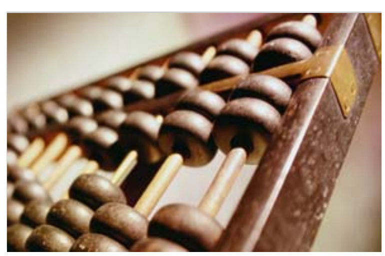
UMASS DONAHUE INSTITUTE •

Telephone Survey of Boston Small Businesses Regarding the Adoption of Green Business Practices

Rebecca Loveland, Raija Vaisanen and Matt Hoover

For the Lowell Center for Sustainable Production and the Boston Redevelopment Authority

August 2008



Produced by the Economic and Public Policy Research Unit, University of Massachusetts Donahue Institute.

Dr. Michael Goodman, Director
Katera Como, Administrative and Projects Coordinator
Anna Curtis, Research Assistant
Deb Furioni, Data Analyst
John Gaviglio, Data Manager
Mathew Hoover, Research Analyst
Lindsay Koshgarian, Research Analyst
Liming Liu, Demographer – Population Program
Rebecca Loveland, Research Manager
Roger Magnus, Research Analyst – Population Program
Kathleen Modzelewski, Research Analyst
William Proulx, Research Assistant
Susan Strate, Manager – Population Program
Raija Vaisanen, Research Assistant
Roy Williams, Senior Research Analyst
Jeremy Wolf, Research Assistant

Contents

Executive Summary

Project Overview

In the spring and summer of 2008, the UMass Donahue Institute partnered with the Lowell Center for Sustainable Production and the Boston Redevelopment Authority to conduct a survey designed to assess current conditions for Boston small businesses related to their adoption of green business practices. The survey, designed collaboratively, provided a broad look at business needs and current conservation strategies related to energy, clean technology, waste management and the purchasing of green products. The intent of the survey was to identify opportunities for intervention in the form of programs, policies or other types of incentives. Another underlying goal was to gauge current levels of interest in the various programs.

Telephone Survey

UMDI partnered with a professional market research firm to survey a random sample of 5,000 small businesses (fewer than 250 employees) located in the city of Boston. Given that small businesses represent the vast majority of firms located within the city of Boston, this population is a crucial one to understand when it comes to the promotion of green business practices within the city. In all, a total of 442 small businesses agreed to participate in the telephone survey. Respondent businesses, as a whole, tended to be very small: seventy-eight percent of the businesses have ten or fewer employees. A large proportion of the businesses - over forty percent of the total - are minority and / or female owned. The sample also included respectable proportions of businesses by neighborhood, industry sector and employment size.

Major Findings

Upon completion of the survey, UMDI conducted a statistical analysis of the survey findings, detailed results of which are contained within the report. The study team was pleased to note an existing, baseline level of interest in and adoption of sustainable business practices among the survey respondents. Survey results suggest that one likely reason for the interest in green business practices has to do with growing financial pressures on small businesses in the City related to energy and water resource costs. Other findings gave evidence of some underlying philosophical support for environmental practices. Whatever the reasons for the action, the survey does provide compelling evidence to suggest that small businesses in Boston are engaged, ready and receptive for further support.

Major findings related to specific topic areas are as follows:

Significant financial pressure related to cost of energy and water

A majority of small businesses (62 percent) report that the most significant challenge they face is the financial impact of rising energy costs. This rate ranks ten percent above the next most significant concern, rising health care costs. Thirty-four percent of businesses ranked water and sewer costs as a significant issue.

The majority of businesses already engage in green practices related to energy use

Small businesses in Boston report that they already engage in numerous environmentally preferable practices. The vast majority of businesses (90 percent) already encourage employees to turn off lights and equipment when they are not in use. Furthermore, the majority of businesses report that they use recycled or waste minimizing products for office supplies and packaging; purchase energy efficient lighting; and purchase energy efficient equipment.

The majority of businesses also engage in green practices related to recycling, but more could be done

The majority of small businesses recycle paper, cardboard, and plastics. Other materials, such as metal and glass, food and organic waste, shipping pallets and textiles are not recycled as frequently by Boston small businesses.

Businesses are more interested in financial incentives over education and training programs to promote green practices

When comparing program types, businesses appear to be more receptive to programs which offer discounts, grants or other financial incentives. Depending on the type of incentive, between 38 and 56 percent of businesses are interested in such programs. Fewer but still a fair number of businesses (between 30 and 36 percent of surveyed businesses) are interested in a range of green training programs.

Commercial property owners are more receptive to adopting green practices than renters

In virtually every category, in both education- and incentive-based programs, those who own their commercial property are more interested in engaging in green practices than those that rent. The biggest differences between owners and renters relate to interest in incentives to use green building materials as well as interest in discounts for green building products. In general, these differences may be due to the fact that property owners have control over infrastructure decisions related to their property, while renters are much less likely to have this capacity.

A good number of businesses are willing to be contacted and further engage with the City on these issues

Many surveyed businesses were interested in further engagement with the City. Close to a majority of surveyed businesses (48 percent) expressed an interest in being contacted by the City of Boston for more information on sustainable business practices. About one-third of surveyed businesses offered to take part in focus groups regarding the needs of Boston's small businesses.

Survey Analysis

Survey Respondents

- Total calls made = 8,420
- Random sample = 5,000
- Number of eligible respondents who refused = 1,525
- Number of eligible respondents, no answer = 962
- Disconnected number = 445
- Total responses = 442
    - Minority / woman owned businesses = 181 (41.0%)
    - Renters = 316 (71.7%); Owners = 125 (28.3%)
- Total response rate after callbacks = 17.8% (total responses/ eligible refusals + eligible no answer).

To assess the business needs in the city of Boston regarding energy use, clean technology, and waste management, the UMass Donahue Institute (UMDI) conducted a telephone survey of 400 randomly sampled small businesses (fewer than 250 employees) within the city of Boston. Firms were identified by the Dun and Bradstreet (D & B) database, which contains name and contact information for these businesses. Over 8,000 calls were made from a sampling frame of 5,000 small businesses to obtain our required sample size. The confidence interval for the survey is +/- 4.75.

Survey Respondent Characteristics

Industry representation

A wide range of industries are represented by the 442 respondents to the small business survey. Survey respondents were categorized by industry using their industry (SIC) codes. Over 10 percent of the respondents were classified as business services, which includes: advertising, consumer credit, mailing and reproduction, building services, equipment and rental, and computer programming and data processing services. Other top represented industry sectors include legal services (8.8 percent), engineering, accounting, research, management, and related services (8.8 percent), and real estate services (7.5 percent).

Industry Sector (SIC-2 digit code)	Number	Percentage
Business Services (73)	49	11.1%
Legal Services (81)	39	8.8%
Engineering, Accounting, Research, Management, and Related Services (87)	39	8.8%
Real Estate (65)	33	7.5%
Health Services (80)	24	5.4%
Miscellaneous Retail (59)	23	5.2%
Personal Services (72)	20	4.5%
Eating and Drinking Places (58)	18	4.1%
Social Services (83)	17	3.8%
Construction Special Trade Contractors (17)	13	2.9%
Automotive Repair Services and Parking (75)	13	2.9%
Wholesale Trade Durable Goods (50)	11	2.5%
Wholesale Trade Nondurable Goods (51)	10	2.3%
Food Stores (54)	10	2.3%
Transportation Services (47)	8	1.8%
Automotive Dealers and Gasoline Service Stations (55)	8	1.8%
Educational Services (82)	8	1.8%
Membership Organizations (86)	8	1.8%
Miscellaneous Services (89)	7	1.6%
Home Furniture, Furnishings, and Equipment Stores (57)	6	1.4%
Printing, Publishing, and Allied Industries (27)	5	1.1%
Apparel and Accessory Stores (56)	5	1.1%
Security and Commodity Brokers, Dealers, Exchanges, and Services (62)	5	1.1%
Holding and Other Investment Offices (67)	5	1.1%
Amusement and Recreation Services (79)	5	1.1%
Agricultural Services (07)	4	.9%
Motor Freight Transportation and Warehousing (42)	4	.9%
Building Materials, Hardware, Garden Supply, and Mobile Home Dealers (52)	4	.9%
Hotels, Rooming Houses, Camps, and Other Lodging Places (70)	4	.9%
Lumber and Wood Products, Except Furniture (24)	3	.7%
General Merchandise Stores (53)	3	.7%
Non-Depository Credit Institutions (61)	3	.7%
Insurance Agents, Brokers, and Service (64)	3	.7%
Miscellaneous Repair Services (76)	3	.7%
Heavy Construction Other Than Building Construction Contractors (16)	2	.5%
Chemicals and Allied Products (28)	2	.5%
Miscellaneous Manufacturing Industries (39)	2	.5%
Motion Pictures (78)	2	.5%
Food and Kindred Products (20)	1	.2%
Textile Mill Products (22)	1	.2%
Apparel and Other Finished Products Made From Fabrics and Similar Materials (23)	1	.2%
Rubber and Miscellaneous Plastics Products (31)	1	.2%

Primary Metal Industries (33)	1	.2%
Fabricated Metal Products, Except Machinery and Transportation Equipment (34)	1	.2%
Industrial and Commercial Machinery and Computer Equipment (35)	1	.2%
Local and Suburban Transit and Interurban Highway Passenger Transportation (41)	1	.2%
Water Transportation (44)	1	.2%
Communications (48)	1	.2%
Depository Institutions (60)	1	.2%
Insurance Carriers (63)	1	.2%
Museums Art Galleries, and Botanical and Zoological Gardens (84)	1	.2%
Non-classifiable Establishments (99)	1	.2%
Total Valid N	442	100%

Neighborhood representation

Respondents were also categorized by their location within the city of Boston. The table below summarizes the zip code / city neighborhood breakdown for each of the businesses represented in the survey. The vast majority of the businesses were located in Downtown Boston (16.5 percent overall). The Back Bay and Dorchester each represent 9.5 percent of the respondents, 9.1 percent in South Boston, 6.7 percent in Roxbury, 6.1 percent in Allston/ Brighton and in the North End, 5.2 percent in Jamaica Plain, 5.0 percent in the Longwood Medical Area, 4.5 percent in Boston's Chinatown and Charlestown, 4.3 percent in East Boston, 3.6 percent in Hyde Park, 3.4 percent in Roslindale, 2.3 percent in Mattapan and West Roxbury, and .7 percent in Copley Square and Readville.

Respondents by neighborhood and zip code

City Neighborhood	Zip Code	Number	Percentage
Allston/ Brighton	02135	17	3.8%
	02134	10	2.3%
Boston – Back Bay	02116	36	8.1%
	02115	6	1.4%
Boston - Chinatown	02111	20	4.5%
Boston – Copley	02199	3	0.7%
Boston – Downtown	02110	26	5.9%
	02108	23	5.2%
	02114	16	3.6%
	02113	6	1.4%
	02117	1	0.2%
	02196	1	0.2%
Boston – Longwood Medical Area	02215	22	5.0%

Boston – North End	02109	27	6.1%
Boston – South Boston	02210	22	5.0%
	02127	18	4.1%
Charlestown	02129	20	4.5%
Dorchester	02124	19	4.3%
	02125	9	2.0%
	02122	8	1.8%
	02121	6	1.4%
East Boston	02128	19	4.3%
Hyde Park	02136	16	3.6%
Jamaica Plain	02130	23	5.2%
Mattapan	02126	10	2.3%
Readville	02137	3	0.7%
Roslindale	02131	15	3.4%
Roxbury	02118	17	3.8%
	02119	9	2.0%
	02120	4	0.9%
West Roxbury	02132	10	2.3%

Company size

The majority of small businesses surveyed had 4 employees or fewer (56.8 percent) and a significant number of those respondents identified themselves as self-employed – e.g. one person companies - (20.1 percent). One in five businesses had between 5 and 10 employees and over 21 percent of the respondents had more than 10 employees in total.

	Number	Percentage
Self-Employed (1 person companies)	89	20.1%
Between 2 and 4 Employees	162	36.7%
Between 5 and 10 Employees	96	21.7%
More than 10 Employees	95	21.5%
Total Valid N	442	100%

Minority and / or female ownership

Slightly more than 40 percent of the businesses surveyed were minority and/or female-owned.

	Number	Percentage
Not Minority and/or Female-Owned	261	59.0%
Minority and/or Female Owned	181	41.0%
Total Valid N	442	100%

Ownership vs. rental of commercial facility

Almost three-quarters of the businesses surveyed rent rather than own their facilities.

	Number	Percentage
Rent	316	71.7%
Own	125	28.3%
Total Valid N	441	100%

Small Business Competitiveness

Each survey respondent was asked about a range of competitiveness issues that their small business may be facing and were requested to rank each issue on a scale of 1 to 5, with 1 being "not a problem" and 5 representing a "serious problem". These rankings were then recoded into three categories: not a significant issue (all of the 1 responses), ambivalent (the 2s and 3s), and a significant issue (the 4s and 5s). The table below presents the issues ordered from highest to lowest, in terms of the "significant problem" category.

Rising energy costs are viewed by respondents as the most significant issue facing small business competitiveness. Over two-thirds of respondents (62 percent) view this as a significant issue and only 12 percent do not believe it to be a problem. Other issues viewed as affecting competitiveness include rising health care costs and commercial real estate costs; 52 percent and almost 41 percent respectively viewed these as significant issues.

Small Business Competitiveness Issues	Significant (%)	Ambivalent (%)	Not an Issue (%)
Rising energy costs (n = 440)	61.6%	26.8%	11.6%
Increasing health care costs (n = 440)	52.3%	23.4%	24.3%
Commercial real estate costs (n = 439)	40.8%	36.9%	22.3%
Water and sewer costs (n = 433)	33.5%	34.6%	31.9%
Availability of skilled workers (n = 442)	22.2%	34.2%	43.7%
Level of Crime in my Neighborhood (n = 442)	15.2%	39.1%	45.7%
The physical condition of my neighborhood (n = 442)	14.0%	37.3%	48.6%

Energy Usage and Efficiency

Energy use: all respondents

Next, respondents were asked to answer either true or false to a series of statements about their business' energy usage and efficiency. Small businesses in Boston report that they already engage in numerous environmentally preferable practices. Nearly 90 percent of respondents reported that they encourage employees to turn off lights and equipment when not in use. In addition, nearly 70 percent of respondents state that they use recycled or waste minimizing products for office supplies and over two-thirds indicated that they purchase energy efficient lighting and equipment and use recycled or waste minimizing products for shipping and packaging. However, only 18 percent of the respondents report that they would consider adding solar panels and just over a quarter of businesses report that their company has participated in an energy audit by their utility company.

Energy Usage: True/ False	True (%)	False (%)	NA
Our business encourages employees to turn off lights and equipment when not in use (n = 442)	89.6%	9.7%	.7%
Our business uses recycled or waste minimizing products for office supplies (n = 442)	69.5%	28.1%	2.5%
Our business purchases energy efficient lighting (n = 442)	64.9%	31.9%	3.2%
Our business uses recycled or waste minimizing products for shipping and packaging (n = 442)	63.6%	32.4%	4.1%
Our business purchases energy efficient equipment (for example, Energy Star products) (n = 442)	60.2%	36.9%	2.9%
Our business substitutes less toxic products and processes to replace more toxic counterparts (n = 441)	45.4%	48.5%	6.1%
Our business has installed water conserving faucets or toilets (n = 442)	44.6%	49.1%	6.3%
Our business provides incentives for employees to use public transit, bicycle, or telecommute (n = 442)	42.1%	56.3%	1.6%
Our utility company provided our business with an energy audit (n = 440)	25.7%	65.9%	8.4%
Our business would consider adding solar panels (n = 441)	18.1%	74.8%	7.0%

Energy use: owners versus renters

In every category, those who own their commercial property are more likely to have adopted green practices than those that rent.

Energy Usage: True/ False	Own True (%)	Own False (%)	Own NA (%)	Rent True (%)	Rent False (%)	Rent NA (%)
Our business encourages employees to turn off lights and equipment when not in use (n = 442)	91.2%	8.8%	0%	88.9%	10.1%	.9%
Our business uses recycled or waste minimizing products for office supplies (n = 442)	71.2%	27.2%	1.6%	69.0%	28.2%	2.8%
Our business purchases energy efficient lighting (n = 442)*	74.4%	24.0%	1.6%	61.1%	35.1%	3.8%
Our business uses recycled or waste minimizing products for shipping and packaging (n = 442)	68.8%	27.2%	4.0%	61.7%	34.2%	4.1%
Our business purchases energy efficient equipment (for example, Energy Star products) (n = 442)	64.8%	32.8%	2.4%	58.2%	38.6%	3.2%
Our business substitutes less toxic products and processes to replace more toxic counterparts (n = 441)	51.6%	44.4%	4.0%	43.0%	50.0%	7.0%
Our business has installed water conserving faucets or toilets (n = 442)	58.4%	40.0%	1.6%	39.2%	52.5%	8.2%
Our business provides incentives for employees to use public transit, bicycle, or telecommute (n = 442)	44.0%	56.0%	0%	41.5%	56.3%	2.2%
Our utility company provided our business with an energy audit (n = 440)	32.0%	63.2%	4.8%	23.2%	66.9%	9.9%
Our business would consider adding solar panels (n = 441)*	22.4%	75.2%	2.4%	16.2%	74.9%	8.9%

Small Business Recycling

In the next section, respondents were asked about their current recycling behaviors in regards to various products. In this section, there are several respondents for whom that particular form of recycling does not apply. The non-applicable (NA) responses remain as a valid category in the table below.

A majority of the respondents, over three-quarters, are regularly recycling paper products, cardboard, and plastic containers. For those businesses for whom it is applicable, significant percentages of small businesses are regularly recycling film (42.8%) and metal and glass (38.2%). There is notably less consistent recycling of food and/or organic waste, shipping pallets, and textiles.

Current recycling	Recycles (%)	Does Not Recycle (%)	NA (%)
Paper products (n = 442)	76.2%	9.3%	14.5%
Cardboard (n = 442)	70.8%	10.2%	19.0%
Plastic containers (n = 442)	59.7%	10.9%	29.4%
Film (such as bags or shrink wrap) (n = 442)	42.8%	17.4%	39.8%
Metal and glass (n = 442)	38.2%	17.4%	44.3%
Food and/or other organic waste (n = 442)	15.4%	27.6%	57.0%
Shipping pallets (n = 442)	12.9%	18.6%	68.6%
Textiles (n = 442)	9.7%	20.4%	69.9%

Interest in Education and Training and Financial Incentives

Interest in training and incentives: all respondents

Respondents were asked to rate their level of interest in various types of education and training programs and financial incentives on a scale of 1 to 5, with 1 being "not interested" and 5 being "very interested." These rankings were combined into three categories: "no interest" (the 1s), "non-committal/ ambivalent" (2s and 3s), and "interested" (the 4s and 5s).

In terms of education and training, survey respondents were most interested in energy efficiency training (35.6 percent) followed closely by training on how to properly dispose of or reuse items which are difficult to throw away (35.1 percent).

Over half of the respondents favored discounts to help their business purchase products that are better for the environment. Similarly, close to 48 percent of the respondents were interested in discounts on energy efficient equipment, lighting, and insulation. Only 38 percent of the respondents were interested in incentives to use green building materials in remodeling or renovation.

Education and Training Programs	Interested (%)	Non-committal/ Ambivalent (%)	No Interest (%)
Education and training to help your business become more energy efficient (n = 438)	35.6%	24.4%	40.0%
Education and training on how to properly dispose or reuse items which are difficult or expensive to throw away (n = 436)	35.1%	27.1%	37.8%
Education and training on green building ideas and products (n = 433)	33.9%	22.2%	43.9%
Education and training to help set up or expand your business recycling and waste reduction program (n = 437)	29.5%	22.7%	47.8%
Financial Incentives / Discounts	**Interested (%)**	**Non-committal/ Ambivalent (%)**	**No Interest (%)**
Discounts to help your business purchase products that are better for the environment (n = 437)	56.1%	20.1%	23.8%
Discounts on energy efficient equipment, lighting and insulation (n = n = 438)	47.9%	19.9%	32.2%
Discounts to help your business take advantage of green building products (n = 429)	47.3%	19.8%	32.9%
Grants or loans to implement energy efficiency and use renewable energy (n = 422)	39.3%	19.4%	41.2%
Incentives to use green building materials in your remodeling or renovation, such as faster permitting or lower fees (n = 419)	37.9%	21.5%	40.6%

Interest in training and incentives: owners versus renters

When the data on interest in education and training programs and financial incentives was analyzed with regard to whether or not the business owned or rented their facilities, in general, owners were more likely to be interested in education and training or financial incentives as compared to their renting counterparts.

The biggest difference between owners and renters was related to their interest in incentives to use green building materials. Over 46 percent of businesses that own their own facilities were interested in this incentive, while this appealed to only a little more than a third of the renters.

Another significant difference between owners and renters was related to discounts to help businesses take advantage of green building products. Over half of the owners were interested in this incentive, while only 45 percent of the renters were interested.

	Own			Rent		
Education and Training Programs	**Interested (%)**	**Non-committal/ Ambivalent (%)**	**No Interest (%)**	**Interested (%)**	**Non-committal/ Ambivalent (%)**	**No Interest (%)**
Education and training on green building ideas and products	37.9%	25.0%	37.1%	32.1%	21.1%	46.8%
Education and training to help your business become more energy efficient	37.1%	24.2%	38.7%	34.8%	24.6%	40.6%
Education and training on how to properly dispose of or reuse items which are difficult or expensive to throw away	35.2%	24.8%	40.0%	34.8%	28.1%	37.1%
Education and training to help set up or expand your business recycling and waste reduction program	29.0%	21.0%	50.0%	29.5%	23.4%	47.1%
	Own			**Rent**		
Financial Incentives/ Discounts	**Interested (%)**	**Non-Commital/ Ambivalent (%)**	**No Interest (%)**	**Interested (%)**	**Non-committal/ Ambivalent (%)**	**No Interest (%)**
Discounts to help your business purchase products that are better for the environment	58.4%	18.4%	23.2%	55.0%	20.9%	24.1%
Discounts to help your business take advantage of green building products	52.4%	21.0%	26.6%	45.1%	19.4%	35.5%
Discounts on energy efficient equipment, lighting and insulation	49.6%	19.2%	31.2%	47.1%	20.2%	32.7%
Incentives to use green building materials in your remodeling or renovation, such as faster permitting or lower fees	46.3%	25.2%	28.5%	34.2%	20.0%	45.8%
Grants or loans to implement energy efficiency and use renewable energy	41.5%	22.0%	36.6%	38.3%	18.5%	43.3%

Willingness to Participate in Further Study

The tables below suggest many respondents were willing to take part in focus groups regarding the needs of Boston's small businesses (30.4 percent) and even more were willing to be contacted by the City of Boston for more information on sustainable business practices (47.7 percent).

Willing to be contacted by the City of Boston for further information on sustainable business practices

	Percentage
Yes	47.7%
No	52.3%
Total Valid N = 442	

Willing to be contacted to take part in a focus group to learn more about the needs of Boston small businesses

	Percentage
Yes	30.4%
No	69.6%
Total Valid N = 441	

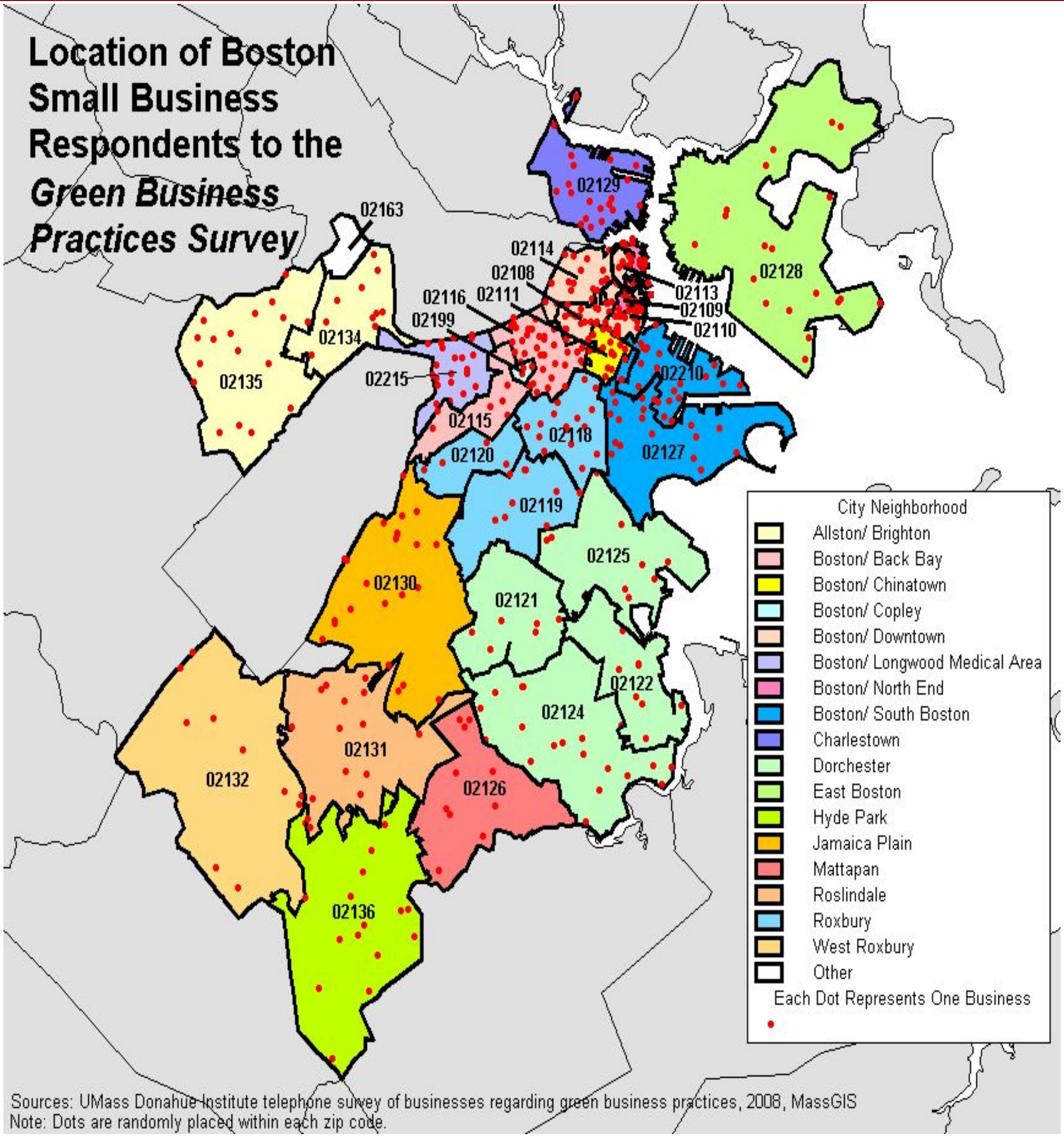
Appendix I. Respondents by Geographic Location

Respondents by Neighborhood and Zip Code

City Neighborhood	Zip Code	Number	Percentage
Allston/ Brighton			
	02135	17	3.8%
	02134	10	2.3%
Total: Allston/ Brighton			**6.1%**
Boston – Back Bay			
	02116	36	8.1%
	02115	6	1.4%
Total: Boston – Back Bay			**9.5%**
Boston - Chinatown			
	02111	20	4.5%
Total: Boston - Chinatown			**4.5%**
Boston – Copley			
	02199	3	.7%
Total: Boston – Copley			**.7%**
Boston – Downtown			
	02110	26	5.9%
	02108	23	5.2%
	02114	16	3.6%
	02113	6	1.4%
	02117	1	.2%
	02196	1	.2%
Total: Boston – Downtown			**16.5%**
Boston – Longwood Medical Area			
	02215	22	5.0%
Total: Boston – Longwood Medical Area			**5.0%**
Boston – North End			
	02109	27	6.1%
Total: Boston – North End			**6.1%**
Boston – South Boston			
	02210	22	5.0%
	02127	18	4.1%
Total: Boston – South Boston			**9.1%**
Charlestown			
	02129	20	4.5%
Total: Charlestown			**4.5%**

Dorchester			
	02124	19	4.3%
	02125	9	2.0%
	02122	8	1.8%
	02121	6	1.4%
Total: Dorchester			**9.5%**
East Boston			
	02128	19	4.3%
Total: East Boston			**4.3%**
Hyde Park			
	02136	16	3.6%
Total: Hyde Park			**3.6%**
Jamaica Plain			
	02130	23	5.2%
Total: Jamaica Plain			**5.2%**
Mattapan			
	02126	10	2.3%
Total: Mattapan			**2.3%**
Readville			
	02137	3	.7%
Total: Readville			**.7%**
Roslindale			
	02131	15	3.4%
Total: Roslindale			**3.4%**
Roxbury			
	02118	17	3.8%
	02119	9	2.0%
	02120	4	.9%
Total: Roxbury			**6.7%**
West Roxbury			
	02132	10	2.3%
Total: West Roxbury			**2.3%**

Appendix II. Zip Code Map



Appendix III. Final Survey Questions

Telephone Survey of Boston Small Business Owners Regarding Energy Use, Waste Production, and the Adoption of "Green" Business Practices

May I please speak with (insert contact name here). Note: If unavailable ask to speak with the person in charge.

Hello, my name is ___________ and I am working with the University of Massachusetts on a survey of small businesses in the City of Boston. This survey is part of an initiative designed to improve programs to meet small business needs related to energy conservation and adoption of clean technologies and greener business practices. Your responses will be used anonymously as background information to inform the City's efforts.

Your participation is completely voluntary and completing this survey will take no more than 10 minutes of your time. Your name and business will be kept private unless you indicate otherwise at the end of the survey.

Would you like to continue?

I would like to begin by asking you a few basic questions about your business.

1. Is your business located in Boston? YES NO

   (If YES continue. If NO, politely terminate the survey.)

2. How many full-time equivalent employees do you have at this location, including yourself? ______

3. Is your business minority- or female-owned? YES NO

4. Do you rent or own your business facility? RENT OWN

5. Now I am going to read a list of competitiveness issues facing small businesses in Boston. **Thinking about your business**, I'd like you to tell me how much of a problem each issue is on a scale of 1 to 5, with 1 meaning not a problem and 5 meaning a serious problem.

   (Note to interviewer: please rotate response categories)

   a. Increasing health care costs
   b. Availability of skilled workers
   c. The level of crime in my neighborhood
   d. The physical condition of my neighborhood
   e. Commercial real estate costs
   f. Rising energy costs
   g. Water and sewer costs

6. Now, I am going to read a series of statements and ask you whether each statement is a true or false statement about your business.

   Note to interviewer: Please rotate statements and track the numbers of respondents who respond "I don't know" or "not applicable (N/A)". Please do not offer "I don't know" or "N/A" as an option.

a. Our business would consider adding solar panels.
b. Our utility company provided our business with an energy audit.
c. Our business purchases energy efficient equipment (for example, Energy Star products).
d. Our business purchases energy efficient lighting.
e. Our business encourages employees to turn off lights and equipment when not in use.
f. Our business provides incentives for employees to use public transit, bicycle or telecommute.
i. Our business has installed water conserving faucets or toilets.
k. Our business uses recycled or waste-minimizing products for shipping and packaging.
l. Our business uses recycled or waste-minimizing products for office supplies.
m. Our business substitutes less-toxic products and processes to replace more toxic counterparts.

7. Now, I am going to read you a list of items that some businesses throw away and others recycle. After I read the name of each item, please tell me whether your business recycles this item on a ***regular basis***. If your business does not generate an item as waste, please tell me that it is not applicable for your business.

   Note to interviewer: Please rotate statements and track the numbers of respondents who respond "I don't know". Please don't offer "I don't know" as an option. Responses should be categorized as either recycles, does not recycle, or not applicable for our business (N/A).

   a. Food and / or other organic waste:
   b. Plastic film (such as bags or shrink wrap):
   c. Plastic containers:
   d. Paper:
   e. Cardboard:
   f. Metal and glass:
   g. Textiles:
   h. Wood / shipping pallets:

8. Do you regularly dispose of materials that you think another business might use? If so, what? (For example: packing materials, old building materials, end of season surplus stock.)

   Note to interviewer: Please track the numbers of respondents who respond "I don't know". Please don't offer "I don't know" as an option. Responses should be open ended.

9. Finally, I am going to read a series of education and financial programs that the City of Boston is considering in an effort to help your business succeed and preserve our natural environment. **Thinking about your business**, I'd like you to tell me, on a scale of 1 to 5, how interested your business would be in these programs and practices, with 1 meaning not at all interested, and 5 meaning very interested.

   Note to interviewer: Please rotate statements and track the numbers of respondents who respond "I don't know" or "not applicable (N/A)". Please do not offer "I don't know" or "N/A" as an option.

   a. Education and training to help set up or expand your business' recycling and waste reduction program.
   b. Education and training to help your business become more energy efficient.
   c. Education and training on green building ideas and products.

d. Education and training on how to properly dispose of or reuse items which are difficult or expensive to throw away.
e. Discounts on energy efficient equipment, lighting, and insulation.
f. Discounts to help your business purchase products that are better for the environment.
g. Discounts to help your business take advantage of green building products.
h. Incentives to use green building materials in your remodeling or renovation, such as faster permitting or lower fees.
i. Grants or loans to implement energy efficiency and use renewable energy.

10. Would you be willing to be contacted by the City of Boston so that they can learn more about how the City can help your small businesses operate in a more sustainable way?

YES NO

11. Would you be interested in participating in a focus group designed to learn more from you about the needs of Boston's small businesses?

YES NO

Thank you very much for your time and for participating in this survey.