

University of Massachusetts Boston

From the Selected Works of Michael P. Johnson

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Community Development Analytics: From Data to Decisions for Boston Main Streets

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Available at: https://works.bepress.com/michael_johnson/63/

Community Development Analytics: From Data to Decisions for Boston Main Streets

Michael P. Johnson, PhD and Sandeep Jani
University of Massachusetts Boston
June 26, 2015



Data Day 2015

Acknowledgements

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- ▶ Deborah Elizabeth Finn, Tech Networks Boston

Problem motivation

- ▶ Community data analytics project 2012 – 2014 highlighted CBO data needs and lack of use of available datasets (Johnson 2015)
- ▶ Boston Main Streets directors dissatisfaction with data reporting requirements
- ▶ Gap in IT & analytics research and practice knowledge regarding data needs in urban communities and communities of color

Boston Main Streets

- ▶ Structure: 20 neighborhood-based districts across Boston's residential communities
- ▶ Mission: Improve the quality of life in Boston's neighborhoods through jobs and entrepreneurship
- ▶ Stakeholders: Businesses, property owners, nonprofits, residents, visitors, shoppers
- ▶ Tasks: Stakeholder education, capacity-building, business development, physical improvements
- ▶ Origin: National Main Streets initiative focused on small-town economic development

Problem description

▶ Statement:

- Identify metrics associated with success in local economic development
- Generate decision opportunities for improved program design and implementation

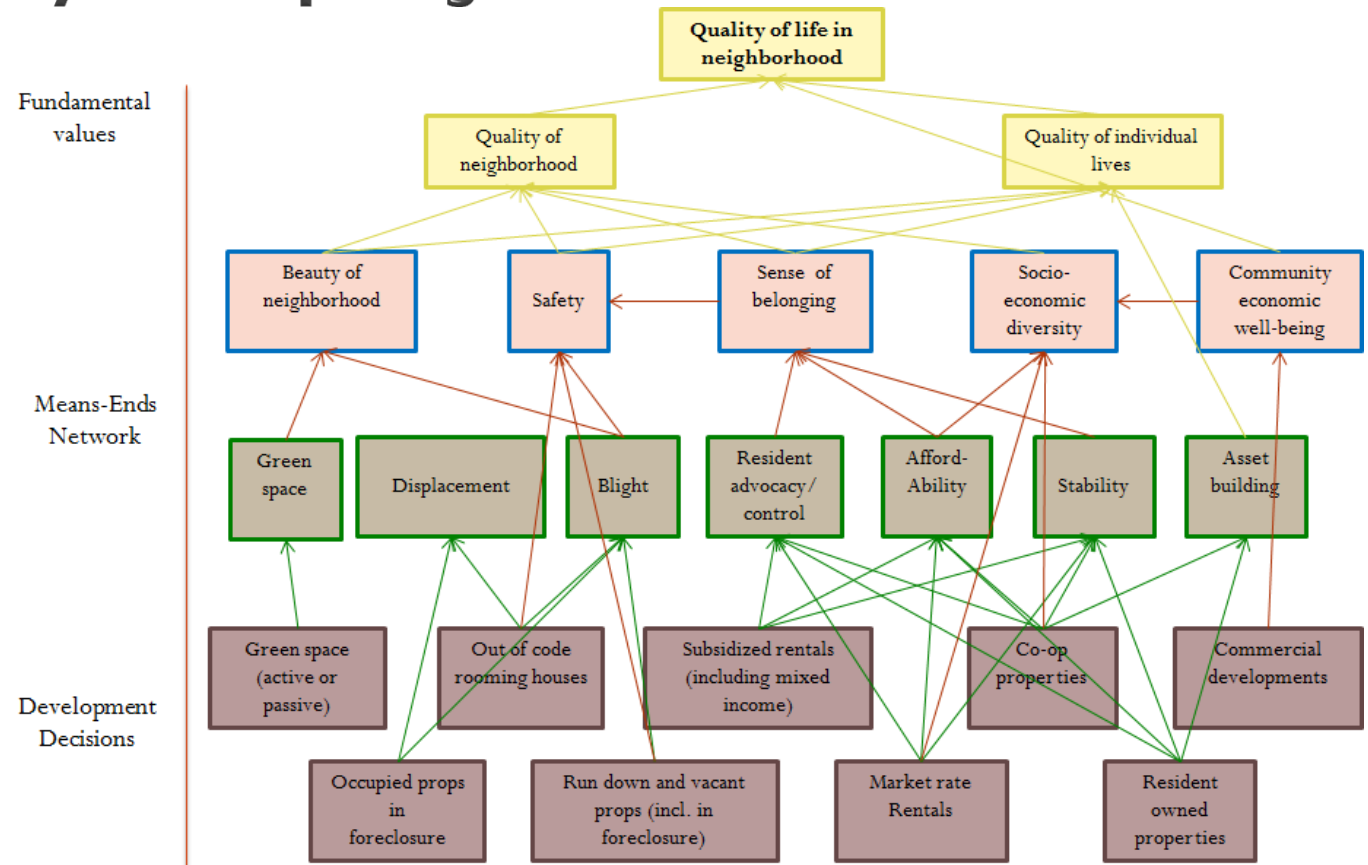
▶ Goals:

- Use principles from PAR, analytics and decision sciences to enable professionals to improve practice based on values, data and analysis
- Embrace systems-type thinking to broaden concept of outcomes (vs. outputs) and decision opportunities (vs. defined tasks)
- Adapt mixed-methods, inductive, community-engaged methods to needs of diverse service areas

What can a successful community data analytics project look like?

NSF-funded project on decision modeling for foreclosure response

- Dorchester CDC
- Fitchburg & Leominster CDC



Emphasis in Dorchester CDC is on individual and neighborhood impacts of specific housing activities

Source: Keisler, Turcotte, Drew and Johnson (2014)

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How will we solve the problem?

▶ Theory:

- Participatory action research (Maria Torre 2009)
- Community-based operations research (Johnson 2012)
- Qualitative, quantitative and mixed-methods research design (Creswell 2013)

▶ Data collection:

- Surveys, interviews, direct observations, focus groups, administrative datasets

▶ Analytic methods:

- Qualitative data analysis (Maxwell 2012)
- Quantitative data analysis (Albright, Winston and Zappe 2009)
- Value-focused thinking & decision analysis (Edwards, Miles and von Winterfeldt 2007)
- Geographic information systems (Gorr and Kurland 2015)

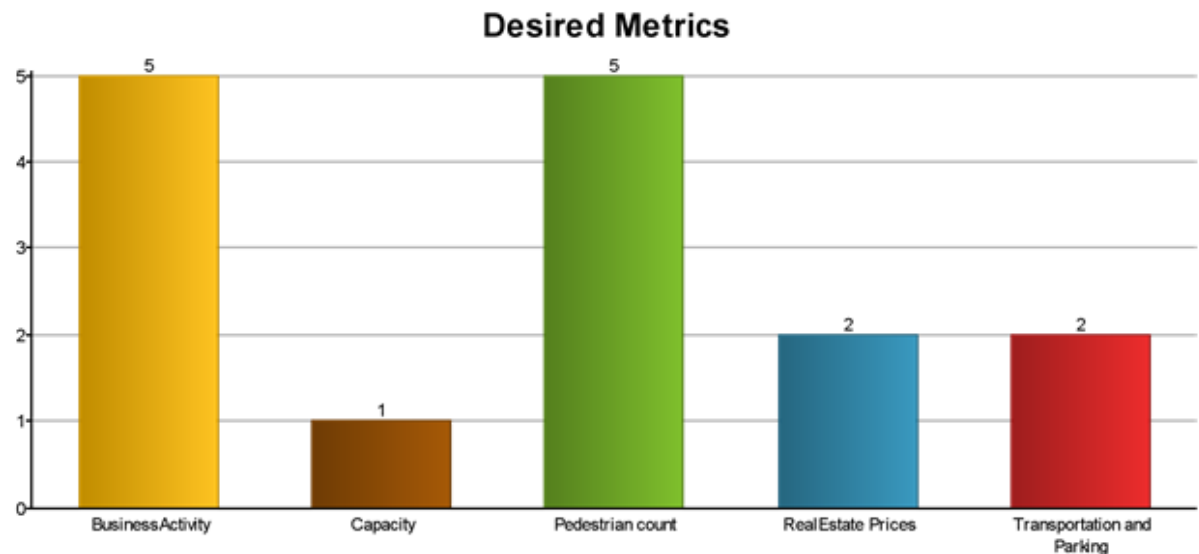
Project design and timeline

- ▶ Problem identification with BMS directors data committee (2014)
- ▶ Survey of BMS directors (Spring 2015)
- ▶ Field data collection at three BMS sites (Summer 2015)
- ▶ Individual and cross-site analysis (Summer – Fall 2015)
- ▶ Cross-site VFT focus group (Fall 2015)
- ▶ Findings, recommendations (Fall 2015 – Spring 2016)

Survey findings (N = 12)

“Is there anything that you want to measure in your district, but do not have the means to measure?”

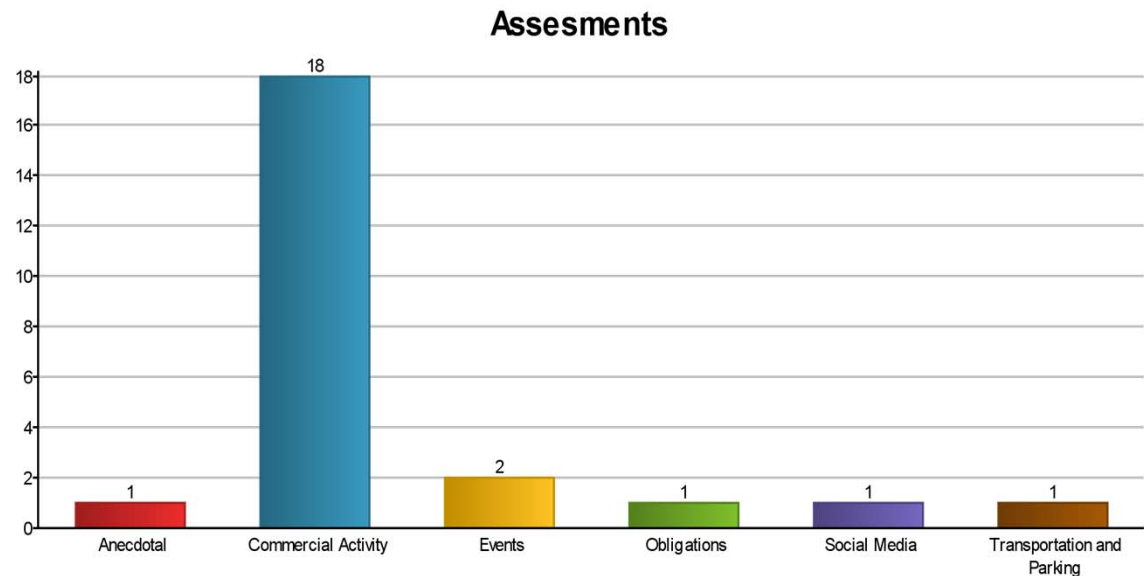
- “Impact special events have on small businesses”
- “I wish I knew how to measure how businesses in the district were performing economically”
- “In general I have the means to measure the things I need to – what I lack is the capacity/systems to easily and regularly collect data.”



Survey findings, continued

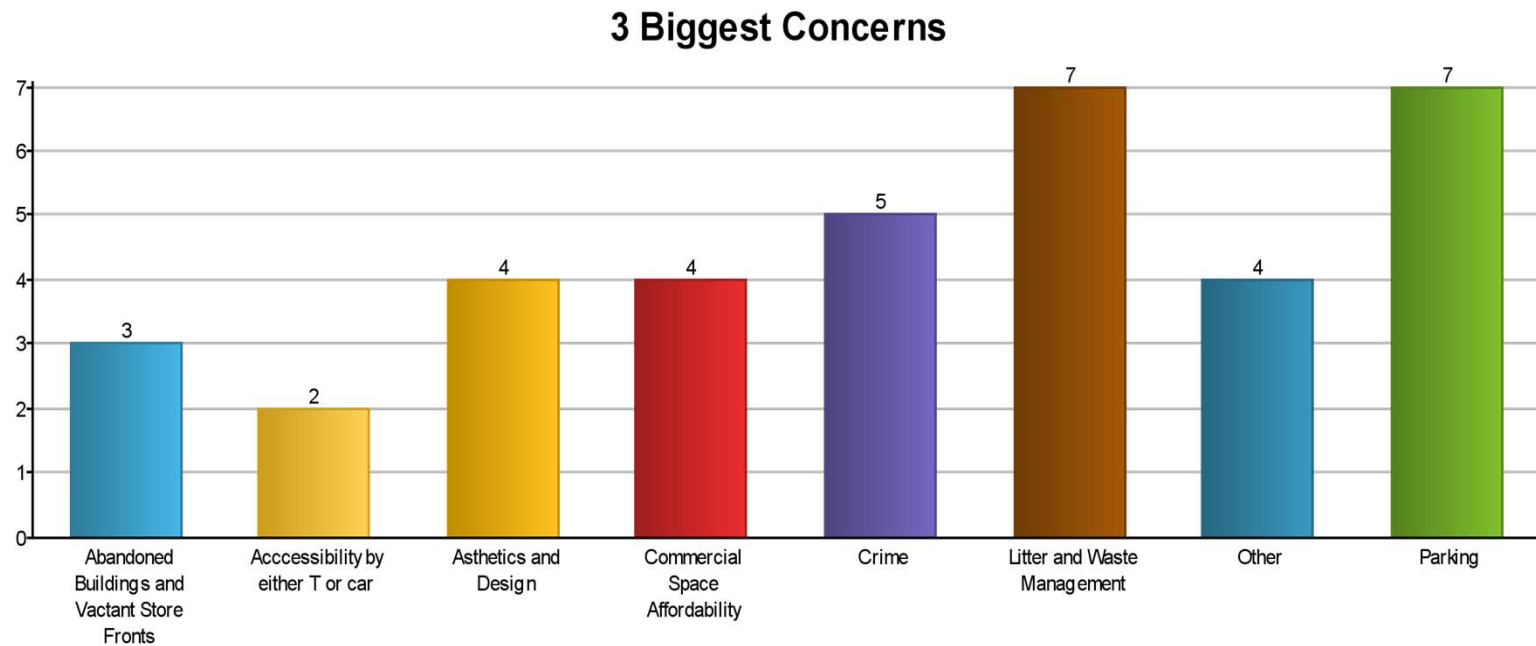
“How do you use data in your day-to-day operations?”

- “We don't use data because we don't have data for day-to-day operation. We only track data for special events.”
- “I don't know that I use it in day-to-day other than to recruit businesses.”
- “I refer to market and demographic data in development proposals mostly.”



Survey findings, continued

“What would you say are the 3 biggest concerns in your district?”

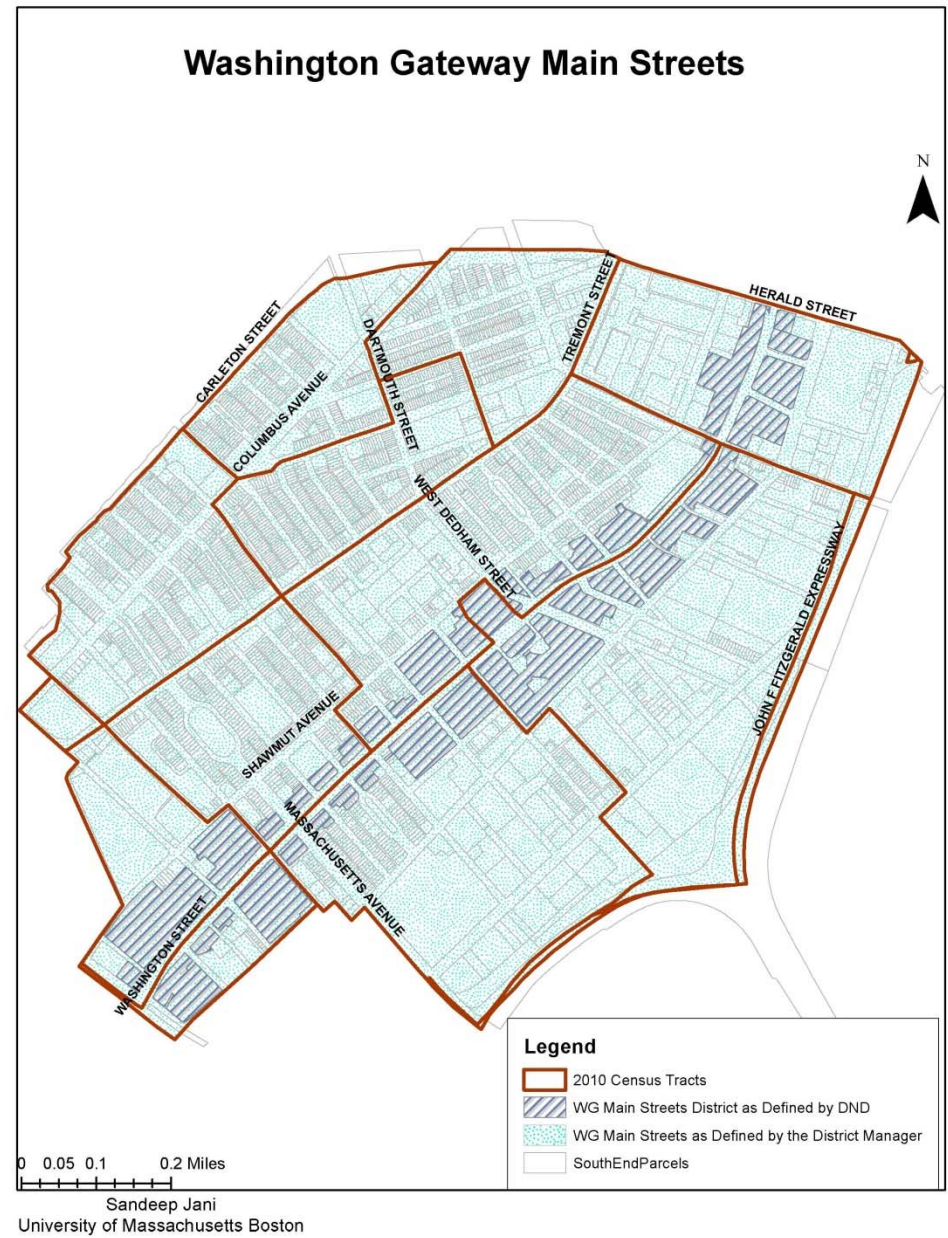


Survey findings, continued

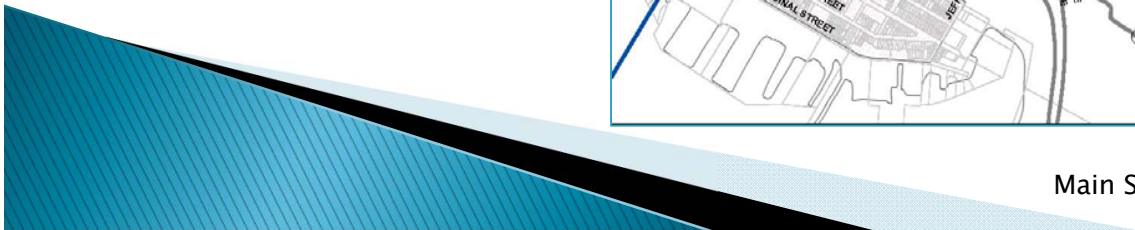
What are Main Street boundaries?

- Defined by Department of Neighborhood Development
- Defined by respondents
- DND approximation using Census units for demographic analysis

Sources: Bureau of the Census (2010), Boston Redevelopment Authority (2015)

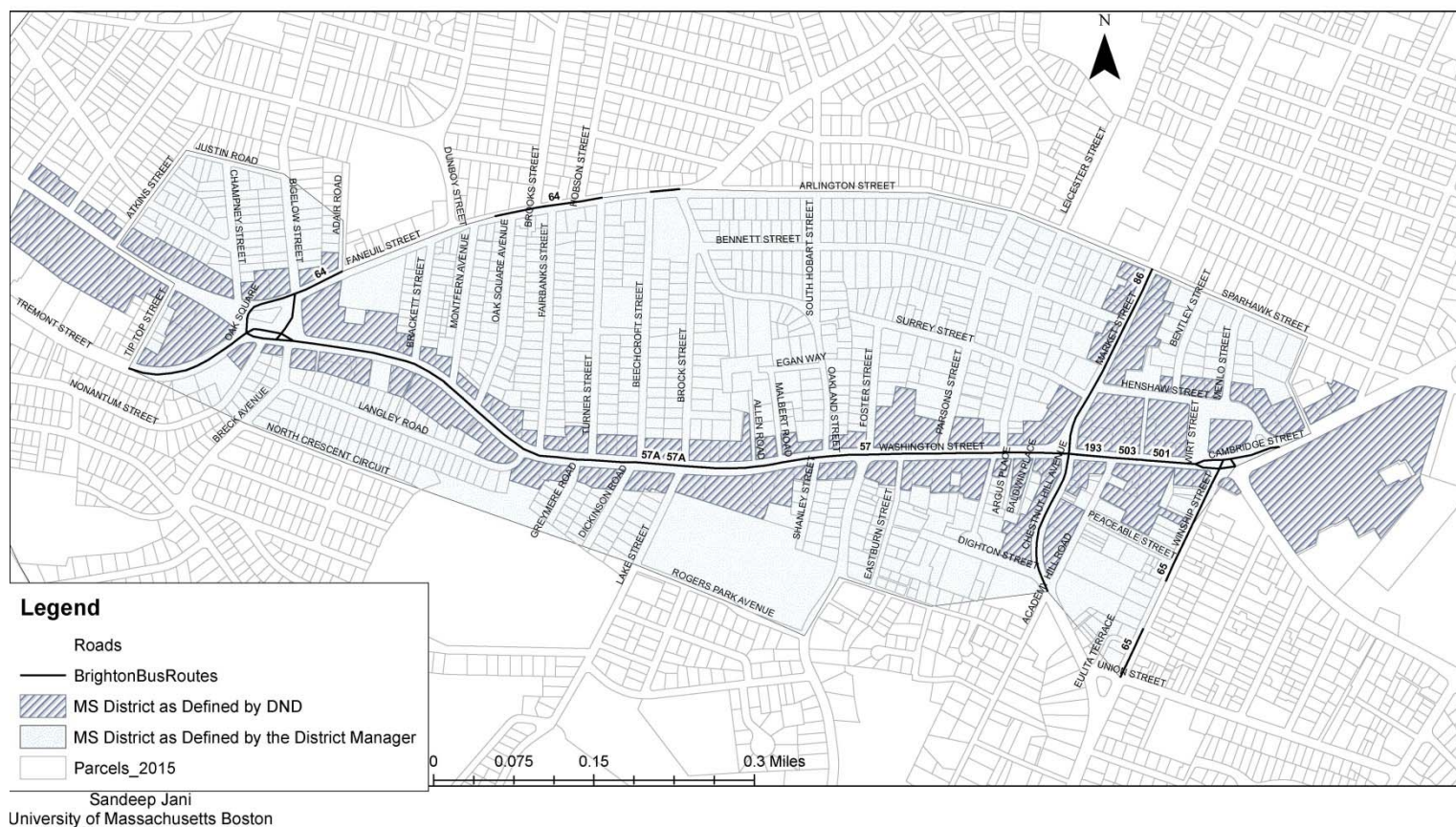


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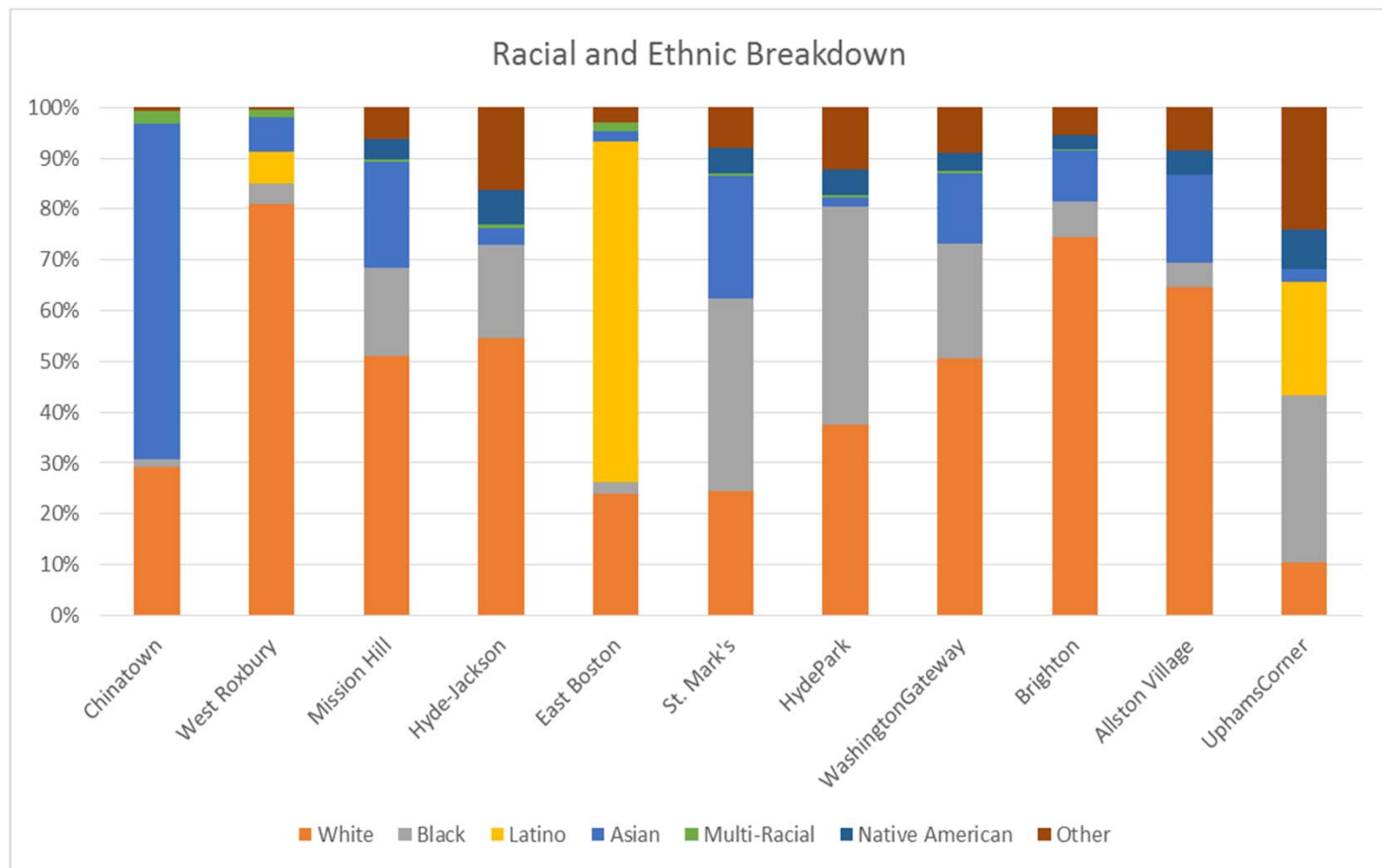


Service area boundaries: Brighton Main Streets

Brighton Main Streets



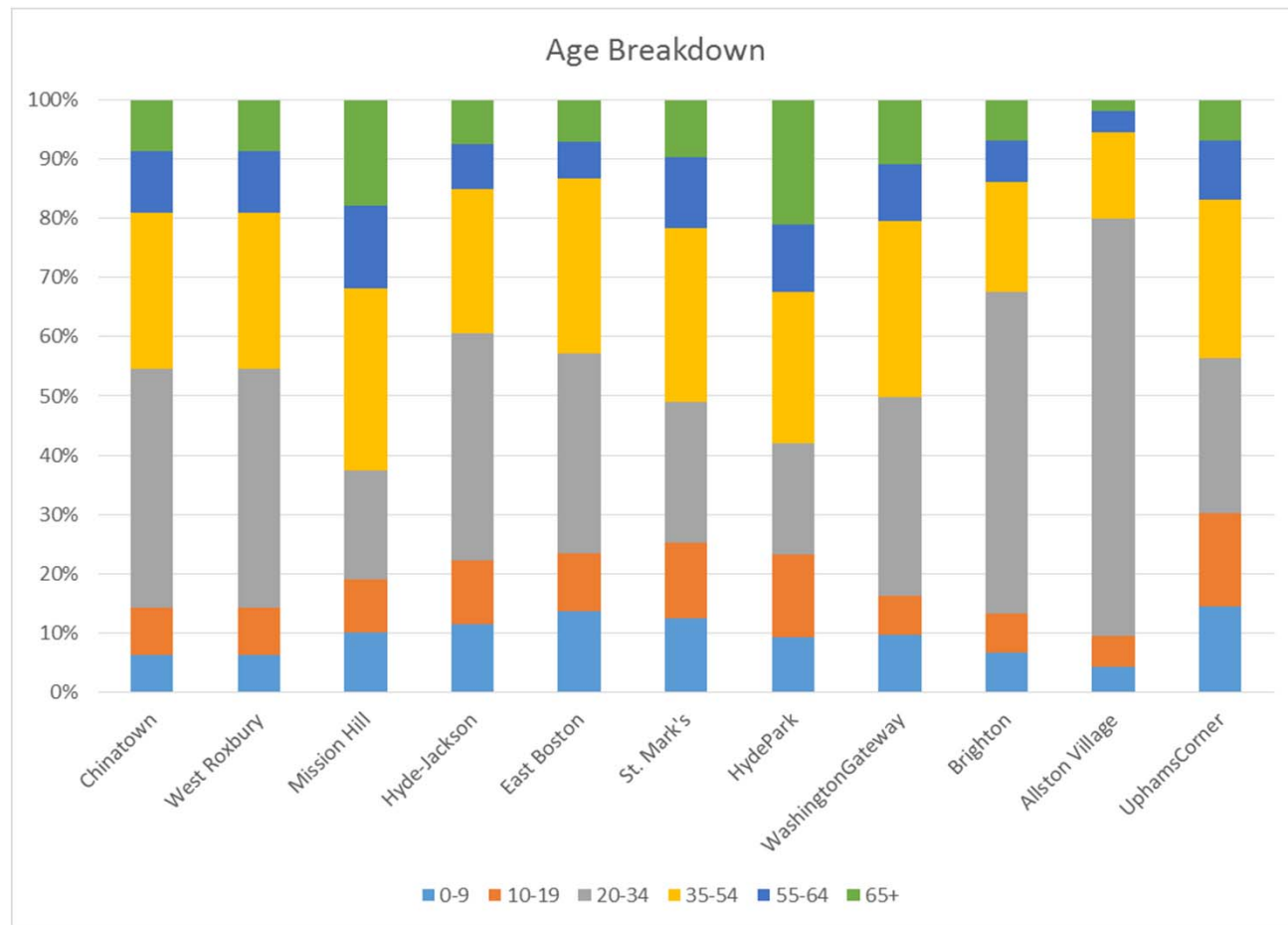
Boston Main Streets community characteristics



Sources: Bureau of the Census (2010), Boston
Redevelopment Authority (2015)

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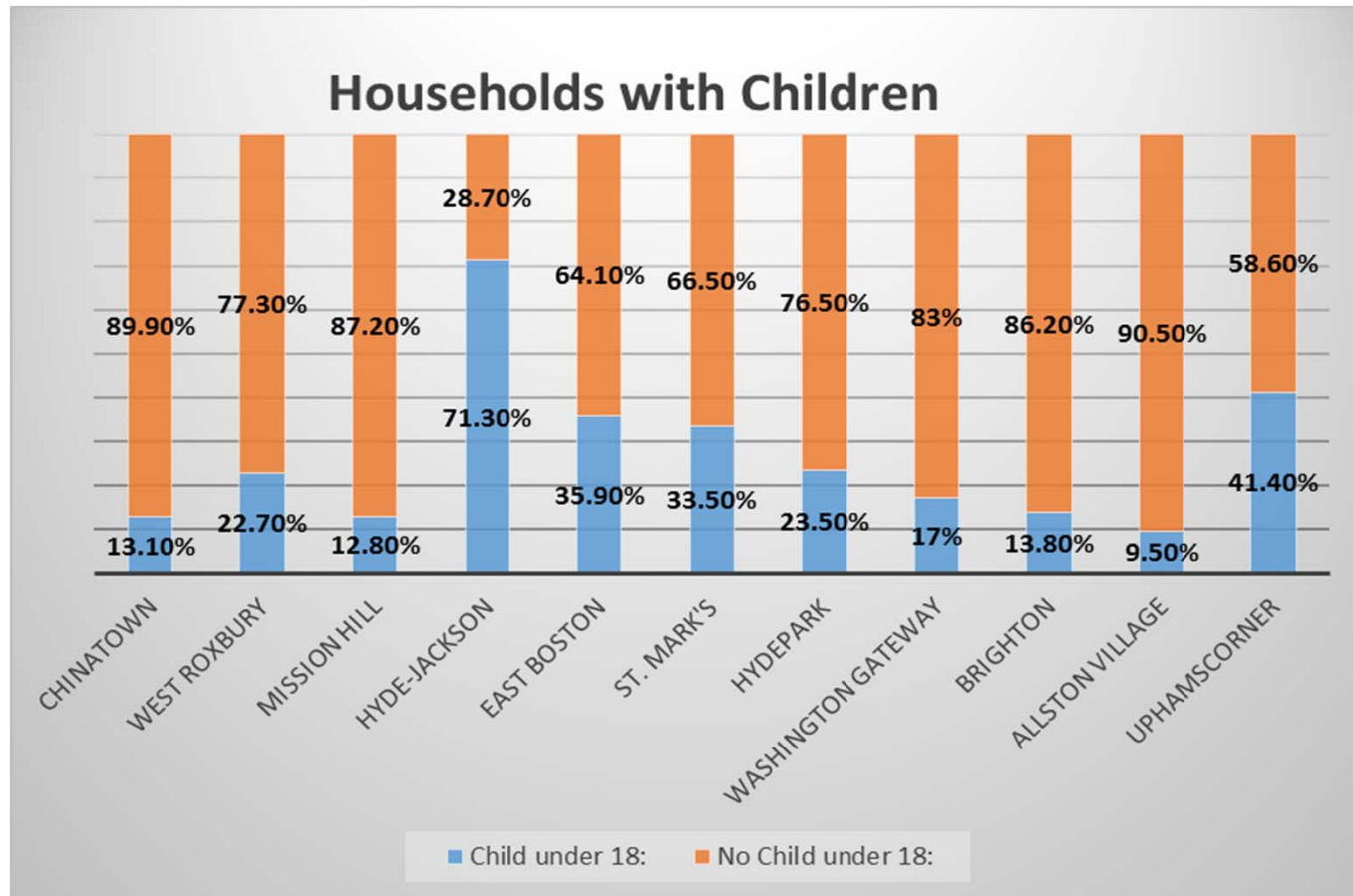
Boston Main Streets community characteristics, continued



Sources: Bureau of the Census (2010), Boston
Redevelopment Authority (2015)

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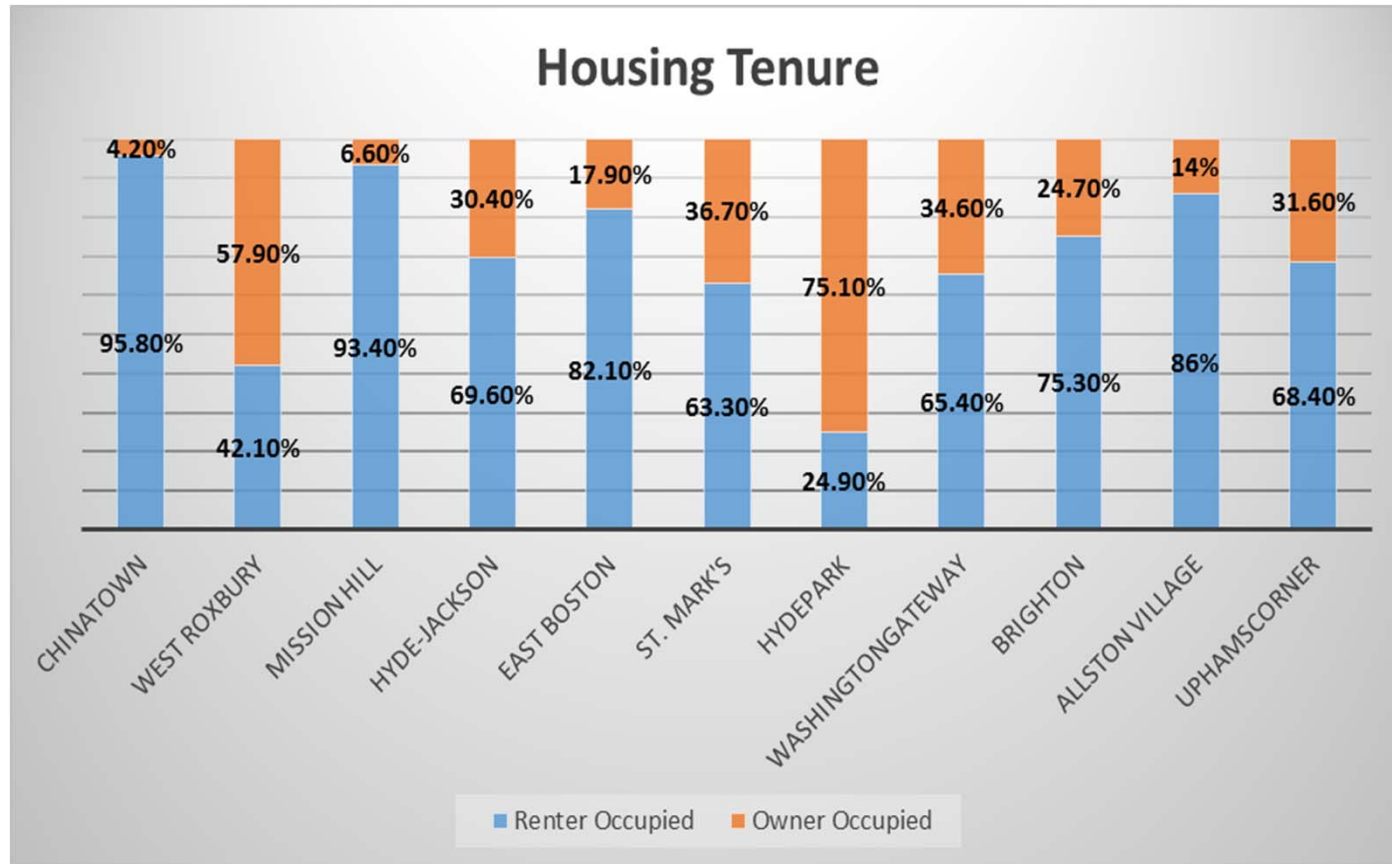
Boston Main Streets community characteristics, continued



Sources: Bureau of the Census (2010), Boston Redevelopment Authority (2015)

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Boston Main Streets community characteristics, continued



Sources: Bureau of the Census (2010), Boston Redevelopment Authority (2015)

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What have we learned?

- ▶ We've had to create data where none existed
- ▶ Enthusiasm across Main Streets organizations to identify community success metrics
- ▶ Main Streets directors have well-defined data needs and challenges
- ▶ Main Streets communities show great diversity across socio-demographic measures
- ▶ Direct engagement of community stakeholders essential for project success

We will focus on three communities for in-depth analysis: Upham's Corner (Dorchester), East Boston and Hyde Park

Next steps

- ▶ Field data collection in case study sites
- ▶ Approximation to community-level, cross-stakeholder values structures
- ▶ Analysis of values structures across case study sites
- ▶ Develop common values structures representing collective priorities of Boston Main Streets and communities served
- ▶ Policy recommendations
 - Performance metrics
 - Improved data collection procedures
 - Decision opportunities