Creating a Tool to Consistently Measure Worcester Resident Perception

The Worcester Community Project Center
Worcester, Massachusetts

Authors:
Khalid Alsobhi

Farraj Aldossary

Tyler Rauch

Timothy Tetreault

Faculty Advisor:
Corey Dehner

Sponsor:
Worcester Regional Research Bureau

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Table of Contents:

Acknowledgments:

Abstract:

Every resident in Worcester deserves to have their voices and opinions heard. For this project we worked with the Worcester Regional Research Bureau (Research Bureau) to develop a tool for residents to provide feedback to the Research Bureau on their satisfaction with various aspects in Worcester. We created an online survey with questions about happiness, satisfaction, and feeling of safety in Worcester. We also created questions relating to city streets and sidewalk infrastructure, public schools, public transportation, and more. This survey can be accessed by all Worcester residents. The team crafted survey questions that would allow residents to be able to give ample input on aspects of Worcester that affect them in their everyday lives. The survey will provide the Research Bureau with trends in resident perception that can in turn help influence city policy.

Executive Summary:

Worcester, Massachusetts is a city with a long and complex history. Worcester, which used to be a popular mill and railroad city from the time of the Industrial Revolution to approximately the 1980's, is now a city that is attempting to redevelop its brand (Worcester History, 2017). The city has made strides in improving its downtown area and some neighborhoods, but it still lacks a definitive path forward. Worcester is run by a council-manager form of government. This council acts as the legislative body for the city (City of Worcester, 2017). Part of the city council's operation is to seek input from local residents and allow resident opinion to influence their decision making.

Like many cities, Worcester struggles with a lack of resident civic engagement. The Worcester Regional Research Bureau (Research Bureau), a three decade old not-for-profit organization that conducts research to influence policy making, has become aware of this issue. Consequently, both the Research Bureau and the city government are seeking input from a broader array of residents (McGourthy, 2017). Our goal in working with the Research Bureau was to create a tool that can be used to survey residents of all ethnic and cultural backgrounds over an extended period of time. We believe that with this survey, the Research Bureau and the city can identify trends in Worcester residents' opinions and behaviors on a periodical basis.

Residents providing feedback to the city government is a form of being civically engaged. Civic engagement is defined as "individual and collective actions designed to identify and address issues of public concern" (Delli Carpini, 2006). Civic engagement is important because it allows for city residents to have their opinion properly heard, helping catalyze change and facilitate creation of new ideas. In *Civic Engagement in American Democracy*, political science professors Theda Skocpol and Morris Fiorina argue that the lack of civic engagement by

large sections of the population enables "small cadres [to] push extreme or narrow causes, framing an overall public debate only tangentially relevant to the values and concerns of most citizens" (Fiorina, Skocpol, 1999. p. 2). When this occurs, the same views and opinions are repeatedly used in the political process, and there is never anyone with a rival viewpoint to oppose these groups.

There are many cities across the nation that employ community surveys as a means of collecting resident perception. Cities such as San Francisco, California; San Diego, California; and Bangor, Maine, have successfully built stronger communication channels between citizens and governments using surveys as a method of measuring opinion. Table 2 below illustrates the comparisons of the three cities:

City	Administered By:	Primary Survey Distribution Method:	Number of Respondents	Key Findings:
San Francisco	San Francisco Office of the Controller	Telephone	2,179	29% of residents reported they planned on moving out in the following three years
San Diego	ETC Institute	Postal Mail, Online, and Telephone	2,478	50% of respondents preferred to report information through the city website
Bangor	Graduate Student: Jaymi Thibault	Online and Focus Groups	532	44% preferred social media as a communication channel

Table 4: Comparison of City Surveys

All three of the studies resulted in the researcher(s) uncovering and qualifying some significant findings that could assist the city governments in creating and adjusting policies. However, each city had a different entity administer the community survey. Another distinction among the studies was the primary survey distribution method or methods that were used.

Methodology

The team created six objectives in order to properly create an online survey tool for the Worcester Regional Research Bureau. We first assessed Worcester's current methods for measuring resident perception, and we looked at seven other cities across the nation that have or currently measures their residents' perceptions. We then evaluated the findings from our first two objectives to determine what survey methods were feasible in Worcester. To be able to integrate residents' preferences into both the survey distribution methods and the question content, we conducted focus groups and interviews with residents in Worcester. Then, we determined which surveying program was the most appropriate to use and developed our community survey. Finally, we provided recommendations for future utilization of the survey to our sponsors as well as additional thoughts on the status of government-resident communication in Worcester.

Findings

Worcester's Current Approach to Gathering Resident Input

We discovered that Worcester has only had three community wide surveys since the 1990's, in 1994, 2001, and 2017. All three surveys were used to complement the strategic plan that the city was working on at the time. We needed to determine that there is not a current annual community survey in Worcester so that if the team were to create an annual survey for Worcester residents it would not overlap with any of the city's current efforts. We also found that the Worcester city government attempts to gather input from residents using a form of online polling called crowdsourcing. Specifically, the city government uses both Twitter and Facebook in order to pose questions to residents. These questions can relate to a variety of topics, and usually only one question is asked at a time. The City of Worcester also provides an Online Customer Service Center located on its website. A phone number is on the site that directs

residents to the Worcester Customer Service Office, allowing residents to verbally relay their complaints (City of Worcester, 2017). There is also the opportunity for residents to provide input to the city through open city meetings. However, just like the crowdsourcing efforts and the city's website, open meetings are another way in **which the city's current methods for collecting resident input are unclear, unknown, or difficult to locate.**

Furthermore the team found that **certain residents in Worcester feel uncomfortable consistently reporting information to the government**. An obstacle for many government entities is creating an environment in which residents feel comfortable reporting information. In some discussions in our focus groups, we heard that some residents would rather have a non-government organization (NGO) gather input. They believed that if a NGO was responsible for this information, there would be less bias in the reports that detail the responses of residents' opinions on the city. (Focus Groups, 2017). For these reasons, we concluded that it would be beneficial for the Worcester Regional Research Bureau to administer the survey, so that residents have a safe area to comfortably report information.

Online Survey Tool

We then compared eight different online survey programs to determine the capabilities of automatic survey translation, the cost of service, the popularity, the ability to block multiple respondents, and the data analysis capabilities. After presenting these aspects of the survey providers to our sponsors, we mutually concluded to narrow down our list of providers to Survey Monkey, Google Form Surveys, and Qualtrics. We created trials of these surveys to demonstrate the aesthetics and functionality of each. After providing both a comparative chart and the demonstrations of the survey providers to the Research Bureau, our sponsors decided to use Survey Monkey as the online surveying tool. While it was one of the more expensive survey

plans, they still chose the Survey Monkey Standard Plan for its ability to send surveys using third-party integration tools and for its data analysis capabilities.

Due to the benefit that there is no additional cost to repetitively send out the Research Bureau's survey online, there will not be a restraint on the number of recipients for the survey. Therefore, the Research Bureau will network this survey by using the Constant Contacts emailing network application to as many Worcester residents as possible. The Research Bureau already has an email chain of over 2,000 Worcester residents that they could distribute the survey tool using this application, and more residents can sign up to receive the survey if they please.

The Research Bureau believes that distributing the survey over a period of time will allow them to identify trends in resident opinion. We were told in an interview with a city auditor, who runs a community survey from another city in the nation that it took them approximately three to five survey distribution cycles before they were able to accurately identify trends (Other City Official #2, personal communication, 2017). In their case, they distributed their survey annually. Therefore, it took three to five years before trends were found. We believe that if the Research Bureau's survey is sent out annually that it will also take them approximately three to five years before they are able to identify trends in resident perception.

For a survey to be used over time, the questions asked would have to be relevant for a longer period of time. We crafted questions that could consistently measure trends over time. We didn't want any questions that would only be relevant in 2017. **We also found that the most useful survey to gather Worcester resident opinion would contain both depth and breadth**. It is important to create detailed questions that lead to specific data while at the same time limiting the length of the survey. A method we learned in our research of other surveys and results from focus groups that could assist in limiting the length of the survey was creating

question blocks (ETC Institute; City of Kansas City, 2017). **Questions blocks can be useful for restricting the survey time and for organizing data by specific categories**. The team created six question blocks, two of which will always be used in the survey distribution and four of which will be constantly rotated in and out of the survey. The question blocks are illustrated in Table 6 that follows:

Block	Used	Content of Questions
1	Always	Demographics
2	Always	Broad questions about satisfaction with Worcester
3	Winter	Questions that can be used in the winter season - Streets and Sidewalk Conditions - Parking in Worcester - Snow Removal
4	Spring	Questions that can be used in the spring season - Crime in Worcester - Public Schools
5	Summer	Questions that can be used in the summer season - Parks and Recreation - Streets and Sidewalks Conditions - Public Transportation
6	Fall	Questions that can be used in the fall season - Public Schools - Public Health - Crime in Worcester

Table 6: Question Blocks for Survey

The group also had to assure that the survey would allow for respondents to complete it while remaining completely anonymous. Despite the demographic questions requiring some answers that may relate to the identity of a respondent, none of the answers that can be given in that block, or any other question block in the survey, will compromise a respondent's anonymity.

This is done in order to address concerns about resident safety and create a channel for residents to comfortably provide input to the Research Bureau about the city. Finally, the group integrated some of the major concerns that Worcester residents voiced in our focus groups and interviews into the question content on the survey.

Next Steps and Final Thoughts

During the course of our project, we also collected additional data and key points of interest from our research, interviews, and focus groups. These additional findings and recommendations can be used in the future to assist the Research Bureau in building and expanding the survey tool. **We found that using multiple methods of survey distribution could potentially increase response rates**. We heard from multiple residents that there is not a singular solution when it comes to government-resident communication (Citywide Parental Planning Advisory Committee, Focus Group, 2017). This means that while online communication is the most popular for many residents, there are some residents who prefer communication through postal mail or the phone. For this reasons, in the upcoming years, **we recommend that the Research Bureau incorporate additional means of distributing the survey**, whether it be postal mail or the phone. We also discovered that a popular method for communication between cities and their residents is social media. Mainly, government officials have been using Facebook and Twitter more often to provide and receive information. In our focus group with the Latino Education Institute, many Hispanic and Latino residents said that they use social media to receive information from the city (Latino Education Institute Focus Group, 2017). This same group was largely unaware of the main platforms that are available for receiving information from the city. However, a majority of the focus group participants had access to social media and therefore used platforms such as Facebook and Twitter to gather

information from the City of Worcester. Based off of this and other information we found **we recommend that The Research Bureau use social media to advertise the online survey tool and poll residents on other topics if the occasion ever arises**. Lastly, **the team found that there are many organizations and groups within Worcester that work towards the similar goals, however these groups do not communicate or collaborate in order to achieve these goals together**. If a greater communication network was created amongst Worcester organizations, there may be more cooperation between these organizations. A listserv of many involved organizations in Worcester could be beneficial in communication amongst these groups, so that joint efforts could be made in solving problems in the Worcester community.

The involvement by city residents is important in order for the City of Worcester to continuously become a thriving and safe community for all. The input that is given by residents is crucial for policy makers to synthesize the opinions and feelings of the community. Organizations like the Worcester Regional Research Bureau provide a comfortable and safe channel for residents to give input on a variety of topics relating to the City of Worcester. The use of the Research Bureau's online survey will produce an accurate representation of the perceptions of residents in Worcester for the city government to use in conjunction when creating and revising policies. We believe that this will assist Worcester in its efforts to become a more welcoming environment for residents as well as improve upon the many aspects that makes the city great.

List of Tables

List of Figures

Authorship

Introduction:

Many cities were founded on a singular industry. With the decline of the industrial boom in the 1970's, most of these cities tried to reinvent themselves due to the emergence of a new global market that was driven by modern technology (Brookings Institution, 2007). For the latter part of the 20th century, some cities have struggled to find a way to utilize a specialized workforce and revitalize a stagnant economy. With this paradigm shift came a change in the diversity of many cities' populations (Frey, 2011). Some groups of people had reasons to move out of the city, while others found cause to move in. While local municipalities have attempted to adapt to this population shift, many 21st century city governments struggle to connect with their diverse populations (Wiseman, 2015).

Worcester, Massachusetts is a city with a long and complex history. Worcester, which used to be a popular mill and railroad city from the time of the Industrial Revolution to approximately the 1980's, is now a city that is attempting to redevelop its brand (Worcester History, 2017). The city has made strides in improving its downtown area and some neighborhoods, but it still lacks a definitive path forward. Worcester is run by a council-manager form of government. The city council is comprised of six at-large elected councilors and five additional councilors, one from each of the five districts of Worcester. This equals a council of 11 members. The councilors running at-large can also choose to run for the position of mayor, which is a separate vote. However, the mayor does act as an at-large city councilor as well. This council acts as the legislative body for the city (City of Worcester, 2017). Part of the city council's operation is to seek input from local residents and allow resident opinion to influence their decision making.

The Worcester Regional Research Bureau (Research Bureau; WRRB), a non-profit organization that provides advice and recommendations to the local government through detailed reports and sponsored events, wants to assist the city in their efforts to increase resident participation (Worcester Regional Research Bureau, 2017). The influence of the Research Bureau allows the local government to be properly informed while making decisions that will impact the communities of Worcester. They have produced over 200 reports and held over 200 events to benefit the Greater Worcester area. By identifying the main issues that communities face, conducting research, and providing suggestions on how to tackle these problems, the Research Bureau has become a critical component of the workings of the city's government.

Like many cities, Worcester struggles with a lack of resident civic engagement. The Research Bureau has become aware of this issue. Consequently, both the Bureau and the city government are seeking input from a broader array of residents (McGourthy, 2017). Our goal in working with the Research Bureau was to create a tool that can be used to survey residents of all ethnic and cultural backgrounds over an extended period of time so that the Bureau and the city can identify trends in Worcester residents' opinions and behaviors on a periodical basis.

This introductory chapter is the first of five chapters in this report. In the next chapter, the background and literature review, the team will discuss the importance of this social science research project as well as other works by experts in the field of civic engagement. In the third chapter, the methodology chapter, the team describes the methods used to accomplish the six objectives created in order to achieve our goal. In the fourth chapter, we provide our results relating to the survey tool. Finally, in the fifth chapter, we explain the next steps the Research Bureau can possibly take, as well as our final recommendations and conclusion.

Background:

In this chapter, we explain why civic engagement is important and why residents in Worcester should have a tool that allows their voices to be heard on a consistent basis. In Section 1, we discuss some of the more common problems that plague 21st century American cities. One of these difficulties is the lack of resident engagement.. In Section 2, the team explores some American cities that have been successful in creating new strategies to increase public activity in their communities and accurately gauge public opinion on a variety of topics. We also analyze the processes that these cities use to measure resident perception in their communities. Finally, in Section 3, we look at Worcester, Massachusetts and the status of its economy and society. We also discuss The Worcester Regional Research Bureau further, and how they are actively searching to find new ways to improve all aspects of the city. An important topic to research for this organization is how the residents in Worcester, a city with a diverse and rapidly changing population, can have a more active voice with the local government.

Section 1: Current Issues with Modern American Cities

Cities are large and complex structures that require constant maintenance in order to thrive. There are a lot of different aspects that make up a city's identity, including the cities' economic development, social geography, physical infrastructure, level of safety, social attraction, and the success of its education system. If one aspect of a city is failing, it can be catastrophic to the overall success of that city. Since most cities share these same structural components, they often face similar issues. In this chapter we focus particularly on issues in cities relating to the economy, education systems, public transportation, and civic engagement. These are aspects that have been prioritized by the Worcester Regional Research Bureau, the sponsor of this research (McGourthy; Quinn, 2017).

1.1: Economy

One prominent struggle of the American city is its economy, which includes the funding of the city government, the wealth of the city's residents, and the success of the city's businesses. A specific issue to the economy in a city is its unemployment rate, which is often much higher when compared to other areas outside of cities. According to the Bureau of Labor Statistics, the unemployment rate in metropolitan areas in the United States as of July 2017 is an estimated 4.6%, which is 0.3% higher than the national average of 4.3% (Bureau of Labor Statistics, 2017). Three hundred and eighty-eight cities were used in this study, ranging in populations from as much as 8.5 million people in New York City, to as little as nearly 6,000 in Dubuque, Iowa (U.S. Census Bureau, 2016). This higher unemployment rate can often be attributed to lack of opportunity. In an area that has a low demand for unskilled labor, but a high supply of unskilled laborers, there simply aren't enough jobs to go around. These high unemployment rates can then have a direct impact on the percentage of people in poverty in a concentrated area (Defina, 2004). Between 2000 and 2014, the concentrated poverty rate in 100 large metropolitan areas rose from 11.0% to 15.4% while the concentrated poverty rate in small metropolitan areas rose from 7.4% to 13.7%. (Brooking Institution, 2016). While the rate in small metropolitan areas rose more, the concentrated poverty rate in large metropolitan areas is almost 2% higher. Figure 1 illustrates the difference between concentrated poverty rates in metropolitan areas (both the 100 largest metropolitan areas in the nation and other small metropolitan areas) and nonmetropolitan areas. Metropolitan areas are defined by the Census Bureau as "a core area containing a large population nucleus, together with adjacent communities that have a high degree of economic and social integration with that core" (U.S. Census Bureau, 2017). This definition applies to most city centers and the surrounding communities that make up a city.

Nonmetropolitan areas can therefore be defined as any area outside of a metropolis. This usually includes towns, woodlands, farms, prairies, and other similar geographic areas. It can be seen in Figure 1 that poverty is more prominent in metropolitan areas (Brooking Institution, 2016).

Years	2000	2005-2009	2010-2014
100 Large Metro Areas	11.0%	11.7%	15.1%
Small Metro Areas	7.4%	10.7%	13.7%
Non Metro Areas	4.5%	6.3%	7.1%

Table 1: Change in Poverty Rates by Geography Type
(Brookings Institute. 2016)

For some cities, the reason for a high unemployment and poverty rate may be the prior focus on a single industry. Specifically, old manufacturing cities suffered when manufacturing jobs shifted out of cities in the 1980's. These older industrial cities faced an average decline of 43% of all manufacturing jobs between 1980 and 2000. (Brookings Institution, 2007).

Cities and their respective residents are not solely responsible for harsh economic conditions. For instance, in a study between the years of 2007 and 2009, high unemployment rates were empirically shown to lead to consumers not having enough money to properly support their household. (Mian, Sufi, 2012). This in turn leads to household balance sheet weakness, causing the real estate market to suffer. A city can't receive all the blame when one economic issue, such as unemployment rates, creates a spiral effect of economic problems for their residents. Yet, despite this, there are still some actions that cities and their residents can take to better their economic status. Cities are tasked with finding ways of establishing and keeping businesses in their area. Worcester, Massachusetts currently has a tax increment financing program that provides tax incentives to businesses that "start up, expand, or relocate" to Worcester (City of Worcester, 2017). Residents play a crucial role in the economic status of a

city as well. Residents searching for new or different jobs in a city must evaluate and potentially improve their employability based on opportunities that are available in their city. Also, they must be consistent and reliable consumers of local market goods. Finally, and most relevant to our research, residents must properly inform their government about their concerns, and help in creation of new policies, that relate to the economy (Woetzel, 2013). This can be accomplished in a few different ways. They can actively go out and have their opinions heard at open city meetings or their city's chamber of commerce. They can also go out and vote for city councilors and officials whom they believe will most accurately support and push their economic stances. If these means of communication are not properly utilized though, residents need a more effective method to provide their sentiments to the local government.

1.2: Education

An aspect of cities that can often go underfunded is the success of their educational system. In order for students to get the most out of their education, their school board needs to be capable of properly providing for them. This starts with a school board that is cognizant of the backgrounds and needs of these students, both educationally and personally. Often times, a school board does not accurately represent the district that they serve. A 2002 study by the National School Board Association found that 4 out of 5 school boards consisted of 90% Caucasian members. Furthermore, the same study found that in urban school districts, which tend to have a much larger nonwhite population, school boards tend to consist of 80% Caucasian members (DeFina, 2004). Unequal representation like this can lead to a board that is not sensitive to issues within certain communities, ultimately causing these school systems to fail at properly teaching and helping students.

In 2009, the state of Minnesota was suffering from severe under representation on their school board. While nearly one third of their public-school enrollment consisted of children of color, only 3% of the school board members across the state were nonwhite (Wastvedt, 2015). Such an incredible gap in representation led to issues with some school's programs for non-English speakers, as well as diversity amongst school staff. By having the voices of residents of color more properly heard in academic related policy making in cities, this issue may be remedied (Gonzalez, 2015).

1.3: Transportation

Transportation in American cities has become a major concern, as more people find it difficult to move safely around cities. Many urban residents may not have a car or may not be able to afford one. Access to affordable public transportation helps urban residents travel to work, school, or shopping areas. However, inefficient or unreliable public transportation can be problematic for residents who use it as their main mode of travel within a city (White, 2015). Inefficient public transportation can be the result of a shrinking user base or cuts in funding. According to Eric Jaffe, an expert in modern transportation, the prices for public transport have risen as the number of riders has shrunk, causing individual premiums to rise (Jaffe, 2014).

A cost-efficient alternative to the common public transportation methods of buses and subways are bicycles (Metro Transit, 2015). Bicycles are a simpler and more affordable mean of transportation. However, riders in cities have a habit of locking their bicycles at bicycle kiosks (Metro Transit, 2015). These kiosks tend to be located in more affluent neighborhoods, and are therefore not accessible to all.

These higher individual premiums have also given way to the rise of private taxi companies, such as Lyft or Uber, which will often travel to a further range of neighborhoods

(Taschler, 2014). However, individuals require a phone with application technology to access these companies, so members of a city who may not own a phone would not be able to use these modern means of transportation (Banister, Dudly, Schwanen, 2017). In order for more residents to have equal opportunities in travel, this issue must become a larger subject at city meetings and in city forums. Yet, attendance at these city forums by residents is typically small, making it difficult to constitute a change. (Hilleary, 2017).

1.4: Civic Engagement

Civic engagement can entail a lot of different activities, and therefore it is often a term that is considered vague by many people. The definition of civic engagement is "individual and collective actions designed to identify and address issues of public concern (Delli Carpini, 2006). An important addition to this definition is that all residents of a city be included in the political process, not just American citizens. This is crucial because even if a resident of a city is not an American citizen, they still make an impact in that city. Some important examples of civic engagement include voting in elections, participating in public forums, communicating with city officials, and working on a campaign team (Mackie, 2014).

Before we analyze resident participation in cities, it is important to first view the ways in which many cities interact with their residents. Cities typically provide basic public services for their residents. A Texas Municipal League report entitled "How Cities Work" lists many common public services, including topics such as economic development, proper waste disposal, infrastructure repair, water services, and public safety services (Texas Municipal League, 2017). These services, according to the Texas Municipal League, are services that "we cannot do without," and services that are "the will of the local taxpayers" (Texas Municipal League, 2017). They also state that cities are "the government closes to the people," (Texas Municipal League,

2017). This means that the access to these services are the easiest in cities compared to other areas such as towns and farmlands.

City governments must provide for their residents, but the people who reside in these areas must also contribute to the city. Residents must contribute to the economic development of the city as well as political conversations which result in the continued growth of the city (Markus, 2002). While this relationship between a city and its residents is designed to be mutually beneficial, often times it seems to only go one way, with residents using municipal services while simultaneously not contributing to the growth of the city. This lack of resident contribution, otherwise known as a lack of civic engagement, can be detrimental to a city (Markus, 2002).

Civic engagement is important because it allows for city residents to have their opinion properly heard, helping catalyze change and facilitate creation of new ideas. In their report, "Efficiency in Urban Governance to Enhances Competitiveness of City Region," Dr. Hamzah Jusoh and Dr. Azmizam Abdul Rashid, professors at the University of Malaysia, state that the contribution of all members of a city is important because an organized and efficient urban government includes all social groups and residents. These organized and efficient governments are increasingly becoming more competitive in the global market. They also demonstrate high levels of social participation and a lower crime rate than on average (Abdul Rashid, Jusoh, 2008). The governments that Jusoh and Abdul Rashid describe are those with active civic engagement by city residents.

The importance of civic engagement is a widespread debate among scholars, reporters, and citizens. Many argue that civic engagement is the factor which drives a democratic society (Dibra, 2017). Yet, others stand by as passive observers, while political decisions and actions are

being made for them. In *Civic Engagement in American Democracy*, political science professors Theda Skocpol and Morris Fiorina argue that the lack of civic engagement by large sections of the population enables "small cadres [to] push extreme or narrow causes, framing an overall public debate only tangentially relevant to the values and concerns of most citizens" (Fiorina, Skocpol, 1999. p. 2). When this occurs, the same views and opinions are repeatedly used in the political process, and there is never anyone with a rival viewpoint to oppose these groups. Likewise, low voter turnout can lead to the estimated half a million elected officials in the U.S. who do not accurately fight for the needs of all residents (Aldag, 2016). Both of these scenarios may lead to a halt of progress in most cities, as a direct result of a lack of civic engagement.

Section 2: Capturing Resident Perception

When the residents of a city are present and participating in their local government, that city tends to prosper. It is often easier for residents to participate in local government when there is an efficient communication channel between the government and its residents that allows the city to capture resident perception. Cities such as: San Francisco, California; San Diego, California; and Bangor, Maine, have worked toward building stronger communication channels between residents and governments.

2.1: San Francisco, California

The city of San Francisco developed a survey in 2015 for the purpose of measuring resident satisfaction in various aspects of the city. These aspects included street and sidewalk conditions, satisfaction with public parks, quality of public libraries, public safety, and more. The city survey questions were based on services that had a high usage by residents, which allowed for more residents to form opinions on them (San Francisco Office of the Controller, 2015).

This survey was based off a similar resident satisfaction survey from 2013 in San Francisco. However, the new survey featured some notable changes. The survey distribution method changed from a primarily postal mail survey to a survey primarily administered over the telephone (San Francisco Office of the Controller, 2015). This resulted in data that was more representative of the residents of San Francisco, since a wider array of people were able to be contacted. Another major change was that questions were consolidated and split into questions blocks. Certain question blocks were rotated out of being asked in the survey administration. This was key to the success of the updated survey, as the average response time dropped from 16 minutes in 2013 to 6-7 minutes in 2015. The changes in the survey methodology helped improve resident representation as well as response time (San Francisco Office of the Controller, 2015).

In the survey, residents were asked to rate various city services and city conditions using the letter grades A through F, with A being representative of an excellent rating and F representing a failing grade. The survey also included an "I don't know" option if the person being surveyed had no opinion on the subject. Background information such as ethnicity, employment type, residency, and district location were also collected. The survey was distributed over phone to 40,501 random numbers, using four different languages; English, Chinese, Spanish and Tagalog. Only 8,366 of those contacted were capable of completing the survey (they spoke one of the four languages, were 18 years old or older, and lived in San Francisco). The city received a 26% response rate, meaning that approximately 2,000 of those who were capable of responding actually completed the survey (San Francisco Office of the Controller, 2015).

San Francisco received some positive input on many aspects of the city, such as a B+ in public safety or a B+ in schools (San Francisco Office of the Controller, 2015). Yet, they also gathered some input that warranted them to consider adjusting certain policies in the city. They

discovered that 29% of San Francisco residents reported that they were likely to move out of the city in the following three years. The three major reasons why residents reported this was the rising costs of housing, educational concerns, and social changes (San Francisco Office of the Controller, 2017). One anonymous resident stated that "[They] don't like [the] sense of community in SF," and that "[they didn't] feel like [their] voice could be heard [there]. It's not the SF [they] fell in love with" (Anonymous Resident, 2015). Although the criticism the city received was negative, it allows them to understand the areas in the city that residents believe needs improvement. This in turn can spur policy change within the city government that will bring about the changes that people wish to see. In San Francisco's case, hopefully they will be able to introduce policy geared towards addressing the primary reasons residents wish to move away from the city.

2.2: The ETC Institute in San Diego

The ETC Institute is a private firm which conducts research "to help local governmental organizations gather data from residents to enhance community planning." (ETC Institute, 2017) In the fall of 2015, The ETC Institute has assisted The City of San Diego in administering their annual community surveys. (ETC Institute; City of San Diego, 2016).

In San Diego, the survey was distributed across the city's nine districts, with at least 200 households in each district receiving a survey so that data was generated across the city and not just in one specific area. The package that was included with the survey contained a postage paid return envelope, a letter explaining the goal and objective of the survey, and instructions on how to complete the survey online (ETC Institute; City of San Diego, 2016). The city included a letter with their goal of the survey so that residents had a better understanding on how their input would be utilized by the government. It was also important that the city provided another mean

of completing the survey because some individuals prefer to complete tasks online. The city also

contacted residents in households which received the survey by phone a week after the surveys

were distributed through the mail, to give the option of completing the survey over the phone as

well (ETC Institute; City of San Diego, 2016).

In this survey, 2,478 households responded by either mail, phone, or email. The locations

of the households which responded to the survey had a fairly even distribution across the city.

The survey included information on resident's overall satisfaction with the city. Figure 1 details

resident approval ratings for several different city services (ETC Institute; City of San Diego,

2016).

Figure 1: San Diego Residents Satisfaction with Overall Quality of City Services.
(ETC Institute. 2016. pg. 3)

The city also discovered other key metrics from the survey results. For instance, 50% of

the city residents stated that their preferred method for reporting problems to the city was

through the city website. Another 20% of residents stated that they preferred reporting issues to

the city through a mobile application (ETC Institute; City of San Diego, 2016). This information is valuable for cities because by knowing how residents prefer to interact with local government, resources can be contributed into making these communication channels more accessible and more efficient.

2.3: Bangor, Maine

Bangor, Maine is another city where a surveying method to increase government-resident communication was utilized. In 2016, a study was done by Jaymi Thibault, a graduate student at the University of Maine, to establish how residents of Bangor prefer to communicate with their local government. The research was focused on two specific resident groups: residents over the age of 60 and residents who rented out living spaces in the city. They chose to analyze these two specific groups because "based on results from existing literature, it was hypothesized that both renters and elderly residents of Bangor would be less satisfied with the city's communication efforts than the general population" (Thibault, 2016). And, if these communities were less satisfied with the city's communication efforts, they were more likely to give strong criticism and feedback. Overall, 510 residents who were either over the age of 60 or renters in Bangor completed an online survey on their preferred communication methods, and 22 people participated in focus groups (Thibault, 2016). The combined use of both online surveys and focus groups is significant. While surveys produce accurate quantitative data, information that can be given or received in numbers, it is still important for a researcher to gain qualitative data, information that provides a better understanding and explanation of people's opinions and feelings. Qualitative data can be used to better understand the survey results.

In her independent study, Ms. Thibault was able to discover some important findings about the understanding of government-resident communication among Bangor residents. Of the

Bangor residents who were surveyed, 44% of them chose social media as their preferred method

for communication. This choice was followed by both local broadcasts and printed media in

second, each with 12% (Thibault, 2016). The top three selections for the preferred means of

communication between Bangor residents all differ heavily from each other. One uses the

internet, one uses the television, and the other uses paper and postal mail. This signifies that for a

government to excel in communication, they must provide multiple avenues of communication

channels. Ms. Thibault also determined that many Bangor residents were unaware of some of the

major communication channels that are provided by the city, such as their Go Bangor application

(Thibault, 2016). This information could allow for the government to more properly advertise

some of their communication channels in the future.

2.4: Comparison of Case Studies

All of the previous studies that we analyzed focus on communication with residents in a

city. There are similarities amongst the three studies and there are imperative distinctions as well.

Table 2 below illustrates the comparisons of the three cities in Section 2:

City	Administered By:	Primary Survey Distribution Method:	Number of Respondents	Key Findings:
San Francisco	San Francisco Office of the Controller	Telephone	2,179	29% of residents reported they planned on moving out in the following three years
San Diego	ETC Institute	Postal Mail, Online, and Telephone	2,478	50% of respondents preferred to report information through the city website
Bangor	Graduate Student: Jaymi Thibault	Online and Focus Groups	532	44% preferred social media as a communication channel

Table 2: Comparison of City Surveys

All three of the studies resulted in the researcher(s) uncovering and qualifying some significant findings that could assist the city governments in creating and adjusting policies. However, each city had a different entity administer the community survey. San Francisco used a government office in order to distribute their survey. San Diego was assisted by the ETC Institute, a private organization whose purpose is to aid cities in gathering data from the public. And, in Bangor, a graduate student from the University of Maine, Jaymi Thibault, administered both a survey and focus groups. Another distinction among the studies was the primary survey distribution method or methods that were used. San Francisco's Office of the Controller utilized a phone survey; San Diego used postal mail, the internet, and phone surveys; and Ms. Thibault employed both an online survey and focus groups.

Section 3: Worcester, Massachusetts

3.1: On the Rise

Worcester, Massachusetts, commonly known as the "Heart of the Commonwealth," has made a concerted effort to invest in its future. The city has great potential due to the large number of surrounding towns and suburbs, as well as its advantageous location in the center of the state. However, this potential has yet to be realized.

Everything in a city starts with a strong economy. According to the 2016 U.S. Census, the poverty rate in Worcester sits at 22.4%, almost double that of the United States average of 13.5% (U.S. Census Bureau, 2016). Likewise, the 2016 median household income in Worcester was $45,472, almost $8,000 less than the national medium (U.S. Census Bureau, 2016). Simply put, there currently are not enough opportunities in Worcester for the general population to make a livable wage. Since the two major fields of employment in Worcester are education and medicine, it can be hard for someone without relevant experience or a proper education to find

employment that exceeds minimum wage. Education and medicine are two industries that are nearing the end of their growth cycle. Both fields require an educated workforce, meaning that residents without relevant experience or a proper education may find it difficult to obtain employment that exceeds minimum wage (Florida, 2013).

Much like its economy, Worcester's school committee suffers from stagnation. In the 2017 school committee election, there was only one challenger for the six seats that were up for reelection (O'Connell, 2017). This is down from the last school board election, which had ten candidates competing for five seats. One member of the current board feels that it is just the nature of local politics that discourage would-be candidates from running (O'Connell, 2017). Furthermore, Worcester's school committee suffers from a problem similar to the state of Minnesota mentioned earlier in Section 1.2, in that there is no minority representation. All five members in 2017, including the only challenger in the election cycle, were Caucasian. This is problematic, as the school committee members represent a city with a nonwhite population of nearly 30% (U.S. Census Bureau, 2016).

Equally important to the growth and development of a city are entertainment and social attractions. Worcester supports a number of venues that provide entertainment for residents of Worcester and beyond such as the Worcester Art Museum, Mechanics Hall, and the Hanover Theater (City of Worcester, 2017). Worcester is also home to the DCU Center, an indoor venue that hosts concerts, conventions, and sporting events (DCU Center, 2017).

While Worcester still faces many social and economic issues, there is an effort to transform it into a successful destination city. A quote from the Worcester website says it best, that

> "For Worcester to remain an attractive world city, we must embrace not only the bio-technology and healthcare industrial sectors, but also the burgeoning green

and creative sectors, while continuing to support the existing infrastructure of our neighborhoods, like diners, bakeries, auto repair shops, printers and the other businesses that make Worcester what it is" (City of Worcester, 2017).

While this statement incorporates a sound plan to improve Worcester, the city cannot truly hope to improve unless a larger and more diverse number of residents participate and are incorporated into the governance process.

The difficulties in Worcester can be improved upon with greater civic engagement. Just like many cities across the nation, Worcester is faced with the obstacle of trying to solicit information from all residents in the community. In her thesis entitled "Why Doesn't Worcester Vote?" Clark University graduate student Molly Kazin cited multiple reasons for why residents may not vote, including pure disinterest in local government, socioeconomic status, education level, race, ethnicity, and even government structure (Kazin, 2016). Table 3 below shows data from the 2013 Worcester City Council Elections. Across five districts, only 14% of eligible voters cast a vote. Perhaps even worse is the fact that 2 of the 5 incumbents ran unopposed, resulting in a lack of turnaround on new ideas and perspectives (Kazin, 2016). With such low citizen participation in local government, it can be hard to properly ascertain resident opinion on local affairs.

2013 Worcester City Council Election Results

District	Incumbent	Challenger	Winner	Ward	Turnout
1	Tony J. Economou	Christopher M. Rich	Tony J. Economou (52%)	1	23%
				2	15%
2	Philip P. Palmieri	Jennithan Cortes	Philip P. Palmieri (51%)	3	10%
				4	12%
3	George J. Russell	[None]	George J. Russell (64%)	5	13%
				6	8%
4	Sarai Rivera	[None]	Sarai Rivera (73%)	8	8%
				10	9%
5	William J. Eddy	Gary Rosen	Gary Rosen (51%)	7	16%
				9	24%
				Total:	**14%**

Table 3: 2013 Worcester City Council Election Results
(City of Worcester, 2013)

3.2: The Worcester Regional Research Bureau

The sponsor organization for this project, The Worcester Regional Research Bureau (Research Bureau; WRRB), assisted the team by providing their talents and resources towards the benefit of this project. The Research Bureau has been a key factor for productive and forward thinking in the city of Worcester's government. The Research Bureau operates as a not-for-profit organization, serving the City of Worcester by producing reports and holding forums on topics relating to the greater good of Worcester. These topics include "public administration, municipal finance, economic development, education, and public safety" (Worcester Regional Research Bureau, 2017). In collaboration with the Research Bureau, our team implemented a new technique for a city-wide survey distribution process.

Our main goal was to develop a tool that would reach the largest possible cross section of the Worcester population. As we collected data, we organized information to identify the most efficient methods for reaching the largest number of Worcester communities. Finally, we presented this tool to our sponsor, along with our recommendations on to how to properly utilize the tool over time. In the next chapter, we will describe what objectives we created to achieve this goal.

Methodology:

Goal:

The goal of our project was to create an online tool for the Worcester Regional Research Bureau (Research Bureau) to identify trends in the opinions of Worcester residents over time. Throughout the early stages of our research, the Research Bureau and the team collectively concluded that an online survey tool will have the potential to reach the greatest number of Worcester residents. This tool will allow the Research Bureau to periodically survey residents in Worcester on a variety of topics relating to their satisfaction with life in Worcester. We believe that over time, the Research Bureau will be able to recognize changes in resident confidence and satisfaction with the City of Worcester. The Research Bureau will then be able to provide this information to the Worcester government to influence their policy moving forward. In order to achieve this goal, the team created six objectives as follows:

<u>Objective 1:</u> Assess Worcester's current methods for measuring trends in resident opinion.

<u>Objective 2:</u> Evaluate other cities methods for collecting data on trends in resident opinion

<u>Objective 3:</u> Evaluate findings from Objectives 1 and 2 for feasibility in Worcester.

<u>Objective 4:</u> Compile and analyze input from Worcester residents on content of questions to include and distribution methods for the online tool.

<u>Objective 5:</u> Develop online tool using the most appropriate program

<u>Objective 6:</u> Provide detailed analysis and recommendations for future use of the online tool in identifying trends over time.
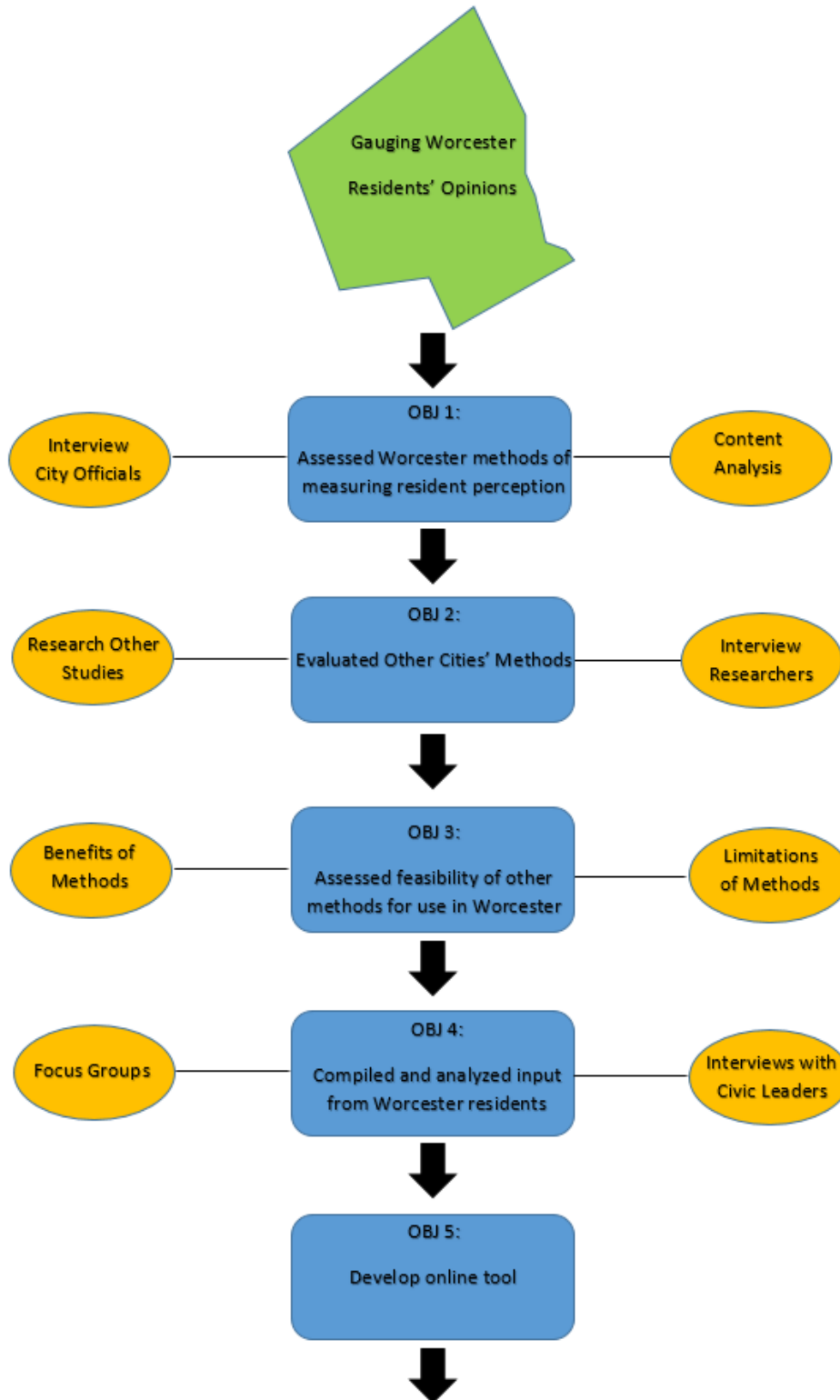
Figure 2: Guide for Gauging Worcester Residents' Opinions

Objective 1: Assess Current Methods for Measuring Trends in Resident Opinion

The project team researched and assessed current ways that resident opinion is measured in Worcester. We accomplished this objective by identifying and analyzing relevant archival data and interviewing city officials.

We analyzed archival data in order to understand how resident opinion has been collected from Worcester residents over a twenty-seven-year period from 1990 to 2017. Specifically, we searched on the City of Worcester's website, The Worcester Telegram and Gazette, Worcester Magazine, and the Worcester Public Library database to identify other studies that have displayed any measure of resident perception within Worcester. We used search terms such as "Resident Satisfaction [and] Worcester," "Resident Opinion Survey in Worcester," and "Measuring Resident Opinions in Worcester," to find these studies. When possible, we interviewed the authors of these studies. The team was able to gauge these author's opinions about surveying Worcester residents, gaining useful insight into the effectiveness of various survey methods. The team also explored whether there is an office in the Worcester City government that analyzes Worcester census data to determine trends in resident opinion. Through our research we determined what channels of communication are available for residents to voice their concerns to the city government in Worcester. To confirm this research, we also interviewed four individuals who work closely with the city.

To ensure that we did not miss any potential avenues that the city uses to solicit information from city residents, the team interviewed a sample of elected and appointed city officials and individuals who have either worked for the city previously or work closely with the city. The team used these interviews to gain an understanding of the current methods that are

available for the government to distribute information to, as well as receive input from, Worcester residents.

We interviewed Eric Batista, the Chief of Operations and Project Management at the City Manager's Office in Worcester; Jayna Turchek, the Director of the Human Rights and Disabilities Office; Chris Ryan, Program Manager at the Central Massachusetts Regional Planning Commission; and Tim McGourthy, our sponsor and the former Chief Development Officer at the City of Worcester. We asked these individuals who work closely with the city what their preferred means of providing information to residents was in order to be able to integrate their preferences into our analysis (see Appendix E for Worcester City Individuals Interview Questions).

Objective 2: Evaluate Other Cities' Methods for Collecting Data on Trends in Resident Opinion

In order to better understand how other cities gather resident opinion, the team researched cities that have attempted to collect satisfaction ratings from their residents. To develop a concise list of cities, the team searched online specifically for cities that had been successful in engaging residents. A successful method is one which has been continuously used for five or more years, and has key findings from each use of the method. We limited our analysis to methods which received a response rate of 15% and above. We decided that 15% was the cutoff response rate because in our research we found that Survey Gizmo, an online survey tool, stated that the average response rates for their members using external surveys is 15%. Therefore, we concluded that anything successful would be above this average response rate. We searched online using the following terms: "City Community Survey", "Measuring Resident Satisfaction in Cities", and "Government-Resident Communication in Cities." The team was also recommended specific cities to research by our sponsors, Timothy McGourthy and Tom Quinn,

and by Eric Batista, Chief of Operations and Project Management of the Worcester City Manager's office.

By searching for cities that had already found success in reaching out to residents, the team was able to identify specific aspects of each that made them successful. In total we identified seven cities with some consistent resident satisfaction data collection method: Chattanooga, Tennessee; San Diego, California; Kansas City, Missouri; San Francisco, California; Bangor, Maine; Somerville, Massachusetts; and Cambridge, Massachusetts. In analyzing these cities, the team looked at how the government or a non-governmental organization (NGO) attempted to collect data from residents, who they got in contact with, and how successful they were in collecting data.

Once we analyzed studies from other cities, the team reached out to the researchers who had utilized these surveying methods to attempt to interview them. We asked them questions about the origins and goals of their studies, the process they took to distribute their surveys, and how successful they were (see interview questions in Appendix D). We wanted to ask researchers about survey distribution, the content of questions to include on a community survey, and what methods for taking the survey were the most efficient for the residents in a given city (i.e. mail, email, online, phone, social media, etc.). In total, we interviewed two experts who had experience with community surveys.

Objective 3: Evaluate Findings from Objectives 1 and 2 for Feasibility in Worcester

The team then assessed the feasibility of the surveying and distribution methods discussed in Objectives 1 and 2 for their use in the Research's Bureau's online Worcester resident satisfaction tool.

The team first determined which aspects of a survey must be included in the Worcester Regional Research Bureau's online tool. The Research Bureau wanted the content of the questions to focus on certain quality of life categories. The categories the team focused on were happiness in Worcester, public schools, transportation, infrastructure, safety, recreation and sports, entertainment, and employment. These categories were chosen because the Research Bureau believes they are the most relevant to life in Worcester. We also chose these categories because, just like the cities of San Diego, Kansas City, and San Francisco, the responses given based off the questions will have the most potential to spur policy change in the city. Furthermore, for the tool to be used over time, the questions needed to be reusable and not dependent on a specific situation in any given year. There could not be any questions that were too specific to the year of 2017. We analyzed surveys from the six cities we researched to compare the questions from year to year to see what type of questions could be reusable.

We also had to determine which survey distribution methods would be cost effective for the WRRB. As a non-for-profit organization, the Research Bureau must act on a restricted budget. Also, because the tool was created to be used over time, any cost of the distribution of the survey would have to be multiplied for however long it is in use. Therefore, in choosing a means of distribution, the team had to consider cost as a key factor. Consequently, we analyzed multiple online surveying tools to determine which would both meet the needs of the Research Bureau and not be cost prohibitive. The online survey tools we analyzed were Survey Monkey, Google Surveys, Qualtrics, Survey Gizmo, Survey Planet, Zoho Surveys, QuickTap Surveys, and Typeform Surveys. We compared the prices for unlimited survey responses by residents over a year long period, the popularity of each tool, the ability to translate the survey automatically, the ability to block multiple responses, the ability to track respondents, and the data analysis

capabilities of each tool. We used each company's website and their customer service centers to find this information. We shared our comparative analysis of the survey tools with Mr. McGourthy and Mr. Quinn and narrowed it down to three choices; Survey Monkey, Qualtrics, and Google Forms. We then conducted a trial of Survey Monkey, Qualtrics, and Google Forms so Mr. McGourthy and Mr. Quinn could assess the aesthetic and functionality of the survey tools in practice to select the most appropriate survey tool. Next, we spoke with Penta Communications, the Research Bureau's web provider, to discuss the multiple ways in which an online URL could be distributed. In Objective 4, we describe how we gathered and utilized input from Worcester residents in the development and distribution of the survey tool.

Objective 4: Compile and Analyze Input from Worcester Residents on Content of Questions to Include and Distribution Methods for the Online Tool

In order to find the best digital communication channel to distribute the online tool through, the team conducted focus groups with various organizations and groups in Worcester, and interviews with civic leaders, to determine the preferred method to measure resident opinion. We also sought input on the content of the questions residents would like to see included in the online tool.

First, we attended meetings with different organizations in Worcester such as school related committees, civic organizations, and religious groups, with the goal of organizing focus groups with their members. We conducted four focus groups with: the Citywide Parent Planning Advisory Committee, the Latino Education Institute, the Shalom House, and WPI faculty that live in Worcester. The questions we asked in these focus groups included how residents prefer to receive important information from the city government, how they prefer to voice their concerns to the city, and if the residents saw any particular aspect of Worcester that could be improved.

27

We wanted to gather information relating to what online channels were most used by residents. We also wanted to discover what aspects of Worcester most residents were concerned with. Facilitating focus groups was important for our research because it helped us better understand both what and why certain issues concern Worcester residents (Martins, Martins, 2014) (see Appendix C for focus group questions).

We then interviewed civic, religious, or community leaders in Worcester to inquire about some ways in which they interact with a diverse Worcester population. Certain leaders in the Worcester community have been successful in communicating and interacting with a large cross section of residents. Specifically, we interviewed Mr. Mark Wagner of the John J. Binienda Civic Engagement Center at Worcester State University, Clyde Talley of the Black Clergy Alliance, and Amy Waters from the Worcester Senior Center. During these interviews we sought information about which channels of communication the interviewee recommended that the WRRB use to gain opinions from their constituents. We also asked them how they personally felt about government-resident communication in Worcester. Finally, we asked them if there were any particular aspects of the City of Worcester that they wished to see a change in.

The team used the results of the focus groups and interviews to alter the questions we included in the online tool. By aggregating the responses from all the focus groups, we saw trends emerge relating to aspects of Worcester where residents had concern or felt there could be improvement. We then molded these aspects into questions that could be used to survey Worcester residents periodically to gather their satisfaction with the city.

Objective 5: Develop Online Tool Using the Most Appropriate Program

After conducting our interviews and focus groups, the team was able to develop a comprehensive online survey that was capable of capturing opinions about various topics around

the city over time. In order to prevent faulty or repetitive data, the team made sure that the survey could only be answered once per IP address each time that the survey was sent out.

In order for the survey to be repeatedly used, our sponsors decided to add it to the Worcester Regional Research Bureau's current Constant Contacts emailing network list. By adding the survey to the Constant Contacts list, the Research Bureau can direct people on how to sign up to be a part of the email list that receives the survey. They are also capable of opening and closing the survey, meaning that they will only collect data when they want to, by using the online survey tools website to open and close data collection.

Using the online survey tool that our sponsors chose, we created the survey online. To attract residents into taking the survey, we included the Worcester Regional Research Bureau logo onto the survey page so that they were aware of the organization that was surveying them. We also included a preamble of information stating why it is important for residents to take time to complete the survey, and how the survey may relate to their lives. We shared an estimate of how long the survey takes to complete and were sure to include a thank you to our respondents.

Objective 6: Provide Detailed Analysis and Recommendations for Future Use of the Online Tool in Identifying Trends over Time

By conducting content analysis on archival data, interviews, and focus groups, the team was able to provide the Worcester Regional Research Bureau with recommendations about how to conduct the survey. We also were able to provide them with a detailed list of some of the most active and useful communication channels that are present amongst Worcester residents so that they can potentially create a larger communication network that would incorporate a large amount of Worcester residents. We gathered this list as a result of the teams networking that we conducted in an attempt to gather data and input from Worcester residents. We provided

recommendations on how to continuously reach out to a larger group of people, so the Research Bureau can continue to grow its survey population over time.

In the next chapter, the team will explain our results relating to surveying methods in Worcester. We discuss all the current strategies that Worcester uses to solicit information from residents. We also display all the online survey tools the team researched, and which surveying tool was chosen. Last, the team demonstrates the content of the questions included on the survey, and we explain why we chose to craft specific questions.

Results

In this chapter, the team discusses the results of the data we collected in Objectives 1 through 6. We start by examining Worcester's current methods for gathering resident opinion. We found that for the most part, Worcester lacks a consistent method of surveying city residents on their perceptions. The group then discusses the evidence we found that supports the decision to choose an online surveying tool. We also examine the steps that we took to choose Survey Monkey as the online surveying tool for the Research Bureau to use for the community survey. Finally, the team shares how we included the content of the questions to include in our survey.

I.   *Worcester's Current Methods for Collecting Resident Input*

In order to assess Worcester's current methods for collecting resident perception, we first had to discover what methods the city government currently uses to gather resident input. We searched for any current or prior community surveys in Worcester in the last 27 years, between 1990 and 2017. We discovered that Worcester has only had three community wide surveys since the 1990's. They took place in 1994, 2001, and 2017. All three surveys were used to complement the strategic plan that the city was working on at the time. We determined this from an interview with Chief of Operations and Project Management, Eric Batista, as well as through searching through online databases to find "Worcester Community Survey" (Eric Batista, personal communication; City of Worcester, 2017). We confirmed this with one of our sponsors, and former Chief Development Officer for the City of Worcester, Timothy McGourthy (Timothy McGourthy, personal communication, 2017). We needed to determine that there is not a current annual community survey in Worcester so that if the team were to create an annual survey for Worcester residents it would not overlap with any of the city's current efforts. It is clear from

our research that they do not have a repetitive community survey. **While Worcester is making strides to receive input for the city's Strategic Plan, there is not a current method for residents to consistently give input on a wide range of subjects relating to Worcester.**

We also found that the Worcester city government attempts to gather input from residents using a form of online polling called crowdsourcing. Specifically, the city government uses both Twitter and Facebook in order to pose questions to residents. These questions can relate to a variety of topics, and usually only one question is asked at a time. Chief Officer and Project Manager Eric Batista stated that the government only receives anywhere from 15 to 30 responses to these questions (Eric Batista, personal communication, 2017). Our sponsors, who are residents themselves, active on social media, and intentionally seek ways to inform city policy, said they are not aware of the purpose of the crowdsourcing effort, since the city is not clear in what type of response they are looking for (Timothy McGourthy and Tom Quinn, personal communication, 2017). Other residents echoed this sentiment, with some completely unaware that the city was asking questions across social media (Focus Groups, 2017). Because the purpose of the city's crowdsourcing is unclear, the Worcester government is not able to collect statistically significant information.

The City of Worcester also provides an Online Customer Service Center located on its website. This can be used by residents to report issues relating to 33 public services provided by the city. A phone number is on the site that directs to the Worcester Customer Service Office, allowing residents to verbally relay their complaints (City of Worcester, 2017). During our focus groups, multiple residents stated that the city website would be a viable way to collect information for Worcester residents. However, many of these same residents, including an individual whose profession requires skill in searching online databases, stated that the current

website is simply too cluttered to be efficiently used (Select Worcester Polytechnic Institute

Faculty, Focus Group, 2017). The following figure illustrates the current status of the sidebars on

the city's website that are used to navigate the site.

Figure 3: City's Current Website Navigation (City of Worcester, 2017)

On this one page of the website, there are 57 separate links leading to various other pages. While

it is important that all these links are available, it can be hard to look at all of this information at

once and decipher it. Instead, it may be better to have the information organized into categories

that then branch out into their respective links. While the city is planning on releasing its new

prototype website early in 2018, **the city's ability to collect data from residents is impeded by

the navigation issues of the current website**.

According to various members of boards and commissions in Worcester, board and

commission meetings are open, and therefore a valuable means for residents to come and voice

their opinions on a variety of topics. Unfortunately, these meetings usually have little to no attendance by city residents, unless there is a controversial issue that is being discussed at a meeting (Personal communication, 2017). When we asked various focus groups what deters them from attending these meetings, the most common answer was that the timing of meetings was inconvenient. While some meetings do occur in the middle of the day, and therefore at a time when people are at work, most meetings occur at night after 5:00 P.M. There are usually other issues though, such as taking care of family, which impacts their ability to attend these meetings. We also found that these meetings are usually recorded and live streamed on the city's website, but many residents, from personal contact with us, said they were not aware of this (Focus Groups, 2017). The image of the city's website below shows the link to where these live stream feeds are available.

Figure 4: Location of Video Archives on City's Website (City of Worcester, 2017)

As show in Figure 4, above, the video archives for these meetings is a small link on the right side of the page. To some residents, this might not stand out because of the large amount of text on the home page, and it can be difficult to locate these videos. Simultaneously, the city's advertisement of these meetings being live streamed has not seemed to be effective in reaching a majority of residents. **Just like the crowdsourcing efforts and the city's website, open meetings are another way in which the city's current methods for collecting resident input are unclear, unknown, or difficult to locate.**

II. The Need for a Consistent, Easily Accessible, and User Friendly Online Tool to Collect Resident Input

Worcester city officials need to be able to gauge resident input on a consistent basis because the needs and wants of residents should be included when forming public policy. The City of Worcester states on its website that Worcester is a "smart city to support your (residents) visions and goals" (City of Worcester, 2017). For residents' visions and goals to be supported properly by the city, they first need to be heard.

The team found that certain residents in Worcester feel uncomfortable consistently reporting information to the government (Focus Groups, 2017). An obstacle for many government entities is creating an environment in which residents feel comfortable reporting information. In our interview with Ms. Turcheck, Director of the Office of Human Rights and Disabilities in Worcester, we discovered that one of their main focuses is trying to come up with new ways in which they could make residents feel safe when discussing personal information (Jayna Turchek, personal communication, 2017). Also, in some discussions in our focus groups, we heard that some **residents would rather have a non-government organization (NGO) gather input. They believed that if a NGO was responsible for this information, there**

would be less bias in the reports that detail the responses of residents' opinions on the city

(Focus Groups, 2017). For these reasons, we concluded that it would be beneficial to administer

the survey through the Worcester Regional Research Bureau. We believe that the Research

Bureau will be a safe space where residents feel comfortable anonymously sharing their hopes

and concerns about the city.

III. Online Survey Tool

The Most Effective and Consistent Manner to Collect Worcester Resident Feedback is Through the Implementation of an Online Survey

As stated in the Methodology chapter, the team along with the sponsors decided to create an

online surveying tool to be able to periodically survey Worcester residents. In our data

collection, we found further evidence to support the online method. Unanimously, the

participants in our focus groups preferred an online survey over a paper survey due to

convenience and the habit of being online often (Focus Groups, 2017). These participants, the

approximately 40 of them who participated, were all Worcester residents over the age of 18. We

found that the majority of Worcester's current methods for measuring residents' opinions and

perception are already online tools and therefore residents who are internet users may already be

accustomed to giving their input via the internet. This population may not include the elderly

community in Worcester, who may not be as technologically inclined as most residents, or

residents whose primary language is not English. However, the internet is constantly becoming a

more accessible place. The Worcester Senior Center offers weekly classes for its residents to

learn how to access the internet from computers, laptops, and tablets (Amy Waters, personal

communication, 2017). Also, many websites on the internet are adapting the capabilities of

translating the content on the website to other languages. An example of this is the Worcester

City website, which can currently be translated into nine languages other than English. Therefore, we believe that moving forward, the usefulness of the online survey will continue to grow.

Through our research of how other cities' collect resident input, we determined that **most cities that consistently survey residents have some online aspect to their information gathering**. These cities that include an online aspect of their survey are San Diego, Bangor, and Kansas City. The details of these surveys can be viewed in the table below:

City	Administered By:	Primary Survey Distribution Methods:
San Diego	ETC Institute	Postal Mail, Online, and Telephone
Bangor	Graduate Student: Jaymi Thibault	Online and Focus Groups
Kansas City	ETC Institute	Post Mail, Online, and Telephone

Table 4: Comparison of Cities with Online Surveying Method

The Most Appropriate Online Survey Program for Use in Worcester is Survey Monkey

We created a table, shown below, that compares eight internet survey providers. The table compares the provider's ability to translate languages automatically, the popularity, the cost, the ability to track respondents, and the data analytics of each.

Survey tool	Automatic Translation Capability	Does it Automatically Track Respondents	Cost	Features	Duplication Protection
Survey Monkey	Translation available with Premium Plan ($1,188 annually) to English, Spanish, +14 other languages	No	$408/year (Standard Plan)	• Unlimited surveys, questions, and responses. • 24/7 Customer Support • Data exports (CSV, PDF, PPT, XLS) • Advanced data exports SPSS • Ability to add brand logo • Ability to manual write surveys in 58 different languages • Ability to send surveys using third party integration tools	Yes
Typeform	No	No	$360/year (Pro plan)	• Unlimited responses • Matrices and reporting • Self-notifications via email • Data API • Respondent notifications via email • Emoji pictures incorporated into survey questions	Yes
Google Survey	No	No	Free	• Unlimited surveys, responses. • Verity of survey models. • Ability to add brand logo • Organize and analyze results and automatically collected in forms	Yes (If user is signed into Google account)
Qualtrics	English, Spanish, +9	Yes	Priced by Qualtrics sales team dependent on individual needs of customer	• Ability to track respondents • Unlimited questions and responses • Exports reports to PDFs • Data analysis built in	Yes
Survey Gizmo	No	No	$300/year (Basic plan)	• Unlimited Questions, Surveys, Responses and Pages • Basic Project Types: Surveys, Polls and Forms • Email Campaigns: Send Email Invitations • Basic Logic: Standard Skip-Logic • Basic Theming: Color, Font and Theme Customization • Import Surveys and Data from Word and Excel • 25+ Question Types • Standard Reports, Data Filters, Exports and Record Browsing • Basic Publishing: Social Media, Link and Email	Yes
Zoho Survey	Translation available with Premium Plan	No	$288/year (Standard plan)	• Unlimited Surveys, questions, responses	Yes

	($288 annually) to English, Spanish, +28 other languages			• Use respondents answers to customize the follow up questions and answer options • Support automatic and editable translation. • Send automatic email notifications to the survey author or to respondents. • Send surveys and analyze results directly • Export reports to Google sheets and analyze them.	
Survey Planet	Translation available with Free plan to English, Spanish, +18 other languages	No	$180/year (Pro plan)	• Unlimited surveys, questions, and responses. • Share surveys via emails. Social media. • Export survey results in word, excel, CSV, PDF or JSON. • Export survey results filtering. • Survey completion notifications.	Yes
QuickTapSurvey	Translation available with Basic Plan ($192 annually) to any language supported by the UTF-8 character set (+61 languages)	No	$192/year (Basic Plan)	• Skip logic and question branching • QR codes • Unlimited surveys, responses. • Offline surveys • Ability to add brand logo • Kiosk mode	No

Table 5: Survey Providers Comparative Table

After we shared this information with our sponsors, we mutually narrowed down the list of potential providers to Survey Monkey, Google Forms, and Qualtrics. We then created trial surveys on each of these three providers to demonstrate the aesthetics and functionality of the surveys to the Research Bureau. The following figures demonstrate the trial surveys of the three survey providers.
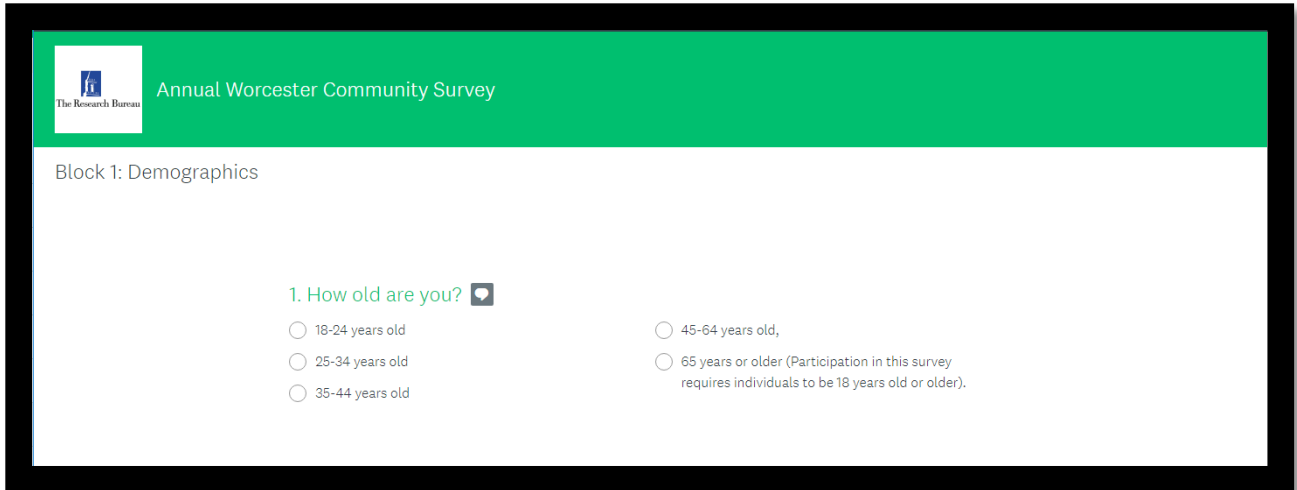
Figure 5: Survey Monkey Survey Aesthetics
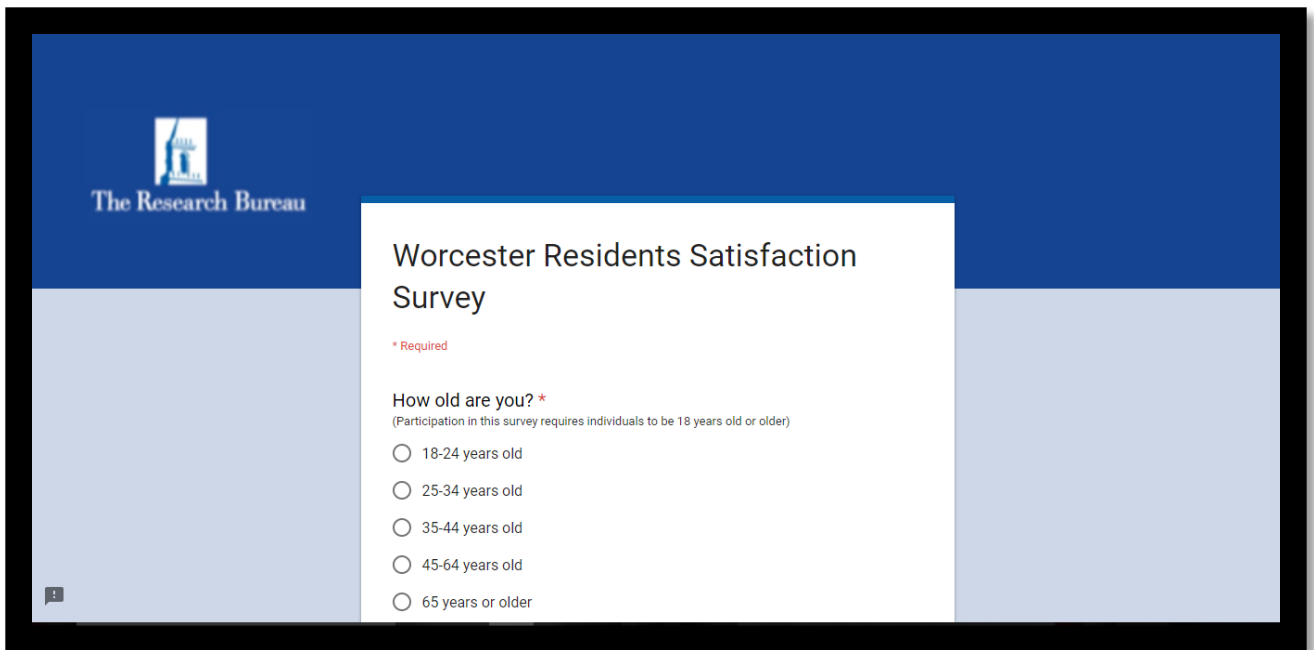
Figure 6: Google Forms Survey Aesthetics
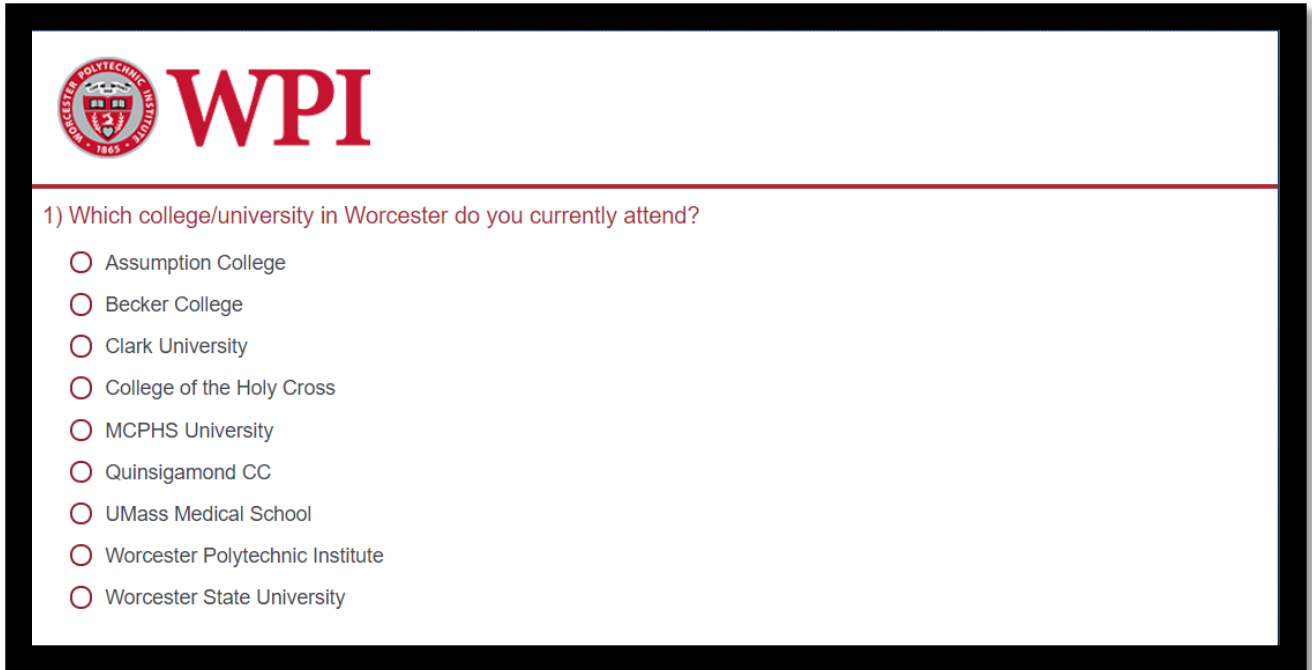
Figure 7: Qualtrics Survey Aesthetics

The Survey Monkey and Google Forms examples were made by the team using free trials. The

Qualtrics Survey example was created via the licensing acquired by the Worcester Polytechnic

Institute. We used this survey to survey Worcester college students (discussed in more detail in

Section V. of this chapter).

After providing both the comparative chart and the demonstrations of the survey

providers, our sponsors decided to use Survey Monkey as the online surveying tool. While it was

one of the more expensive survey plans, they still chose the Survey Monkey Standard Plan for its

ability to send surveys using third-party integration tools and for its data analysis capabilities.

A Multilingual Survey is Essential for Worcester Residents

A key finding that we consistently noticed in our data gathering process was the

significance of making this survey available in a variety of languages. This is especially

important in Worcester. According to the U.S. Census Bureau, in 2015 approximately 15.5% of

the Worcester population spoke Spanish as their primary language, 3.5% of the Worcester population spoke an African language as their primary language, and 3% of Worcester residents' primary language was Vietnamese (U.S. Census Bureau, 2015). These three languages were the three most popular non-English languages in Worcester in 2015, with 22% of the population speaking these languages. Even with these three other non-English languages, there are still many more spoken as a primary language in Worcester. This means there are many residents in Worcester whose primary language is not English.

Eric Batista, Jayna Turchek from the Worcester Office of Human Rights and Disabilities, and another professional of community surveys from San Francisco, all conveyed the importance of translating survey material into multiple languages (Eric Batista; Jayna Turchek; Other City Official #1, personal communication, 2017). This was reiterated in three of our four focus group sessions. Therefore, it was important that our survey could be translated to the prominent languages in Worcester, which are: English, Spanish, Vietnamese, Arabic, African languages, Portuguese, and Albanian (U.S. Census Bureau, 2015). The Research Bureau's current package of Survey Monkey does not have the functionality to be translated automatically. However, Survey Monkey has the capacity for a survey to be written in 16 different languages, it just has to be done manually. Since this would have to be done manually, the Research Bureau would need to seek outside assistance to translate the survey into multiple other languages.

IV. Survey Distribution

To overcome seasonal response bias, or respondents producing skewed data as a result of the time of year, we collectively decided with our sponsors to distribute the survey in a different season every time the annual survey is distributed. We read about a similar method of survey distribution while researching the Kansas City Community Survey. Kansas City, with the

assistance of the ETC Institute, distributes their survey four times a year (ETC Institute; City of Kansas City, 2017). They randomly chose a sample of city residents at the beginning of their annual resident satisfaction assessment process, and break this sample into quarters. Each season, a quarter of the sample receives the survey, with variations made to questions depending on what time of the year the survey was sent out. The survey contained three question blocks. Question block one was sent out in every quarter, question block two was sent out in the first and third quarters, and question block three was sent out in the second and fourth quarters.

Since the survey is distributed online, the Research Bureau does not need to worry about the cost of distributing the survey. Therefore, the Research Bureau will be able to network this survey to as many Worcester residents as possible by using the Constant Contacts emailing network application. The Research Bureau already has an email chain of Worcester residents that they could distribute the survey tool using this application, and more residents can sign up to receive the survey if they wish.

The goal is to be able to distribute the survey over a period of time in hopes of identifying trends in resident opinion. We were told in an interview with a city auditor, who runs a community survey from another city that it took them approximately three to five survey distribution cycles before they were able to accurately identify trends (Other City Official #2, personal communication, 2017). In their case, they distributed their survey annually. Therefore, it took three to five years before trends were found. **We believe that if the Research Bureau's survey is sent out annually that it will also take them approximately three to five years before they are able to identify trends in resident perception.**

V. Content of Survey Questions

Creating Reusable Survey Questions

For a survey to be used over time, the questions asked would have to be relevant for a longer period of time. We determined the need to craft questions that could consistently measure trends over time. We did not want any questions that would only be relevant in 2017. We analyzed the questions from the annual community surveys from Kansas City, San Diego, and San Francisco to determine what questions could be asked repetitively over time. Figures 8 through 10 below display the content of questions from the Kansas City, San Diego, and San Francisco surveys.

2. Please rate your satisfaction with the following items that may influence your perceptions of the City of Kansas City, Missouri:

Perceptions of the Community	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Don't Know
1. Overall quality of services provided by the City	5	4	3	2	1	9
2. Overall value that you receive for your City tax dollars and fees	5	4	3	2	1	9
3. Overall image of the City	5	4	3	2	1	9
4. Overall quality of life in the City	5	4	3	2	1	9
5. Overall feeling of safety in the City	5	4	3	2	1	9
6. How safe you feel in your neighborhood	5	4	3	2	1	9
7. Overall quality of education system within the City	5	4	3	2	1	9
8. Physical appearance of your neighborhood	5	4	3	2	1	9

Figure 8: Excerpt of Kansas City 2016-17 Citizen Satisfaction Survey (ETC Institute; City of Kansas City, 2017)

Living and Working in San Diego

1. Using a scale of 1 to 5, where 5 means "Excellent" and 1 means "Poor", please rate the City of San Diego, California, with regard to each of the following:

	Excellent	Good	Fair	Poor	Very Poor	Don't Know
1. As a place to live	5	4	3	2	1	9
2. As a place to raise a family	5	4	3	2	1	9
3. As a place to retire	5	4	3	2	1	9
4. As a place to start a business	5	4	3	2	1	9
5. As a place to start a career	5	4	3	2	1	9
6. As a place to work	5	4	3	2	1	9

Figure 9: Excerpt of 2015 City of San Diego Resident Satisfaction Survey (ETC Institute; City of San Diego, 2017)

SAFETY

Please grade your feeling of safety while:	Excellent	Good	Average	Poor	Failing
Walking alone in your neighborhood during the day	A	B	C	D	F
Walking alone in your neighborhood at night	A	B	C	D	F

Figure 10: Excerpt of 2017 San Francisco City Survey Questionnaire (San Francisco Office of the Controller, 2017)

The following figures illustrates questions the team crafted that would be able to identify trends in resident opinion over time. By comparing answers from questions such as the ones in the figure below over time, the Research Bureau will be able to analyze what areas in Worcester are improving or deteriorating.

Figure 11: Excerpt of Survey Questions 5, 6, and 10

Question Blocks

Based off of research of other surveys and results from focus groups, surveys that are too long show a lower response rate or will be more likely for someone to not fill out (Focus Groups, 2017). Yet, people in the focus groups seemed more interested in surveys that displayed questions that were relatable to their lives in Worcester, and not just general, broad questions. **We found that the most useful survey to gather Worcester resident opinion would contain both depth and breadth**. It is important to create detailed questions that lead to specific data while at the same time limiting the length of the survey. A method we learned in our research of other surveys and results from focus groups that could assist in limiting the length of the survey was creating question blocks. Questions blocks can be useful for restricting the survey time and for organizing data by specific categories. Here is a good place to share data to support your

question block finding. What cities used question blocks, what did that look like, what kind of groupings did they use?

The following table illustrates the content of each of the question blocks that the team create, which season the question block should be used and whether the question block should always be included or only be included in certain seasons.

Block	Used	Content of Questions
1	Always	Demographics
2	Always	Broad questions about satisfaction with Worcester
3	Winter	Questions that can be used in the winter season - Streets and Sidewalk Conditions - Parking in Worcester - Snow Removal
4	Spring	Questions that can be used in the spring season - Crime in Worcester - Public Schools
5	Summer	Questions that can be used in the summer season - Parks and Recreation - Streets and Sidewalks Conditions - Public Transportation
6	Fall	Questions that can be used in the fall season - Public Schools - Public Health - Crime in Worcester

Table 6: Question Blocks for Survey

We recommend that Blocks 1 and 2, demographics and broad satisfaction questions about Worcester, be asked in every distribution of the survey. We also recommend that Blocks 3 through 6, be distributed once, a block for every season. Therefore, a resident would only

have to answer three question blocks each time they complete the survey. We believe this will shorten the response time of the survey, and, as a result, increase the response rate. We also concluded that question blocks for the survey would be beneficial so data can be more specifically categorized into either topics in Worcester that do not change depending on the season, or topics in Worcester that change depending on the season (ETC Institute; City of Kansas City, 2017).

The group also had to assure that the survey would allow anonymity of respondents completing it. Despite the demographic questions that may relate to the identity of a respondent, none of the answers to any question have the potential to compromise a respondent's anonymity. This is done in order to address concerns about resident safety and create a channel for residents to safely and comfortably provide input to the Research Bureau about the city (Focus Groups; Janya Turchek, personal communication, 2017).

Where Residents Believe Worcester can improve

We also crafted some specific questions on the survey by conducting focus groups with Worcester residents. During these focus groups, we asked about specific areas where they believed Worcester could advance. Many residents across all the focus groups believed that the streets and sidewalk infrastructure in Worcester could be greatly improved (Focus Groups, 2017). The issue of sidewalk lighting was also brought up at multiple focus groups. We also distributed an online survey via Qualtrics to college students in Worcester inquiring about some of the reasons in which they may or may not stay in Worcester. We used relevant data from the survey answers to craft more questions. There were 212 college students across Worcester who responded to our survey. The following figures displays some prominent survey answers from college students in Worcester:

Q4 - 6) Do you intend on staying in Worcester after you are done with your education at your college/university?
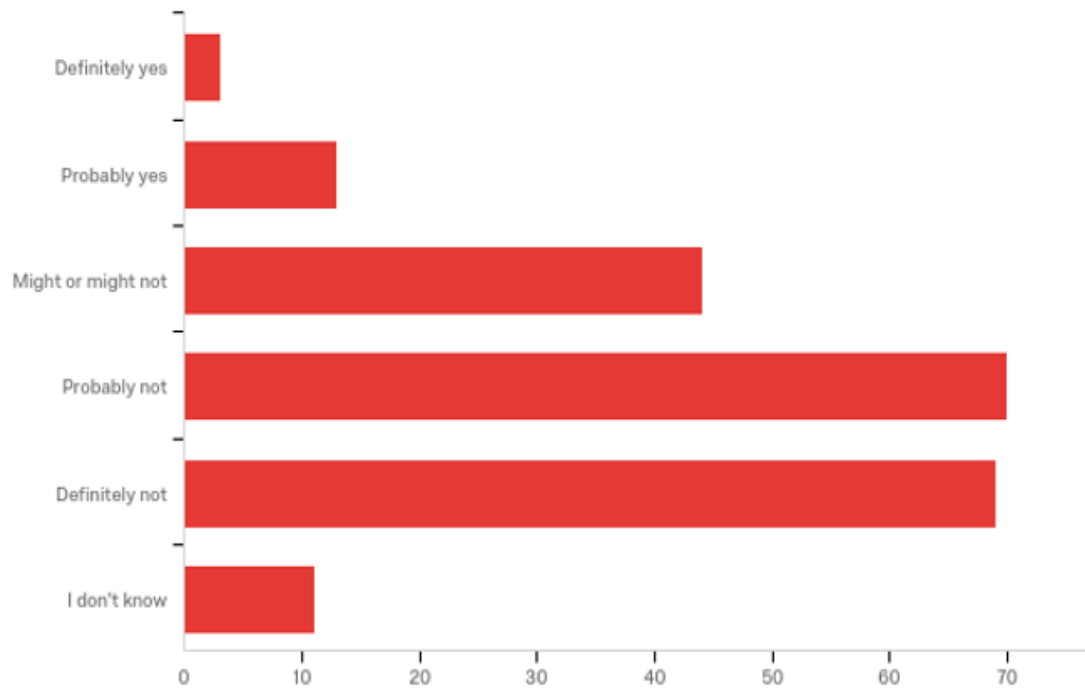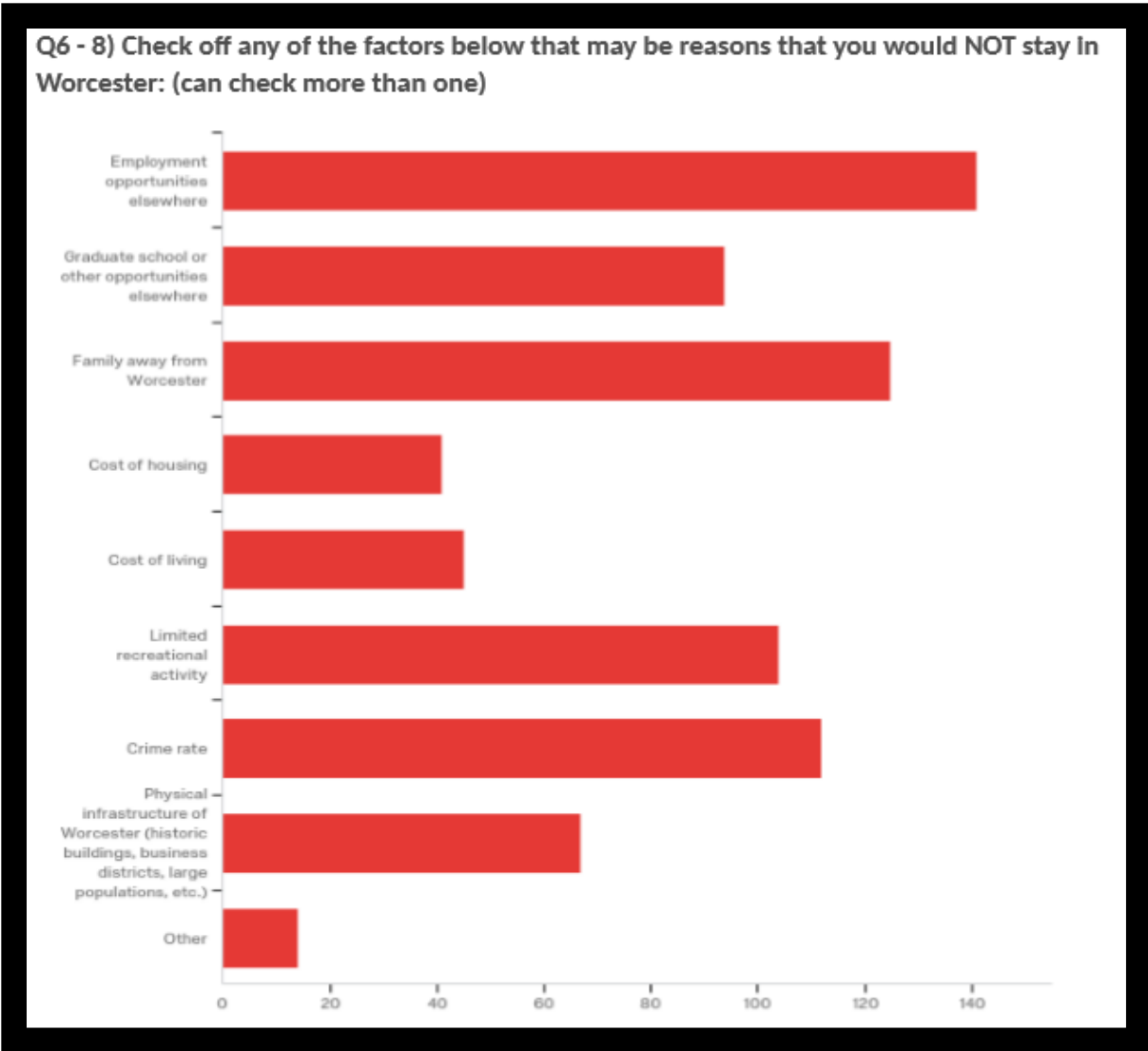
Figure 12: Results from Student Survey

As noted in Figures 12 above, the number one reason why many college students in Worcester

may leave the city upon graduation is for employment opportunities elsewhere, with 145 out of

the 212 respondents labeling this as a factor for potentially leaving the city. The number two

reason is due to students having family that do not live in Worcester. Since Worcester has so

many higher education institutions, which therefore attract students from across the country, this

statistic would be unlikely to change based off any new policy from the city. Therefore, there is

no reason to base a future question on our survey off it. The third highest response for reasons why college students might leave is the crime rate which had 52% of respondents, or 114 students, state this as a reason for not staying in Worcester. Crime rate is a response which can be incorporated into the Research Bureau survey. We synthesized the data collected from these responses, as well as data collected in our focus groups, to create the following questions. For example, since the condition of roads and sidewalks came up during each focus group, these concerns were crafted into questions for the survey. Likewise, the number one city service that the focus group respondents deemed inadequate was snow removal (Focus Groups, 2017). The following excerpts of some of the questions we created display how we integrated this feedback into our survey.

Figure 13: Excerpts of Survey Questions 12 and 13

In the next chapter we share some additional information that we found. We discuss some ways the Research Bureau could expand upon the survey. We also explain some information that doesn't directly relate to the survey, but relates to government-resident communication in Worcester. This includes the importance of social media as a communication tool and the potential of community organizations in Worcester working together towards common goals.

Next Steps and Final Thoughts

During the course of our project, we also collected additional data and key points of interest from our research, interviews, and focus groups. These additional findings and recommendations can be used in the future to assist the Research Bureau in building and expanding the survey tool. They can also be used to assist the City of Worcester in becoming a more open place for residents give input.

Finding 1: Creating More Methods than Just an Online Survey Tool can Increase the Response Rate

The group found that the City of Kansas City, which has been distributing a community survey since 2001, had the highest response rate out of all the cities we researched with a response rate of 47%. Kansas City distributes their survey online, through postal mail, and by the phone (ETC Institute; City of Kansas City, 2017). By allowing residents to have more options to complete the survey, respondents are able to answer the survey using the method that is more convenient for them. Information gathered from our focus groups and Amy Waters, the Director of the Worcester Senior Center, suggest that the younger generations are more likely to respond to a survey online, while many older generations are more likely to respond by either phone or mail (Amy Waters, personal communication; Focus Groups, 2017). The response rate for Kansas City can be compared to that of another city we researched, San Francisco. San Francisco also implements a city-wide survey, however they only collect responses over the phone. The survey had a 26% response rate (San Francisco Office of the Controller, 2015).

Using multiple methods of survey distribution could potentially increase response rates. In the Citywide Parental Planning Advisory Committee focus group, we heard from multiple residents that there is not a singular solution when it comes to government-resident

communication. This means that while online communication is the most popular for many residents, there are some residents who prefer communication through postal mail or the phone. Some residents stated that it might be beneficial to have respondents fill out a form that would allow them access to their preferred communication method (Citywide Parental Planning Advisory Committee, Focus Group, 2017).

A specific demographic that prefers another means of communication other than online is the elderly population. In an interview with the Director of the Worcester Senior Center, Amy Waters, we discovered that most of her members from the center prefer to use either postal mail, magazines, newspaper, or the phone to receive and share information (Amy Waters, personal communication, 2017). If the Research Bureau uses solely an online format for distributing the resident satisfaction survey, they may not get a completely representative picture of Worcester resident opinion and may specifically miss getting feedback from the elderly in Worcester. *For these reasons, in the upcoming years*, *we recommend that the Research Bureau incorporate additional means of distributing the survey, whether it be postal mail or the phone.* The following figures demonstrates the uses of each of the three primary means of survey distribution: mail, online, and by phone.
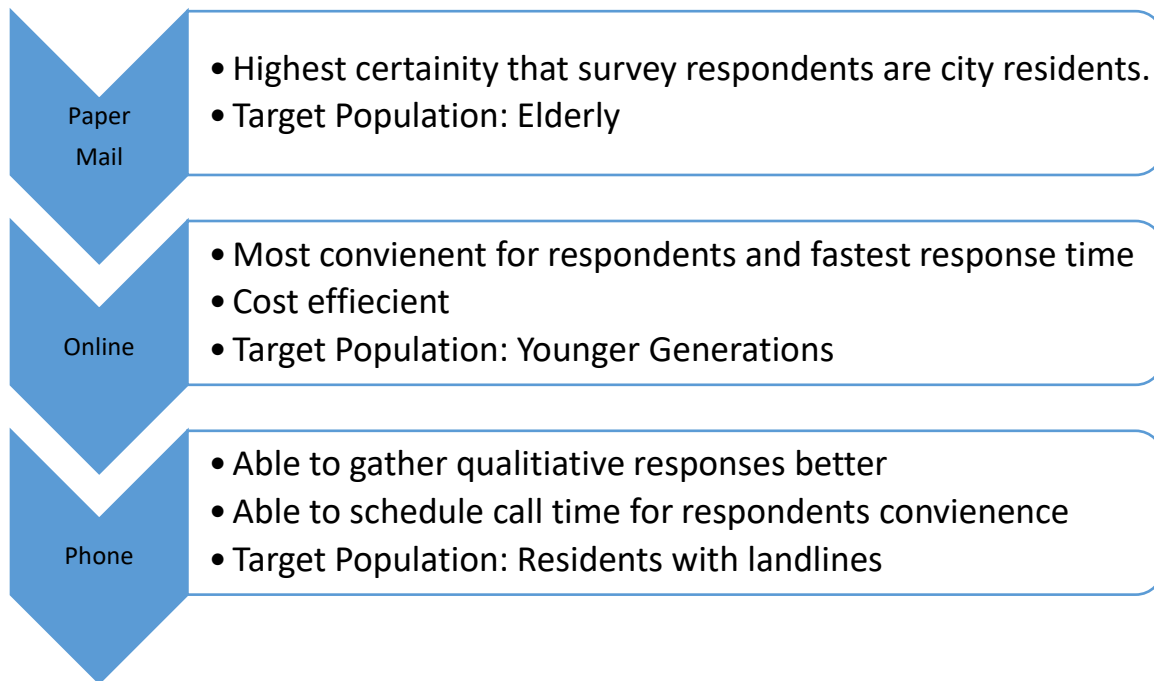
Figure 14: Benefits of the Major Survey Distribution Methods (Focus Groups, 2017)

Finding 2: Social Media is Becoming Increasingly Important in Government-Resident Communication

A popular method for communication between cities and their residents is social media. Mainly, government officials have been using Facebook and Twitter more often to provide and receive information. As stated in the previous chapter, Worcester uses these sites and applications for crowdsourcing information about a variety of topics related to the city (Eric Batista, personal communication, 2017). Other individuals who work for, or closely with, the city in Worcester also use social media for different reasons. In an interview with Chris Ryan, Program Manager at the Central Massachusetts Regional Planning Commission (CMRPC) (not a Worcester government organization), he stated that the director of the CMRPC actively uses Twitter to interact with residents in Worcester, informing them about the new programs and projects that the CMRPC is working on (Chris Ryan, personal communication, 2017). We also

found in our research that the Worcester Police Department uses Facebook daily to provide

residents with important information regarding their safety (Worcester Police Department, 2017).

If the Police Department is working on a case that relates to criminal activity, they will post

relevant details on their Facebook page to ensure resident safety. Figure 12, shown below,

displays an example of this.
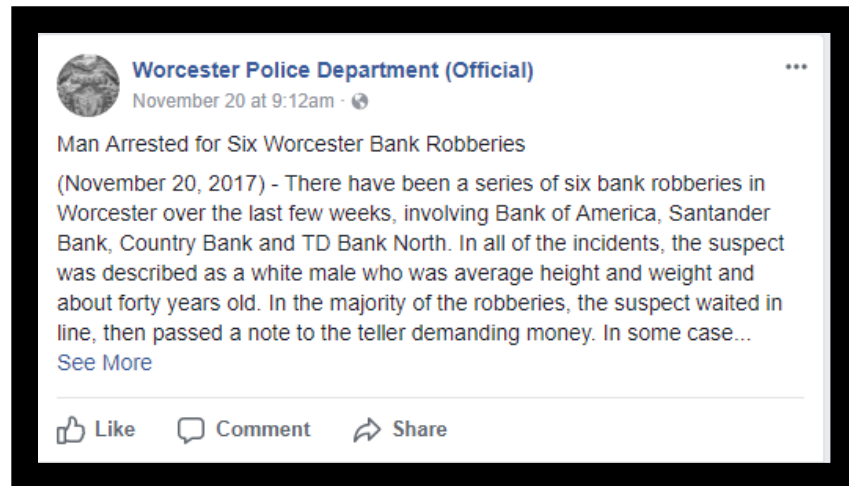
Figure 15: Excerpt of Worcester PD's Facebook Posts

They also post flyers and advertisements for any sort of fundraising event that the department runs.

We also heard from a particular community in Worcester that they use social media as

their primary means of communication. In our focus group with the Latino Education Institute,

many Hispanic and Latino residents said that they use social media to receive information from

the city. This same group was largely unaware of the main platforms that are available for

receiving information from the city. However, a majority of the focus group participants had

access to social media and therefore used platforms such as Facebook and Twitter to gather

information from the City of Worcester (Latino Education Institute, Focus Group, 2017). While

many residents who may be natural born citizens are aware of the more common methods of

government-resident communication in the U.S., such as city forums, the city website, and

personal discussions with city officials, the immigrant population may not be as aware (Focus Groups, 2017). Social media has become the main avenue for many immigrants as a result of them not being informed of these other means.

While social media does have many advantages for government-resident communication, there are also some disadvantages. Table 5, below, illustrates the pros and cons of using social media as a means of communication between a city and its residents.

The Advantages and Disadvantages of Social Media as a Means of Communication	
Advantages	**Disadvantages**
Accessible to anyone who has internet connection	Not everyone in Worcester has an internet connection or a device that can access the internet
Quicker communication	Limit to the amount of characters that can be typed on certain platforms
Easy to use and convenient	Can't limit respondents by geographical boundaries (May receive feedback from non-Worcester residents)

Table 7: Advantages and Disadvantages of Social Media Use for Communication (Focus Groups, 2017)

Yet, while it does have some disadvantages, social media has still become a larger method for government-resident communication, and it could be a useful means of gathering information for the Research Bureau in the future. We recommend that *the Research Bureau use social media to advertise the online survey tool and poll residents on other topics if the occasion ever arises.*

Finding 3: Many Community Organizations in Worcester Work Towards the Same Goals, But Do Not Collaborate in Collective Action in Achieving Them

The team found that there are many organizations and groups within Worcester that work towards the similar goals, however these groups do not communicate or collaborate in order to achieve these goals together. For instance, in a study of a previous Interactive Qualifying Project that was partnered with the CMRPC, we found that a team of students created a set of indicators

that could be used to track the implications of policies that are created by the government over time (Perry, Temple, 2015). We also discovered in some of our interviews with city officials that the city is currently creating their own indicators that would be able to measure similar trends (Batista, 2017). There were also residents from our Citywide Parental Planning Advisory Committee (CPPAC) focus group that shared this same concern; that many groups in Worcester overlap the work they do instead of collaborating (Citywide Parental Planning Advisory Committee, Focus Group, 2017).

If a greater communication network was created amongst Worcester organizations, there may be more cooperation between these organizations, meaning more work can potentially be completed with less time and money spent. There are certain organizations in Worcester that have large networks spread across the city. One group in particular is the Worcester Regional Chamber of Commerce. The Chamber of Commerce's website itself has a list of hundreds of organizations in Worcester, both local businesses and non-for-profits (Worcester Regional Chamber of Commerce, 2017). Many of these groups have their contact information on the Chamber's website as well. Organizations such as the Chamber of Commerce, who have effective means of communication with a large number of Worcester based organizations, could be of assistance in creating greater communication amongst these groups. Therefore, we recommend that *a listserv of many involved organizations in Worcester could be beneficial in communication amongst these groups, so that joint efforts could be made in solving problems in the Worcester community*.

Conclusion

Worcester is a city that is on the rise. It has a revitalizing down town area and a city government that is focused on creating a thriving and safe community. The involvement by city

residents is important in order for this to successfully occur though. The input that is given by residents is crucial for policy makers to synthesize the opinions and feelings of the community. Organizations like the Worcester Regional Research Bureau provide a comfortable and safe channel for residents to give input on a variety of topics relating to the City of Worcester. It is our belief that the use of the Research Bureau's online survey will produce an accurate representation of the perceptions of residents in Worcester. This information can then be used by the Research Bureau to help promote change in areas where Worcester residents have problems and in conjunction with the city government when creating and revising policies. We believe that the information we gather, along with the Research Bureau's mission of promoting good governance and informed public policy, will assist Worcester in its effort to become a city that promotes the well-being of all.

Appendices

Appendix A: Annual Worcester Community Survey

Block 1: Demographics

This use of this survey is to measure Worcester residents' opinion and perception of the city. We anticipate that by surveying residents over time, we will be able to identify trends in opinions about certain aspects about the city and encourage policy change to benefit these areas. This survey is a collaborative project between the Worcester Regional Research Bureau and the Worcester Polytechnic Institute. All results for this survey will be contained and analyzed by the Worcester Regional Research Bureau, a non-for-profit research organization in Worcester.

Your participation in this survey is completely voluntary and you may withdraw at any time. Your answers with remain anonymous. No names or identifying information will appear on questionnaires or in any of the reports or publications. If interested, a copy of our results could be provided at the conclusion of the study. This survey is estimated to take respondents 5 to 10 minutes to complete. We thank you for your time!

* 1. How old are you?

○ Under 18 years old   ○ 35-44 years old

○ 18-24 years old   ○ 45-64 years old,

○ 25-34 years old   ○ 65 years or older (Participation in this survey requires individuals to be 18 years old or older).

* 2. Do you currently: (Participation in this survey requires individuals to be Worcester residents)

○ Own a home in Worcester

○ Rent in Worcester

○ Do not reside in Worcester

○ Other

[   ]

* 3. How long have you resided in Worcester?

○ 0-2 years   ○ More than 10 years,

○ 3-5 years   ○ Born and raised in Worcester

○ 5-10 years

* 4. Do you identify as: 💬

- ◯ Caucasian
- ◯ Hispanic or Latino
- ◯ Black or African American
- ◯ Other

- ◯ Asian/ Pacific Islander
- ◯ Native American or American Indian
- ◯ Decline to answer

[   ]

Block 2: Broad Questions to be asked year round

* 5. Please rate Worcester from Excellent to Very Poor on the following aspects:

💬

	Excellent	Good	Fair	Poor	Very Poor	Don't know
As a place to live	◯	◯	◯	◯	◯	◯
As a place to raise family	◯	◯	◯	◯	◯	◯
As a place to retire	◯	◯	◯	◯	◯	◯
As a place to work	◯	◯	◯	◯	◯	◯

6. Please rate the following items that may influence your perceptions of Worcester: 💬

	Excellent	Good	Fair	Poor	Very Poor	Don't know
Feeling of safety in the city	◯	◯	◯	◯	◯	◯
Feeling of safety in your neighborhood	◯	◯	◯	◯	◯	◯
Image of the city (How successfully does the city appear to be doing?)	◯	◯	◯	◯	◯	◯
General happiness with life in Worcester (personal experience)	◯	◯	◯	◯	◯	◯

Please add additional comments if you please:

[   ]

* 7. Please indicate your level of satisfaction with the following aspects of Worcester: 💬

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Don't know
Employment Opportunities	○	○	○	○	○	○
Cost of living	○	○	○	○	○	○
Water and Sewage Operations	○	○	○	○	○	○
Street and Sidewalk Conditions	○	○	○	○	○	○
Parks	○	○	○	○	○	○
Worcester Regional Transit Authority	○	○	○	○	○	○
Medical Services	○	○	○	○	○	○
Public Schools	○	○	○	○	○	○
Restaurants	○	○	○	○	○	○
Business Districts/Shopping	○	○	○	○	○	○
Nightlife	○	○	○	○	○	○
Museums/Tourist Attractions	○	○	○	○	○	○
Recreational Activities (i.e. movies, bowling, gym, sports, etc.)	○	○	○	○	○	○

* 8. Out of the aspects of Worcester listed in Question 7, which FOUR do you believe are the most important? 💬

	First	Second	Third	Fourth
Employment Opportunities	○	○	○	○
Cost of living	○	○	○	○
Water and Sewage Operations	○	○	○	○
Street and Sidewalk Conditions	○	○	○	○
Parks	○	○	○	○
Worcester Regional Transit Authority	○	○	○	○
Medical Services	○	○	○	○
Public Schools	○	○	○	○
Restaurants	○	○	○	○
Business Districts/Shopping	○	○	○	○
Nightlife	○	○	○	○
Museums/Tourist Attractions	○	○	○	○
Recreational Activities (i.e. movies, bowling, gym, sports, etc.)	○	○	○	○

Please add additional comments if you please:

* 9. Out of the aspects of Worcester listed in Question 7, which FOUR do you believe need the most improvement? 💬

	First	Second	Third	Fourth
Employment Opportunities	○	○	○	○
Cost of Living	○	○	○	○
Water and Sewage Operations	○	○	○	○
Street and Sidewalk Conditions	○	○	○	○
Parks	○	○	○	○
Worcester Regional Transit Authority	○	○	○	○
Medical Services	○	○	○	○
Public Schools	○	○	○	○
Restaurants	○	○	○	○
Business Districts/Shopping	○	○	○	○
Nightlife	○	○	○	○
Museums/Tourist Attractions	○	○	○	○
Recreational Activities (i.e. movies, bowling, gym, sports, etc.)	○	○	○	○

Please add additional comments if you please:

* 10. Compared to several years ago, how do you think the overall quality of life in Worcester has changed? 💬

○ Much better   ○ A little worse

○ A little better   ○ Much worse

○ About the same   ○ I don't know

* 11. Please rate your satisfaction with the following communication channels: 💬

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Don't Know
Availability of information about city programs and services	○	○	○	○	○	○
Usefulness of city's website	○	○	○	○	○	○
Opportunity to give input into decisions made by city	○	○	○	○	○	○
City's use of social media	○	○	○	○	○	○

Block 3: Questions to be asked in winter

* 12. Please rate your satisfaction with the following aspects of street, sidewalk, and crosswalk infrastructure and conditions in Worcester:

	Very Satisfied	Satisfied	Nuteral	Dissatisfied	Very Dissatisfied	Don't know
Conditions of city streets	○	○	○	○	○	○
Conditions of streets in your neighborhood	○	○	○	○	○	○
Conditions of city sidewalks (potholes, width, ice/snow conditions, etc.)	○	○	○	○	○	○
Conditions of sidewalks in your neighborhood (potholes width, ice/snow conditions, etc.)	○	○	○	○	○	○
Lighting of public streets and sidewalks	○	○	○	○	○	○
Conditions of crosswalks and other pedestrian amenities	○	○	○	○	○	○
Availability of street parking in the city year round	○	○	○	○	○	○
Availability of street parking in your neighborhood year round	○	○	○	○	○	○
Snow removal in the city	○	○	○	○	○	○
Snow removal in your neighborhood	○	○	○	○	○	○

Please add additional comments if you please:

[   ]

Block 4: Questions to be asked in spring

* 12. Please rate your satisfaction in relation to public schools in Worcester: 💬

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Don't Know
Overall quality of the public schools	○	○	○	○	○	○
Quality of the technology available to students in the public schools	○	○	○	○	○	○
Quality of instruction in the public schools	○	○	○	○	○	○
Quality of technology instruction in the public schools	○	○	○	○	○	○
Quality of after school programs provided by public schools	○	○	○	○	○	○

* 13. Please rate your satisfaction with the following in regards to public health in Worcester:

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Don't Know
Availability of gyms and safe exercise spaces	◯	◯	◯	◯	◯	◯
Availability to healthy and affordable foods	◯	◯	◯	◯	◯	◯
Quality of medical services	◯	◯	◯	◯	◯	◯
Availability of services for family and children such as vaccines	◯	◯	◯	◯	◯	◯

* 14. Are you concerned with the level of crime in Worcester?

◯ Yes

◯ No

◯ Sometimes

◯ I don't know

Please add additional comments if you please:

[   ]

Block 5: Question to be asked in summer

* 12. Please rate your satisfaction with the following aspects of street, sidewalk, and crosswalk infrastructure and conditions in Worcester:

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Don't know
Conditions of city streets	◯	◯	◯	◯	◯	◯
Conditions of streets in your neighborhood	◯	◯	◯	◯	◯	◯
Conditions of city sidewalks (potholes, width, ice/snow conditions, etc.)	◯	◯	◯	◯	◯	◯
Conditions of sidewalks in your neighborhood (potholes, width, ice/snow conditions, etc.)	◯	◯	◯	◯	◯	◯
Lighting of public streets and sidewalks	◯	◯	◯	◯	◯	◯
Conditions of crosswalks and other pedestrian amenities	◯	◯	◯	◯	◯	◯
Union Station (frequency of available trains for travel)	◯	◯	◯	◯	◯	◯
Worcester Regional Airport	◯	◯	◯	◯	◯	◯
Worcester Regional Transit Authority	◯	◯	◯	◯	◯	◯
Conditions of bicycle lanes and bicycle kiosks (availability, safety, quality, etc.)	◯	◯	◯	◯	◯	◯

* 13. Please rate your satisfaction with the following aspects of parks and recreation in Worcester:

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Don't know
Quality of public parks (Aesthetics and activities available)	○	○	○	○	○	○
Cleanliness of public areas (Public restrooms. Parks, downtown, etc.)	○	○	○	○	○	○
Public recreational activities	○	○	○	○	○	○
Quality of community centers	○	○	○	○	○	○

Block 6: Questions to be asked in fall

* 12. Are you concerned with the level of crime in Worcester?

○ Yes

○ No

○ Sometimes

○ I don't know

Please add additional comments if you please:

[   ]

* 13. Please rate your satisfaction in relation to public schools in Worcester:

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied	Don't know
Overall quality of the public schools	○	○	○	○	○	○
Quality of the technology available to students in the public schools	○	○	○	○	○	○
Quality of instruction in the public schools	○	○	○	○	○	○
Quality of technology instruction in the public schools	○	○	○	○	○	○
Quality of after-school programs provided by public schools	○	○	○	○	○	○

End of Survey

14. Please add any additional comments about Worcester if you please:

[   ]

Appendix B: Survey for Worcester College Students

WPI

We are a group of students from Worcester Polytechnic Institute (WPI). We are conducting a survey to analyze Worcester college and university students retention in the city. The goal of this research is to understand feelings and opinions of transitive groups, such as college students, in Worcester. This is a collaborative project between the Worcester Regional Research Bureau and WPI. Your participation is greatly appreciated.

Your participation in this survey is completely voluntary and you may withdraw at any time. Your answers will remain anonymous. No names or identifying information will appear on the questionnaires or in any of the project reports or publications. If interested, a copy of our results can be provided at the conclusion of the study. If you have any questions, you may contact us at worcesterinitiative@wpi.edu. You may also contact our faculty advisor, Corey Dehner, at cdehner@wpi.edu.

→

WPI

1) Which college/university in Worcester do you currently attend?

- ○ Assumption College
- ○ Becker College
- ○ Clark University
- ○ College of the Holy Cross
- ○ MCPHS University
- ○ Quinsigamond CC
- ○ UMass Medical School
- ○ Worcester Polytechnic Institute
- ○ Worcester State University

2) Do you currently:

- ○ Commute to school from a location outside of Worcester
- ○ Commute to school from an off campus location in Worcester
- ○ Live on campus in Worcester

3) When school is not in session, do you:

- ○ Live in Worcester
- ○ Live at home
- ○ Live at another location

4) How would you rate your time in Worcester so far?

○ Excellent
○ Good
○ Average
○ Poor
○ Terrible
○ I don't know

5) Please rate the following amenities as seen or experienced in Worcester:

	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
Streets and Sidewalk conditions	○	○	○	○	○
Parks	○	○	○	○	○
Public Transportations	○	○	○	○	○
Restaraunts	○	○	○	○	○
Business Districts/ Shopping	○	○	○	○	○
Nightlife	○	○	○	○	○
Museum and Tourist Attractions	○	○	○	○	○
Recreational Activities (movies, bowling, gym, sports, etc.)	○	○	○	○	○

6) Do you intend on staying in Worcester after you are done with your education at your college/university?

○ Definitely yes
○ Probably yes
○ Might or might not
○ Probably not
○ Definitely not
○ I don't know

7) Check off any of the factors below that may be reasons that you would stay in Worcester: (can check more than one)

☐ Employment Opportunities
☐ Graduate school or other opportunities in Worcester
☐ Family in or around Worcester
☐ Cost of housing
☐ Cost of living
☐ Recreational activity
☐ Physical infrastructure of Worcester (historic buildings, business districts, large populations, etc.)
☐ Other

8) Check off any of the factors below that may be reasons that you would NOT stay in Worcester: (can check more than one)

- ☐ Employment opportunities elsewhere
- ☐ Graduate school or other opportunities elsewhere
- ☐ Family away from Worcester
- ☐ Cost of housing
- ☐ Cost of living
- ☐ Limited recreational activity
- ☐ Crime rate
- ☐ Physical infrastructure of Worcester (historic buildings, business districts, large populations, etc.)
- ☐ Other

WPI

We thank you for your time spent taking this survey.
Your response has been recorded.

Appendix C: Focus Group Questions

We are a group of students from Worcester Polytechnic Institute in Massachusetts. We are conducting focus groups with individuals like yourself so that we can be better prepared to create a community survey for the Worcester Regional Research Bureau. Your participation in this session is completely voluntary and you may withdraw at any time. Please remember that your answers will remain confidential. No names or identifying information will appear on the results or in any of the project reports or publications. This is a collaborative project between the Worcester Regional Research Bureau and WPI. We would just like to make it clear that we are not affiliated with the city's current efforts. Although our work may assist their efforts, our work is independent from theirs. If interested, a copy of our results can be provided at the conclusion of the study.

As many of you may know, Worcester government is in the process of developing a Strategic Plan to benefit the city. The Plan has four main goals, but the content of these goals is going to rely in part on the input received from Worcester residents. Our sponsor, the Research Bureau, believes that it's important that residents are not just surveyed once, but that residents should have an avenue to have their opinions heard on a constant basis. As a result, we are tasked with creating a tool that will allow the Research Bureau to identify trends in residents' opinion over time. In order to do this, we are trying to gather some initial input on how residents prefer to have their voice heard, how they prefer to receive information from the city, and if they have any general complaints or comments about Worcester that they believe the city government does not focus on.

First, we would just like to start by asking, what are some of your favorite aspects of Worcester?

1. Now of days, there are so many means of communication. There is mail, email, phones, social media, and of course in person contact. Information is constantly being distributed through all these means. As residents in a large city, it is important that we are all constantly keeping up to date on the actions of the government. In your opinions, what are some of the better ways to receive information from the City of Worcester?

2. Likewise, it is important that we have means to have our voices heard by the city government about any concerns we may have about Worcester. How do you all prefer to give information to the city?

3. As we said earlier, the city is trying to gauge opinions from Worcester residents. One way in which they plan on doing this is through the use of a survey. As a team, we are also planning on including some sort of survey into our online tool we are creating for the Research Bureau. In order for us to increase our efficiency of our survey, we would like to know what some reasons are that you guys might respond to a survey. What are some reasons why you might not respond to a survey?

4. What would you be more likely to respond to, an online survey or a paper survey? Why?

5. Do you see any specific area that the city of Worcester can improve in?

Appendix D: Interview Questions for Researchers

We are a group of students from Worcester Polytechnic Institute in Massachusetts. We are conducting interviews with researchers so that we can better understand government-resident communication. This is a collaborative project between the Worcester Regional Research Bureau and WPI. Your participation is greatly appreciated, and if you are interested a copy of the results can be provided at the conclusion of our study.

Your participation in this interview is completely voluntary and you may withdraw at any time. Please let us know if you would like us to keep your name confidential, or if it is okay to use your name in our report.

1) We have all read your report, _____, and we feel that is relates closely to our project. Could you tell us about the origin of your work and what you were looking to accomplish?

2) How long have you been conducting this work? How long did it take you to realize trends in your results? (If applicable)

3) How could your method for your study been improved? What worked well and what did not work as well as planned?

4) What suggestions do you have for us?

5) *Question specific to individual being interviewed*

Appendix E: Interview Questions for City Officials

We are a group of students from Worcester Polytechnic Institute in Massachusetts. We are conducting interviews with city employees and volunteers in Worcester so that we can be better understand government-resident communication in Worcester. This is a collaborative project between the Worcester Regional Research Bureau and WPI, and your participation is greatly appreciated. If interested, a copy of our results can be provided at the conclusion of the study.

Your participation in this interview is completely voluntary and you may withdraw at any time. Please let us know if you would like us to keep your name confidential, or if it is okay to use your name in our report.

1) Could you explain how, if in any way, your office assist residents in having their voices properly heard?

2) What are the main avenues in which your office provides information to residents on different events, programs, and services you run? Which means of communication do you believe work the best?

3) What are the main avenues in which residents can provide comments, concerns, or feedbacks to your office? Again, which means of communication do you believe work the best?

4) Is there anyone else that you believe we should reach out to that has an important role in government-resident communication?

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