Evaluating a Campaign to Increase Demand for Energy Efficient Commercial Buildings

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ABSTRACT

In 1999, the Board of Directors of the Northwest Energy Efficiency Alliance (the Alliance) implemented a regional public information campaign (RPIP) to increase demand for energy-efficient new buildings. Market research with consumers, businesses and trade allies throughout the region led the Alliance to focus on new commercial construction.

The campaign evolved to include a website, television and a print advertising campaign promoting the *betterbricks.com* website. Once at the website, users see information focused on ways to enhance worker productivity using different design solutions for lighting, daylighting, temperature control and ventilation. Website users can request that an advisor spend four hours with them at no cost, reviewing specific construction projects to explore how these solutions can be incorporated into their projects. The television advertising campaign was initiated May 1, 2000, and ran through September 30, 2000. The print media campaign was initiated May 1, 2000, and ran through March 2001.

First-year evaluation results found a 4% awareness of the *betterbricks.com* brand. The TV advertising was responsible for most of this awareness. However, the focus group research suggests that print media, if better placed and more carefully targeted, can expand on this awareness more cost effectively than TV advertising.

Introduction

The Regional Public Information Program (RPIP) is part of an effort called the Efficient Building Practices Initiative (EBPI), which the Northwest Energy Efficiency Alliance (the Alliance) established in 1998. The goal of the RPIP is to increase the demand for highly energy-efficient buildings over a 20-year period.

The RPIP is rooted in a market assessment for building codes conducted for the Alliance in 1998. The assessment proposed that the Alliance "create a strong market pull...based on **demand for the benefits** conferred by energy codes" (Heschong-Mahone 1998, 40). The authors recommended that a "savvy public relations firm" be hired to promote code benefits with the general public, new homebuyers, commercial owners and tenants, and government officials who manage building departments.

The Alliance conducted a competitive solicitation in 1999 to identify an advertising firm to assist them in the process of developing the RPIP. The solicitation resulted in the Alliance contracting with Cole & Weber, a Northwest-based advertising firm, to develop a regional public information campaign.

A competitive solicitation for an evaluation contractor was also conducted. The evaluation contract was awarded in the fall of 1999, just as the campaign was nearing final conceptual design. As the EBPI Steering Committee met with the advertising company to resolve the final design of the campaign, the evaluation team attended the meetings and developed an evaluation plan to measure the effects of the campaign.

The Campaign Development Process

The EBPI Steering Committee is a subcommittee of the Alliance Board of Directors. The Steering Committee oversees the RPIP and asked Cole & Weber to conduct market research to help develop a message for the campaign. The market research, consisting of in-depth interviews, focus groups and a review of the literature, was completed in the spring of 1999. Interview and focus group participants included supply-side providers such as architects, engineers and real estate professionals, and demand-side purchasers such as homeowners, business owners and influential commercial business employees.

The market research revealed that energy efficiency was not "top-of-mind" with any of these groups. Furthermore, the residential group participants did not respond to potential benefits of energy efficiency, such as sustainability or an improved environment. The focus groups with supply-side professionals revealed they were skeptical of being able to sell energy efficiency in buildings. Only with business respondents did the research identify a "powerful hook;" connecting energy-efficient buildings with increased worker *productivity.*

Cole & Weber presented the initial market research key lessons to the EBPI Steering Committee in October 1999, and recommended that the RPIP:

- Focus upon the commercial sector.
- Target primarily employees and decision-makers in businesses, with a secondary focus on architects, developers, real estate brokers and government agencies.
- Develop a brand focus, taking a business point of view, centered on productivity and empowerment – "Evangelists for a better way to work." Energy efficiency, while still the concern, would not be in the central campaign message.
- Develop a product – a website that would "give them a place to go." This product would be bolstered by more traditional public information efforts to "drive" target audiences to the website.

The Campaign

The Alliance Board of Directors adopted the recommended strategy and Cole & Weber proceeded to develop a business model for the campaign, along with a statement of objectives for each of the components.

The business model is predicated on building "brand awareness" for the website *betterbricks.com*, which then leads the end-user to request help with creating highly energy-efficient workspaces or buildings using design guidelines (a toolkit) available through *betterbricks.com* and the advocacy campaign (Cole & Weber 1999).

The components of the campaign include mass media and print advertising, a public relations effort, the *betterbricks.com* website (including an Advisory Service with four hours of free on-site consulting available), material for the website and distribution of informational materials (such as brochures) to interested decision-makers.

At the May 1, 2000, launch of the *betterbricks.com* campaign, the RPIP was focused on the *betterbricks.com* brand and its associated components: a referral service and design guidelines.

The Evaluation

The evaluation design provides both real time information and an end-of-contract-term assessment of all campaign accomplishments. The evaluation, included a variety of activities:

- A baseline and follow-up survey with the target markets;
- Focus groups assessing response to the RPIP media efforts by target markets;

- Analysis of data collected at the website and through use of the website advisory service; and
- A usability test of the RPIP campaign website.

The following describes the method used for each aspect of the evaluation, except for the usability tests, which are reported elsewhere.[1]

Survey Methodology

Demand Side Markets. We generated the sample for the baseline and follow-up survey in the same manner. We purchased a list of commercial establishments located in the four-state Pacific Northwest and selected SIC codes corresponding with offices and schools, wholesale and retail stores, healthcare establishments and financial institutions. We identified those with more than 20 employees and called the selected businesses. Once we reached someone, we asked to speak to "a person in your organization who makes or influences decisions about the space where your employees work." Once we were connected with the individual, we verified that he or she did make or influence such decisions. This screening process determined whether the respondent was a "decision-maker" or "influential-staff."[2]

For the follow-up survey, we allocated the sample roughly evenly between newly contacted respondents and respondents with whom we had spoken in the baseline study. By re-contacting those with whom we had previously spoken, we could employ a panel method to assess changes in attitudes over time. Table 1 shows the sample distribution in terms of decision-makers and influential staff, and new and repeat respondents.

Table 1. Follow-Up Sample Distribution by Respondent Type (n=1,018)

Position In Firm	Interview Group		Total
	New Group	Repeat Group	
Decision-Maker	321	200	521
Influential staff	249	248	497
Total	570	448	1,018

Supply-Side Markets. We used different approaches for the baseline and follow-up surveys with supply-side actors. The *betterbricks.com* media plan targeted information on systems that architects and developers address (e.g., lighting and HVAC), therefore we selected these two supply-side groups as the populations to survey for the baseline.

We interviewed just over 100 architects and developers in the Pacific Northwest whose business focus was commercial buildings. The interviews were conducted during the first two weeks of May 2000. We drew the sample of architects from the 1998 roster of the Pacific Northwest chapters of the

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[1] Dethman, Peters & Gordon 2001.

[2] Though the baseline includes general commercial employees as well as decision-makers and influential staff, general commercial employees were not included in the follow-up because those who participated in the usability study did not feel that the ads or website was designed for them. This, coupled with indications from the volume of website traffic and help desk use, suggested that resources should be focused on the most important actors targeted by the campaign – the influential staff and decision-makers.

American Institute of Architects (AIA) and the sample of developers from a purchased list of businesses whose SIC code corresponded with development.

Table 2 presents the number of individuals surveyed by type of firm and state. The sample distributions by state reflect population proportions.

Table 2. Number of Interviews by Target Audience and State

State	Architects	Developers	Total
Idaho	5	6	11
Montana	5	3	8
Oregon	16	13	29
Washington	28	26	54
Total	54	48	102

When it came time to conduct the follow-up survey, several aspects of the supply-side campaign had not been implemented. Therefore, we piggybacked the *betterbricks.com* awareness questions on a survey of architects conducted for the Alliance's *Architecture+Energy* program (A+E). To implement that survey we purchased a business list of all 1,800 Pacific Northwest architectural firms from InfoUSA. We integrated that list with lists from three other sources: firms listed in the most recent AIA member database, firms that participated in A+E, and firms that Research Into Action, Inc. (RIA) had previously interviewed.

We drew two samples: *participating firms* – firms with staff that participated in A+E (in the Alliance funding period), and *nonparticipating firms* – firms without such staff. For the participating firms, we attempted to identify a participating individual.

For nonparticipants we stratified the list by firm size to match the participant list. We randomly selected firms to call in each size category and asked to speak to a principal or project director. To ensure inclusion of design/build firms, we also contacted general contracting companies and developers and identified those with architects on staff. Table 3 displays the results of the sampling strategy. This sampling strategy was then used to develop the weights for each stratum.

Methodology for Assessing Awareness. During the period between the baseline and first follow-up studies, advertisements for *betterbricks.com* appeared both on television and in business and trade publications. The questionnaire poses a series of questions to assess whether the respondents recalled seeing any *betterbricks.com* ads.

We included a set of questions to obtain unaided recall of the ads and the ad sponsor, *betterbricks.com*, asking whether the contact had "seen or heard any advertising or news stories about a website that provides information on improving productivity in commercial buildings." We followed up with those who said they had, asking where they recalled seeing the ad or story, what they recalled seeing, whether they recalled the sponsor and, if so, who the sponsor was. This set of questions enabled us to assess whether or not the respondents definitely or likely saw a *betterbricks.com* ad or news story and whether or not they could recall the *betterbricks.com* name on their own.

Table 3. Sample for Survey

Number of Employees in Firm	Population of A+E Participant Firms	Completed Interviews	Population of A+E Non-Participant Firms	Completed Interviews	Population of Non-Residential Architec-ture Firms	Total Complete Interviews
>50	17	11	18	12	35	23
20-50	19	14	52	12	71	26
10-19	11	6	90	11	101	17
5-9	18	7	240	10	158	17
1-4	~40[a]	5	~140[b]	5	~180	10
Total	105	43	540	50	545	93

a. The participant and nonparticipant populations include many small firms that primarily do residential design. These firms were screened out during calls to request interviews and the proportion of all firms in the population doing nonresidential was estimated from the calls that were made.

b. The number of nonparticipants in the size range of 1-4 are only those from the InfoUSA database, not the AIA directory, since the AIA directory lists individuals. Nor does the total include firms identified with architects who do general construction or development. Furthermore, the total number of firms was adjusted to estimate those doing only nonresidential design.

We also developed a set of questions to obtain aided recall of the website name for all other respondents. We asked if they had "seen or heard anything about an organization or website called *betterbricks.com*." Of respondents who said they had, we asked where they had seen the information and what they recalled seeing to assess whether or not these respondents definitely or likely knew of *betterbricks.com*.

We determined those who did not recall a *betterbricks.com* ad or story at the time of the interview by their response to the aided and unaided questions. Either the respondent said they did not recall such an ad or story or said that they did recall such an ad but then could provide no details or provided incorrect details (e.g., "It was telling you about workshops you could attend to learn how to improve employee productivity.").

Focus Group Methodology

We selected three key audiences for focus groups to explore target market reaction to the media messages in the television and magazine ads. We structured the groups to represent both demand-side and supply-side actors:

- *Decision Makers and Influential Staff* – because they may have immediate opportunities to decide on or influence physical workspace decisions. We split this pool into movers and non-movers:
  - *Movers* (9 participants) – Decision-Makers/Influential staff who had recently moved or were in the process of moving; and
  - *Non-Movers* (8 participants) – Decision-Makers /Influential staff who had not recently moved and were not contemplating a move.

- *Developers/Real Estate Brokers* (9 participants) – because they are key actors in determining the future of new commercial building design through their contacts with tenants and owners.

The focus groups were held in the Portland area in mid-October 2000, with a total of 26 participants attending (as indicated in parentheses above). Each group was led by a trained facilitator, lasted approximately one-and-one-half hours, and moved through a series of similar questions designed to address the goals listed in the introduction to this chapter. In general, the groups covered five topics: (1) roles and perceptions about workspace design issues and trends; (2) reactions to television advertising; (3) reactions to print advertising; (4) characterization of the *betterbricks.com* brand identity; and (5) information sources.

Website Data Tracking

The website data were collected by Cole & Weber and provided to the evaluation team for analysis. Cole & Weber also provided the evaluation team with a schedule of media, including the circulation numbers for print media, audience estimates for television and when ad purchase expenditures were made. We implemented a correlation analysis to examine the relationship between weekly unique website hits and weekly expenditures for print and television advertising.

Findings

In general, the results of this research showed that the goals for the mass media campaign will not be achieved easily. About 4% of both the supply-side and demand-side market segments were aware of *betterbricks.com* following the advertising campaign.

Demand Side Awareness

As summarized in Table 4, following the campaign, about 4% of the entire follow-up sample was aware of the advertising and the *betterbricks.com* name. Less than 1% of the entire sample visited the website after viewing an ad. For those newly surveyed – who were not primed by the baseline survey to be aware of the topic of productivity in the workspace – just over 2% were aware of the campaign and about one-half of one percent visited the website after viewing an ad.

Table 4. Summary of *betterbricks.com* Awareness (n=1,018)

Level of Awareness	**New Group**		**Repeat Group**		**Total Follow-Up Sample**	
Aware of *betterbricks.com*	12	(2.1%)	27	(6.0%)	39	(3.8%)
Visited website after viewing ad	2	(0.4%)	6	(1.3%)	8	(0.8%)
Not aware of *betterbricks.com*	558	(97.9%)	421	(94.0%)	979	(96.2%)
Total	570	(100%)	448	(100%)	1,018	(100%)

Supply-Side Awareness

We identified 19 respondents who recalled the campaign, weighting their responses for size of firm and participation in A+E; the resulting weighted recall of the RPIP *betterbricks.com* campaign is 9.9%. The unweighted awareness responses for the participants and nonparticipants by size of firms are presented in Table 5. This table shows that the A+E participants and architects in larger firms were more likely to be aware of the campaign.

Table 5. Architect Awareness of RPIP *betterbricks.com* Campaign by Strata

Firm Strata	A+E Participants Aware by Total in Strata	Percent of Strata	Non-Participants Aware by Total in Strata	Percent of Strata
Large Firm (50+ Designers)	6/11	55%	2/12	17%
Medium Large (20-49 Designers)	6/14	43%	0/12	0%
Medium (10-19 Designers)	2/6	33%	1/11	9%
Medium Small (5-9 Designers)	1/7	14%	1/10	10%
Small (1-4 Designers)	0/5	0%	0/5	0%

However, awareness by architects of the brand was more complex than for business decision-makers and influential staff. A colleague was the source of information for 47% of the 19 architects. When source of information on *betterbricks.com* is weighted for size of firm and participation in A+E, Table 6 shows that TV advertisements and print had the largest effect on the architects.

Table 6. Source of Information on *betterbricks.com* (n=93)

Source of Information	Weighted Percent
Colleague	3%
TV Advertisement	4%
Print ad	2%
Alliance activity	<1%
Combination	<1%
Not aware	90%
Total	100%

TV advertisement was the source for 4% of the architects (slightly higher when combination sources are included). The additional awareness for architects (nearly double that for business-decision makers and influential staff) came from print advertisements, colleagues and experience with the Alliance.

Website Tracking Data

We also wanted to understand the relationship between advertisements for *betterbricks.com* and visits to the *betterbricks.com* website. We looked at weekly data on unique visitors to the website, the number of viewers estimated to have seen *betterbricks.com* TV ads and the number of people subscribing to magazines in which *betterbricks.com* advertisements ran.[3] Table 7 displays the totals and maximums for these characteristics.

Table 7. Characteristics of Website Hits and Advertisement Reach

Characteristic	Unique Web Hits	TV Gross Impressions	Print Ad Circulation
Totals May 2000 - March 2001	15,905	80,092,188	80,108,093
Weekly Mean	331	1,668,587	26,264
Weekly Maximum	1,262	12,552,000	101,523
Weekly Minimum	89	0	0

We first normalized the three data sets because the variables were of such different orders of magnitude: 1,262 for the maximum number of unique website visits per week; 1,481,548 for the maximum number of print ad readers; and 12,552,000 for the maximum number of TV ad viewers. By dividing each observation by the variable's maximum, each normalized variable had a value ranging from 0 to 1.

We estimated the total TV viewing audience for September in the Pacific Northwest. At the time of the analysis we only had Seattle and Portland audience estimates. Based on TV viewing data for the six weeks in May and June, however, we determined that Portland and Seattle viewers comprised 64% of the total viewers. Using the inverse of 64%, we were able to estimate the total TV viewing population for September.

Our statistical analysis of the data shows that that unique visits to the *betterbricks.com* website by individuals were highly correlated with the showing of TV ads (two-tailed Pearson $r = .88$, significant at the .01 level). On the other hand, unique visits to the website were not correlated with the number of people exposed to print ads ($r = -.06$, not significant at the .05 level).

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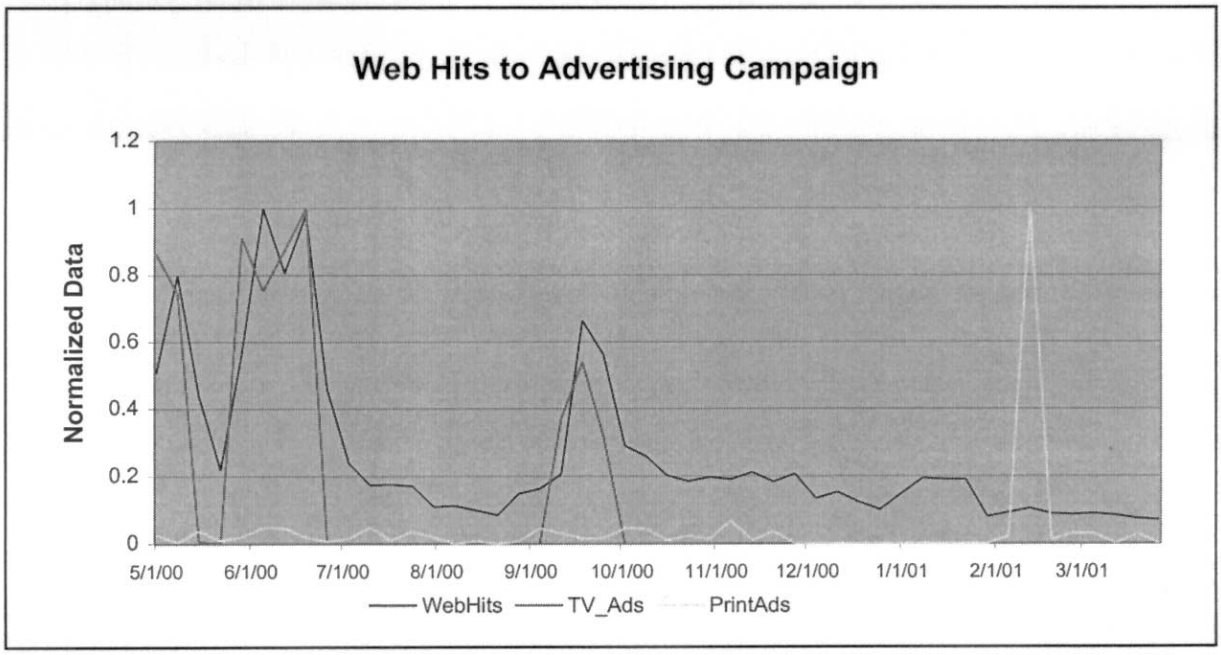
[3] A *unique visitor* is a count of a visit from a URL. The visitor may view multiple pages on the site, or there may be multiple visitors from the same URL. In each case the URL would be counted one time. TV advertising uses *gross impressions*, which are the total number of times a media campaign is viewed. *Impressions* come from multiplying the individual program audience (in thousands) by the number of times the spot ran. *Print ad viewing* counts the sum of the circulation for each publication for each time period the advertisement is placed.

As shown in Figure 1 below, the visual profile of unique website visits closely resembles the profile of exposure to TV ads, which aired in May, June and September 2000. The same is not true for the print ads, though a small "blip" can be observed in web hits following placement of ads in regional Sunday papers in February 2001.

Figure 1. Website Hits, TV Ads, and Print Ads



Focus Groups

The focus groups were most useful for identifying opportunities to improve the campaign, and specifically for helping to understand why responses to the television-based brand campaign was limited to 4% of the target market. Comments from participants included the following:

- The link between productivity and energy efficiency was not easy for decision-makers, influential employees, and developers/real estate brokers to perceive. However, they are already concerned about productivity and if the message were more direct they would attune to it.
- Supply-side actors can and want to play an important role in promoting energy-efficient construction. In the focus groups, it became clear that effective collaborations for innovation can occur with developers and brokers for Class A buildings where owners and tenants are willing to pay for quality improvements.
- When mass media TV advertising is used, it needs to clearly convey the links between productivity, energy efficiency, and the benefits of visiting the website. When directing viewers to the website, it was most effective when the message included both voice plus displayed the address.
- The print advertising was not placed in publications read by the participants. Most noted that they read trade publications targeted to their specific types of businesses (e.g., hospitals or schools), not the general business publications used during the campaign.
- Participants in these groups voiced strong shared interests in solving the real problems of lighting, air quality and temperature, and wanting information to do that.
- Supply and demand-side groups did not respond to the *betterbricks.com* ads in the same manner. Demand-side groups were admiring of the "fast company" image (a trendy company on the

cutting business edge used in the print and television ads) but the supply-side group was somewhat distrustful and offended by it. Participants in the demand-side groups tended to favor *betterbricks.com* being sponsored by a not-for-profit agency, but supply-siders were more neutral or negative.

- Similarly, technical consulting services need to be different for demand-side and supply-side actors. Supply-side groups want in-depth services.

Conclusions

The RPIP began with an untested, long-term and ambitious goal. The campaign evaluation confirmed that it is possible to influence demand and that influencing demand for energy-efficient buildings is an important goal for market transformation efforts. However, it also demonstrated that that goal is not sufficient in itself. The following eight conclusions evolved from this research.

1. Mass media reached some commercial end-users, while print media did not. The mass media approach did reach some of the audiences targeted by the campaign. However, the most responsive groups were the smaller portions of the target market: decision-makers, influential staff and supply-side service providers.
2. Perhaps the most important lesson that should be learned from the failure of the advertising campaign and website to attain a larger market share lies in the need to test the messages before launch. Substantial work was done to develop the message and to understand what messages might work with the target markets. Yet, when the focus groups found that the messages were not working, the media materials were already in the field.
3. General commercial employees cannot influence building-space decisions.
4. The focus group results clearly suggest that it is the decision-makers and influential staff who must be contacted, not general commercial employees.
5. Productivity is an important non-energy benefit, but it does not easily link to energy efficiency. The findings in the baseline research and the focus groups suggest that, while productivity is a powerful message, to most listeners it usually means improving worker comfort, ergonomics, accessibility, equipment and office layout, not energy-efficiency components like lighting, temperature control and air-flow.
6. The *betterbricks.com* brand has drawing power and we found the supply-side respondents in the focus groups to be interested in *betterbricks.com*. The follow-up survey with business decision-makers and influential staff found only 2% of the unprimed respondents were aware of the campaign; 4% of the entire sample was aware. For architects the story was different, with 10% of all architects aware of the campaign.
7. Indirect approaches (i.e., no obvious connection to energy efficiency or to the Alliance) did not appeal to audiences. Though only tested in the qualitative research, focus group participants strongly preferred direct approaches.
8. The collateral information at the website left users wanting more. The advisor service had no branded material to share with potential users of the service other than that on the website. Architects in the follow-up survey noted that the website materials were good to show clients ideas, but did not really help sell a project or help them design one.
9. The size and structure of the target market appears to have been overestimated. We estimate the target market – if all commercial employees are included – to be about 1.6 million, rather than the 7 million people in the region between ages 18 and 65. If general commercial employees are excluded and the target market is defined as *business decision-makers, influential staff, and supply-side service providers*, then the target market is 130,000 to 250,000 (depending on the size of the supply-side service provider market). If the target market is only those making changes to their workspace, then the target market in any year is about 30-40% of the business decision-makers and influential staff.

Lessons Learned

The evaluation of the RPIP revealed many good lessons and developed notable accomplishments, not the least of which is that a marketing effort such as the *betterbricks.com* campaign can be conceptualized and developed.

The history of social marketing efforts in health and other areas demonstrate that: *If at first you do not succeed, you should try, and try again.* Eventually, with testing and revisions, the message will succeed and behavior will change. But marketing efforts take a long-term commitment and adaptive management driven by feedback.

The evaluation suggests that the *betterbricks.com* brand has entered the market and gotten some of the target market's attention. This is the time to refine it, update it, and keep it current.

A key lesson is that indirect messages are confusing. It is important to connect *productivity* more directly to energy efficiency in all components of the campaign. It is not necessary to say "energy efficiency" but the connections need to be clear. For example, how the suggested actions and equipment (e.g., lighting, temperature and air-flow) are related to improved worker productivity, through improvements to comfort, health, efficiency, and cost savings. It is also important to work with the supply-side to provide the tools they need to implement the design solutions and sell these solutions to their clients.

Another key lesson is that an advertising campaign should use the preferred media and messages for the target audience and limit mass TV advertising to the future. While it is clear that website hits are strongly correlated with TV advertising, this is not the only way to get traffic – especially the right traffic – to the website.

Good market segmentation is important. In segmenting the market, consider what the most important variables are and combine them to determine the best markets (e.g., building tenure, likelihood of moving or making a change to the workspace, decision-maker status, and building type). Select the media approaches that best match the target market characteristics and size.

The key demand-side market segments appear to be decision-makers and influential employees who are thinking about moving or making workspace changes. Also important are the supply-side service providers, architects and developers, some of whom expressed interest in partnering with *betterbricks.com*.

Perhaps the final lesson to be learned is that each market actor needs different types of information to make decisions. A mass campaign is probably not the way to go. Furthermore, using concepts like supply-side and demand-side can limit one's perceptions of the market, thinking of each market actor and their role in the market process ultimately provides a more comprehensive perspective.

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