

Session 8: Research & Evaluation

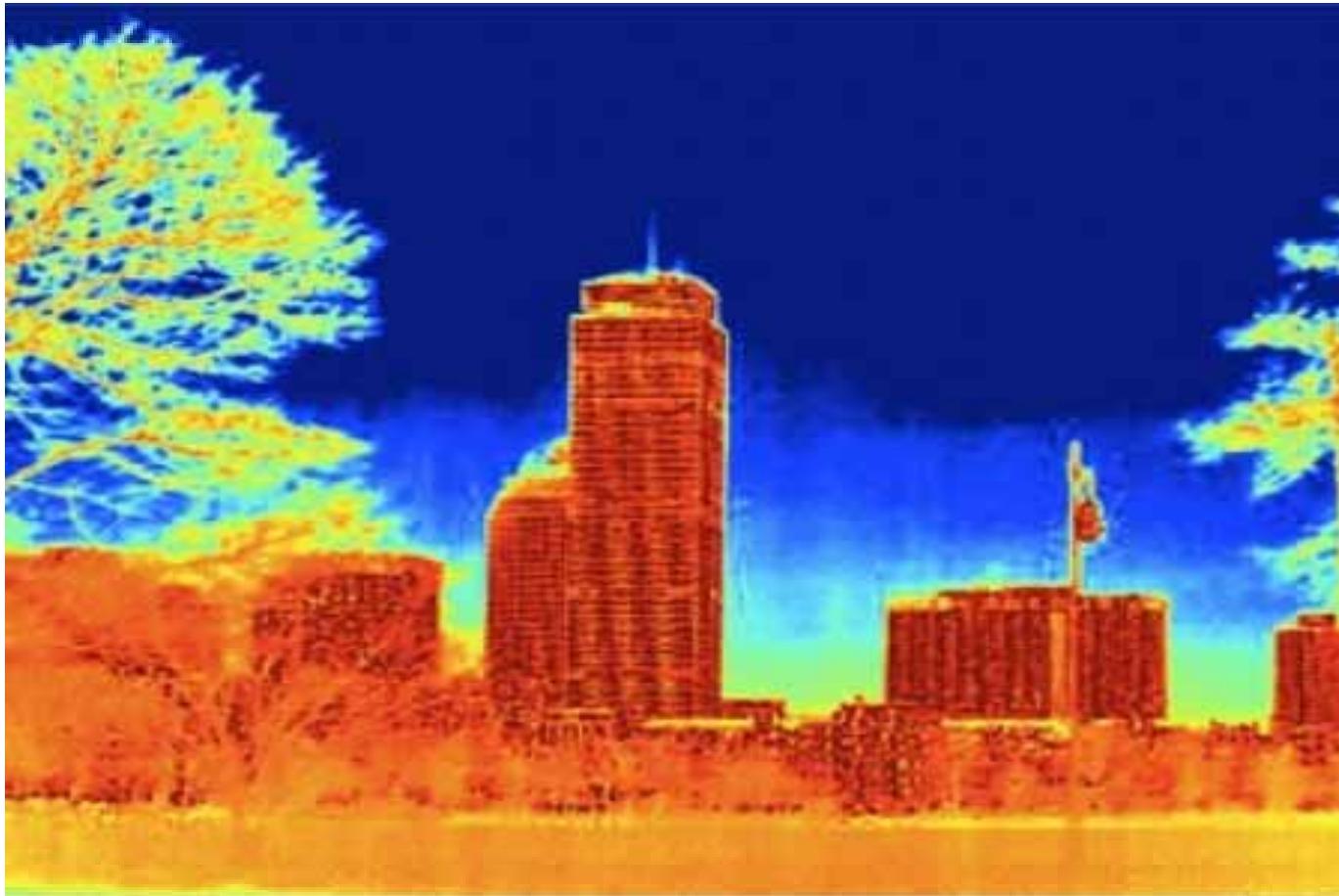
Commercial Code Compliance: The Law. The Reality. The Savings?

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10:30 AM – 12 Noon, January 31, 2013

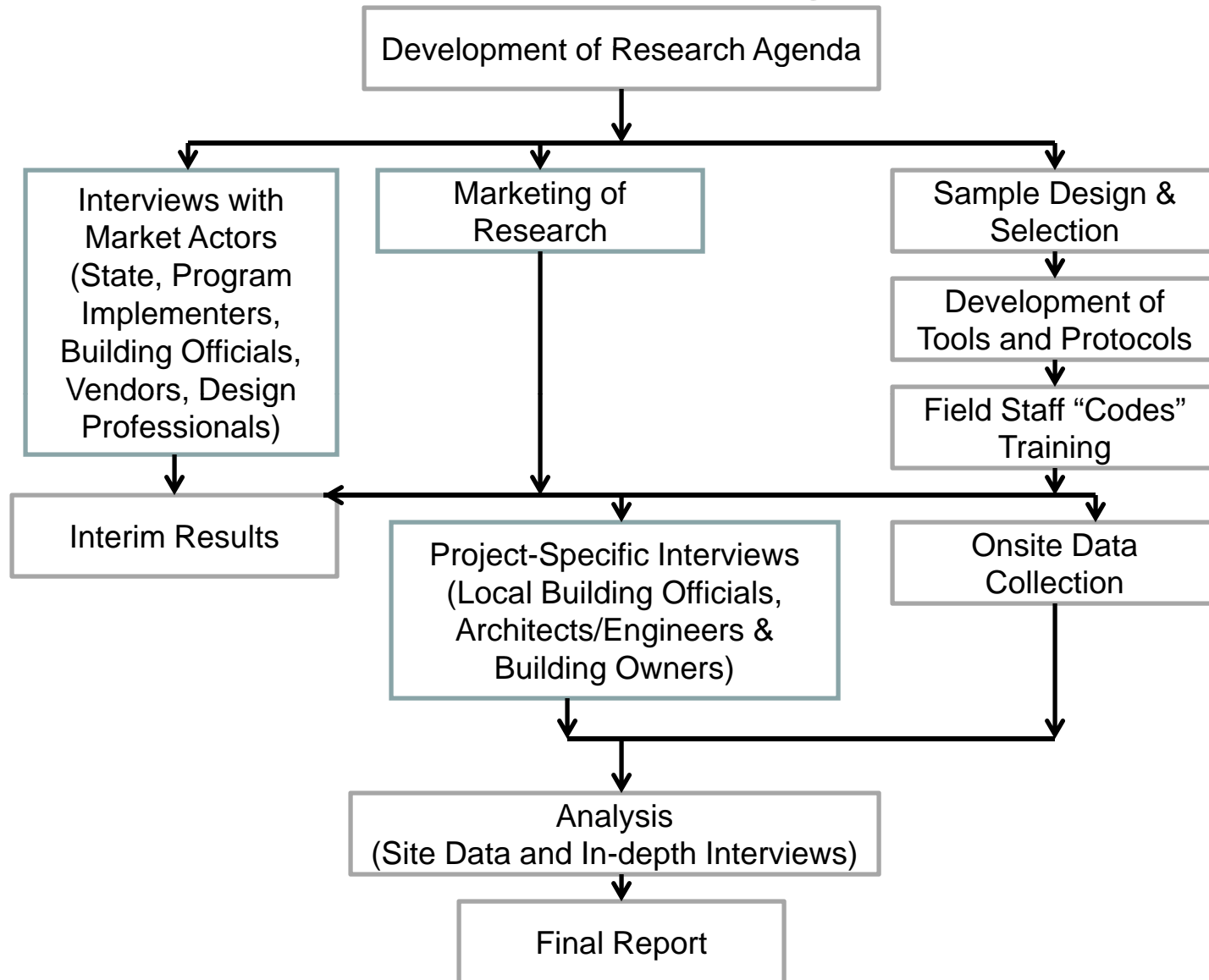
Thermal Image of Boston Skyline



Massachusetts and Rhode Island Commercial & Industrial Code Compliance Studies

- Study motivations:
 - Assess savings opportunities between actual practice and energy code requirements.
 - MA and RI Program Administrators in process of developing Codes & Standards program.
 - Baseline benchmark is critical to this effort.
 - Requirement of American Reinvestment and Recovery Act for states to achieve 90% energy code compliance by 2017.

Study Design

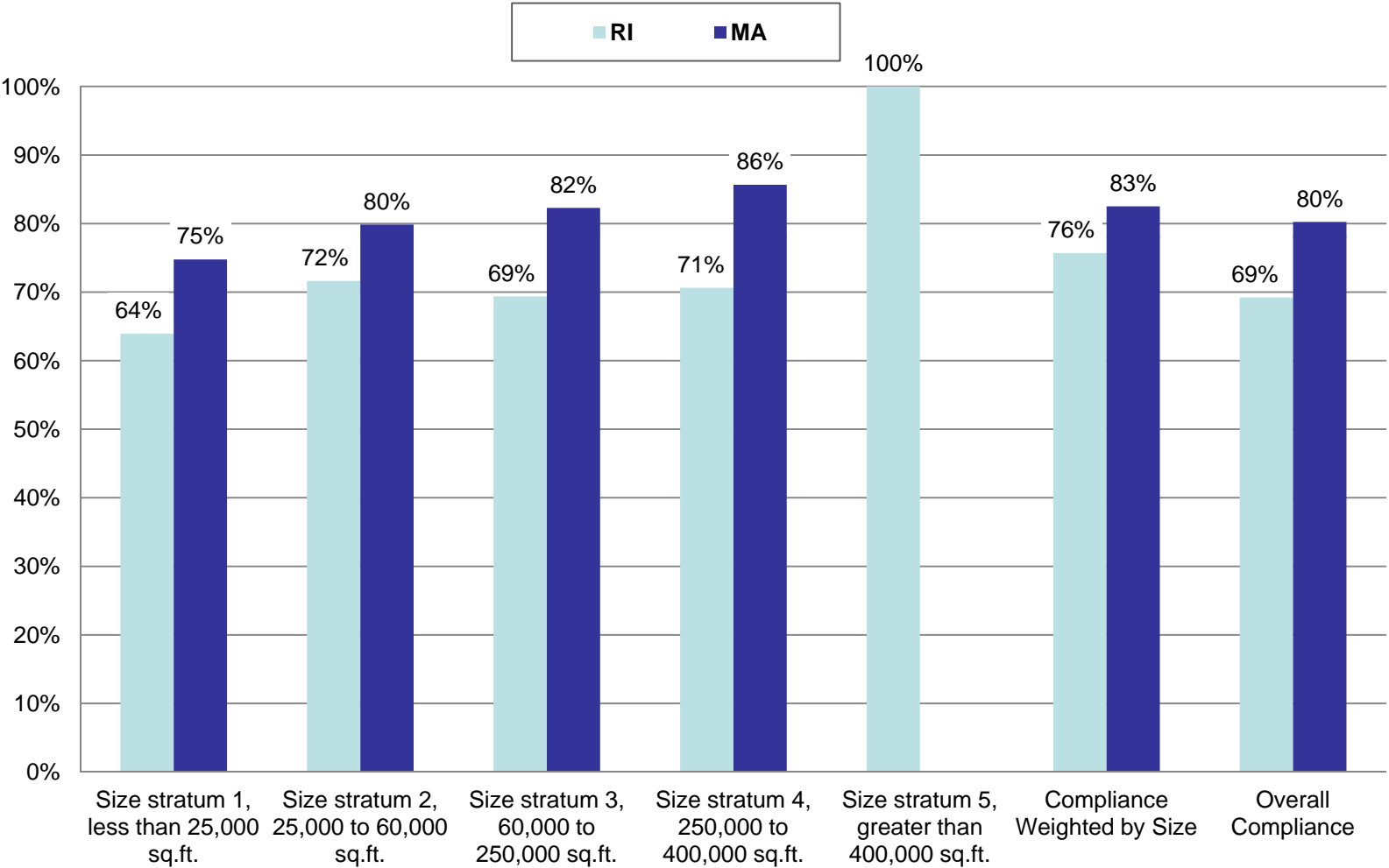


Compliance Rates

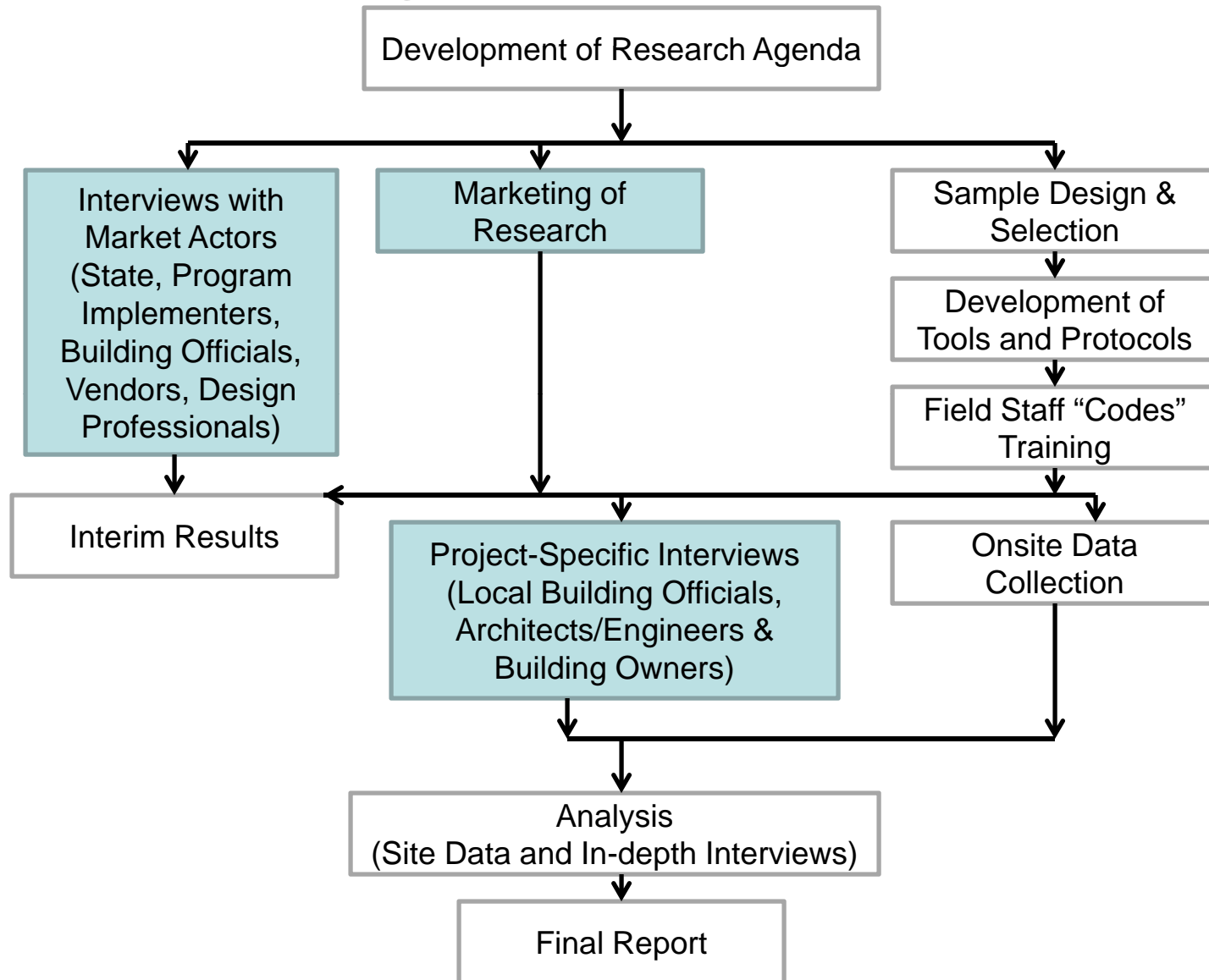
Methodology and Results

- Compliance rate calculations:
 - DOE/PNNL methodology
- Aggregated commercial building compliance rates:
 - MA: 83% weighted, 80% unweighted
 - RI: 76% weighted, 70% unweighted
- No building in either study was found to be 100% compliant

MA and RI Statewide Compliance Rates per Building Size Stratum



Getting the Whole Story



Interview Respondents by State

Market Actors	Numbers of Interviews	
	Massachusetts	Rhode Island
<i>Initial In-Depth Interviews</i>		
State Building Code Commissioner	NA	1
BBRS Code Development Manager	1	NA
PA New Construction Program Implementers	6	NA
Building Code Officials	7	31
Wholesale/Retail Suppliers	6	NA
Design Community (focus group)	5	NA
<i>Project Specific In-Depth Interviews</i>		
Building Code Officials	19	NA
Building Owners / Owner's Project Managers	65	NA
Design Community	43	NA
TOTAL	152	32

Drilling Down on In-Depth Interviews

- Objectives were to learn about:
 - Code compliance practices
 - Energy code implementation barriers
 - Energy code knowledge and training needs
 - Technical challenges and opportunities
- Two types of Interviews in Massachusetts:
 - Non project-related market actor overviews
 - Project specific experiences

Key Findings

- Building officials feel overwhelmed by their ranges responsibilities
- Affidavits used heavily to document compliance
- “You review what you’re familiar with”
 - more emphasis on envelope review than lighting or HVAC
- HVAC systems and controls often too sophisticated for building officials’ technical backgrounds

Conclusions & Recommendations

Energy code compliance is a shared responsibility among market actors

- Develop training across market segments
- Offer 3rd party compliance assistance across market segments

Conclusions & Recommendations

Traditional training approaches are not up to current market actor needs

- Adopt effective training approaches – e.g. charrettes and project-specific training
- Train a range market actors on a range of topics – from how to use COMcheck to basic HVAC equipment and their controls
- Re-introduce circuit riders for building officials and design teams

Conclusions & Recommendations

States lack standardized code documentation and energy-savings metrics

- Standardize code documentation for prescriptive and performance (energy modeling) compliance
- Adopt common metrics i.e. energy cost savings, site savings, source savings, across utility and state programs

Summary

- Interviews are very important supplements to baseline code compliance studies
- Feedback from market actors will provide better direction for policy and programs to improve compliance percentages than baseline studies
- Interviews can be completed with follow-up compliance studies to gauge efforts



Save the Dates

Apr. 29-May 1, 2013

AESP's Spring Conference
Dallas, TX

Sept. 30-Oct. 2, 2013

AESP's Fall Conference
Seattle, WA

Jan. 27-30, 2014

AESP's National Conference
San Diego, CA

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