

# From Pandemics to Wildfires, Sustainability and Resiliency in 2020 (and beyond)

**BILLY GRAYSON**

EXECUTIVE DIRECTOR, CENTER FOR SUSTAINABILITY AND ECONOMIC PERFORMANCE, URBAN LAND INSTITUTE

NOVEMBER, 2020



# Some background on me, and ULI







# 2020





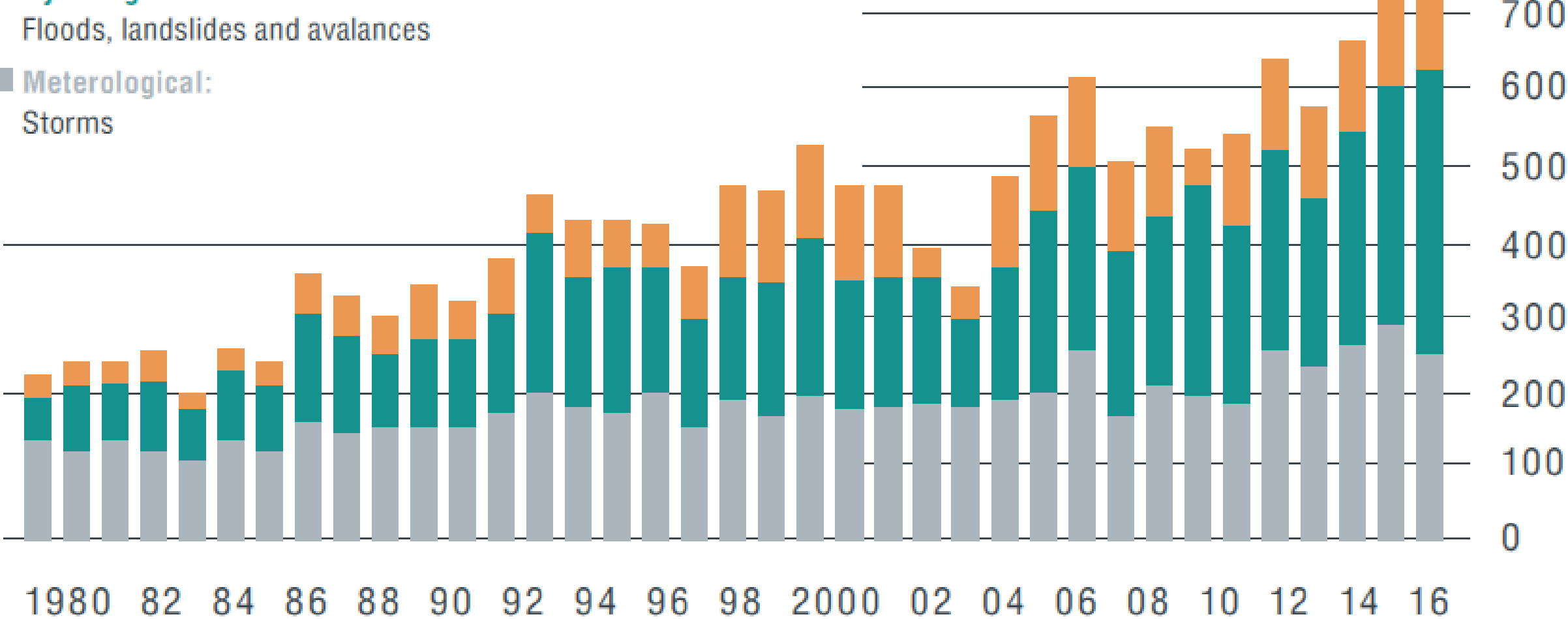


A dark, grayscale photograph of two people, a man and a woman, looking down at a tablet computer. The man is on the left, wearing glasses and a button-down shirt. The woman is on the right, wearing a blazer. They are both focused on the screen. The image is dimly lit, with the primary light source coming from the tablet screen.

# Climate Risk and Real Estate

# Cost of Natural Disasters

- **Climatological:**  
Extreme temperatures, droughts, forest fires
- **Hydrological:**  
Floods, landslides and avalanches
- **Meteorological:**  
Storms



Adaptive by Munich Re

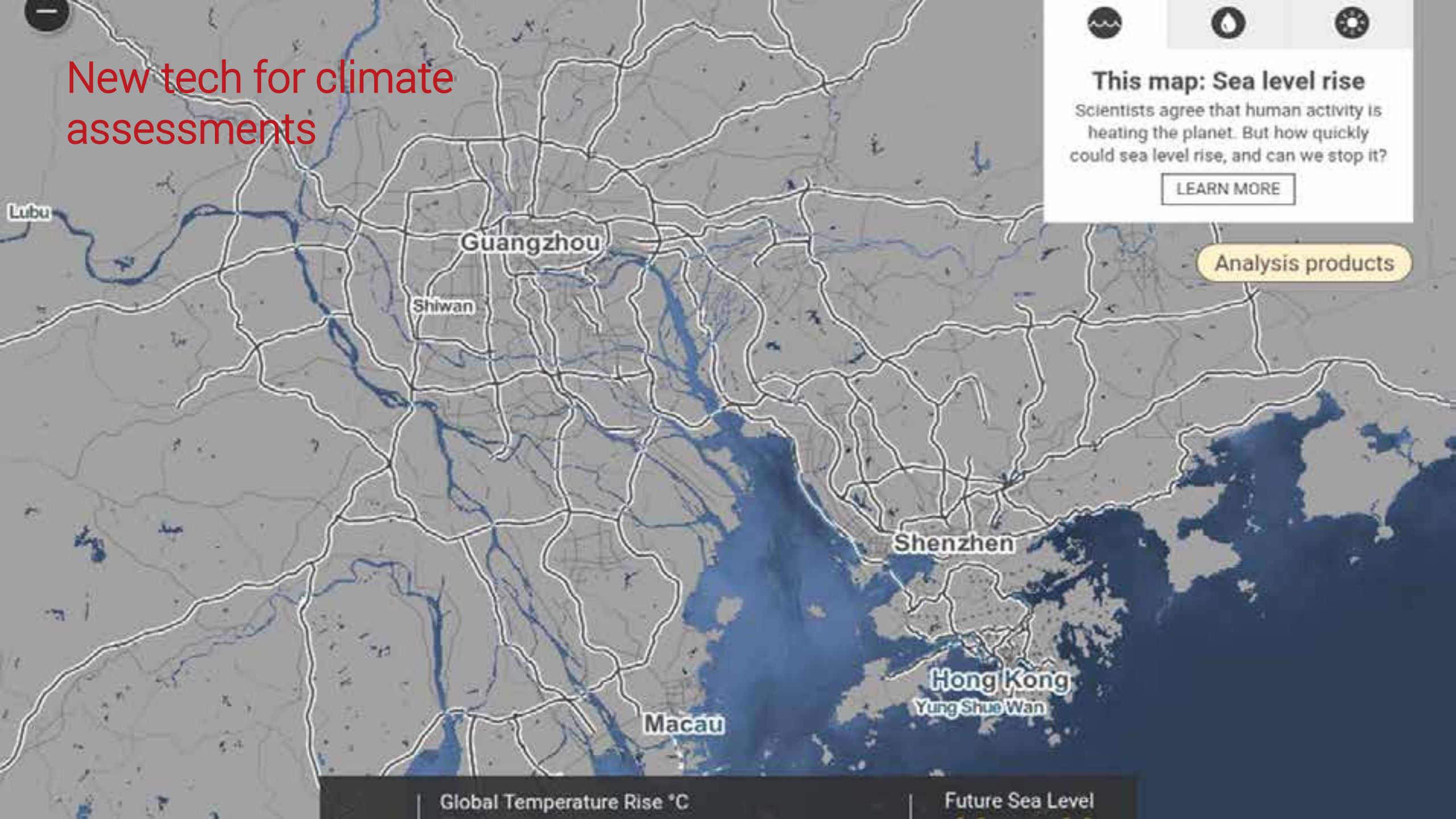
# For real estate investment, this is important – and complicated

- **Uncertainties** around timeframe, magnitude, and location of short and long term impacts makes planning difficult
- Financial **shocks** (from debt and equity cost and availability to insurance and utilities pricing) may come before biggest physical risks materialize.
- Short and medium-term **investment horizons** and owner/tenant **split incentives** may complicate long-term resilience planning
- **Duty to disclose?** Are you more exposed knowing climate risks (and not sharing) or not knowing risks?

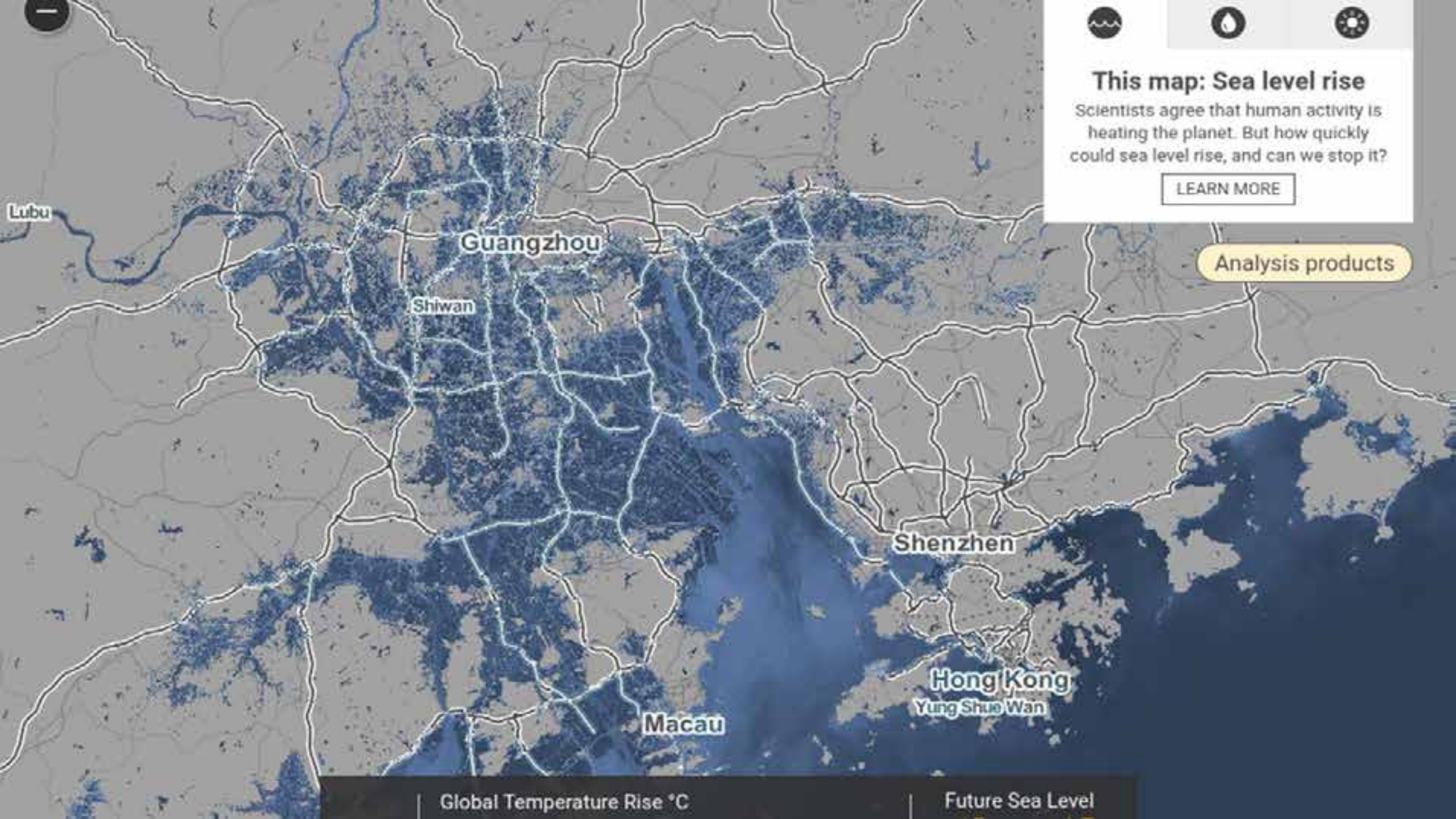




# New tech for climate assessments







## This map: Sea level rise

Scientists agree that human activity is heating the planet. But how quickly could sea level rise, and can we stop it?

[LEARN MORE](#)

Analysis products

Global Temperature Rise °C

Future Sea Level

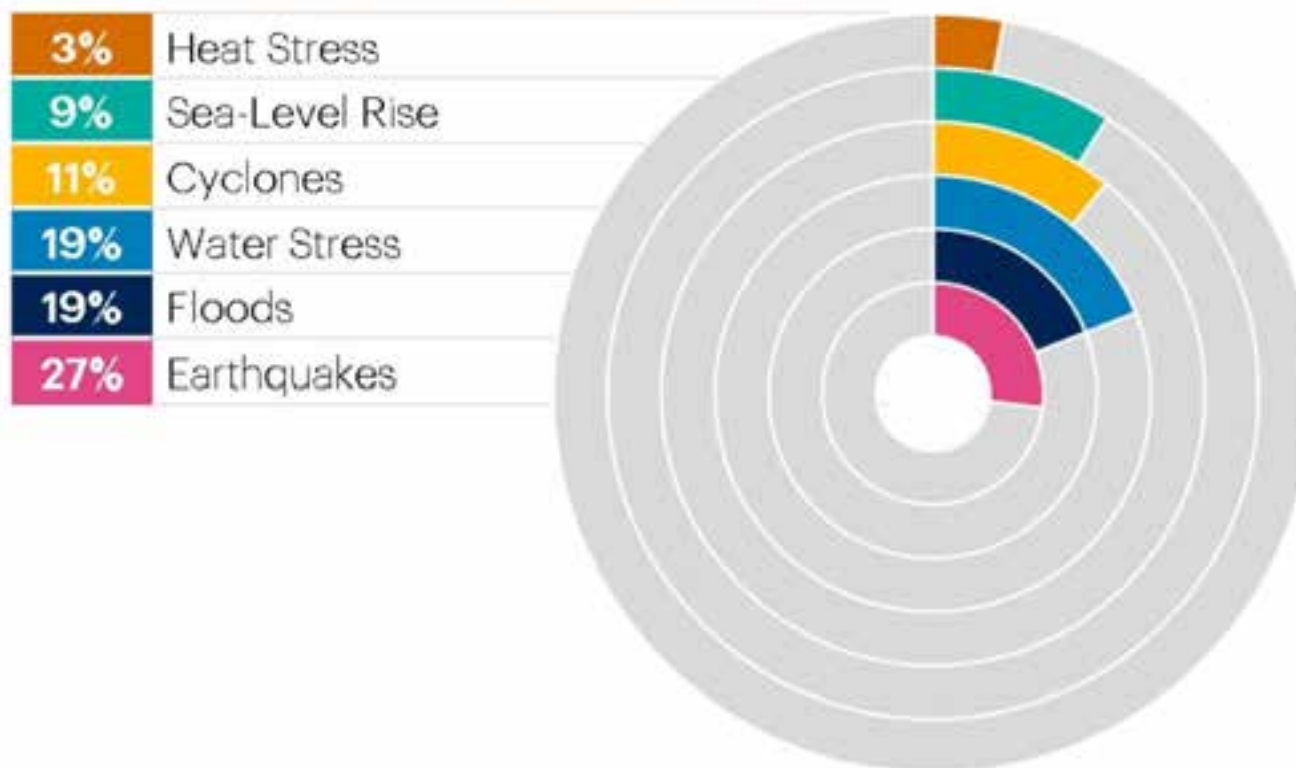
Assessing real estate portfolios, not just assets





# Building climate risk analysis for a real estate portfolio and taking action

2018 PERCENT OF [CLIENT REDACTED] AUM VULNERABLE TO RISKS



- Invest in resilience retrofits at the asset level?
- Advocate for resilience investment at the regional level?
- Work climate risk into my pricing for acquisition and disposition?
- Re-weight portfolios away from higher risk?
- Divest from some markets?



# THE BUSINESS CASE FOR RESILIENCE: SOUTHEAST FLORIDA

---

*A Regional Economic Evaluation*  
Commissioned by the Southeast Florida  
Climate Change Compact



# Building a business case for resilience at the market scale

**Community-wide adaptation** can offer  
**\$37.9 billion** in economic benefits  
for the region and support  
**85,000** job years.\*

For every **\$1** invested in  
community-wide adaptation  
strategies, the region will  
see about **\$2**  
in benefits.

Examples:  
Beach nourishment  
Seawall construction  
Dune restoration

**2:1**  
Benefit-cost  
ratio for  
**community-  
wide adaptation**



**4:1**  
Benefit-cost  
ratio for  
**building-level  
adaptation**

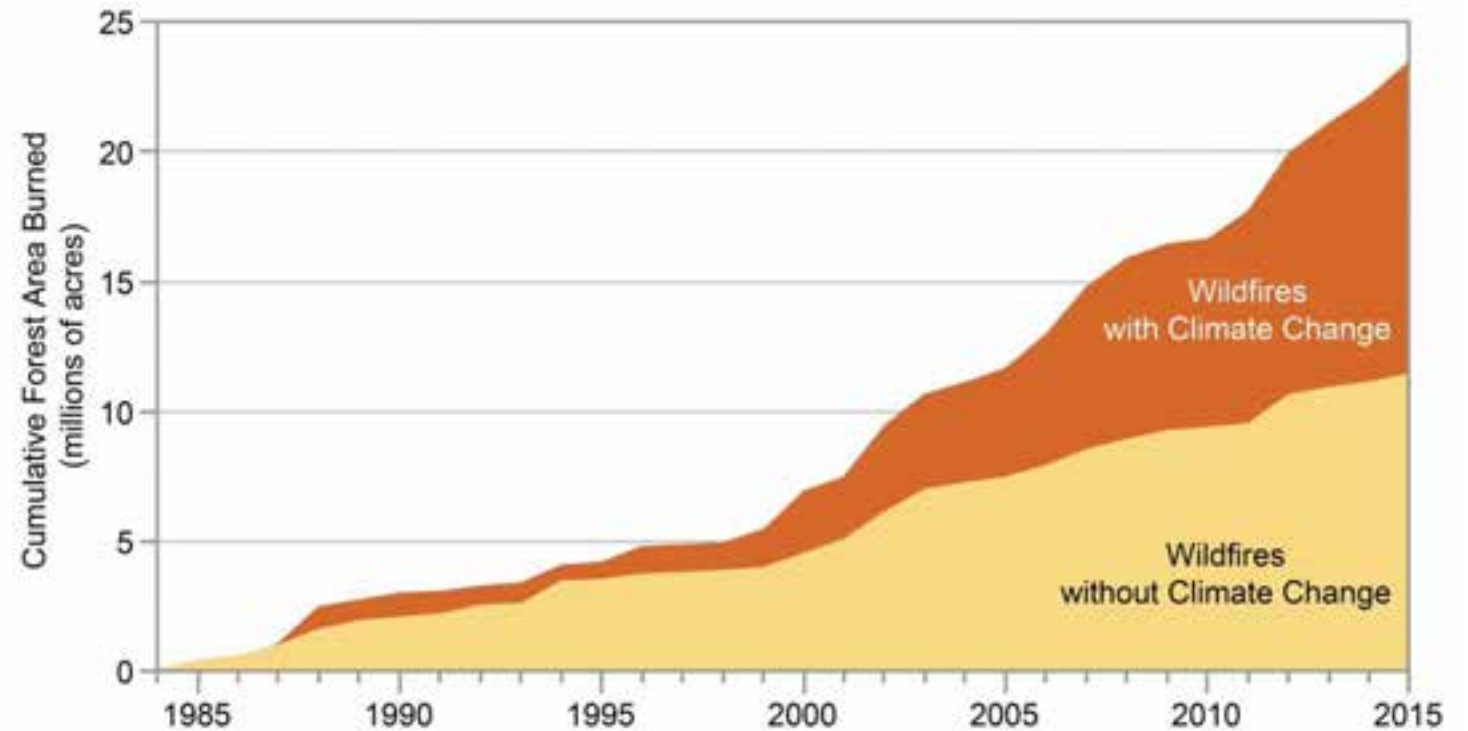
**Building-level adaptation** can offer  
**\$17.6 billion** in economic benefits  
for the region and support  
**56,000** job years.\*

For every **\$1** invested in  
building-level adaptation  
strategies, the region will  
see about **\$4**  
in benefits.

Examples:  
Elevating structures  
Floodproofing

## Wildfires and climate risk

- 29 million people at risk in the US, 4.5 million homes
- \$1.3 trillion in the WUI
- Wildfires are triggering first climate change-related bankruptcies
- Smoke and fire – are major markets at risk for a climate-related migration?





# Wood design as a resilience solution



A grayscale background image showing several pairs of hands writing on documents or blueprints spread out on a table. The image is slightly blurred, focusing on the action of writing.

# Climate Mitigation and a Path to Zero Net Carbon



# Global leaders and markets are starting to respond



Moody's



BLACKROCK®

JPMORGAN CHASE & CO.

**WE ARE  
STILL IN**



# 2021?

- A plan for net zero by 2050
- International climate change engagement
- Climate resilient infrastructure initiative
- Corporate climate change reporting
- New federal lands policies, with a climate change focus
- Deep investment in green jobs, with a focus on social equity

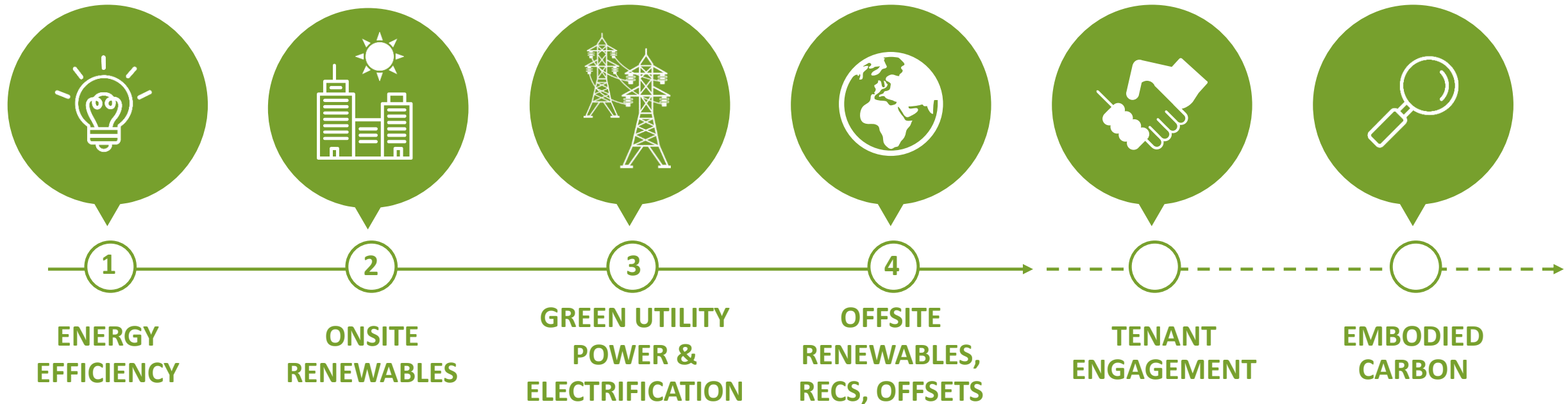
A commitment of \$1.7 trillion for this \$5 trillion initiative





# Connecting Adaptation and Mitigation – a pathway to zero

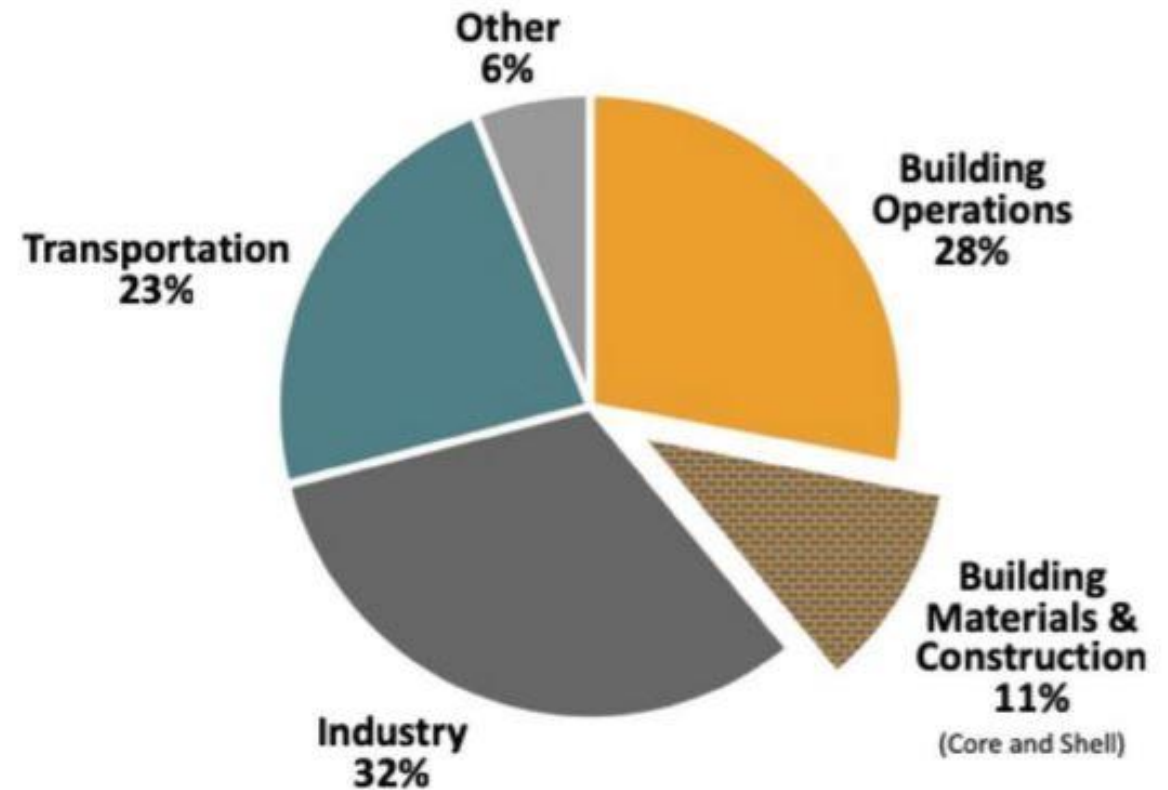
- ❖ Investors feeling more comfortable about pathway to zero by 2050 (if not sooner)
- ❖ Leveraging frameworks to evaluate climate risk and mitigation strategy together (TCFD)
- ❖ Markets responding through Green bonds and new net zero real estate funds



# Climate change and “Embodied Carbon”

- **Embodied carbon:** GHG emissions attributed to manufacturing and transporting construction materials, the process of construction, and building disposal.
- Can account for as much as half of a building's total carbon footprint over its lifetime.
- Structural systems can comprise up to 80 percent of a building's embodied carbon
  - Traditional structural materials include concrete, steel, and synthetic insulation

**Global CO<sub>2</sub> Emissions by Sector**




©Architecture 2030, using data from the Global Alliance for Buildings and Construction, 2018 Global Status Report









# Healthy and social equity in the age of COVID-19





# What we are learning from COVID-19

---

- We are not as resilient as we could be
- Climate commitments still strong, but short-term the focus is on health and social justice
- Economic recovery? we aren't sure if this will be V, W, U, or other-shaped. Implications for private and public sector
- Our buildings aren't pandemic-proof. So what does it mean to say they are healthy?
- Inequality is making health disparities worse for people at the bottom – and this is driven by race as well as income.



## What we are learning from a summer of racial justice

- Racial disparities persist, and in some ways are getting worse
- “Structural racism” still drives this inequality, in community investment, education, health care, and even zoning and urban planning
- The real estate industry has a long way to go in efforts to drive diversity, equity, and inclusion.
- The real estate industry (in partnership with local governments) can be a major part of the solution.

- 
- ## What we are learning from a summer of racial justice
- Racial disparities persist, and in some ways are getting worse
  - “Structural racism” still drives this inequality, in community investment, education, health care, and even zoning and urban planning
  - The real estate industry has a long way to go in efforts to drive diversity, equity, and inclusion.
  - The real estate industry (in partnership with local governments) can be a major part of the solution.



A role for wood in health  
and social equity?





From  
Pandemics to  
Wildfires –  
what's next?

---





# Thank you

[Billy.Grayson@uli.org](mailto:Billy.Grayson@uli.org)