PLEASE WAIT FOR THE WEBINAR TO BEGIN

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PLEASE WAIT FOR THE WEBINAR TO BEGIN

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The Business Case for Urban Resilience

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ULI URBAN RESILIENCE
AUGUST 28, 2020
ULI’s Urban Resilience Program

- ULI’s resilience work focuses on how cities, buildings and communities can be more prepared for the impacts of climate change, including both environmental shocks and stresses
- Strategizing for buildings, communities, and cities to be more resilient to the impacts of climate change
  - Conducting Research
  - Advising Communities
  - Supporting Local-Level Resilience Work
  - Convening Leaders in Resilience
- Focus has shifted from preparedness and recovery from peak events (post Sandy) to broader best practices related to climate risk and land use
- A key focus: Better understanding, measuring and addressing climate risk and scaling resilience planning accordingly.
ULI Resilience Research

- How will climate change impact cities, land use and real estate?
- What are the opportunities for ROI?
- How will real estate and land use practices shift:
  - At the market scale
  - Within markets – what are land use and development strategy best practices?
  - At the building scale – what are best practices for mitigation?
2020 Resilience Perspectives
California on the Frontlines

Wildfires & Air Quality

Heat Waves

Energy Stress & Blackouts

CAL FIRE – 8/25/20

111-Degree High Forecasted Next Week, Would Be One Of ...
Aug 13, 2020 · Temperatures are expected to reach into the mid to high 100s through the weekend. ... NWS Sacramento (@NWSSacramento) August 13, 2020.
2020 Resilience Perspectives

- Climate resilience can be one strategy for addressing long-standing racial inequities
- Low-income communities and communities of color are most at risk to climate hazards:
  - Low-income and communities of color are more likely to live in parts of cities vulnerable to flooding and extreme heat
  - Communities most at risk have fewer resources to rebound from disruptive events
  - Compounded risk in the time of COVID
- Challenges preparing for the 2020 hurricane/wildfire/heat summer season
  - City budget reductions
  - Dual vulnerability of low-income communities and communities of color to climate events and COVID
  - Physical distancing in shelters, evacuation transport, etc.
  - Household challenges obtaining food, supplies, etc.
  - Delayed climate resilience projects due to city budget crises
## Insights from Climate Risk Research

<table>
<thead>
<tr>
<th>Risk Type</th>
<th>Category</th>
<th>Potential Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Risks</strong></td>
<td>Catastrophic events</td>
<td>Damage costs, business downtime, insurance changes</td>
</tr>
<tr>
<td></td>
<td>Changes in weather patterns</td>
<td>Costs related to damages, operations, adaptation measures, insurance</td>
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<td><strong>Transition Risks</strong></td>
<td>Market</td>
<td>Reduced economic activity, property demand, asset value; increased taxes</td>
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<td></td>
<td>Policy and regulation</td>
<td>Increased cost of business, taxes, capital investment; loss of subsidies/funding</td>
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<tr>
<td></td>
<td>Resource availability</td>
<td>Increased costs for resources; additional expenditures for adaptation</td>
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<td></td>
<td>Reputation and market position</td>
<td>Reputation risk; lower liquidity</td>
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</table>
Initial Research Findings: Emerging Practices

- **Mapping physical risk** for current portfolios and potential acquisitions;
- Incorporating climate risk into **due diligence** and other investment decision-making processes;
- Incorporating additional **physical adaptation and mitigation measures** for assets at risk;
- Exploring a variety of strategies to mitigate risk, including **portfolio diversification** and investing directly in the mitigation measures for specific assets; and
- **Engaging with policy makers** on local resilience strategies and infrastructure investments

Source: First Street Foundation
What’s Next? Climate Risk and Market Assessment:

Seeking an understanding of which markets face:

“not necessarily the biggest risk, but...the biggest risk relative to what [the cities] are already paying to absorb that risk”

Global Real Estate Investment Manager
Current Spectrum of Market Assessment Approaches

- **Not considering climate risk** in market assessments – each asset and opportunity is unique; asset-level mitigation may be prioritized.

- **Suspending new growth** or reducing footprint in markets with climate risk concerns – typically in response to other concerns as well as climate risk.

- **Divestment** – Examples are limited but increasingly exist, occurring in response to both peak events and overall risk.

- Of all these responses, very few market assessments were developed through a systematic, data-based approach analyzing both risk and resilience, showing a **gap in industry tools**.
Resilience for Sacramento Climate Hazards

Source: Sacramento County

August 2020

Source: Annual average temperatures for California from 1850-2018 using data from UK Met Office. [https://showyourstripes.info](https://showyourstripes.info)
“We’re facing scenarios where summers are 5°F hotter with prolonged heat waves every other year. **What types of properties will be attractive?** Where will people want to live....fill their leisure time?.”

Edward Dixon
Director, Sustainability Insights
LandSec
## Business Case for Extreme Heat Mitigation

<table>
<thead>
<tr>
<th>PROJECT DEVELOPMENT</th>
<th>PROJECT MARKETING</th>
<th>PROJECT COMPLETION</th>
<th>PROJECT OPERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Reduced construction costs and reduced likelihood of construction delays caused by extreme heat</td>
<td>• Enhance project branding or boost a firm’s reputation through high-quality, resilient design</td>
<td>• Increased occupant comfort, site visitation, and/or retail sales when property is available as a cool place of refuge during normal hot-weather months and extreme heat events</td>
<td>• Sustained value from avoidance of additional costs replacing heat-damaged materials, upgrading per regulatory requirements, and/or adding additional amenities per consumer demand</td>
</tr>
<tr>
<td>• Faster permitting and increased buy-in from influential stakeholders, including investors, public officials, and community groups</td>
<td>• Capture market demand for “green” building with extreme heat resilience as a differentiator</td>
<td>• Enhanced asset value, higher rent premiums, lower vacancy rates, or faster lease-up because of increased occupant comfort and/or likely increased productivity of building occupants</td>
<td>• Long-term utility cost savings because of decreased cooling load and energy use, supporting an improved net operating income</td>
</tr>
<tr>
<td>• Reduced stress on public infrastructure, potentially helping sustain long-term economic vibrancy and climate resilience in the local area</td>
<td>• Public recognition through awards or iconic features</td>
<td></td>
<td>• Higher chance of sustained operations (business continuity) and occupant health during extreme heat events</td>
</tr>
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Business Case for Green Infrastructure

- Cities increasingly encourage or require private development to incorporate green infrastructure as strategy to mitigate heat and flood risks
- Real estate projects can harness opportunities for operational and land use efficiencies, reduce risk, and otherwise create value to projects
- Successful development outcomes include
  - Increased developable land
  - Increased market value
  - Enhanced marketing opportunities
  - Placemaking opportunities, amenity value, and improved building user experience
  - A smooth permitting process
  - Avoided losses in peak weather events
  - Reduced operating and maintenance costs
  - Decreased potable water use
ROI for Resilient Development

- Developing Urban Resilience (DUR) is an online case study library
- Examples of value add in profiles:
  - Avoided losses/ Business continuity
  - Increased likelihood of/speed for permitting
  - Opportunities for enhanced market value or faster lease-up
  - Enhanced attractiveness to tenants/Brand value – user experience, placemaking
  - Energy and water usage reductions
  - Extended building life
  - Opportunities for decreased insurance premiums
- ULI welcomes nominations for additional projects to profile
Burbank Water and Power EcoCampus
Burbank, California

- **Context**
  - A community-owned public utility site
  - ~80% impervious surface
  - Aging facilities with inefficiencies and higher utilities rates

- **Strategies**
  - Water filtration strategies
  - Landscaping with native plants and trees
  - Recycled water treatment system
  - Green street demonstration project
  - Redesign of decommissioned electrical substation
  - Green roofs
  - Solar panels

- **Outcomes**
  - Lowered operating costs, which led to more affordable utility rates for the citizens of Burbank
    - net-zero stormwater runoff from the campus
    - Reduced piped water by as much as 100,000 gallons per day
    - Green roofs absorb 70% of rainwater and saves facility $14,000/yr
  - BWP boasts some of the lowest rates for utilities in southern California
  - Improved morale of employees and recruitment capabilities of younger talent
  - Numerous awards and Sustainable Sites and LEED Platinum certifications
Heat-aware Development
SkySong (Scottsdale, Arizona)

- Motivation
  - Talent attraction
  - Year-round enjoyable use
  - Operational efficiencies

- Strategies
  - Artistic, functional shade structures
  - Building orientation and siting
  - Efficient building facades
  - Energy efficient lighting and HVAC

- Outcomes
  - $588 million in local economic output
  - Tenant retention - 57 companies
  - Year-round foot traffic (5,500 visitors/month)
  - LEED Silver
Heat-specific Policy

Cool Surfaces: Roofs and Roads (Los Angeles, California)

- Green Building Code cool roof requirement in 2014 (residential)
  - 20,000 new cool roofs in Los Angeles

- Cool paving pilot projects 2017 – now
  - Street level 10°F decrease in surface temp
  - Significant press and social media attention
  - Expanding pilot tests from parking lot to streets to adjacent city blocks
  - Additional state-level funding secured

LA Bureau of Street Services
Public Sector Leadership

How will climate change impact cities and economies, and how can infrastructure be more prepared?

- **Miami Beach, Florida**
  - Developed $600 million stormwater infrastructure program, including pumps and elevated streets
  - Brought ULI in to assess the plan
  - Conducted a business case analysis on the program

- **California State Lands Commission**
  - Adopted in AB 691 – Proactively Planning for Sea-Level Rise Impacts in 2015
  - Requires grantees to assess the impact of sea level rise on granted trust lands
  - Updated in 2018 with best available science and statewide planning guidance
Wildfire Resilience and Real Estate
New report published Fall 2020

The 2017 North Bay Fires disaster was a housing disaster. Costs are higher because of the fires, and demand is higher as a result of a number of homes lost.” – Developer

“We have to plan our communities better, especially in high fire severity zones.” – City Manager

“One of our best wildfire mitigation tools is to get back some semblance of the native plant community” – Landscape Architect

“We won’t have environmental resilience unless our community is resilient in other ways, including workforce, equity, and economic resilience.” – Conservation Foundation President

“Every time we create localized energy solutions, we take a lot of pressure off infrastructure at risk.” - Engineer

We’re in this symbiotic relationship between the town, our development, the public forest, and the commercial woodlots. You have to work with your neighbors to manage wildfire risks together. - Developer
Ways to get involved

- Contribute to research as an interviewee or peer reviewer
- Nominate a case study for Developing Urban Resilience
- Host or attend a virtual event
- Participate in a Technical Assistance or Advisory Services Panel
- Invite ULI to provide technical assistance to a local community or organization
Thank you!

- Visit the Urban Resilience Program website: https://americas.uli.org/resilience

- All reports are available for download in the reports section

- Project profiles can be accessed at https://developingurbanresilience.uli.org

- Email: resilience@uli.org