

CADMUS



Preparing Your Buildings for Climate Change

January 31, 2019



Agenda

Template Presentation
Discussion



Template Presentation

Project Overview


- **Audience:** Commercial real estate property owners and managers considering resilience at the building-level
 - Primary focus is existing buildings and their daily operations
 - Can inform risk planning for new construction or major rehabilitation projects
- **Contents:** Existing best practice climate resilience resources and includes new guidance for decision-making and implementation
- **Geography:** Focus on Boston, MA
- **Project Partners:** Boston Green Ribbon Commission's Commercial Real Estate Working Group (GRC CREWG), A Better City (ABC), and Cadmus

Project Components

- Template, Worksheet and Vendor List



Climate Resilience Template for Buildings



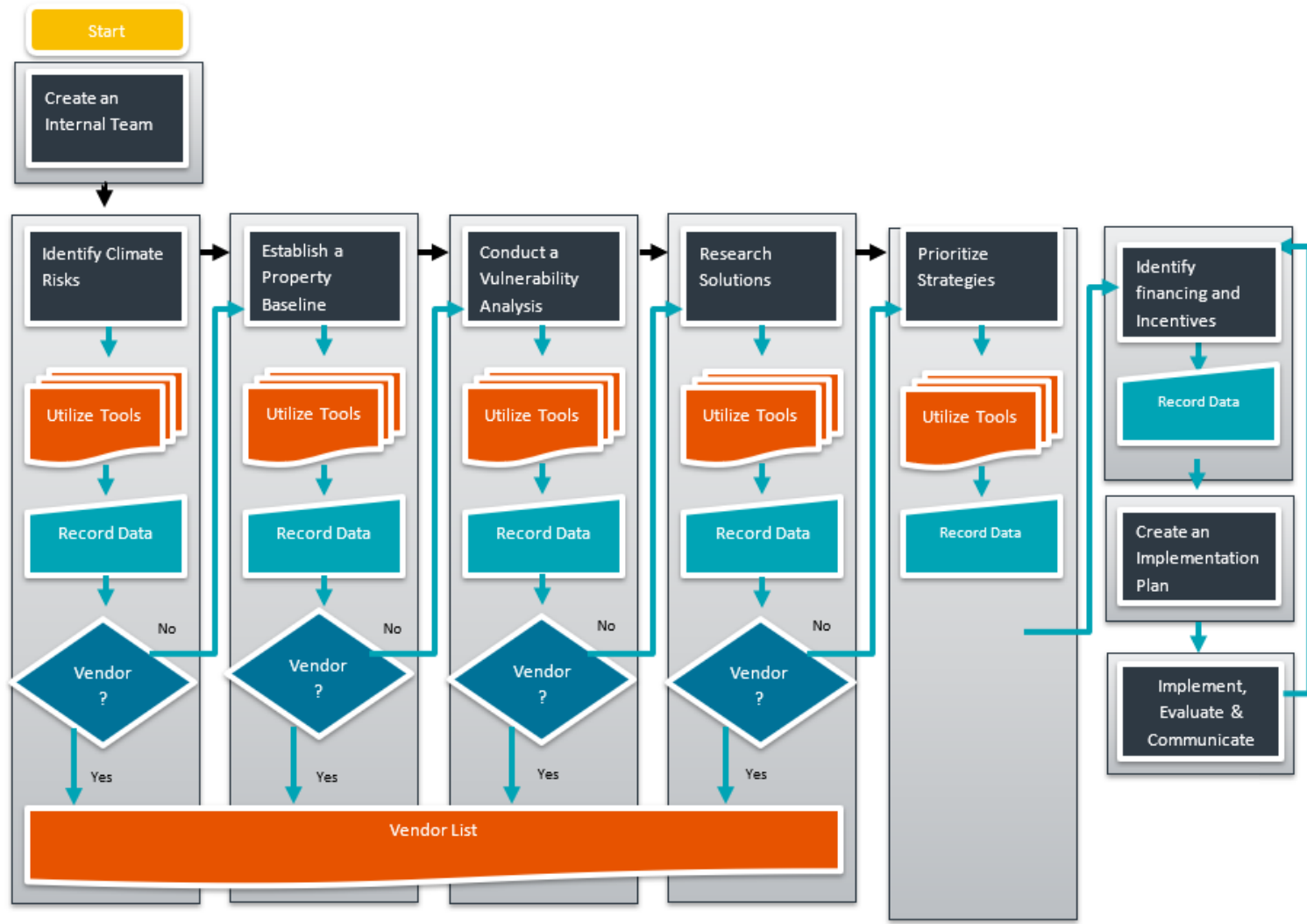
Commercial Building Climate Resilience Worksheet

How to use this workbook: This workbook is a companion to the Resilience Template for the Commercial Real Estate Sector. The template is part of an initiative of the Boston Green Ribbon Commission to provide localized, tailored guidance on resiliency planning for facilities in each of Boston's major building sectors. This workbook follows the seven steps from the template, and provides areas for users to input specific information about their facilities and identify which tools or reference materials align most closely to their context.



Request for Information (RFI) for Resiliency Services for the Commercial Real Estate Sector

Planning Process



Step 1 – Create an Internal Team

- Action Steps
 - Determine representatives from each relevant department
 - Assign roles and responsibilities
 - Communicate with team

Recommended Team Members

Energy Manager

Maintenance and Operations staff

Grounds keeping & custodial staff

Security Manager

Finance staff

Sustainability Manager

Communications staff

Personnel or tenant engagement staff



Step 2 – Identify Climate Risks

| Climate Factor | Summary |
|-----------------------|--|
| Extreme Heat | <ul style="list-style-type: none">• Rate of increase is accelerating• Number of days with extreme heat will increase<ul style="list-style-type: none">• 20 – 40 days over 90 and 5 days over 100 by 2030• Heat waves will be hotter, last longer, and occur with greater frequency |
| Sea Level Rise | <ul style="list-style-type: none">• Pace of SLR is accelerating<ul style="list-style-type: none">• Additional 8” above 2000 levels by 2030 |
| Extreme Precipitation | <ul style="list-style-type: none">• Northeast experiencing greater increase in precipitation than anywhere else in the country<ul style="list-style-type: none">• 24-hour storm of 5.5” by 2035, greater than the Boston stormwater drainage system is designed to handle |

Sources: Climate Ready Boston, BPDA Climate Resiliency Guidance

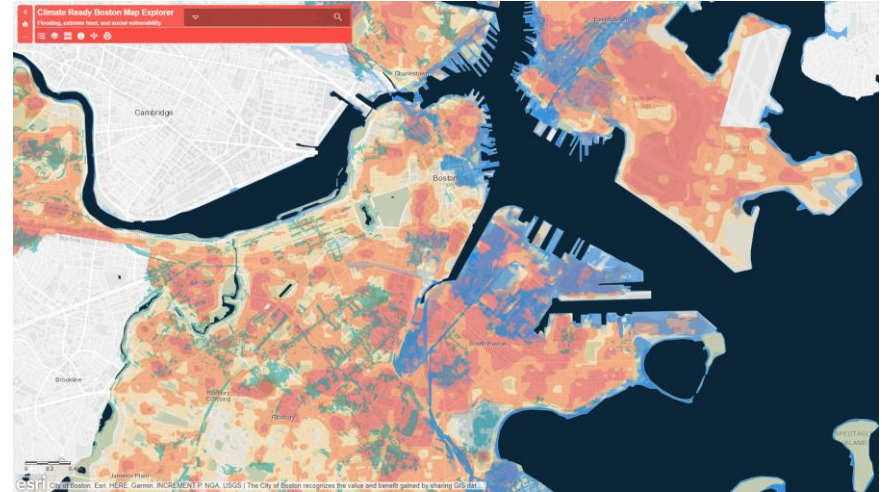
Step 2 – Identify Climate Risks

- Resources

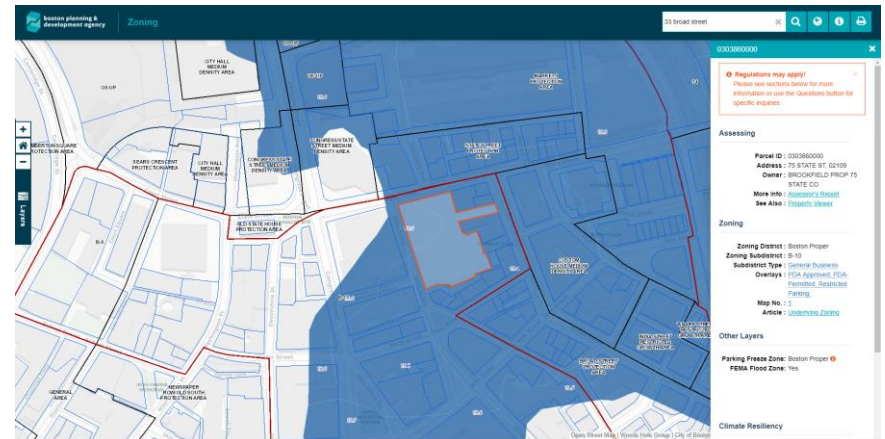
- [Climate Ready Boston Map Explorer](#)
- [BPDA Zoning Viewer](#)
- [Resilient MA Climate Clearing House](#)

- Action Steps

- Determine exposure to extreme heat
- Determine exposure to sea level rise
- Determine exposure to extreme precipitation
- Determine exposure to storm surge



Climate Ready Boston Explorer



BPDA Zoning Viewer

Discussion

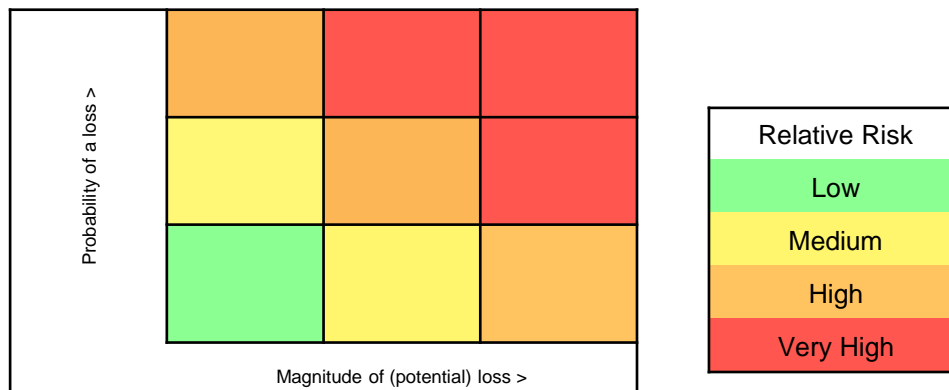
- Have you used any of these tools in your work?
- Do you have any questions about these tools?

Step 3 – Establish a Property Baseline

- Key Considerations
 - Site characteristics
 - Building characteristics
 - Existing resiliency efforts
- Resources
 - BPDA Climate Resiliency Guidelines and Checklist
- Action Steps
 - Collect relevant information
 - Develop property baseline
 - Identify gaps in information, collect additional material, add them to property baseline
 - Assess role for third-party vendors to assist in developing a property baseline

Step 4 – Conduct Vulnerability Analysis

- Resources
 - US Climate Resilience Toolkit
- Action Steps
 - Determine exposure of each building asset
 - Determine vulnerability of each building asset
 - Determine risks
 - Assess role for third-party vendors in conducting a vulnerability analysis



U.S. Climate Resilience Toolkit Risk Matrix: Risk Characterization

Step 5 – Research Solutions

- Resources
 - ABC's Building Resilience Toolkit
 - BPDA Climate Resiliency Design Reference Guide for New Developments
- Action Steps
 - Research solution for reach vulnerable asset identified during vulnerability analysis
 - Review case studies where additional information is desired
 - Assess role for third-party vendors in researching and determining solutions

Discussion

- Do these steps resonate with your experience?
 - Establish a property baseline
 - Conduct vulnerability assessment
 - Research solutions

Concluding Steps

- **Step 6: Prioritize Strategies**

- Determine priority of action based on ability to minimize probability or magnitude of risk
- Determine expected value of prioritized actions based on associated costs and benefits

- **Step 7: Identify Financing and Incentives**

- Create budget assessment of prioritized actions
- Track funding opportunities

Concluding Steps Continued

- **Step 8: Create an Implementation Plan**
 - Determine timeline for each priority action
 - Determine lead for each priority action
 - Determine budget source for each priority action
 - Consider existing organizational processes that should be revised
- **Step 9: Implement, Evaluate and Communicate**
 - Communicate with internal team to evaluate progress
 - Update plans as necessary
 - Share resilience plans internally and externally

Discussion

Subheading



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Discussion

- What is your initial reaction to the template and worksheet?
- How do you envision using the template, worksheet, and/or vendor list?

Pilot Project

- In 2019 ABC will be working with a small group of members to pilot the Resilience Template process
 - Participants will receive 1:1 or Working Group support from ABC
- Would you consider being a part of this pilot?
- What goals would you have for this process?



Thank You / Q&A