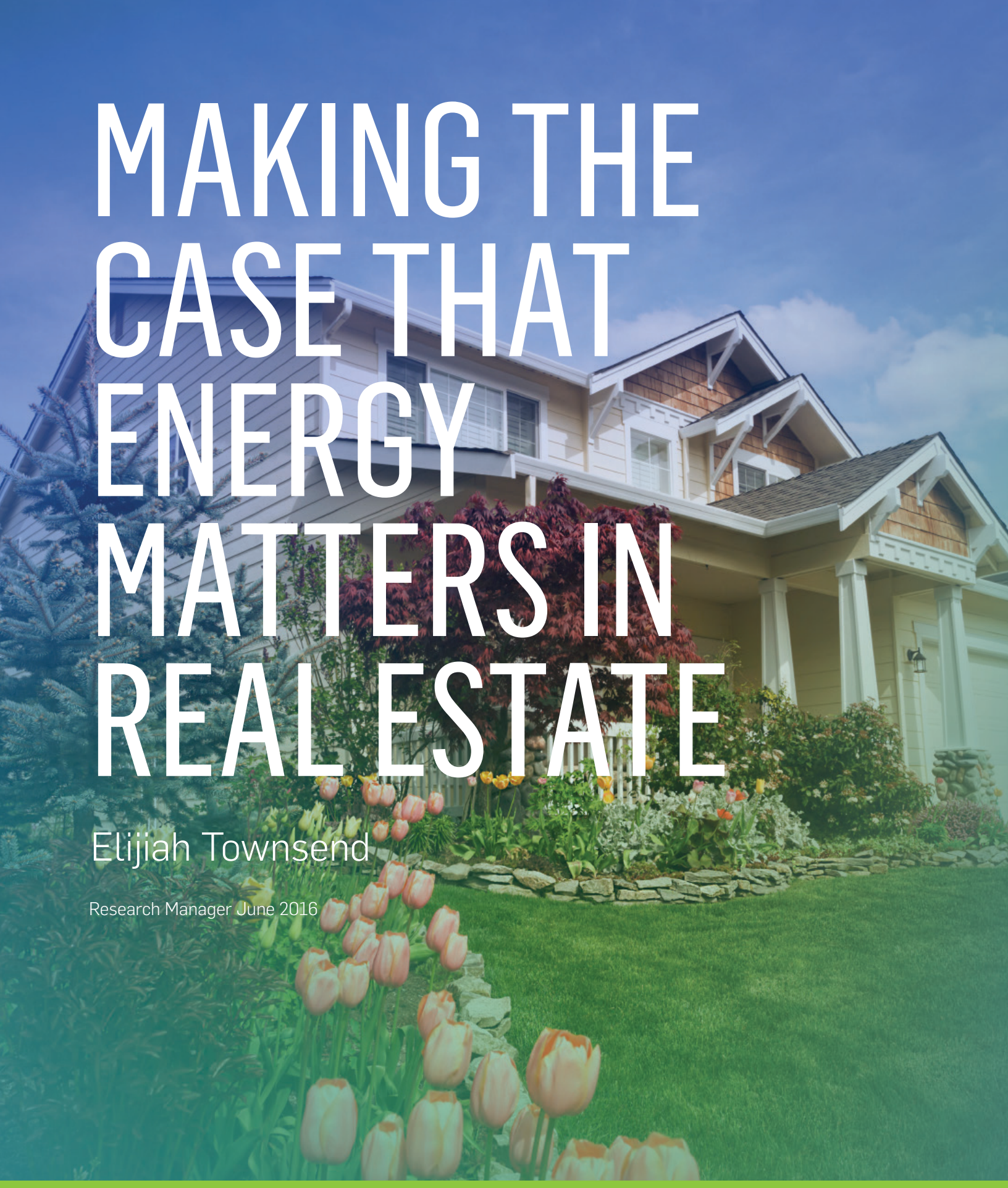

MAKING THE CASE THAT ENERGY MATTERS IN REAL ESTATE

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Abstract

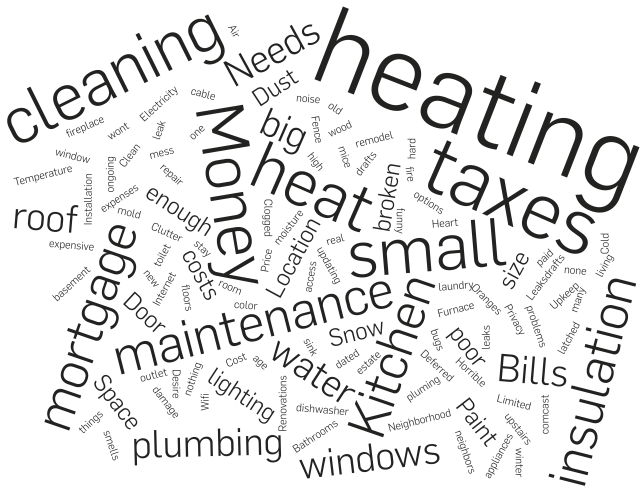
Today's home buyers care more about energy-related information than ever before. When looking for homes via search portals, they rank energy usage as the second most important category of home information, right behind crime. They seek to create idealized spaces within their home by solving physical problems - fixing broken appliances, making aesthetic upgrades and maximizing their comfort. Our research shows that 1 out of 3 problems people face in the home are energy-related. In addition, consumers are thinking about energy usage frequently - but not always in context of their monthly bills. Instead, they are seeking to solve practical problems. This requires new types of energy information - many consumers are already covering the basic energy efficient behaviors like thermostat and light discipline. They want advanced tips and information that goes beyond the basics and contextualizes recommendations with real world problems. Tendril's Insights Team has identified a need for this next level energy intelligence, and we believe that the real estate industry is uniquely positioned to be a trusted advisor across a homeowner's lifecycle.

INTRODUCTION

During the first quarter of 2016, Tendril's Insights Team engaged in a broad research project with the goal of understanding how people think about and engage with energy in their homes. In particular, we were interested in how consumers use energy products and alter behavior to confront and solve "real world" problems around the home. In the first iteration of this research (Report #1, Appendix A), we identified a distinct difference between consumer perception of "things" and "spaces" in the home. While typical homeowner complaints center on material items - energy bills, leaky faucets, drafty windows - they also aspire to create cohesive, abstract spaces, e.g. cozy bedrooms, comfortable living rooms, picturesque yards, etc. Solving material problems directly relates to creating these desired spaces, and Tendril's task is to help people create them by solving material energy-related problems. With this in mind, the Insights Team set out to investigate if/how these problems were connected to energy, as well as how consumers view energy in relation to other concerns, particularly during a home search/sale.

PROBLEMS AND SOLUTIONS

To begin, we revisited some surveys from the first iteration, particularly one in which we asked, "What is the biggest problem you have with your home?" (Survey #1, Appendix A) Parsing through open-ended responses, we found that approximately 1 out of 3 problems people have with their homes are energy related - uneven heating, high bills, old appliances, etc. In particular, heating-related issues were the most common. In many



cases, consumers are simply trying to solve practical problems. Take, for example, a recent survey we conducted in which we asked individuals what they did to save energy during hot summer months (Survey #2, Appendix A). The most common answer, surprisingly, was "nothing." However, when we instead asked what they did to stay comfortable during hot weather, they named a variety of common behaviors that do, in fact, save energy - opening windows, using fans, dressing lighter instead of using A/C, etc. (Survey #3, Appendix A).

In short, energy issues are pervasive in the home, but consumers are not necessarily focused on energy efficiency in the traditional sense. More often than not, they are trying to solve practical problems like staying cool, making their bedroom more "cozy," or replacing a broken appliance.

BEYOND THE ENERGY BILL

Taking this a step further, it's worth noting that while the energy industry often conflates energy efficiency and saving money, there is a useful distinction to be made between purely monetary worries and energy concerns in general. While our past focus group participants have typically stated that they only think about their energy costs on a monthly basis (i.e. when they receive their bill), a recent survey we conducted shows that 51% of people think about energy usage in the home on at least a weekly basis (Survey #4, Appendix A).

This naturally leads to a follow-up question...What are consumers thinking
about between bills? To drill down further, we deployed another survey, this time asking what energy-saving tasks they engaged in the most (Survey #5, Appendix A). The top responses were adjusting the thermostat and turning off unused appliances/lights, deeply ingrained actions that simply go without saying most of the time.

This tells us two things: first, it corroborates our early study, showing that people really are thinking about energy use on a daily/weekly basis. These are conscious, deliberate decisions that recur on a daily basis. Second, it tells us that most people are already covering the basics of energy conservation.

If a company is instructing the average American to turn off unused lights or adjust the thermostat to save energy, they have already lost them. Modern homeowners need next level information.

So, to briefly recap:

a. Homeowners want to create desirable spaces in their home by solving material problems,

b. A substantial portion of those problems are energy-related,

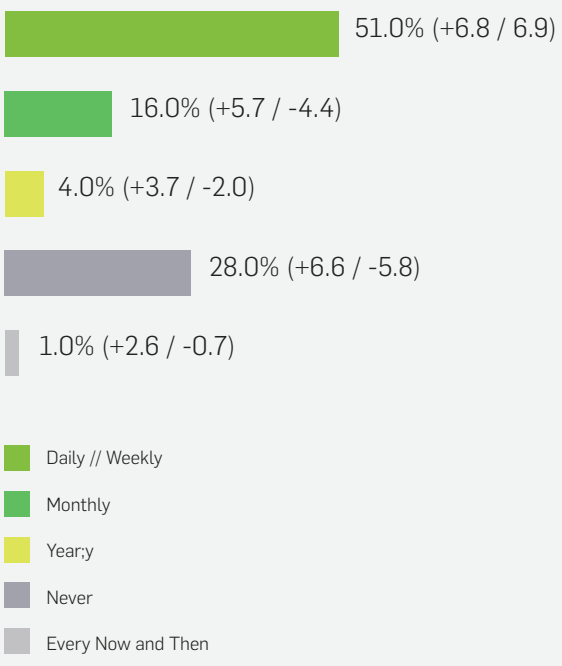
c. Consumers think about energy in more diverse terms than just utility bills,

d. Most consumers already have the basics covered.

They need next level energy information.

HOW OFTEN DO YOU THINK ABOUT ENERGY USE IN YOUR HOME?

Results for all respondents*. Weighted data unavailable for this view. (200 responses).Confidence too close to call..



*Methodology: Conducted by Google Consumer Surveys, April 12, 2016 - April 17, 2016 and based on 200 online responses. Sample: National adult Internet population.

WHICH OF THESE IMPROVEMENTS ARE ALL RESPONDENTS MORE INTERESTED IN?

Results for all respondents. Weighting Off. (201 responses)
Winner statistically significant

Kitchen Remodel

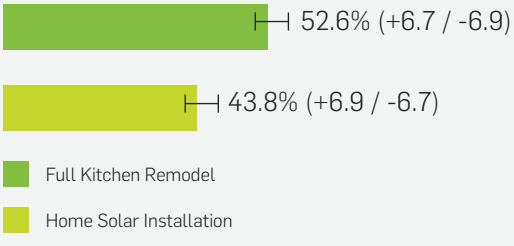
+18K Home Value

Project Cost: $1,600

Home Solar Installtion

+Save $165/Month

Project Cost: $15,540



*Methodology: Conducted by Google Consumer Surveys, April 12, 2016 - April 17, 2016 and based on 201 online responses. Sample: National adult Internet population.

ADVANCED INTELLIGENCE

This is where Tendril's expertise comes in. As an industry leader in providing energy intelligence; we've been working on identifying new, innovative ways to reach consumers with useful information. To that end, our Q1 research also focused on how different forms of energy intelligence compared to existing information streams currently available to homeowners.
Do consumers want advanced energy intelligence? If so, in what context?

Our most recent surveys have shown that large scale energy upgrades compare favorably with purely aesthetic kitchen and bathroom remodels in the search portal environment (Surveys #6, #7, #8, Appendix A).

WHICH OF THESE IMPROVEMENTS ARE HOMEOWNERS MORE INTERESTED IN?

Results for all respondents with demographics. Weighted by Age, Gender. (82 responses) in order to match U.S. national population. Winner statistically significant

Full Bathroom Remodel

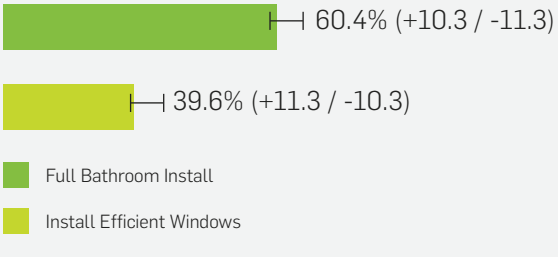
+17K Home Value

Project Cost: $14,000

Install Efficient Windows

Save $350/Year

Project Cost: $11,000



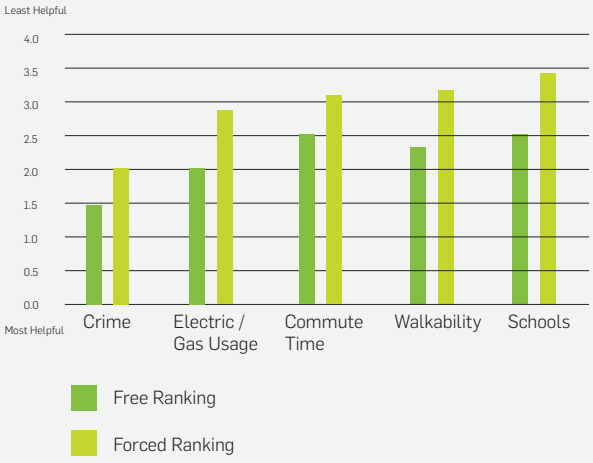
*Methodology: Conducted by Google Consumer Surveys, April 12, 2016 - April 17, 2016 and based on 82 online responses. Sample: National adult Internet population.

To test this, we inserted solar installations and upgraded efficient windows into advertisements side by side with common, highly valued aesthetic upgrades, showing them to survey respondents side by side.

The results show that energy upgrades can hold their own against even the most valued aesthetic upgrades, especially when emphasizing monthly savings figures. When testing both solar installations and efficient windows, efficient upgrades were preferred at least 40% of the time. We believe that the addition of monthly savings figures instead of only the projected home value increase is important for UX presentation. In an earlier iteration, we tested solar installations with home valuation instead of monthly savings and it was preferred only 36.6% of the time, as opposed to 43.8% for the later iteration. In any case, the performance of efficiency upgrades in this test is important, as kitchen/bathroom remodels are consistently among the most desired home upgrades which is why content platforms consistently emphasize them. Our research shows that energy upgrades deserve a place on these platforms as well.

Beyond just flashy upgrades, however, our research shows that consumers have a real desire for comprehensive energy information over other types of information currently displayed on search portals (Survey #9, Appendix A). As part of our Q1 research initiative, we took examples of different "widgets" (crime data, school information, commute time, WalkScore), extracted from existing search portal websites, and put them side-by-side with our current energy intelligence dashboard (i.e. Electric/Gas Usage). The dashboard consistently ranked second only to crime data, well ahead of other information streams currently available on top search portal websites (rankings are 1-5, so lower scores represent higher rankings).

IF YOU WERE LOOKING AT A HOME ONLINE, WHICH TYPE OF INFORMATION BE MOST HELPFUL TO YOU?



These information categories are secondary to the top homebuyer concerns - size, location, price - but provide a valuable source of engagement and site traffic. It's also worth noting that energy information, of all the widgets tested, is the only one that is not widely available on any large real estate website, underlining a significant market opportunity.

CONCLUSION

So what does all this tell us? It tells us that SAmericans are thinking about energy quite frequently, often in context of day to day problems they're having with their homes. It tells us that energy issues play into top-of-mind cost and comfort issues, even when homeowners don't realize it. They're already doing the basics, and they want advanced energy intelligence, illustrated by their preference for the comprehensive energy dashboard. Energy information is one of the few resources that the real estate industry does not provide on a large scale to its customers. There is an opportunity for the real estate industry become a trusted energy advisor for consumers, providing the advanced energy intelligence they seek. Help the real estate industry become a trusted energy advisor for consumers, providing the advanced energy intelligence they seek.

To learn more about Tendril, contact us:

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NOTES ON METHODOLOGY:

Tendril's Insights Team takes a heterogeneous approach to research and testing, relying heavily on qualitative, ethnographic research. We utilize a broad spectrum of methods, including small and medium scale web-based surveys, secondary research, and qualitative interviews.

While we sacrifice some statistical significance with this approach, we can craft a fine-grained, realistic narrative of consumer expectations and desires by stitching together diverse pieces of research. For all cited surveys, we utilized either Google Consumer Surveys or SurveyMonkey's "Audience" feature.

Unless otherwise noted, all surveys were deployed to a nationwide, adult audience without any identifiable demographic skewing. Members of the insights team conducted qualitative interviews in-house, typically reimbursing interviewees for their time with a small Starbucks gift card.

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APPENDIX A:

Report #1
"Consumer Energy Sentiment Block 1 Summary"
Author: Elijiah Townsend Date: MAR16
Notes: Internal report

Survey #1
"What is the Biggest Problem You Have With Your Home?"
Date: 06JAN16
Platform: Google Consumer Surveys
Sample Size: 205
Notes: Open Ended

Survey #2
"What Do You Do to Save Energy During Hot Weather?"
Date: 11MAY16
Platform: Google Consumer Surveys
Sample Size: 100
Notes: Open Ended

Survey #3
"What Do You Do to Stay Comfortable During Hot Weather?"
Date: 11MAY16
Platform: Google Consumer Surveys
Sample Size: 100
Notes: Open-Ended

Survey #4
"How Often Do You Think About Energy Use in Your Home?"
Date: 12APR16
Platform: Google Consumer Surveys
Sample Size: 200
Notes: Multiple Choice

Survey #5
"What Do You Do Around the House to Reduce Energy Use?
Date: 12APR16
Platform: Google Consumer Surveys
Sample Size:
Notes:

Survey #6
"Solar vs Kitchen Remodel Comparison"
Date: 22-26APR16
Platform: Google Consumer Surveys
Sample Size: 403
Notes: Two iterations (monthly savings, home value improvement), this-or-that

Survey #7
"Window Upgrade vs Bathroom Remodel Comparison"
Date: 26APR16
Platform: Google Consumer Surveys
Sample Size: 100
Notes: This-or-that

Survey #8
"Which of These Home Improvement Projects Are YouMost Interested In?"
Date: 15MAR16
Platform: Google Consumer Surveys
Sample Size: 445
Notes: Multiple Selection, two iterations

Survey #9
"Search Portal Widget Comparison"
Date: 03MAY16
Platform: SurveyMonkey
Sample Size: 559
Notes: Multi-part survey