Various levels of intervention:

Geopolitical / Policy Level

Portfolio Level

Project / Asset Level
The Paris Agreement

• Agreed to by 195 nations at “COP-21” in Paris - December 2015
• Takes effect when 55 countries, representing 55% of emissions ratify it
• Aims to keep global temperature rise to no more than 2° C over pre-industrial.
• Key elements of the Agreement and drivers of change in the post-COP-21 world;

• Opportunities for the real estate industry, how to capture them, and the risks of not doing so;

• High-level steps for real estate organizations to stay relevant and competitive post-COP-21.

“ULI’s global members have a pivotal role to play in addressing some of the greatest challenges facing our rapidly urbanizing world, including the pressing threat of climate change.”

- Patrick Phillips, Global CEO, Urban Land Institute
Implications for the Real Estate Industry

Climate-changing carbon emissions

Climate impacts (e.g., extreme weather)

Paris Agreement on Climate Change

Policy impacts

Market impacts

New and evolving behaviors

Greater regulation and oversight

Stronger stakeholder scrutiny

New product innovation

Disruptive events

Mitigation imperative

Delivering energy and carbon reduction in new development and existing buildings

Higher compliance hurdles

Reporting and engagement

Value risk and arbitrage

Adaptation imperative

Embedding resilience

Risk management and disclosure
Where to Start: Sample Questions

- Climate risk
  - What climate hazards are our assets and our core operations exposed to? How resilient are we to the potential physical and financial impacts of those hazards?

- Client and stakeholder expectations
  - What are our peers and competitors doing, and what benefits do they get from their actions?

- Competitor approaches
  - What opportunities do we have to deliver energy and carbon reduction programs on our assets? What should our goals, targets, and priorities be in this regard?

- Policy change

- Asset performance

- Value chain

- People/processes

How do your holdings contribute to climate change? How do your holdings stand to be impacted by climate change or efforts to address it? What can you do to address both?
• Possible timescale mismatches
• Mixed views of climate impacts
• Viewed as having primarily asset-level impacts
• Risk assessments are being done, but mostly simply
• Some investments are being made, but there are gaps
• Expertise gap may exist
• Market rewards for climate action are still weak
Respondent Profile: Business Activity

- 50 respondents
- Senior Executives
Respondent Profile: Regional Focus

- Respondents are primarily invested in Europe, especially Western, Northern and Southern

- Respondents’ portfolios have limited focus on the southern hemisphere
### Anticipated Business Implications

<table>
<thead>
<tr>
<th>Implication</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision not to invest in properties with insufficient risk profile</td>
<td>3.64</td>
</tr>
<tr>
<td>Divestment of properties with insufficient risk profile</td>
<td>3.17</td>
</tr>
<tr>
<td>Reinforced adaptation measures for existing properties</td>
<td>3.04</td>
</tr>
<tr>
<td>Higher required rate of return on properties with insufficient climate resilience</td>
<td>3</td>
</tr>
<tr>
<td>Unaltered investment in real estate</td>
<td>2.96</td>
</tr>
<tr>
<td>Exclusion of specific investment regions</td>
<td>2.83</td>
</tr>
<tr>
<td>Exclusion of specific real estate asset types</td>
<td>2.72</td>
</tr>
<tr>
<td>More investment in real estate</td>
<td>1.56</td>
</tr>
<tr>
<td>Less investment in real estate</td>
<td>1.4</td>
</tr>
</tbody>
</table>

- Most respondents do not see any major change in their investment levels in real estate
- Wholesale exclusion of investments in certain regions is less likely than changes in investment strategy for individual buildings
Over 90% of respondents are improving energy efficiency in at least some of their portfolios, but less than 50% are investing in resilience to extreme weather impacts.
Market Observations

- Some market trends to encourage more sustainable buildings, but there are areas where the market signal is still weak
5,414 Properties in the Greenprint benchmark

1.32 Billion Sq. Feet Covered by Greenprint buildings

Over €37M (US $42M) Annual energy and water cost savings

2009-2015 Results

- **Energy Consumption**
  - **Energy**
    - **-13.7%**
    - 2009: 5,031 million kWh
    - 2015: 4,340 million kWh
    - 973 properties

- **Carbon Emissions**
  - **Carbon**
    - **-16.5%**
    - 2009: 1,951 thousand mt
    - 2015: 1,630 thousand mt
    - 973 properties

- **Energy Spend**
  - **Energy spend**
    - **-12.8%**
    - 2009: $313 million (€245 million)
    - 2015: $273 million (€246 million)
    - 733 properties
Greenprint vol. 7 Report

**Best Practices**

- Energy
- Water
- Waste

**Trends**

- Tenant engagement is the next frontier
- Embedding sustainability in the investment process
- Health and wellness are attracting more attention
- Technology is evolving
- Interest in net-zero energy buildings is increasing
Print report
- www.uli.org/returnsonresilience
- Office, housing, institution, resort, mixed
- Various climate threats and strategies
- Focus: value-creation strategies

Web platform
- returnsonresilience.uli.org
- New case studies to come
- Resource library
- Propose case studies, or request the report: resilience@uli.org