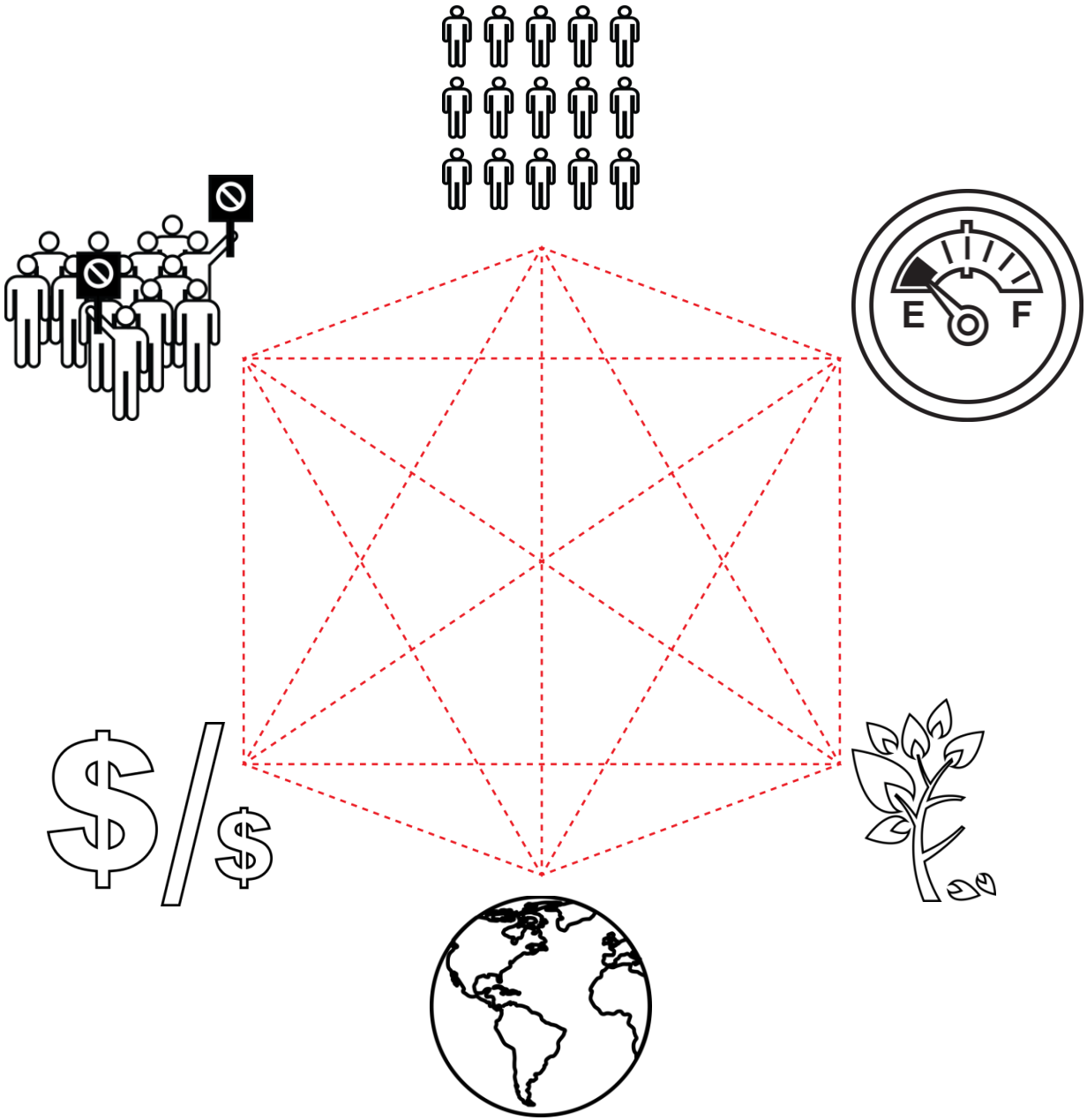
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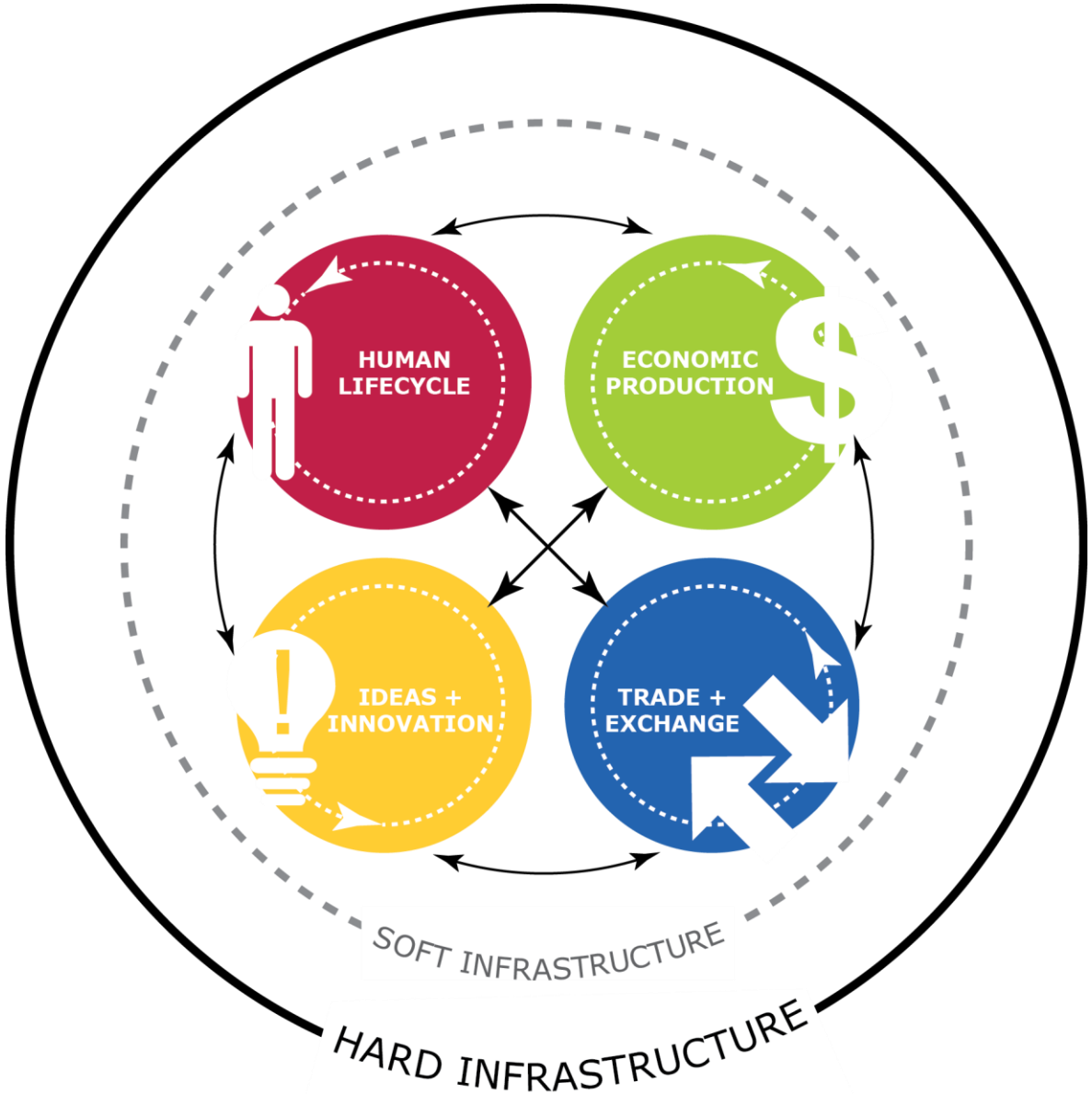
7 Key Attributes
of Urban Resilience

1. Flexibility
2. Sustainable energy flows
3. Local self-sufficiency (decoupling)
4. Redundancy
5. Diversity
6. Decentralization
7. Environmental Integration

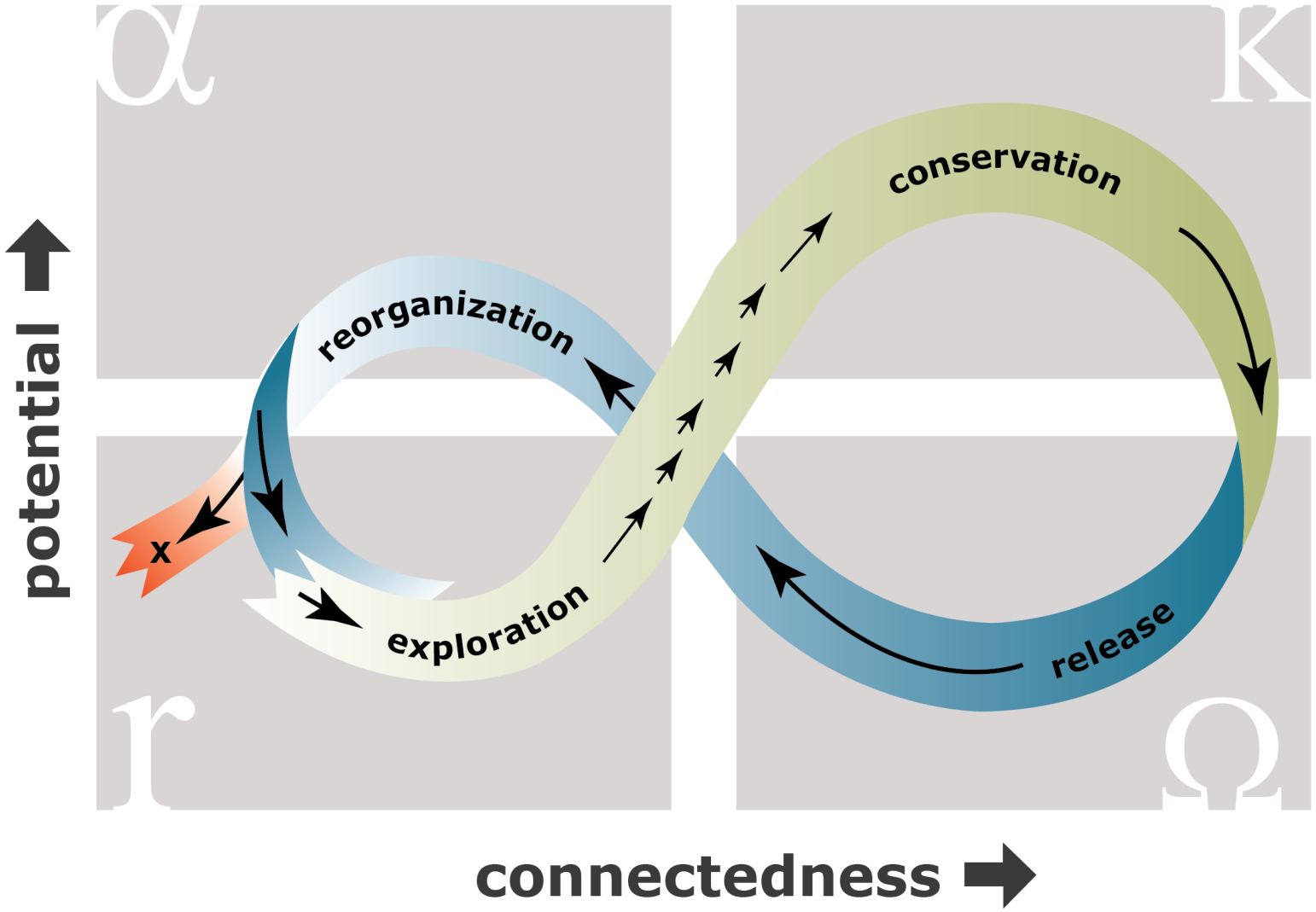

HUMAN LIFECYCLE
ECONOMIC PRODUCTION
IDEAS + INNOVATION
TRADE + EXCHANGE
SOFT INFRASTRUCTURE
HARD INFRASTRUCTURE

10 potential infrastructure planning and design strategies to increase resilience

1. Plan to increase Population Density
2. Plan for Mixed Uses
3. Plan for Diversity
4. Plan for Sustainable Energy Supplies
5. Plan for Re-localization of Food / Manufacturing
6. Decentralize key infrastructure
7. Increase density/access of Mass Transit
8. Plan for more Durable Infrastructure
9. Design for Generic Building Forms
10. Recladding of Exiting Building Stock

*"**Success** is relative: it is what we can make of the mess we have made of things."*

T.S. Eliot, *The Complete Poems and Plays*, 1909 – 1950



The First Version of the Adaptive Cycle

Source: Gunderson and Holling, 2002