BUILDING CLIMATE RESILIENT CITIES

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Vice President, Research & Advisory Services

Urban Living Festival 2024

Urban Land Institute

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THE MISSION OF THE URBAN LAND INSTITUTE

Shape the future of the built environment for transformative impact in communities worldwide

50,000 members globally

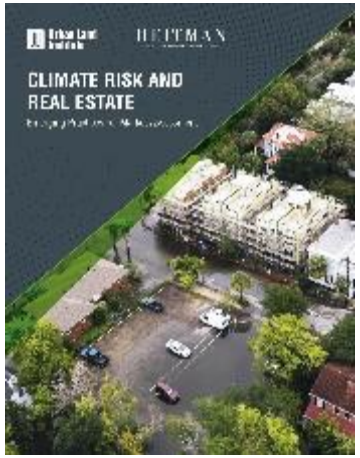
Active across the value chain: investors, developers, architects, city planners, etc

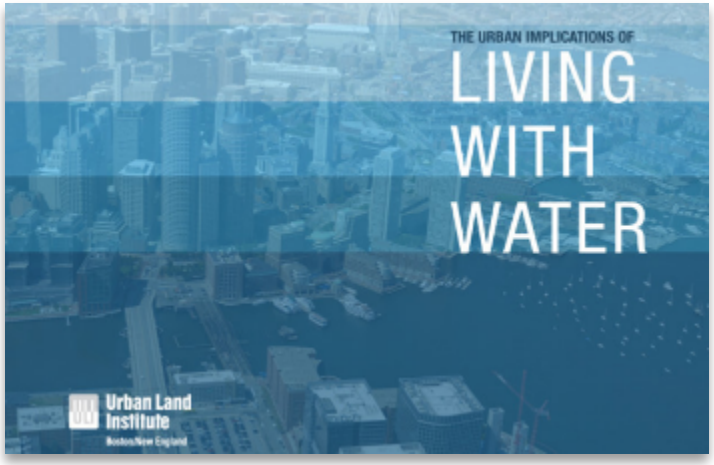
Thought leadership & education

ULI's Urban Resilience Programme

Strategies for buildings, communities, and cities to be more resilient to the impacts of climate change

- Conducting research
- Advising communities through Advisory Services Programme and Technical Assistance
- Supporting local-level resilience work with ULI's global network
- Convening leaders in resilience





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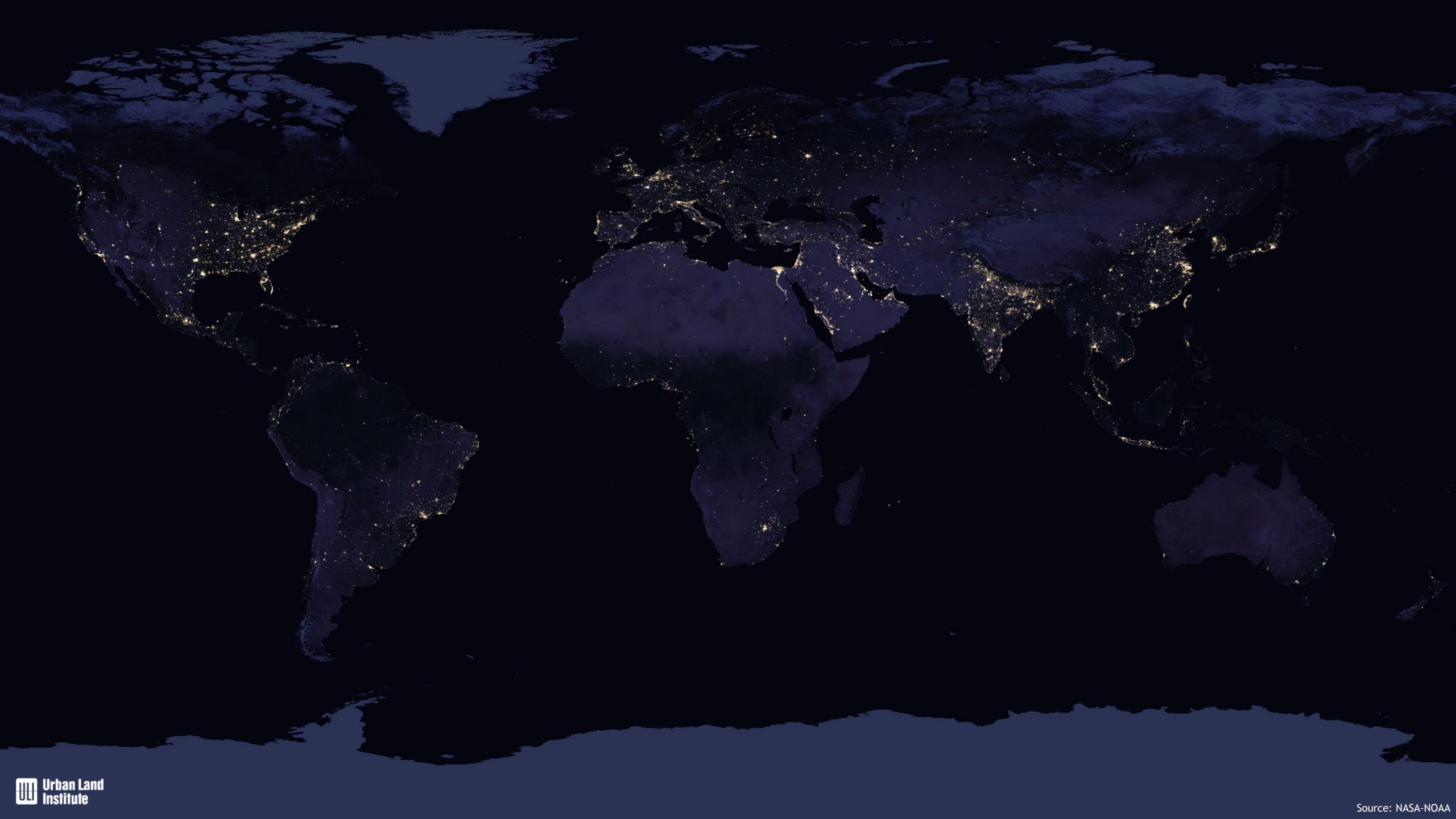
Contact us at resilience@uli.org



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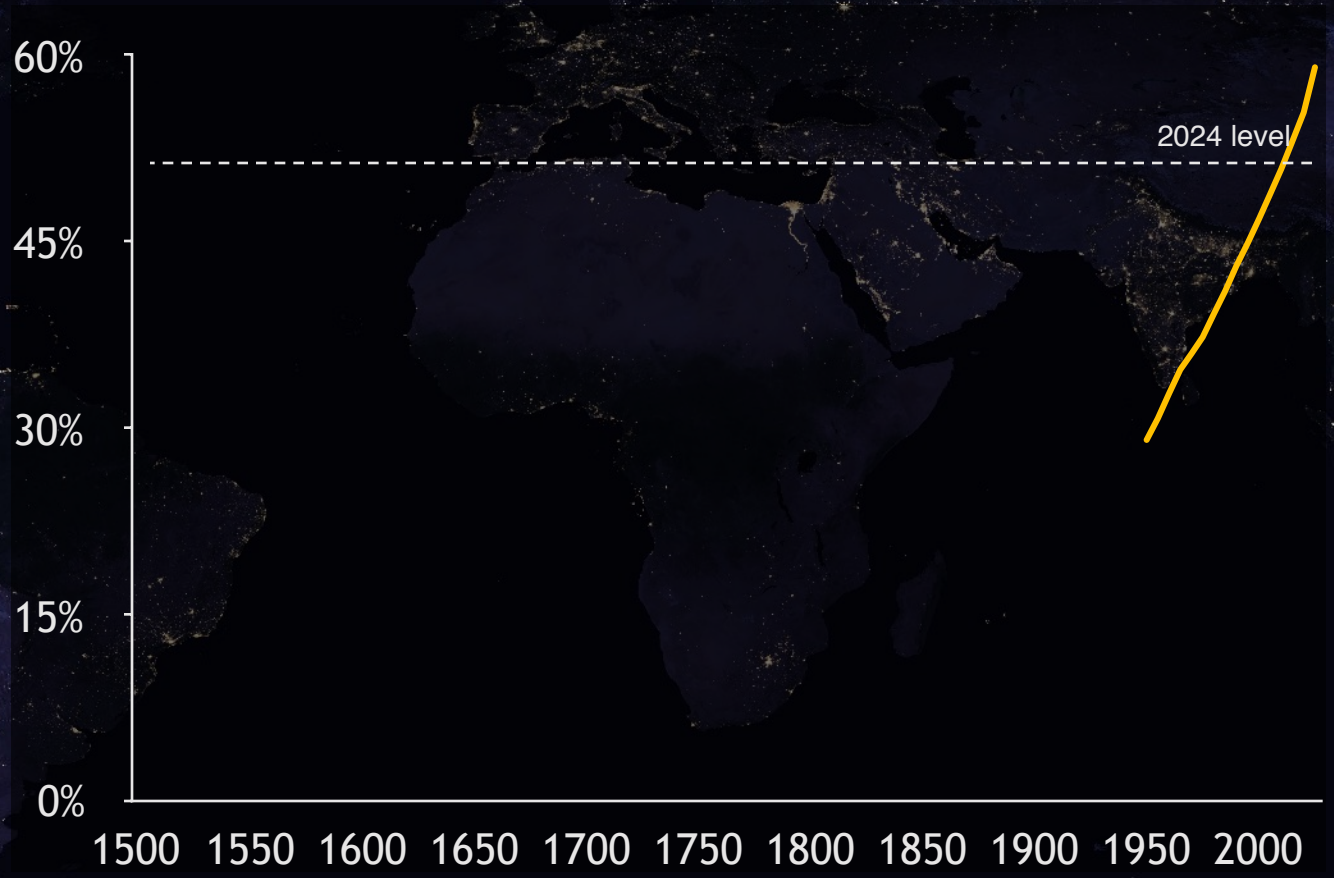
Source: NASA-NOAA

Share of the population living in urbanised areas



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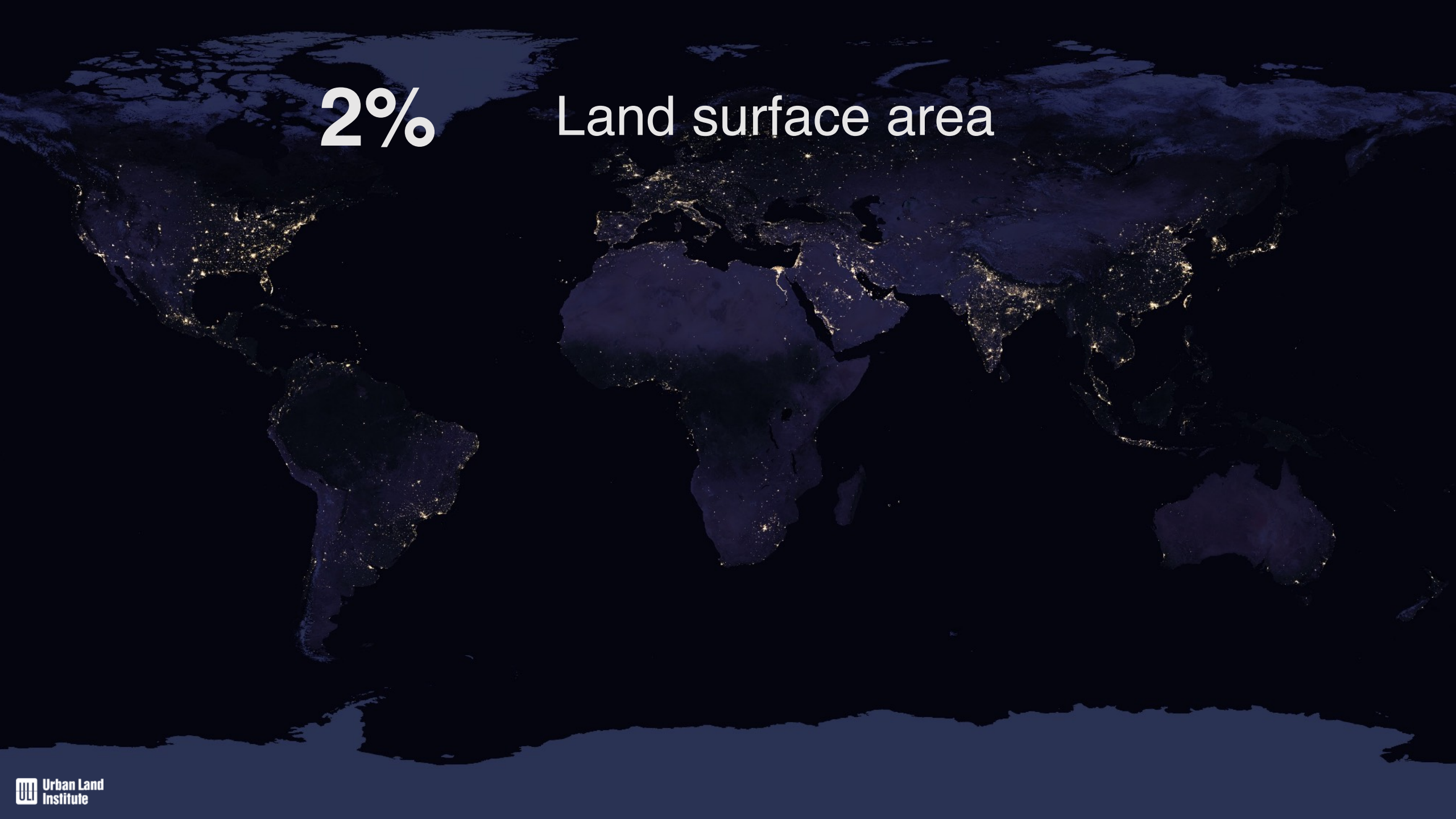
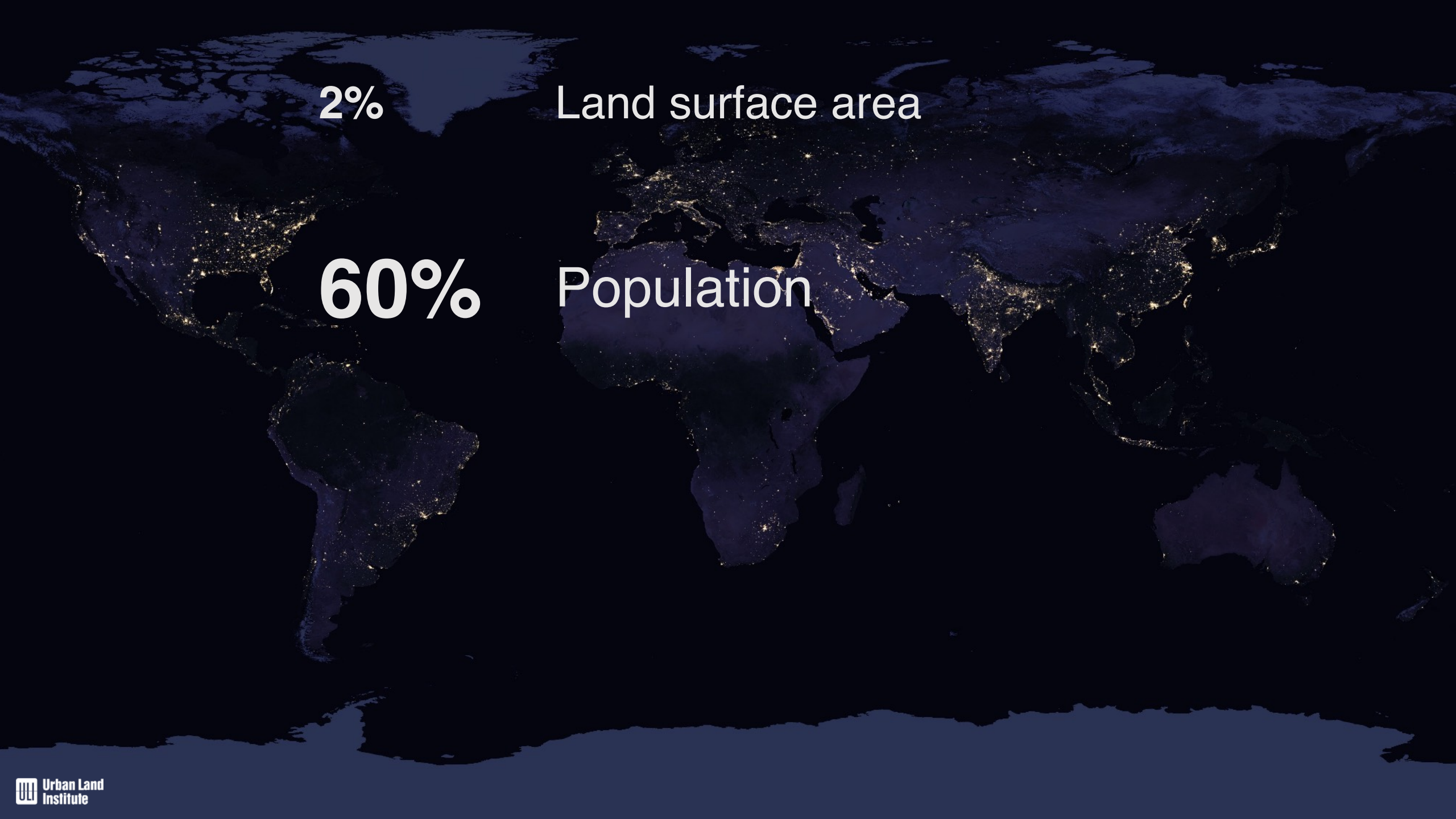
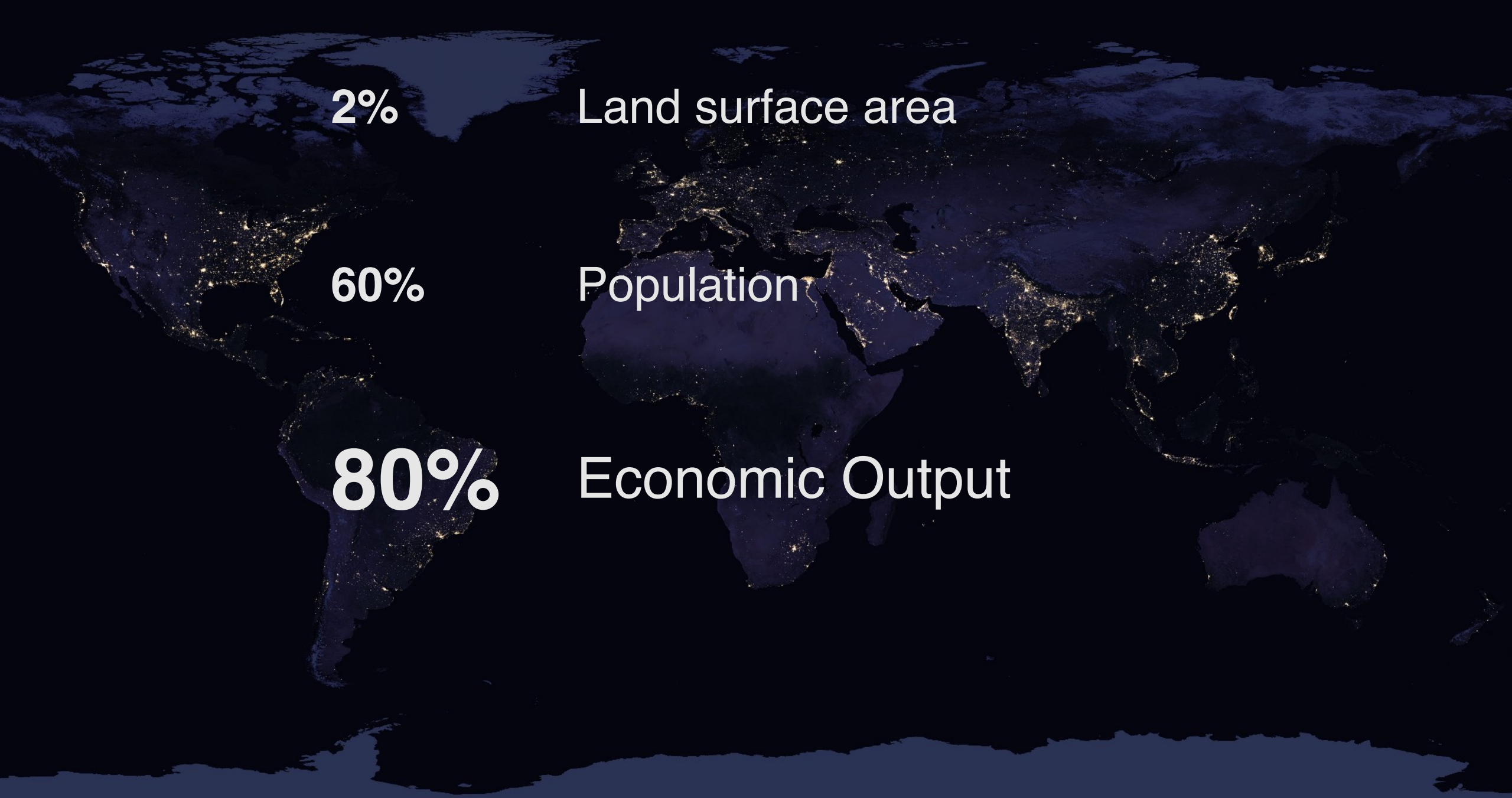
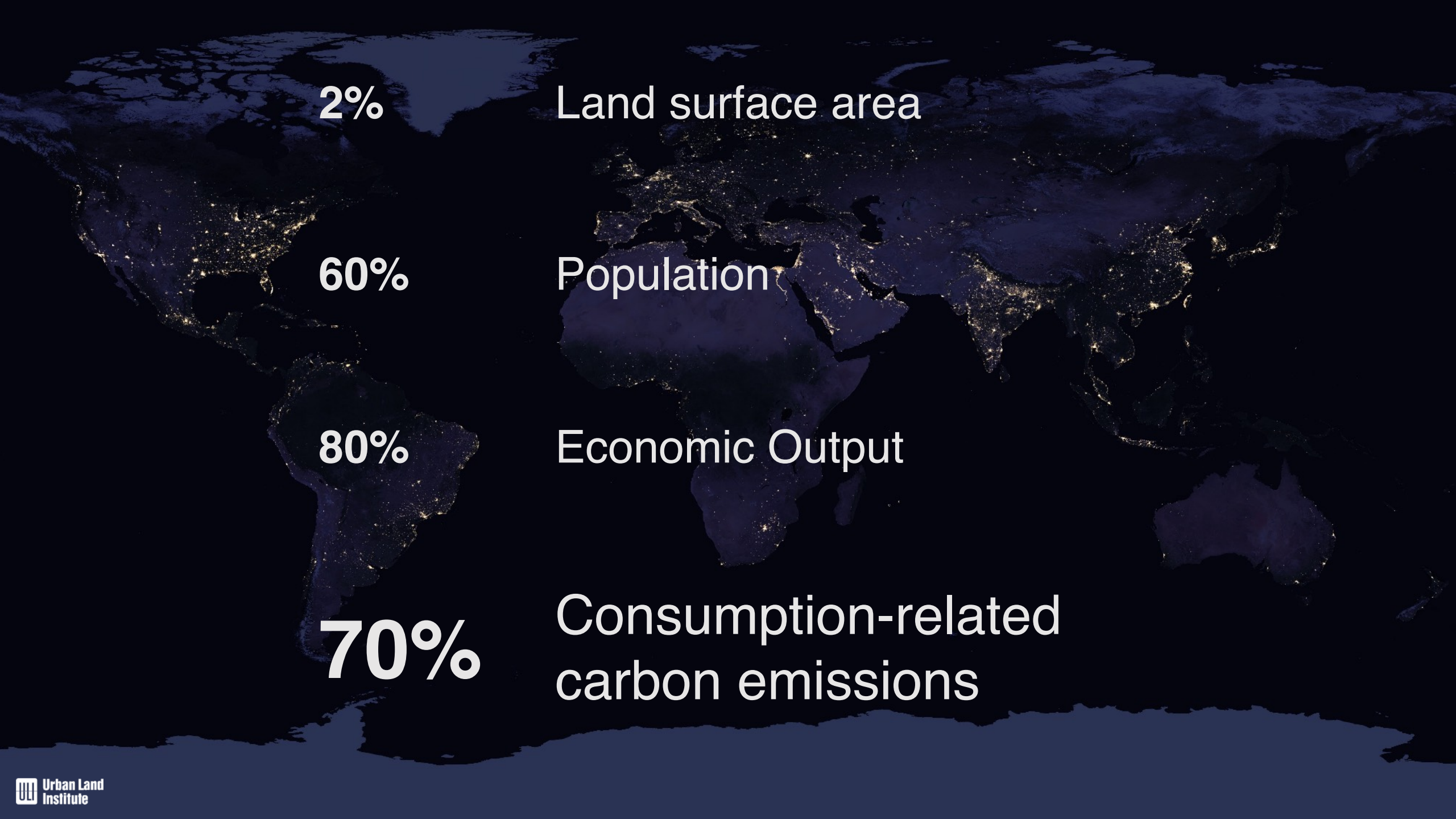
Source: HYDE, Our World in Data, ULI


2%
Land surface area

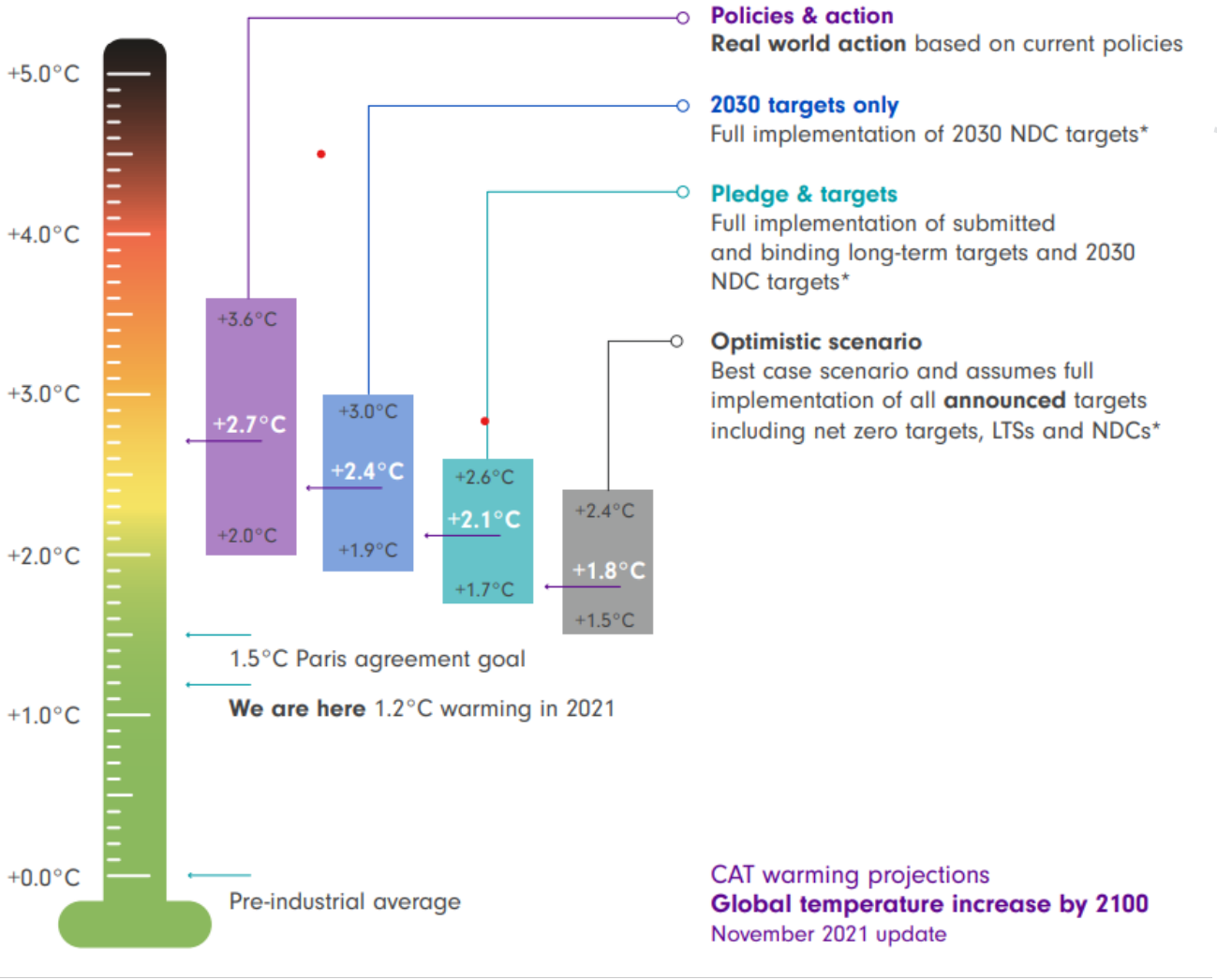

2%
Land surface area
60%
Population


2%
Land surface area
60%
Population
80%
Economic Output


2%
Land surface area
60%
Population
80%
Economic Output
70%
Consumption-related carbon emissions

Physical climate risk is increasing

- The IPCC reports show that, particularly in the last decade, changes in weather and climate extremes have intensified
- It is estimated that based on the existing policies and pledges, we are on track to deliver **2.7^{0}C rise** in global temperatures



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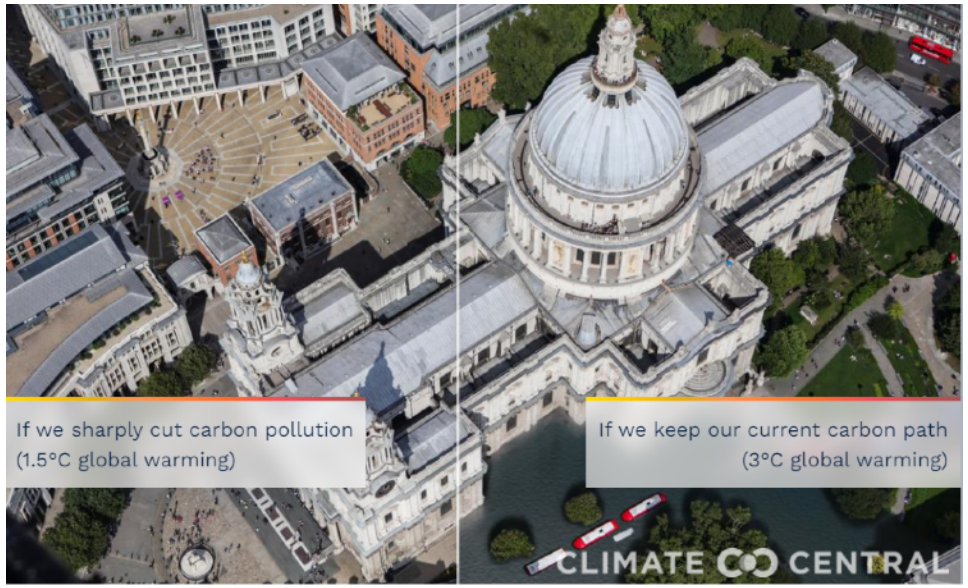
Physical risks: acute and chronic

A case of timescale

Acute: extreme events such as droughts, floods and storms

Chronic: progressive shifts such as sea-level rise & coastal erosion

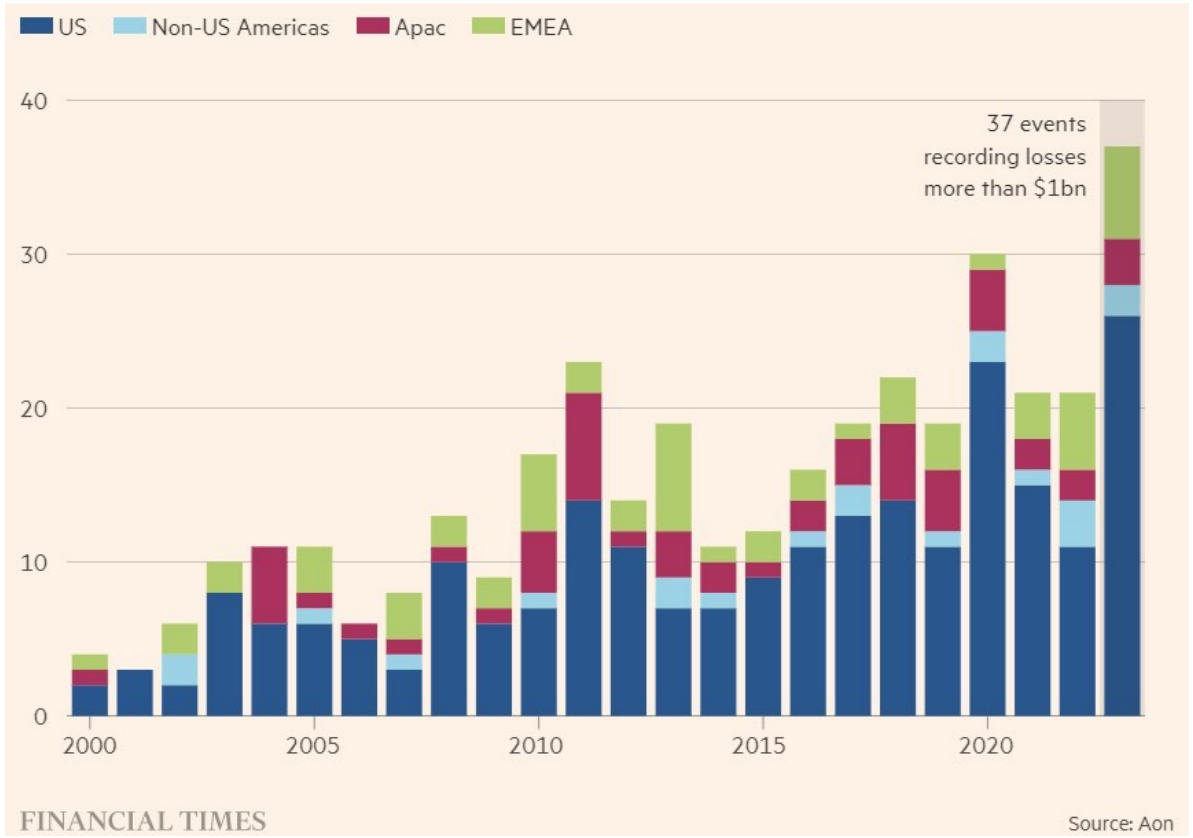
Flooding in Slovenia (2023)



Potential scenario of sea level rise in London, United Kingdom (2300)

Why we need climate resilient cities

Last year had a record number of billion-dollar insured losses from extreme weather



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What are climate resilient cities

Resilience: The ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events

(1) MITIGATION:

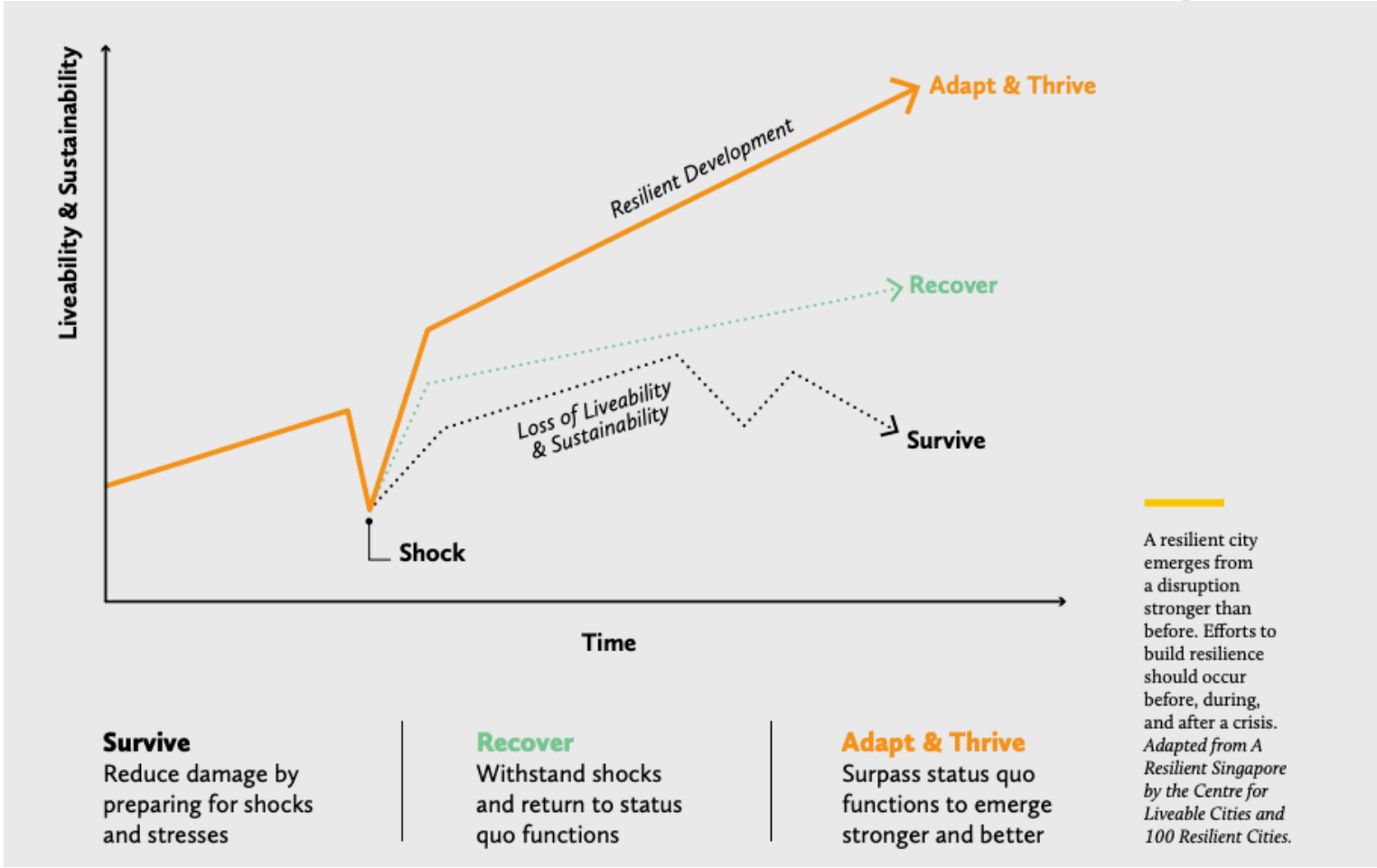
Measures that reduce greenhouse gas emissions or enhance carbon sinks to slow the rate of global warming and reduce the severity of climate impacts:

- Transitioning from fossil fuels to renewable energy
- Enhancing carbon sequestration through afforestation and reforestation.

(2) ADAPTATION:

Interventions that prevent, or soften, the real and anticipated damages caused by climate change

- building dykes and polders to manage rising sea levels
- using natural and artificial shade to reduce the effects of rising temperatures
- changing behaviours to cope with adverse conditions.

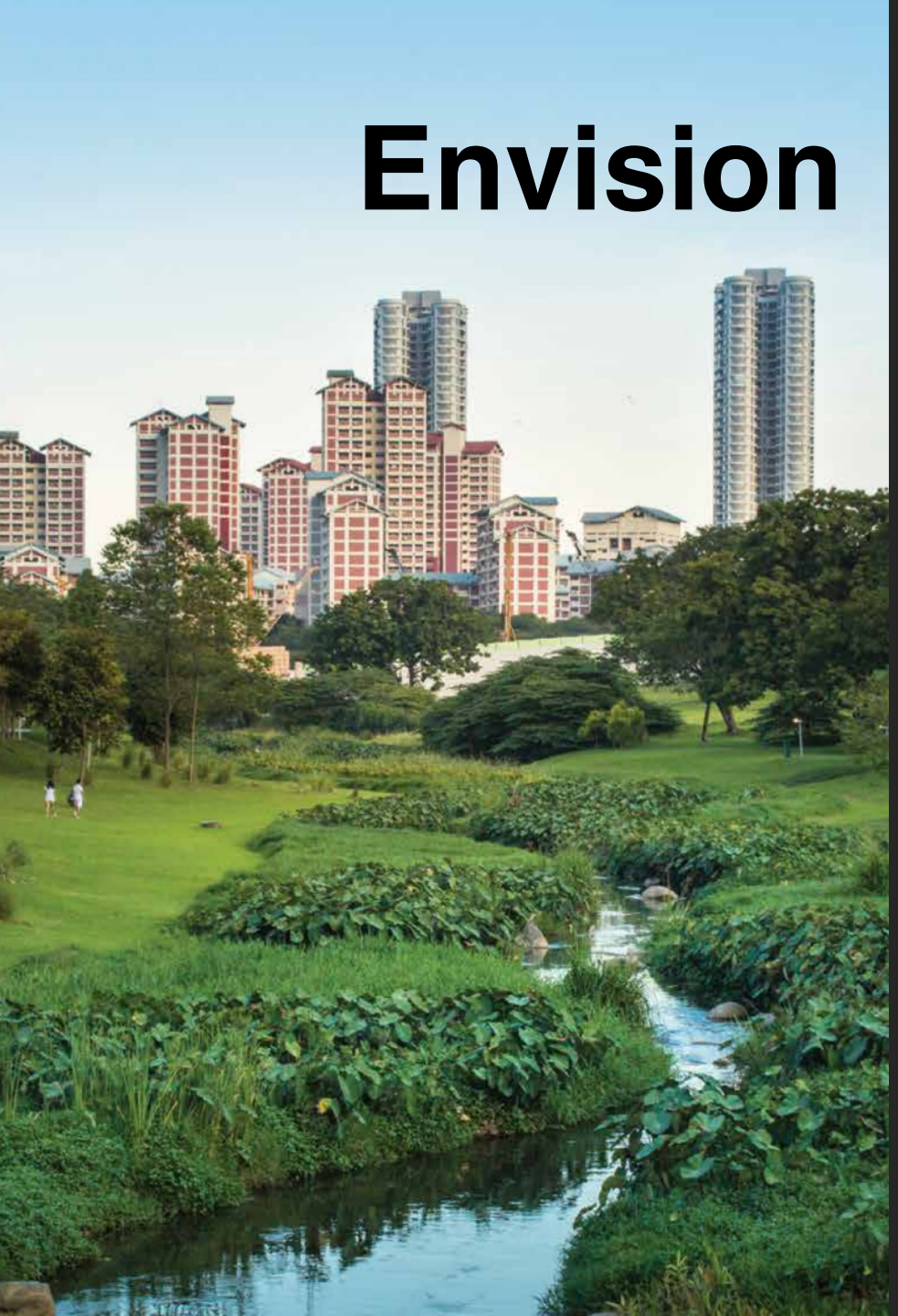


Source: ULI / CLC Building Climate Resilience

The Business Case for Building Climate Resilient Cities

- Build Longevity and Efficiency
- Financial Performance
- Liveability and Survivability
- Marketability and Corporate Social Responsibility

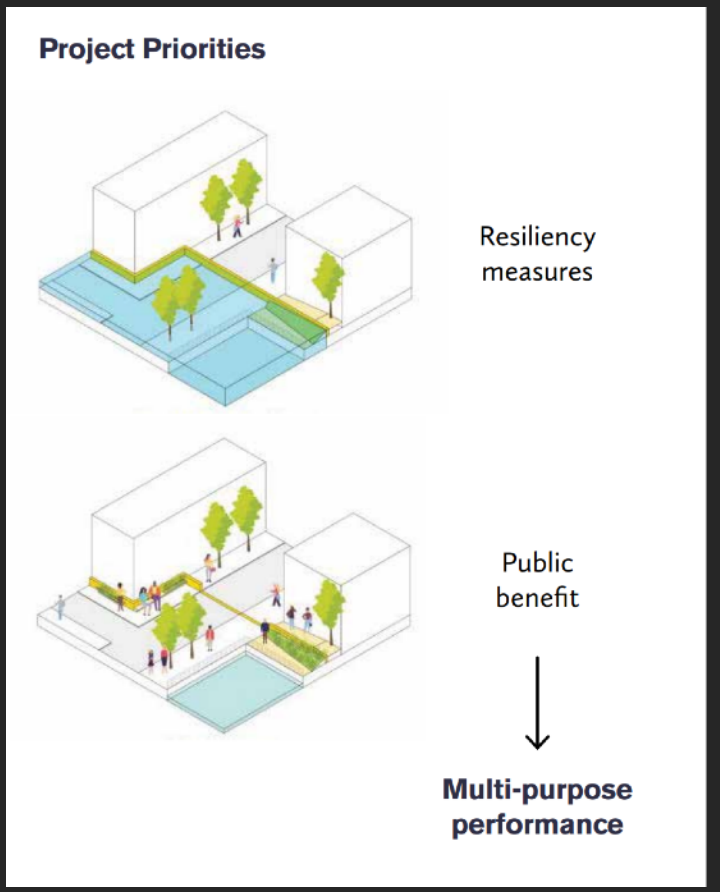
Envision

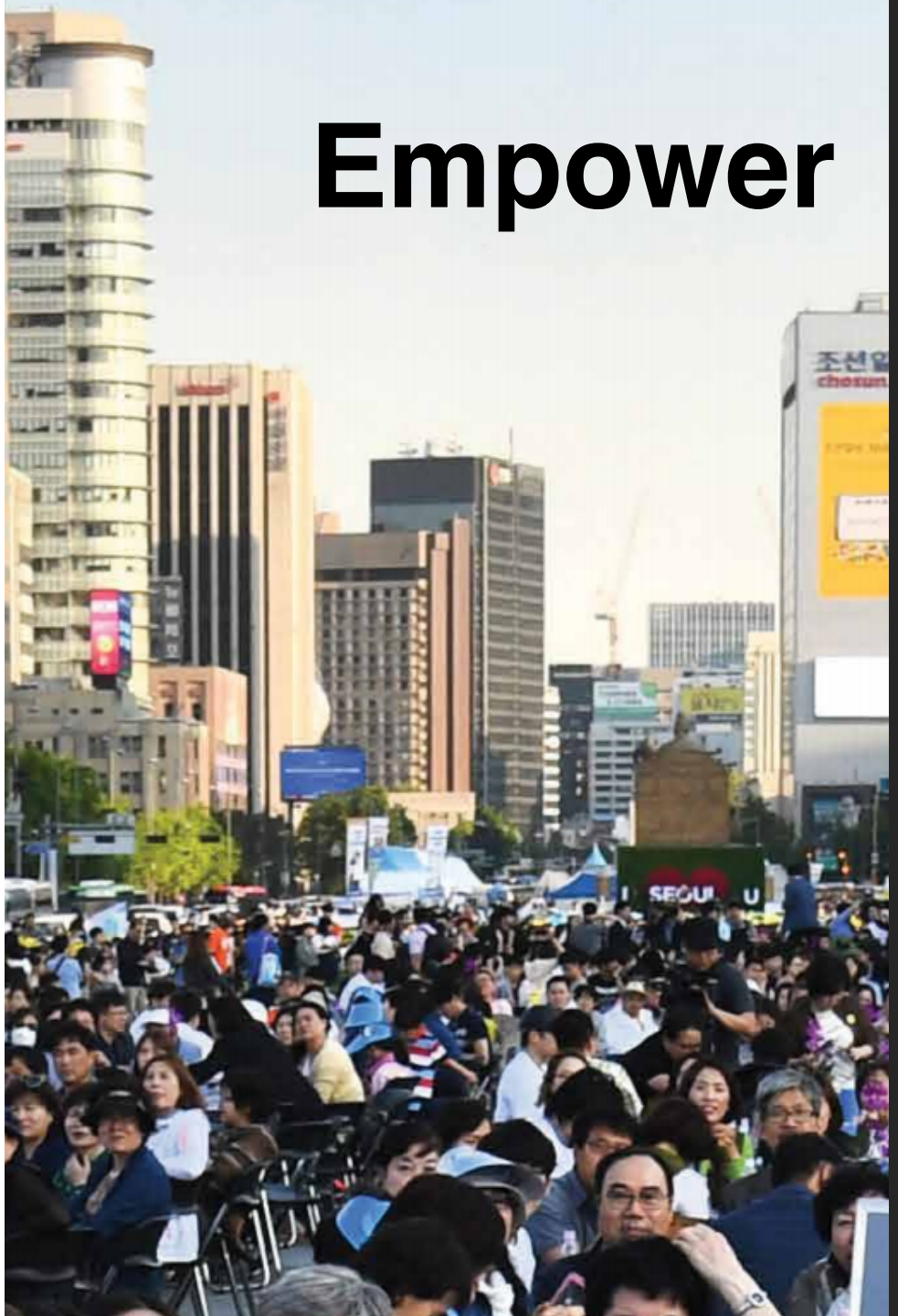


PRINCIPLE 1: ELEVATE RESILIENCE AS A GOAL FOR ALL SECTORS AND STAKEHOLDERS

PRINCIPLE 2: WORK ACROSS SPACE, TIME, AND ORGANISATIONS

PRINCIPLE 3: LEVERAGE OPPORTUNITIES TO ENHANCE LIVEABILITY





Empower

PRINCIPLE 4: PROVIDE TRANSPARENCY THROUGH DATA AND KNOWLEDGE SHARING

PRINCIPLE 5: STRIVE FOR EQUITY, ACCESS, AND INCLUSION

PRINCIPLE 6: SPUR UNITED ACTION THROUGH A COMMON NARRATIVE

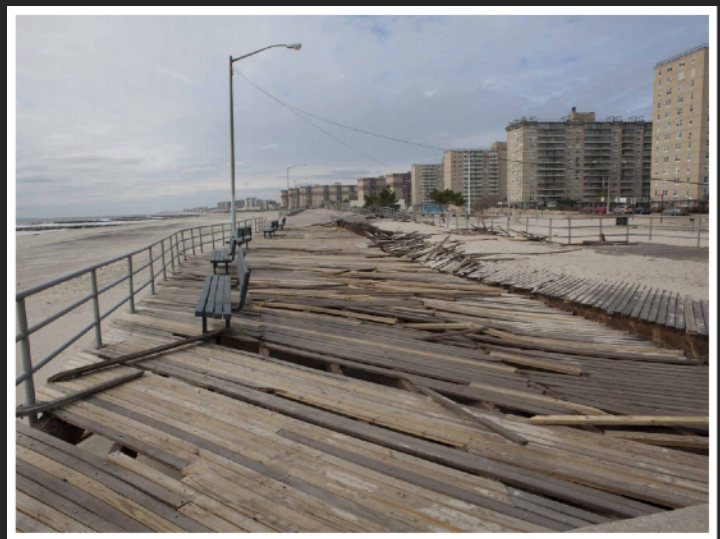
Execute

PRINCIPLE 7: NURTURE A CULTURE OF COLLABORATION

PRINCIPLE 8: EMBODY FLEXIBILITY IN APPROACHES AND SOLUTIONS

PRINCIPLE 9: MOTIVATE THE MARKET, SPUR INNOVATION

PRINCIPLE 10: NORMALISE GREEN FINANCE TO FUND PROJECTS



Climate Resilience in Action

Flood plans and flowerbeds: macro and micro interventions to prepare for climate change Case study: London

Climate Resilience in Action

Adaptive Climate Parks
Extreme rainwater retention basin
Case study:
Enghaveparken, Copenhagen

Climate Resilience in Action

THE BIG U, NEW YORK CITY

16-kilometre coastal protection system of interconnected infrastructure and resilience elements surrounding the southern third of Manhattan

Climate Resilience in Action

Nature-based & tech-based cooling solutions to extreme heat

Singapore's solar-powered "supertrees"

Key Takeaways

- Ground decisions in climate-smart data.
- Design for the future.
- Invest equitably across cities and neighbourhoods.
- Tap into the community as co-creators and operators.
- Embrace nature.
- Make every capex multitask.
- Learn from experiences to budget accurately.

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More information

www.europe.uli.org/research/

https://developingresilience.uli.org/

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