Market Baseline Evaluation Report

Efficient Building Practices Initiative, No. 1

prepared by

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Final Baseline Evaluation Report

EFFICIENT BUILDING PRACTICES INITIATIVE

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GLOSSARY

Table 1 lists and describes acronyms and abbreviations used throughout this report. They are listed in the order they are presented in the report.

Table 1: List of Terms Used in This Report

TERM	DEFINITION
Alliance	*Northwest Energy Efficiency Alliance* – the sponsor of EBPI
EBPI	*Efficient Building Practices Initiative* – the Northwest Energy Efficiency Alliance program being evaluated in this report. As initially conceived, EBPI included these elements: the Regional Public Information Program (RPIP), the New Construction Baseline, Energy Code Support, State Special Projects, Seed Funding, Transition Funding for Existing Infrastructure, and the Code Advisory Group.
RPIP	*Regional Public Information Program* – the public information arm of EBPI.
BetterBricks.com	*BetterBricks.com* – the initial public information campaign (including advertising, public relations, marketing, a website, and other services) launched under RPIP. The campaign's goal is to inform and persuade commercial workers and architects and developers about the importance of energy related workspace design elements (such as lighting and temperature control) on worker productivity

EXECUTIVE SUMMARY

BACKGROUND

The Northwest Energy Efficiency Alliance (Alliance) is a non-profit group of electric utilities, state governments, public interest groups and industry representatives committed to bringing affordable, energy-efficient products and services to the marketplace. The Alliance's Efficient Building Practices Initiative (EBPI) couples a Regional Public Information Program (RPIP), with several building code support programs to:

- Increase the demand for highly energy efficient residential and commercial buildings.
- Enhance the capability of code-related institutions so they can meet increased consumer demand for efficient buildings.

The overall goal of evaluating EBPI is to assess how well and to what extent this dual approach works to change markets for energy efficient buildings.

This Executive Summary focuses on the results of RPIP evaluation activities to date. It provides key findings and conclusions from baseline market surveys of primary and secondary target audiences for RPIP's initial public information campaign, BetterBricks.com. Currently this campaign includes advertising, public relations, marketing, a website, a help desk, and design guidelines. Chapters 3 and 4 of this report provide detailed findings from these baseline surveys.

The rationale behind the BetterBricks.com campaign is to forge a stronger awareness, among target audiences, of the link between job productivity and the benefits of energy-efficient workplace elements which would, in turn, encourage demand for higher efficiency commercial buildings.

To set the stage for the overall EBPI evaluation, this report also presents:

1. An overview and history of EBPI (Chapter 1)
2. The EBPI evaluation approach (Chapter 2)
3. Key indicators for RPIP's BetterBricks.com campaign (Chapter 5)
4. Conclusions about the BetterBricks.com efforts (Chapter 6)

KEY FINDINGS

Baseline Assessment Of Commercial Workers

To establish a market baseline for commercial workers, we surveyed three primary target audiences of the BetterBricks.com public information campaign: **general employees**, **influential staff** who influence workspace decisions, and **decision-makers** who are in charge of workspace decisions. The surveys investigated key company characteristics, opinions about the effects of the physical workspace on productivity, actions taken to improve productivity, sources of information about workspace and productivity, and Internet use and TV viewing patterns, including whether they had seen any advertising or news stories relating the workspace to productivity.

The sample was drawn from a list of companies with at least 20 employees in Washington, Idaho, Oregon, and Montana. The evaluation team worked with Alliance staff to design the surveys, and Gilmore Research, Inc. conducted the interviews between April 13 and May 1, 2000, the launch date of the BetterBricks.com campaign. Each group had a sample size of about 500. (Please refer to *Appendix A* for details about the sampling design.)

Key characteristics of the respondents and companies include:

- Respondents represent workers in offices, schools, wholesale and retail stores, health care, and financial institutions.
- Most workers are in older buildings, with less than 20% in buildings less than five years old.
- Just over 60% of the companies occupy space that they own.
- Just over a third of decision-makers (35%) reported their companies planned to make or were in the process of making changes to their workspaces, including renovating current space, constructing their own building, or moving to new leased space
- Companies housed in older buildings and larger companies were more likely to be making space changes than those in newer buildings and smaller companies.

Key attitudinal and behavioral findings related to productivity and workspace include:

- Influential staff and decision-makers tended to rate their organizations more positively than general employees in terms of their companies "being concerned about worker productivity."

- About 60% of respondents overall believe the physical workspace *strongly* affects productivity.

- When asked to name what physical factors had a large effect on employee productivity, all types of workers most often said the "layout of the workspace" (about 45% of each group), with "equipment" a distant second (about 22%). In addition, most steps already taken to improve productivity through physical changes involved layout and equipment changes.

- Although asked to confine themselves to "physical factors" related to productivity, respondents also noted the importance of non-physical factors such as management, co-workers, and compensation.

- Between 10% and 20% of respondents spontaneously mentioned workspace design features relevant to energy efficiency and of interest to EBPI – natural light, good lighting, good temperature – as strongly influencing productivity.

- When spontaneous mentions are added to prompted ratings of features relevant to energy efficiency, most workers said those features had a large effect on productivity (90% for lighting; 75% for temperature; 55% for natural light).

- Among the decision-makers who were planning or making changes in their workspaces, "increased productivity" was rated as the top priority among six potential reasons for changing space (79% important or very important ratings). Notably, a much smaller portion of architects named increased productivity as something decision-makers frequently mention as a reason to make workspace changes (46%).

Key findings related to information sources, media use, and recall of advertising related to a productivity website include:

- When asked to name the information sources they would use to learn more about the physical workspace and employee productivity, decision-makers said they would use external sources. They most often mentioned reference materials—including the Internet—followed by equal mention of professional organizations, seminars, and design and construction firms.

- In contrast, employees most frequently mentioned they would seek information from within the company, turning to their managers and appropriate coworkers, followed by less frequent mention of seeking information from reference materials (including the Internet).

- Influential staff fell mid-way between the other two groups reporting, with equal frequency that they would turn to external reference materials and to internal staff.

- About 20% in each of the three groups would turn to the Internet for more information on the relationship between the workspace and employee productivity.

- About 70% of general employees, influential staff, and decision-makers report using the Internet on the job, with more than half of these users reporting that they access the Internet for four hours or less per week

- Over 95% of respondents typically watch some TV during the week. About 90% of respondents watch the news during the week, about 80% watch prime time TV, and fewer than 60% watch sports.

- Only about 5% of respondents reported they had seen advertising or news stories about a website providing information on improving productivity in commercial buildings. Most of this 5% could not describe anything specific about what they had seen, suggesting that few respondents (if anyone) had seen the first day of BetterBricks.com advertising.

Baseline Assessment of Commercial Architects and Developers

Architects and developers of commercial space are key players in generating, understanding and meeting the demand for buildings with high-energy efficient features. These groups were secondary target audiences of the BetterBricks.com efforts. We interviewed over 100 commercial workspace architects and developers in the Pacific Northwest during May 2000, exploring their experiences with and opinions about buildings that enhance productivity. These interviews occurred during the first two weeks after the BetterBricks.com launch (making it possible that some respondents might have noticed the campaign).

We drew the sample of architects from the population of members of Pacific Northwest chapters of the American Institute of Architects (AIA), as of 1998. We drew the sample of developers from a purchased list of businesses whose primary SIC code corresponded with development.

Key findings from these interviews include:

- Architects and developers play somewhat different roles with respect to commercial workspace design. Both architects and developers, however, are equally concerned with the building envelope and the general mechanical systems of interest to EBPI (e.g., natural light and temperature control). They are also equally concerned about lowering operating costs.

- Architects are likely to be more concerned than developers about the "look" and aesthetic appeal of the buildings and workspace, meeting energy efficiency and environmental goals, and dealing with interior lighting design and layout. They are also much more likely than developers to address the "human" factors of occupying a building (e.g., physical comfort, productivity, worker satisfaction).

- Seventy percent of architects spontaneously mentioned good lighting when asked to name the features of the physical workspace that contribute most to employee satisfaction and productivity. About 60% mentioned natural light and about 50% mentioned a comfortable temperature. Developers mentioned these features less often, with about 40% of developers naming natural light and comfortable temperature and about 30% naming good lighting.

- Architects, more than developers, were able to name specific natural lighting and artificial lighting strategies that they used to enhance employee satisfaction and productivity, but both groups were equally capable of naming heating and cooling equipment that would improve productivity. Both groups often said that good temperature control was one of the hardest objectives to achieve in commercial buildings.

- Architects would be most likely to turn to reference materials (61%), including the Internet, to learn more about the relationship between workspace design and worker satisfaction and productivity. The top three sources of information most frequently cited by architects were professional journals and magazines (41% a subset of reference materials), professional organizations, seminars, and colleagues (35%), and the Internet (28%).

- Developers would be most likely to turn to architects and other design and construction professionals to learn more about how to design workspaces to enhance worker satisfaction and productivity. However, given their

focus on the building envelope and technical systems, and not on the interior workspace, many developers suggested that it was unlikely that they would pursue such information.

- Almost 1/3 of architects and developers said they had seen advertising or news stories about improving worker satisfaction and productivity through workspace design. None, however, were able to specifically identify the just recently launched BetterBricks.com advertisements. This suggests that the BetterBricks.com campaign themes are familiar to them through other information sources.

CONCLUSIONS AND ISSUES

The overall goal of this baseline is to establish key performance indicators for the RPIP's BetterBricks.com campaign, so that subsequent evaluations of this RPIP effort can be compared against them. These indicators are described in Chapter 5 of this report. Although the baseline research was not meant to generate recommendations, four conclusions and issues of concern to the RPIP's BetterBricks.com campaign are summarized below. They are further discussed in Chapter 6.

1. The BetterBricks.com message is competing with other messages.

A challenge for RPIP's BetterBricks.com campaign is likely to be the variety of sources, and the ideas and issues contained in those sources, that target audiences draw from when they talk about workplace productivity. Testing whether the messages of BetterBricks.com are heard amidst the already existing concern and interest in workplace productivity is one purpose of this evaluation.

2. BetterBricks.com messages may not currently attract developers.

Our research shows that developers often are not concerned with the design of interior workspaces; rather, they are involved with building shell and infrastructure decisions. The current BetterBricks.com advertising campaign emphasizes interior design, which may not "hook" developers.

However, providing commercial building occupants with reliably comfortable temperatures is very important to many developers and is often difficult. BetterBricks.com messages will be looked upon more favorably by this group if it

can help solve that problem for them. Developers also want reassurances that the innovations promoted by the BetterBricks.com campaign are bankable.

3. Primary target audiences prefer news and prime time TV to sports.

When considering ad placement, news and prime time may be better venues than general sports to reach the primary target audiences of general employees, influential staff, and decision-makers.

4. Preferences for information sources may vary by target audience.

Employee, influential staff, and decision-maker preferences for information sources about productivity and the workspace reflect their differing positions within organizational hierarchies. Employees reported that they would likely turn to internal staff to learn more about having a more productive workspace. In contrast, decision-makers said they would likely turn to external sources. Influential staff said they would rely equally on internal and external sources. These information pathways should be further monitored to assess whether how messages are likely to successfully reach each group.

CHAPTER 1: THE EFFICIENT BUILDING PRACTICES INITIATIVE

INTRODUCTION

The Northwest Energy Efficiency Alliance (Alliance) is a non-profit group of electric utilities, state governments, public interest groups and industry representatives committed to bringing affordable, energy-efficient products and services to the marketplace. The Alliance's Efficient Building Practices Initiative (EBPI) couples a Regional Public Information Program (RPIP), with several building code support programs to:

- Increase the consumer demand for highly energy efficient residential and commercial buildings.
- Enhance the capability of code-related institutions so they can meet increased consumer demand for efficient buildings.

The Alliance hopes this pairing of consumer demand and codes infrastructure enhancements will ensure greater compliance with current energy codes and propel voluntary "standard practice" beyond current codes. The remainder of this chapter presents a history of EBPI, explains its components, and outlines its logic.

HISTORY OF EBPI

The history of the Northwest Energy Efficiency Alliance's *Efficient Building Practices Initiative* (EBPI) is fairly long and complex. This section of the report chronicles the key developments of EBPI to date. Currently EBPI is scheduled to operate through mid-2001, but, given it's long-term market transformation goals (see the next chapter for the EBPI Logic Model), it is likely to continue further, although it may be modified based upon experience and evaluation findings.

In 1997, the Alliance Board commissioned an in-depth research to "identify strategies that the Alliance could pursue which would result in sustainable and effective energy codes" (Heschong Mahone Group, *Report #E98-009*, April 1998). According to this report, the Board commissioned the study because the Alliance views energy codes as a crucial ingredient in its "portfolio" of investments in energy efficiency and market transformation in the Northwest.

Energy codes, while different in each state, are generally strong in this region; they set and maintain minimum standards for whole building energy efficiency. Codes

are also available for improvements and updating as products and practices are improved.

However, as pointed out in correspondence with a key Board member associated with the evolution of EBPI, "Codes were drums whose music was not appreciated by every ear in the region." While the Board was well aware codes were key to market transformation, there were two reasons to "downplay what became know as the "c" word:

1. In Oregon and Washington, some perceived that "incremental efficiency changes above the ambitious codes that were there involved design, behavior, or other non-codifiable aspects of construction."

2. In Idaho and Montana, building industry and political powers were "opposed to any coercive codes pushed on them by people outside their states."

While the research was focused on how to sustain effective energy codes, it needed to be tempered with political and market realities. Thus, to actively oversee this research, the Board appointed a committee of its members, the "Board Management Committee." This committee interacted extensively with Heschong Mahone, discussing and debating the results that emanated from, among other tasks, interviews with over 100 energy stakeholders in the region and a day-long facilitated meeting with about 50 stakeholders. The research concluded that a demand-side program was needed to foster public/political support for code compliance.

While the Committee accepted most of the suggestions stemming from the Heschong Mahone research, they "took responsibility for formulating final recommendations and presenting and defending the multi-part (EBPI) project to the rest of the Board." The recommendations called for seven interrelated elements, implemented over three years, to support energy efficiency and energy codes in the Northwest. The Board approved the elements listed in Table 2 below in February 1998; current names of these elements are given in the second column.

The Alliance Board also directed the Committee (now known at the EBPI Steering Committee) to oversee the implementation of EBPI, giving them considerable autonomy to make decisions. At key points the Steering Committee presents the progress of EBPI to the full board and asks for approval of major decisions; otherwise, the Steering Committee has responsibility for guiding the program.

Table 2: Original and Current EBPI Elements

ORIGINAL EBPI ELEMENT NAME	CURRENT EBPI ELEMENT NAME
1. Regional Public Information Program	1. Regional Public Information Program
2. New Construction Baseline	2. New Construction Baseline
3. On-Going Funding for Code Development Infrastructure	3. Energy Code Support
4. State Special Projects Program	4. Special Projects
5. Seed Funding Program for Code Support	5. Seed Funding
6. Transition Funding for Existing Infrastructure	6. Transition Funding
7. Regional Energy Code Coordination Program	7. Code Advisory Committee

The next section of this history briefly describes the each EBPI element.

REGIONAL PUBLIC INFORMATION PROGRAM (RPIP)

The Regional Public Information Program (RPIP) has always been the single largest element within EBPI, commanding at least half of its $6 million resources, and largely overshadowing the visibility of other EBPI efforts. Heschong Mahone's original project plan sought to "create a strong market pull...based on **demand for the benefits** conferred by energy codes" (Heschong, p.40). It recommended that a "savvy public relations firm" be hired to impress these code benefits upon the general population, new homebuyers, commercial owners and tenants, and government officials who manage building departments.

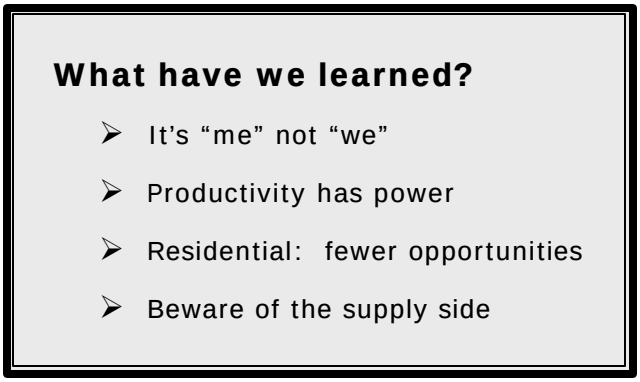
Through a competitive process, the EBPI Steering Committee hired a large, west coast advertising firm, Cole & Weber, Inc. (C&W), in February 1998. C&W's scope of work (see *Exhibit A, Statement of Work, For Contract No. 99-083, Regional Public Information Program*, Cole & Weber) called for creating and promoting "market demand for the benefits of energy efficient buildings." The goal was to build awareness of the benefits of high efficiency buildings so that people would demand buildings equal to or better than current codes. The audiences remained

the same, with some other audiences (such as real estate professionals) added for the purpose of communicating with the primary target audiences.

Working with the Steering Committee, C&W began by conducting a review of secondary literature and interviews with supply-side architects and developers. They then conducted further qualitative focus groups with 160 consumers divided into three types: homebuyers/remodelers, supply-side professionals, and business decision-makers.

This market research produced changes in the RPIP orientation. The research revealed that energy efficiency was not "top-of-mind" with any of these groups. Furthermore, the residential sector did not strongly resonate with other potential motivators and benefits of energy efficiency, such as sustainability or an improved environment. The supply-side focus groups revealed that they were somewhat skeptical of being able to sell efficiency in buildings. Only with business respondents did the research reveal a "powerful" hook: connecting energy efficient buildings with increased *productivity*.

As C&W summarized the research results in their slide presentation of October 28, 1999, to the Steering Committee:



During this presentation, C&W also presented a new approach that embraced four strategies for the RPIP:

1. Focus upon the *commercial sector initially* (rather than including residential)

2. Target primarily *employees and decision-makers in businesses,* and a secondary focus on *architects, developers, and real estate brokers, and government agencies*.

3. Develop a *brand focus*, taking a business point of view, centered around *productivity and empowerment* – "Evangelists for a better way to work." At this point, energy efficiency, while still the concern, would not be in the central campaign message.

4. Develop a product – a website that would "*give them a place to go.*" This product would be bolstered by more traditional public information efforts (advertising, public relations, collateral materials, advocacy program) that would encourage or "drive" target audiences to go to the website.

The Steering Committee adopted these strategies and C&W proceeded to develop an advertising, marketing and public relations campaign, as well as the website. The result of these efforts was the BetterBricks.com campaign and the BetterBricks.com website.

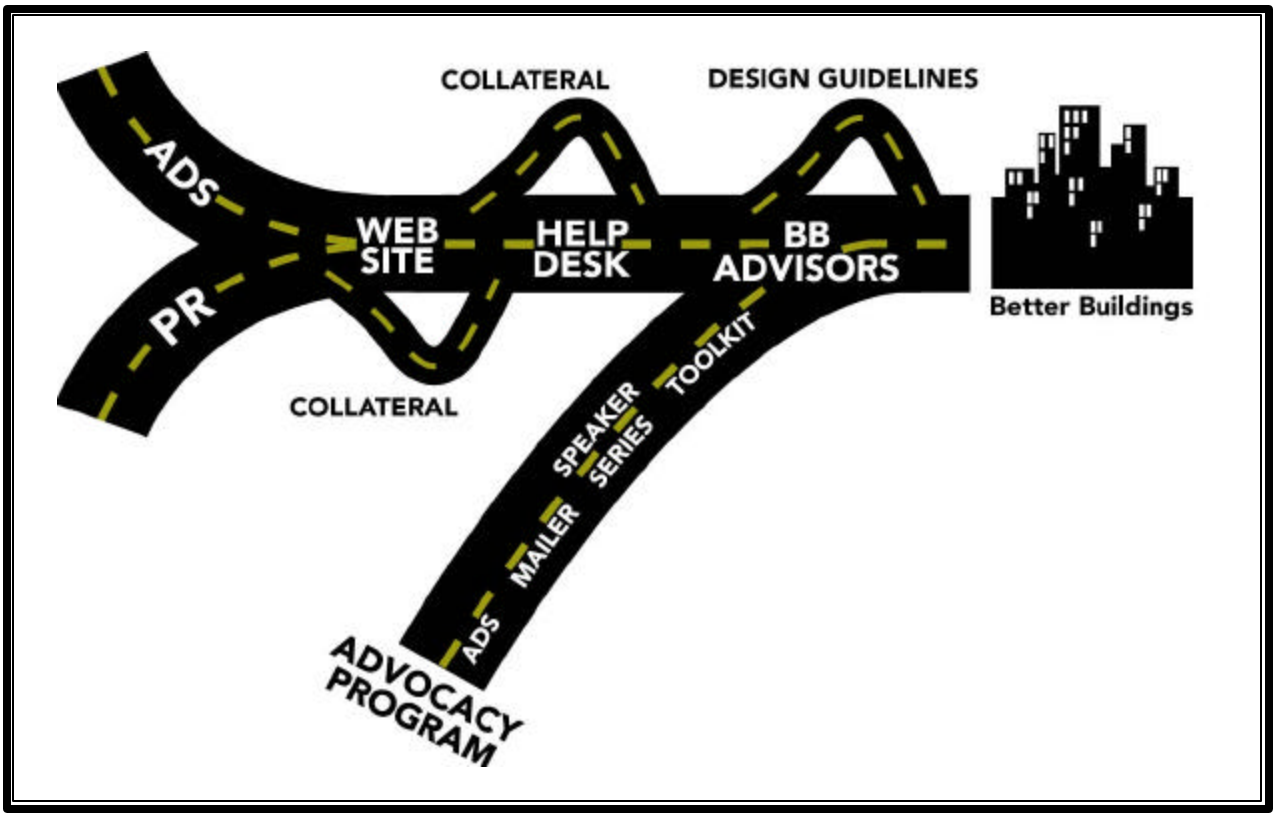
As the campaign was being developed, several members of the Steering Committee and other interested parties raised concerns about the relation of the campaign to supply-side services. To this point, the focus of the RPIP was on building demand for energy efficiency, better buildings, and, indirectly, for codes. However, those involved with the program began to wonder what would happen once this demand was built and asked, "Would the supply side be able to respond?"

Thus, at the end of 1999, these issues began to be discussed between the Steering Committee and C&W. The Steering Committee and the Board approved the development of a Referral Service (reachable through the website) was developed that could help the "handshake" occur between demand-side prospects interested in pursuing high efficiency buildings and appropriate supply-side services. The Referral Service is comprised of a Help Desk to answer questions and direct prospects to the right resources, and BetterBricks.com *Advisors* who could work with "pre-qualified" prospects on real projects.

On February 18, 2000, C&W presented "*BetterBricks.com Purchase Path: How all the components of the campaign fit together.*" In addition to describing already conceived elements of the campaign and how they were integrated, C&W recommended the development of Design Guidelines that could provide more in-depth "how-to" information for both demand-side and supply-side audiences. The Steering Committee and Board approved development of these guidelines. Figure 1 shows how the purchase path is conceived with all of the elements for BetterBricks.com in place.

Figure 1

PURCHASE PATH – BETTERBRICKS.COM



NEW CONSTRUCTION BASELINE

The goals of the New Construction Baseline with EBPI are to:

- Document new construction current practices in the residential and commercial sectors in all four states and the reasons behind these practices.
- Establish a measurement protocol that is repeatable in five years to measure market progress.

The methods for this Baseline Survey included random sampling procedures to ensure high reliability of results, review of permit covers, plan checks, and site visits to commercial and residential sites under construction. General contractors, owners, architects, and engineers from selected buildings were also interviewed.

All design and data gathering for this element of EBPI has been completed and the draft report has been reviewed by EBPI and other Alliance staff, as well as the Steering Committee.

ENERGY CODE SUPPORT

This aspect of EBPI provides on-going support for code development infrastructure and help ensures code infrastructure still exists. It will also give the Alliance access to the code maintenance process and keep institutional memory intact so that relevant state agencies can keep working on maintaining and updating energy codes. Energy code support funding has been provided to the appropriate agencies in three of the four states: Oregon, Washington, and Idaho.

STATE SPECIAL PROJECTS PROGRAM

This element of EBPI reviews proposals and grants funding for special energy code and building energy efficiency projects from state energy and code agencies, code organizations, non-profit organizations, public agencies and private industry. Its overall goal is to make the process of code compliance and going beyond code work better and be more accessible. A variety of state special projects are planned or underway, including:

- The Oregon Office of Energy is researching the efficacy of using CO_2 - Sensor Based Demand Controlled Ventilation for controlled ventilation in assembly spaces, and if feasible, develop code language specifying its use.
- The Idaho Department of Water Resources is conducting a project designed to demonstrate that the Home Energy Rating System would be accepted by residential builders and consumers.
- The Idaho Chapter of the International Conference of Building Officials is partnering with cities and counties in southern Idaho to help them adopt local codes, set up building departments, and train staff.
- Shorebank Pacific, using real projects in Portland, is complementing its loans on low income housing rehabs by training Portland Development Commission staff in energy efficiency and life cycle costing.
- The City of Portland Energy Office will develop four demonstrations and create persuasive information to support life cycle cost analysis in publicly funded or assisted buildings.

- The Oregon Building Officials Association will place Oregon energy code interpretations and code compliance documents on a website.

- The Oregon Office of Energy will develop and adopt prescriptive duct sealing code for residential buildings.

SEED FUNDING

This aspect of EBPI was designed to provide seed funding for businesses that intend to be self-sustaining and to deliver services to facilitate implementation of energy codes at the design and building levels. Support of these businesses is intended to help improve energy code compliance and upgrade building energy efficiency beyond minimum code requirements.

As of this report, no projects have materialized or have been funded. Over time, much of the budget allocated to Seed Funding has been transferred to other components of EBPI (particularly RPIP), or has been allocated to a sub-category termed "Other Projects." The Other Projects category includes membership in the New Buildings Institute; sponsorship of the Future @ Work project; funding for various aspects of the Brewery Blocks projects (a case study for RPIP); and support for a few small consultant contracts.

TRANSITION FUNDING FOR INFRASTRUCTURE

Early on in EBPI, short-term bridge funding was provided to support energy code efforts in appropriate agencies in Montana, Oregon, Idaho, and Washington when the Bonneville Power Administration and utilities scaled back their support of these agencies. Further funding for ongoing support of code efforts was then continued under EBPI's Energy Code Support element, described above.

CODE ADVISORY COMMITTEE

The Regional Code Advisory Committee component of EBPI was never implemented for two reasons:

- U.S. DOE set up a similar program that brought together code staff on a quarterly basis (the Regional Code Discussion Group); and

- EBPI's lack of direct emphasis on codes greatly decreased the usefulness of the Code Advisory Committee.

CHAPTER 2: EBPI EVALUATION APPROACH

The overall goal of evaluating EBPI is to assess how well and to what extent EBPI's dual approach – of creating demand for high efficiency buildings and supporting code and supply side expertise so that those buildings can be realized – worked. This chapter first discusses the comprehensive logic model diagram developed to explain the underlying interconnections and desired short and long-term outcomes of the program. It is these outcomes that need to be addressed, or planned for, in evaluation efforts. The final part of this chapter then charts the EBPI evaluation components and timeline.

THE EBPI LOGIC MODEL

Figure 2 on the next page shows a "logic model" that the Steering Committee developed for EBPI. This model shows the intended links between the program elements and desired short-term program outcomes through the end of the current contract period (mid-2001), and desired long-term (20 year) market transformation outcomes. It is a graphical representation of the thinking behind EBPI and also frames the EBPI evaluation efforts.

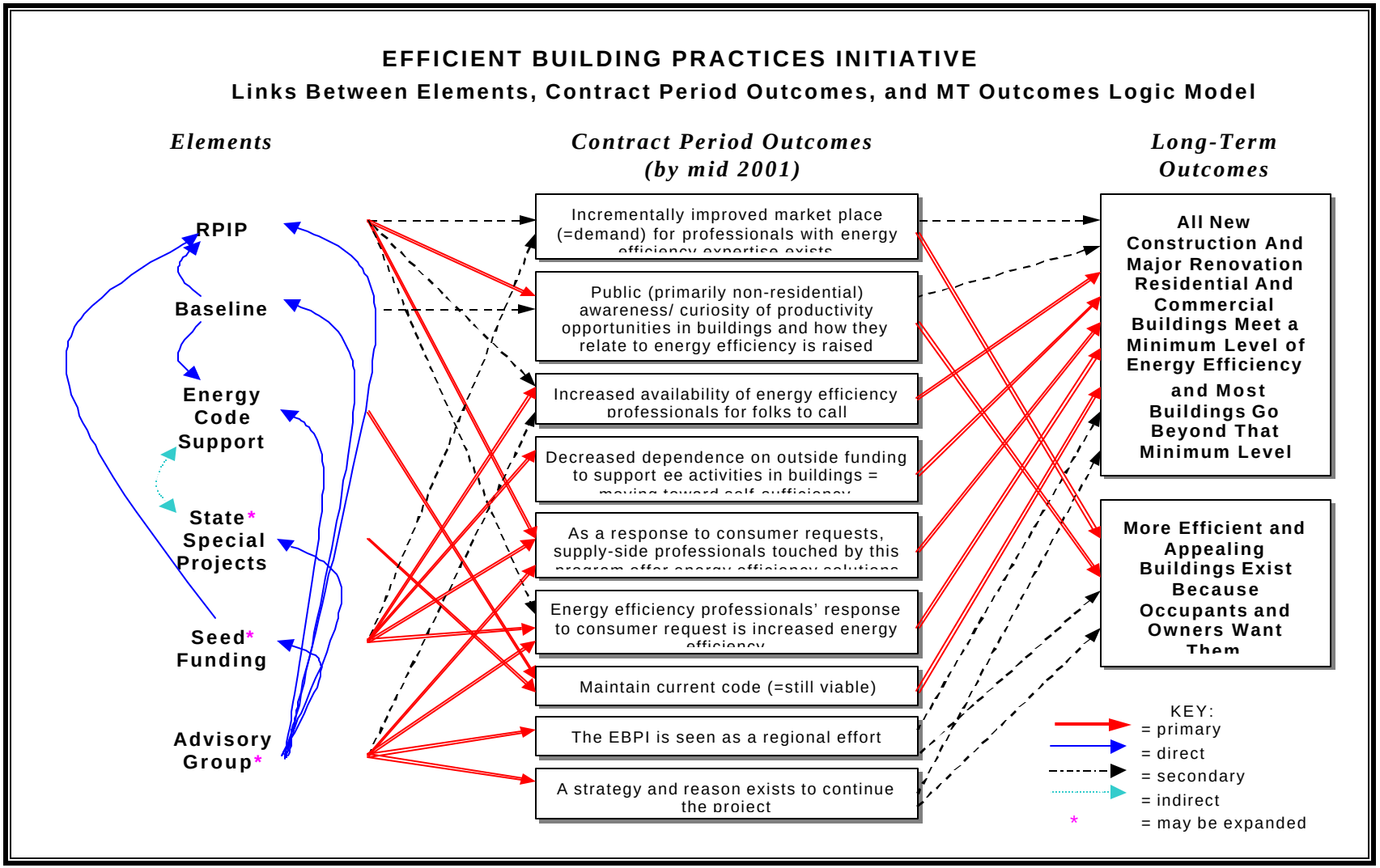
As shown in the logic model, the elements of the program are interconnected (or, were intended to be interconnected) in a variety of ways, so that the results of various efforts inform and support one another. Of greatest interest to the current evaluation efforts are the desired "Contract Period Outcomes," since meeting, or not meeting, these outcomes defines the success or failure of EBPI in the short term. The challenge of the evaluation effort will be to determine how some or all of these outcomes can be usefully and reliably measured.

The greatest effort to date in EBPI has been with RPIP. The logic model identified two primary short-term desired outcomes for RPIP:

- Public (primary non-residential) awareness/curiosity of productivity opportunities in buildings and how they relate to energy efficiency is raised; and

- As a response to consumer requests, supply-side professionals touched by this program offer energy efficiency solutions.

Figure 2: Logic Model for EBPI



In addition, it identified three secondary outcomes:

- Incrementally improved market place (=demand) for professionals with energy efficiency expertise exists.
- Increased availability of energy efficiency professionals for folks to call.
- Energy efficiency professionals' response to consumer request is increased energy efficiency.

These outcomes are clearly related to the current RPIP goal of building awareness, both with demand and supply side audiences, of the benefits to worker productivity from using high efficiency elements (such as efficient lighting, daylighting, and temperature control) in commercial buildings.

The outcomes are also related to the evaluation activities undertaken to date and to the success indicators discussed in Chapter 5. We have collected baseline measures, among RPIP's target audiences, of the importance of various workspace criteria, knowledge about, and attitudes toward the relationship of productivity and workspace elements, and information sources they use to learn more about workspace and productivity. Future evaluation activities, after RPIP efforts are implemented through the BetterBricks.com campaign, will detect whether any changes for these indicators have occurred.

Other evaluation efforts for EBPI will match desired contract outcomes for EBPI elements against evaluation results. For instance, will State Special Projects and Energy Code Support help "maintain current code" as the model suggests.

EVALUATION COMPONENTS FOR EBPI

The following table shows key elements of the EBPI schedule and the components and schedule of the evaluation activities implemented and planned for EBPI.

Table 3: Key EBPI Events and Evaluation Components and Schedule

EBPI	EVALUATION
1. *End of1997* – Heschong Mahone Study 2. *Early 1998* – Board Approval of EBPI Elements; Hiring Project Manager; Hiring of Cole & Weber 3. *Mid1998- mid-1999* – EBPI planning and RFPs for non-RPIP elements; C&W Background Research and RPIP Planning 4. *May 2000* – Launch of BetterBricks.com campaign, including advertising, marketing, public relations, website 5. *May- July 2000* – Reporting of website "bugs" *6. May- September 2000* – Better Bricks .com TV ad waves and other campaign activities (e.g., print, PR) 7. *October 2000* – November wave of TV ads cancelled *8.* October- December 2000 – Revamping of website *9. January- June, 2000* – New strategy development for EBPI	➢ *August 2000 – Draft Baseline Report*, including: • A program and evaluation component overview • A program history • Results and conclusions from baseline surveys conducted before, or within the first 2 weeks of, the BetterBricks.com campaign launch of these audiences: – General commercial employees – Influential staff in commercial businesses – Business decision-makers – Building supply-side actors – architects and developers ➢ *November 2000 – White Paper Report,* (internal use only) including: • A recap of Baseline MPER key insights • Results of usability tests of the BetterBricks.com website (September 2000) • Results of focus groups on BetterBricks.com advertising (October 2000) • Review of BetterBricks.com Website Use and Benchmarking (October 2000) • Conclusions and recommendations to date ➢ *April 2001 – Market Progress Evaluation Report #1,* including a recap of all evaluation efforts to date with the addition of: • Results of follow-up surveys with BetterBricks.com target audiences (October-November 2000) • Process evaluations of Energy Code Support, State Special Projects, and Seed Funding projects (January-February 2001). • Conclusions and recommendations to date • Outline of next evaluation step

CHAPTER 3: BASELINE ASSESSMENT COMMERCIAL WORKERS

The goal of RPIP's BetterBricks.com advertising campaign and website is to foster the link people make between workplace productivity and energy-efficient commercial building design and construction. To that end, it seeks to inform workers in commercial spaces of the opportunities for improved productivity from better lighting, temperature control, and daylighting.

The evaluation of market transformation programs requires an understanding of the market prior to the program's intervention, termed the *market baseline.* This baseline study of commercial employees, influential staff, and decision-makers – the three employee groups targeted by the BetterBricks.com campaign – investigated:

- Importance of potential workspace criteria;
- Opinions about the effect that the physical workspace has on employee productivity;
- Information sources respondents would use to learn more about how to improve productivity in their workspace;
- Awareness of advertising or news stories about a website that provides information on improving productivity in commercial buildings; and
- Internet usage and TV viewing patterns.

METHODS AND SAMPLE CHARACTERISTICS

To establish a market baseline, Gilmore Research, a survey research firm in Portland, interviewed, between April 13 and May 1, 2000, representatives from the three target groups of workers: regular employees, influential staff, and decision-makers. Since the BetterBricks.com campaign began on May 1, 2000, there was a slight overlap of the interviewing and the campaign.

All respondents were asked similar questions and worked for companies with 20 or more employees housed in offices, schools, wholesale stores, retail stores, health care facilities, or financial institutions. *Appendix A: Sample Disposition for Worker Samples* provides more detail about sampling procedures and dispositions for these three surveys, but definitions of the three types of respondents and the basic survey approach are described below.

A regular employee is defined as a worker in a commercial business that does not influence workspace decisions. Respondents for this sample were obtained through conducting a random sample general population telephone survey in the four states, weighted according to population proportions. Respondents were screened to ensure they were non-influential workers within the desired business types.

An influential staff person is defined as a worker who has a significant amount of unofficial influence upon, or whose opinion is often sought about, employee workspace decisions. A decision-maker is defined as a person in charge of, or who plays a key role in, making decisions about employee workspace company-wide. To gain access to these worker groups, we purchased a list of businesses in the targeted SIC codes. When contacting the businesses, interviewers asked to speak with those making decisions about workspace.

Table 4 shows how the survey samples were distributed by state.

Table 4: Target Audiences By State

RESPONDENT	IDAHO	MONTANA	OREGON	WASHINGTON	TOTAL
Regular Employees	55	35	151	265	506
Influential Staff	45	86	166	224	521
Decision-Makers	48	88	161	219	516

Table 5 shows the commercial sectors represented in each sample.

Table 5: Commercial Sectors Represented

SECTOR	REGULAR EMPLOYEES (N=506)	INFLUENTIAL STAFF (N=521)	DECISION-MAKERS (N=516)
Office or School	64%	54%	55%
Wholesale or Retail Store	21%	28%	28%
Health Care	12%	10%	9%
Financial Institution	3%	8%	8%

Regular employees were significantly more likely to work in the larger companies (250+ employees) than decision-makers and influential staff (see Table 6). This difference in size between employees and the other samples probably reflects a greater difficulty in reaching upper management in larger firms, including the fact that some larger firms in the Pacific Northwest have corporate management outside of the region.

Table 6: Number of People Employed by Company at Surveyed Location

NUMBER OF PEOPLE EMPLOYED	EMPLOYEES (N=506)	INFLUENTIAL STAFF (N=521)	DECISION-MAKERS (N=516)
20-49	34%	56%	55%
50-99	21%	24%	27%
100-249	17%	12%	11%
250-500	13%*	5%	4%
Over 500	15%*	2%	3%

** = significant < .05 with influential staff and decision-makers*

Table 7 provides respondent estimates of the age of the building in which they work. Differences between employees, influential staff, and decision-makers are not statistically significant. However, some differences do appear among the states. Based upon the estimates of influential staff and decision-makers, commercial buildings in Montana and Oregon are significantly older than those in Washington, with Idaho buildings falling in between.

Table 7: Approximate Age of Building Respondent Works In

AGE	EMPLOYEES (N=506)	INFLUENTIAL STAFF (N=521)	DECISION-MAKERS (N=516)
Less Than 5 Years Old	16%	9%	8%
Between 5 And 20 Years Old	38%	30%	29%
Older Than 20 Years	44%	58%	60%
Not Sure	2%	3%	3%

We asked influential staff and decision-makers a series of questions about the characteristics of the workspace that we did not ask of employees, on the assumption that employees would be less likely to know this information. As shown in Table 8, a little less than two-thirds of companies owned the space they occupied, while the rest leased their space. Companies in Idaho and Montana were significantly more likely than those in Oregon and Washington to be owner-occupied (73% versus 59%).

Table 8: Workspace Owned or Leased

OWNERSHIP OF WORKSPACE	INFLUENTIAL STAFF (N=521)	DECISION-MAKERS (N=516)
Own facility	62%	63%
Lease facility	35%	36%
Not sure	2%	1%

Of influential staff and decision-makers who could answer the question about workspace square footage, 50% estimated that their workspace was under 25,000 square feet and another 25% estimated that it was between 25,000 and 50,000 square feet (see Table 7). Notably, influential staff were much less likely to offer an estimate of the size of space (62%) than were decision-makers (87%).

Table 9: Square Footage of Workspace

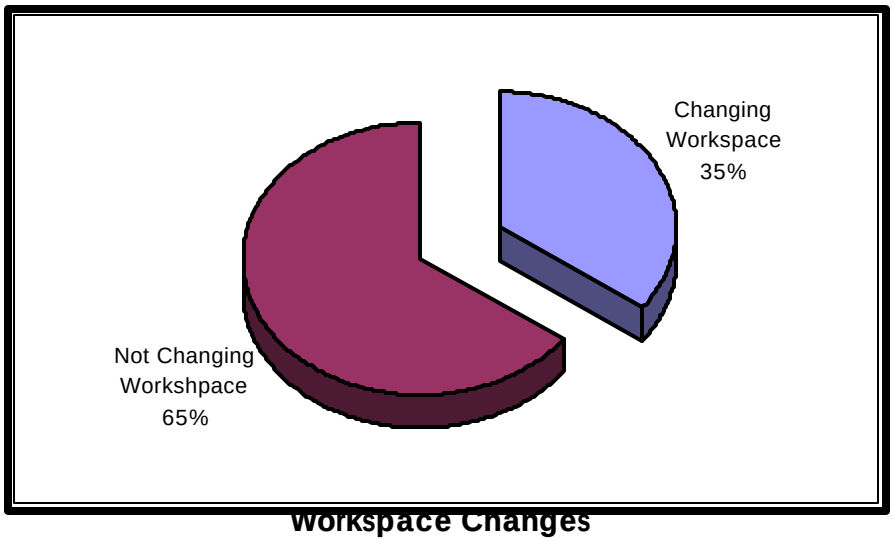
SQUARE FOOTAGE	INFLUENTIAL STAFF (N=325)	DECISION-MAKERS (N=448)
Under 10,000 sq. ft.	32%	23%
10,000 to Just Under 25,000 Sq. Ft.	27%	32%
25,000 to Just Under 50,000 Sq. Ft.	21%	22%
50,000 to Just Under 100,000 Sq. Ft.	10%	10%
100,000 Sq. Ft or More	10%	13%

Respondent groups and company characteristics, along with other variables, were cross-tabulated with relevant questionnaire items to determine if statistically significant differences emerged. Statistically significant differences, where explanatory, are noted in the text. For a complete set of cross-tabulation tables, please see the *Bannertabs for Baseline Surveys* notebook on file with Alliance evaluation staff.

COMPANIES MAKING WORKSPACE CHANGES

As shown in Figure 3, 35% of decision-makers reported their company planned to make or was in the process of making **one or more** changes to their current workspace.

Figure 3: Percent of NW Businesses Contemplating



Workspace Changes

Of the third of businesses that were making changes:

- 78% said the company was renovating its current space
- 32% said the company was constructing its own building, and
- 28% said the company was moving to new leased space.

Characteristics of companies related to workspace changes included:

- Companies housed in older buildings were significantly more likely than those in younger buildings to be planning or making space changes.
- Companies with over 100 employees were significantly more likely than those with fewer employees to be renovating their current space.
- Companies with 50,000 square feet of space or more were significantly more likely than companies with less than 25,000 square feet to be constructing their own building with other companies falling in between.
- Firms in Montana were significantly less likely than firms in Washington, which were the most likely, to be moving into new leased space. Firms in Idaho and Oregon fell in between.
- The incidence of space changes did not vary by whether the building was owned or leased.

We asked decision-makers who planned or were making space changes to rate the importance of various factors in making the change, using a five-point scale in which 5 meant "very important" factor and 1 meant "not at all important" (see Table 10). The shaded factors on the table indicate the BetterBricks.com related factors.

Table 10: Importance of Various Factors When Changing Facilities

DESIGN FACTORS	DECISION- MAKERS RATING THIS FACTOR AS IMPORTANT (N=181)
Increased Productivity	*79%*
More Space for Existing Staff or Customers	69%
Room for Future Staff Expansion	62%
Meeting Company Environmental Goals	*62%*
Reduced Operating Costs	*61%*
Improved "Look" for Customers or Clients	61%
More Storage or Warehouse Space	45%
Room for More Product Display	19%

While "increased productivity" is clearly the leading factor with 79% rating it as very important, the other two BetterBricks.com related factors (meeting environmental goals and reduced operating costs) received ratings similar to other factors, such as room for expansion and improved "look."

In Table 11 below, decision-maker ratings for these factors are compared with architects' ratings for the same factors. (The full results of the designer/architect survey are given in *Chapter 4*.) Assuming that a factor's importance relates somewhat to the frequency with which architects are asked to include it in a building design, we asked architects to rate each of the factors using a five-point scale where "5" meant "all the time" and 1 meant "not at all." Table 10 shows the percentage of each group that indicated the top two rating categories.

Table 11: Comparison of Decision-Makers and Architects on Design Factors

DESIGN FACTORS	DECISION-MAKERS RATING THIS FACTOR AS IMPORTANT [A] (N=181)	ARCHITECTS FREQUENTLY BEING ASKED [B] (N=54)
Increased Productivity	*79%*	*46%*
More Space for Existing Staff or Customers	69%	54%
Reduced Operating Costs	*61%*	*59%*
Room for Future Staff Expansion	62%	69%
Meeting Company Environmental Goals	*62%*	*28%*
Improved "Look" for Customers or Clients	61%	76%
More Storage or Warehouse Space	45%	54%
Room For More Product Display	19%	20%

[A] *Percent of decision-makers giving a 4 or 5 rating on a five-point scale in which 5 signified "very important" and 1 signified "not at all important."*

[B] *Percent of architects giving a 4 or 5 rating on a five-point scale in which 5 signified clients asked the factor to be considered "all the time" and 1 signified "not at all."*

Of the three factors most directly related to BetterBricks.com, only reduced operating costs received similar ratings from decision-makers and architects. For

the other two factors – increased worker productivity and meeting environmental goals – decision-makers attached more importance to them than architects' ratings of how often clients ask for those factors to be considered.

COMPANY IMAGE

We asked all three worker groups to rate their company with respect to six "image" statements. A rating of 5 indicated they strongly agreed with the statement and a rating of 1 indicated that they strongly disagreed. Table 12 presents the percent of agreement ratings (a rating of 5 or 4) for the statements (in the order of the highest percent to the lowest for employees).

Table 12: Percent Agreement with Opinions about Company Image[A]

STATEMENTS ABOUT COMPANY IMAGE My company is. . .	EMPLOYEES (N=506)	INFLUENTIAL STAFF (N=521)	DECISION-MAKERS (N=516)
Concerned About Worker Productivity	74%	86%	89%
Good to Employees	64%	85%	92%
Environmentally Conscious	64%	78%	80%
Mainstream	52%	52%	53%
Cutting Edge	48%	51%	55%
Slow to Change	32%	27%	24%

[A] *Percent of employees, influential staff, and decision-makers giving a 4 or 5 rating on a five-point scale where 5 signified "very important" and 1 signified "not at all important."*

Both employees and influential staff agreed the most with the statement "My company is concerned about worker productivity." Decision-makers rated this statement closely behind their top-rated "My company is good to employees."

Agreement ratings tended to increase as the person's level of influence in the organization increased – from employee, through influential employee, to decision-maker. Differences between employees and the other two groups were larger than between influential employees and decision-makers (who probably have more similar status). Influential employees and decision-makers were much more positive than employees about their respective company's concern for worker

productivity, environmental consciousness, and good treatment of employees; these two groups were also somewhat more positive as to whether their companies were cutting edge or adaptable to change. All groups rated their companies similarly on whether or not they were "mainstream."

Companies that were rated by respondents as environmentally conscious were also more likely to be rated as concerned with productivity, good to employees, and cutting edge. Respondents from larger firms (with more than 100 employees or occupying more than 25,000 square feet) were more likely to rate their companies as environmentally conscious than were respondents from smaller firms (less than 100 employees or occupying less than 25,000 square feet).

On the other hand, companies rated as "slow to change" were significantly more likely to own their building, to be planning on staying in their current space, and to be less concerned with productivity.

THE PHYSICAL WORKSPACE AND EMPLOYEE PRODUCTIVITY

Employees, decision-makers, and influential staff held similar views about how strongly the physical workspace affects worker productivity. Between 59% and 65% of respondents in each group thought that the physical workspace had a large effect on productivity (see Table 13). Those working in wholesale and retail stores were significantly less likely than health care workers, who had the highest percentage saying "large effect," to say the physical workspace has a large effect on productivity.

Table 13: The Effect of Physical Workspace on Employee Productivity

EFFECT	EMPLOYEES (N=506)	INFLUENTIAL STAFF (N=521)	DECISION-MAKERS (N=516)
Large Effect	65%	59%	63%
Some Effect	31%	36%	35%
No Effect/Not Sure	4%	5%	2%

To gauge how important three building features promoted through BetterBricks.com were to productivity (i.e., a good lighting system, good natural

light, and a comfortable temperature), we asked respondents to spontaneously list the features in the physical workspace that contribute **the most** to productivity. Table 14 shows that "layout of the workspace" was, by far, the physical factor respondents thought of most often (over 40% in each group). Features related to Betterbricks.com are shaded in the table.

Table 14: Physical Factors[A] Considered to Have A Large Effect on Employee Satisfaction and Productivity *(Multiple Responses Given)*

PHYSICAL FACTORS	EMPLOYEES (N=506)	INFLUENTIAL STAFF (N=521)	DECISION-MAKERS (N=516)
Layout of Workspace	43%	47%	48%
Technology, Equipment, Supplies	18%	20%	22%
Good Lighting System	15%	18%	19%
Aesthetic Appeal of Workspace	10%	17%	22%
Ergonomic Features	10%	15%	16%
Good Temperature	8%	15%	15%
Good Natural Light	11%	8%	9%
Low Noise Levels	9%	5%	4%
Personalized Space, Privacy	8%	8%	10%
Air Quality, Air Flow, Fresh Air	6%	2%	5%
Amenity Space, Meeting Rooms	3%	2%	3%
Features of The Property	2%	2%	2%
Safety, Security	1%	4%	4%
None; up to Individual Employee	1%	0%	0
Non-Physical Factors Cited (Management, Communication, Compensation, Co-Workers)	17%	12%	11%
Not Sure, Refused	17%	15%	13%

[A] *"Layout" includes responses about the organization and spaciousness of the space; "aesthetic appeal" includes open-ended responses concerned with visual appeal, comfort, and cleanliness; "ergonomic features" include responses about work surfaces, equipment access, and comfortable furniture; "amenity space" includes responses about common space, break and lunch areas, and exercise room; and "features of the property" includes responses about the location of the building within the community and its convenience.*

While respondents did mention the features promoted through Betterbricks.com (good lighting system, 15% to 19%; good temperature control, 8% to 15%; and good natural light, 8% to 11%), the percentages were much lower than for layout, and were about equal to other factors, such as equipment, aesthetics, and ergonomics. In addition, although we asked respondents to limit themselves to physical factors, they mentioned non-physical factors, such as management and co-workers, more often than many physical ones.

We then asked decision-makers and influential staff to consider the factors they had mentioned as important to employee productivity and to tell us any steps they had taken to increase productivity in the workplace (see Table 15).

Table 15: Steps Firms Have Taken to Increase Productivity *(Multiple Responses Given)*

STEPS TAKEN TO INCREASE PRODUCTIVITY	INFLUENTIAL STAFF (N=521)	DECISION-MAKERS (N=516)
Reorganized Layout of Workspace, Remodeling	30%	34%
Technology, Equipment, Supplies Upgraded	17%	14%
Ergonomic Features	9%	11%
Better Lighting, Natural Lighting	7%	9%
Improved Heating, Cooling, Air Quality	4%	7%
New Building, Expanded Facilities	4%	5%
Aesthetic Appeal Of Workspace, Safety	6%	3%
Amenity Space, Meeting Rooms	2%	2%
Personalized Space, Privacy	2%	2%
Noise Reduction Measures	0%	1%
Non-Physical Factors (Management, Communication, Compensation, Co-Workers)	24%	24%
Other	12%	12%
Nothing, No Steps	12%	12%
Not Sure, Refused	12%	10%

About a third of these respondents had taken steps to reorganize the layout of the space, including remodeling, and about a quarter had taken steps to improve non-physical space productivity factors. Considerably fewer – about 4% to 9% – had taken steps to improve lighting or temperature, the targets of BetterBricks.com. Just over 20% had not taken any steps or could not identify steps that they had taken.

If respondents did not spontaneously mention the three features promoted through BetterBricks.com, we asked them to rate how important each one was to productivity. By combining the spontaneous mentions with those giving "very important" ratings, we determined the percentage of respondents considering each feature to be "very important" (see Table 16).

Table 16: Importance of BetterBricks.com Features to Employee Productivity

IMPORTANCE TO EMPLOYEE PRODUCTIVITY	EMPLOYEES (N=506)	INFLUENTIAL STAFF (N=521)	DECISION-MAKERS (N=516)
GOOD LIGHTING SYSTEM			
Very Important	90%	90%	87%
Included In "Top-of-Mind" Answers	15%	18%	19%
Very Important Rating (prompted)	75%	72%	68%
Somewhat Important Rating	9%	9%	12%
Small Importance or Don't Know Responses	1%	1%	1%
GOOD TEMPERATURE			
Very Important	79%	71%	74%
Included In "Top-Of-Mind" Answers	8%	15%	15%
Very Important Rating (Prompted)	71%	56%	59%
Somewhat Important Rating	20%	26%	23%
Small Importance or Don't Know Responses	1%	3%	3%
NATURAL LIGHT			
Very Important	57%	53%	52%
Included In "Top-Of-Mind" Answers	11%	8%	9%
Very Important Rating (Prompted)	46%	45%	43%
Somewhat Important Rating	34%	38%	40%
Small Importance or Don't Know Responses	9%	9%	8%

As shown in Table 16, 90% of all respondents rated a good lighting system as very important to productivity, about 75% rated a comfortable temperature as very important, and about 55% thought that natural lighting was very important. A similar set of questions was asked of architects, who rated each of these features as more important to productivity than did the employees, influential staff, or decision-makers (see *Chapter 4* for more detail).

INFORMATION SOURCES

The BetterBricks.com program uses mass media advertising to attract commercial employees to the BetterBricks.com website. The website informs workers and professionals about the benefits of daylighting, quality lighting, and temperature control in commercial workspaces. We asked respondents to identify the information sources they use, or would use, to learn more about how to improve worker productivity in their workspaces; the results are shown in Table 17.

A similar percent of all three groups (28% to 33%) report they would use reference material such as journals, the Internet (18%), and books to learn more about how to improve productivity. Otherwise, however, employee choices for information differed from decision-makers and influential staff, who tended to be more similar. Employees would look most often to internal staff for information (45%). Significantly fewer influential staff and decision-makers would use internal sources, and significantly more say they would look to external sources, such as professional organizations and outside colleagues, and professional workplace and design firms. Between 22% and 27% of all three groups said they did not know where they would go to get information on workspace design and productivity.

Use of the Internet as a source of information about workplace productivity is particularly relevant to BetterBricks.com, and a few notable differences did emerge among respondent groups. Respondents in Idaho, compared to other states, were the least likely to report the Internet as an information source. Office employees were significantly more likely to turn to the Internet than were wholesale and retail employees, who were the least likely.

Table 17: Information Sources Respondents Would Use To Learn More How to Improve Productivity in their Workspaces *(Multiple Responses Given)*

INFORMATION SOURCES	EMPLOYEES (N=506)	INFLUENTIAL STAFF (N=521)	DECISION-MAKERS (N=516)
Internal Staff	45%	32%	26%
Reference Materials:	28%	33%	31%
... Journals, Magazines, Newspapers	2%	7%	9%
... Internet	18%	19%	18%
... Books, Library, University	8%	7%	4%
Professional Organizations, Colleagues, Seminars:	6%	19%	19%
... Seminars, Conferences	3%	6%	4%
... Union	2%	0%	0%
... Colleagues Not In My Company	3%	10%	7%
... Own Industry's Association	0%	3%	8%
Professional Design And Construction Firms:	6%	16%	20%
... Architecture Firm	0%	2%	5%
... Workplace Consulting Company	6%	12%	14%
... Engineering Firm	0%	1%	0%
... Construction Firm	0%	0%	1%
Regulatory Agency (Local, State, Federal), OSHA, Labor Board	4%	4%	6%
Office Equipment Company	1%	2%	1%
Own Assessment	0%	1%	2%
Other	2%	1%	1%
Don't Know	27%	22%	22%

Although the ad campaign only overlapped one day with interviewing, about 5% of respondents reported they had seen advertising or news stories about a website that provides information on improving productivity in commercial buildings (25 of 506 employees, 31 of 516 decision-makers, and 27 of 521 influential staff). Table 18 categorizes the open-ended descriptions of what this small group of respondents reported they saw, heard, or read. Notably, about half of respondents were not sure what they had seen and those who could tended to give general or vague

descriptions. Table 19 identifies the sources these same respondents cited for the advertising or news stories, and only a very few cited television. These tables show that while a few respondents may have seen productivity and workspace information, it was not BetterBricks.com advertising.

Table 18: Nature of Advertising or New Stories Seen

NATURE OF INFORMATION SEEN	EMPLOYEES (N=25)	DECISION-MAKERS (N=31)	INFLUENTIAL STAFF (N=27)
Website Mentioned, Website Available, Web Offers Tools to Design Space	4	8	4
Things About Improving Employee Productivity or The Workspace, Training, Seminars	8	2	6
Other	1	1	1
Not Sure	11	20	16

Table 19: Source of Advertising or New Stories Seen *(Multiple Responses Given)*

SOURCE OF INFORMATION SEEN	EMPLOYEES (N=25)	DECISION-MAKERS (N=31)	INFLUENTIAL STAFF (N=27)
Television	7	1	2
Internet Advertising	8	15	8
Magazines, Journals, Newspapers	8	7	6
Conference, Meeting	2	0	2
Company, Employer	2	0	0
Other	4	6	8
Can't Recall	2	7	3

INTERNET USAGE AND TV VIEWING PATTERNS

The majority of respondents in each worker group reported they used the Internet on the job (see Table 20). Notably, decision-makers were the most likely to use it (78%), compared with 67% of influential staff and 59% of employees. Employees were the most likely group, however, to use the Internet at least 20% of their time, with 17% of employees reporting they used it the equivalent of at least one day a week, compared with 14% of influential staff and 12% of decision-makers.

Table 20: Percent of Time Respondents Use the Internet to do their Job

PERCENT OF TIME	EMPLOYEES (N=506)	INFLUENTIAL STAFF (N=521)	DECISION-MAKERS (N=516)
Not at All	40%	30%	18%
1-10%	34%	44%	51%
11-20%	8%	9%	15%
21-30%	7%	6%	5%
31-40%	2%	2%	2%
41-50%	3%	3%	2%
Over 50%	5%	3%	3%
Not Sure, Refused	1%	3%	4%

Employees working in different business sectors reported significantly different Internet usage patterns. Over 70% of employees of wholesale or retail stores never use the Internet to do their job, and 58% of healthcare employees never use the Internet. These proportions contrast with the 27% of office, school, and financial employees who never use the Internet on the job.

Table 21 shows the hours per week that respondents typically watch television; no significant differences are present among the groups.

Table 21: Hours per Week Respondents Typically Watch Television

HOURS PER WEEK	EMPLOYEES (N=506)	DECISION-MAKERS (N=516)	INFLUENTIAL STAFF (N=521)
Not at All	6%	8%	5%
1 To 5 Hours	35%	42%	38%
6 to 10 Hours	32%	30%	28%
11 to 15 Hours	13%	10%	16%
16 to 20 Hours	8%	6%	8%
21 to 25 Hours	3%	2%	2%
Over 25 Hours	3%	2%	3%

Tables 22 through 24 show the percent of time respondents spend watching the news, prime time TV, and sports. Overall, about 90% of respondents watch the news, 80% watch prime time TV, and between 50% and 60% watch sports *at least some of the time.* The viewing patterns for each type of programming are similar across the three groups.

Table 22: Percent of Viewing Time Watching News

PERCENT OF TIME	EMPLOYEES (N=474)	INFLUENTIAL STAFF (N=497)	DECISION-MAKERS (N=477)
Not at All	10%	10%	9%
1-10%	24%	27%	21%
11-20%	14%	14%	15%
21-30%	18%	16%	15%
31-40%	7%	6%	6%
41-50%	14%	14%	17%
Over 50%	12%	12%	15%
Not Sure, Refused	0%	1%	2%

Table 23: Percent of Viewing Time Watching Prime Time TV

PERCENT OF TIME	EMPLOYEES (N=474)	INFLUENTIAL STAFF (N=497)	DECISION-MAKERS (N=477)
Not at All	21%	20%	22%
1-10%	19%	17%	17%
11-20%	10%	9%	12%
21-30%	14%	10%	10%
31-40%	5%	8%	6%
41-50%	15%	12%	12%
Over 50%	17%	23%	19%
Not Sure, Refused	0%	1%	2%

Table 24: Percent of Viewing Time Watching Sports

PERCENT OF TIME	EMPLOYEES (N=474)	INFLUENTIAL STAFF (N=497)	DECISION-MAKERS (N=477)
Not at All	47%	44%	38%
1-10%	22%	21%	20%
11-20%	6%	7%	8%
21-30%	6%	5%	7%
31-40%	3%	3%	2%
41-50%	15%	12%	12%
Over 50%	17%	23%	19%
Not Sure, Refused	0%	1%	2%

CHAPTER 4: BASELINE SURVEY OF ARCHITECTS AND DEVELOPERS

While the employee, influential staff, and decision-maker surveys explored the demand for BetterBricks.com information, services, and buildings, they could only indirectly comment on the supply side of the equation. To enhance understanding of the "supply-side" baseline market, we interviewed commercial workspace architects and developers to answer these research questions:

- How frequently are architects and developers currently asked to provide workspaces that enhance productivity?
- When architects and developers think about enhancing productivity through the physical workspace, are energy-efficiency elements among the solutions that come to mind?
- On what sources do these groups rely for information about workspace design, including the effects of design choices upon productivity?

METHODS AND SAMPLE DESCRIPTIONS

With the BetterBricks.com media targeted to architects and developers (e.g., *Architectural Record* and daily *Journals of Commerce*), and with the website information focused on systems that architects and developers address (e.g., lighting and HVAC), we selected these two supply side groups as the populations to survey.

We interviewed over 100 commercial workspace architects and developers in the Pacific Northwest 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 American Institute of Architects (AIA). We drew the sample of developers from a purchased list of businesses whose primary SIC code corresponded with development.

Table 25 presents the number of individuals surveyed by type of firm and state. The sample distributions by state reflect the population proportions. *Appendix B: Population and Sample Descriptors for Baseline Study of Architects and Developers* provides a more detailed discussion of the populations from which the samples were drawn.

Table 25: 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

Architects worked in architectural firms and design/build firms, but only three firms were focused on design/build work. However, six architects said that their firm had teamed on occasion with contractors for design/build projects, and one of these architects said that his firm was considering changing its focus to design/build.

The developers worked in firms with declared assets of over $1 million: 39% of the sample had assets of over $5 million, 35% had assets between $2.5 and $5 million, and 26% had assets between $1 and $2.5 million.

More than three-quarters of the architects (78%), but less than half (44%) of the developers, designed or developed both commercial and institutional workspaces. Most of the remaining respondents worked exclusively in the commercial sector, while a few (about 5% of both groups) worked exclusively in the institutional sector. More than two-thirds of the architects surveyed have designed schools; nearly half have designed municipal and office buildings, and nearly 40% who have designed medical buildings (Table 26). Developers primarily developed office and retail properties.

About two-thirds of the firms surveyed had twenty or fewer employees. The developer firms were more likely than the architect firms to be quite small (five people or less). Developers also comprised the largest companies, as some of them were part of large conglomerates. (See *Appendix A* for more detail.)

Table 26: Building Types Designed and Developed *(Multiple Responses Given)*

BUILDING TYPE	ARCHITECTS[A] (N=49)	DEVELOPERS[B] (N =48)	TOTAL (N=97)
Office	47%	81%	64%
Retail	29%	67%	47%
Schools	71%	4%	38%
Municipal	43%	4%	24%
Medical	39%	6%	22%
Historic Renovations	18%	10%	14%
Hospitality	20%	4%	12%

[A] *Tallies for all building types except "historic renovations" incorporate the responses of nine architects who said they were involved in "all types" of buildings, excluding the category "historic renovations." Five of the 54 architects were not asked this question.*

[B] *Tallies for all building types except "historic renovations" incorporate the response of one developer who said he was involved in "all types" of buildings, excluding the category "historic renovations."*

DESIGN AND DEVELOPMENT CRITERIA

We sought to understand the frequency with which architects and developers currently consider worker productivity issues in their design of commercial and institutional workspaces. When speaking with architects, we asked them how often their clients ask them to incorporate various design criteria into their projects. When speaking with developers, we asked them how often they have their architects incorporate the various criteria.

We investigated criteria related to the building envelope and to the interior workspace. The responses of architects and developers reflected their different areas of concern. An architectural team working for an owner/occupant, such as a university, produces a design encompassing both the building envelope and the workspaces within. For other clients, an architectural team may be involved in selected portions of the design. Team members have different specialties, such as addressing the orientation and configuration of the building envelope, the work areas, the lighting, or the interior design.

Developers, on the other hand, tend to directly concern themselves only with the envelope design and its systems (although there are exceptions to this). The occupant to whom the developer sells the project or leases space specifies the design of the interior workspace. The occupant may contract with the developer to build out the space or may contract with another firm.

Occupants acquire build-out designs through a number of routes. For simple designs, they may use the developer's team. For more tailored designs, they may hire architects or interior designers, or, if they are part of a national enterprise, they may use a design supplied by their headquarters. Developers of leased space have the ability to constrain an interior proposed by a tenant if they think the build-out might limit the marketability of the space to subsequent tenants.

Respondents were asked to state the frequency with which they addressed the design criteria using a five-point scale where 5 means "all the time" and 1 means "never." Table 27 shows the percent of "frequent" ratings (ratings of 4 and 5). The criteria are grouped under two major categories: those relating to the building envelope and overall technical systems and those relating to aesthetics and the adjustable workspace within the envelope.

Shaded criteria relate to the concepts or features the BetterBricks.com campaign promotes. This study explored criteria beyond those promoted by BetterBricks.com, both to provide a wider context for the program-relevant items and to reduce any social-response bias that can occur when the objective seems obvious to the respondent. (Note: criteria would likely vary by the type of building use, but given the sample size, those differences cannot be detected.)

Over half of architects frequently address several design criteria promoted through Betterbricks.com, including good temperature control, lower operating costs, natural light, quality lighting, energy efficiency, and employee comfort. But fewer than half routinely addresses meeting a client's environmental goals, or finding ways to increase worker satisfaction, productivity, and turnover through design.

A few architects mentioned that clients are talking with them more in the initial planning stages about their environmental goals, even though these goals often are sacrificed for other goals in a budget-constrained project. In addition, some architects report that clients in tight labor markets, such as high-tech companies, increasingly request strategies for reducing worker turnover. Architects have typically responded to such requests by adding employee amenities.

Table 27: Percent of Time Various Design Criteria Are Frequently Addressed [A]

DESIGN CRITERIA	ARCHITECTS (N=54)	DEVELOPERS (N =48)
CRITERIA RELATED TO TECHNICAL ENVELOPE AND OVERALL SYSTEMS		
Good Temperature Control	85%	79%
Low or Reduced Operating Costs	59%	56%
Natural Light in Workspace	57%	50%
Energy Efficiency	59%	27%*
Meeting Company Environmental Goals	28%	13%*
CRITERIA RELATED TO AESTHETICS OR INTERIOR WORKSPACE DESIGN		
Improved "Look" for Customers or Clients	76%	65%*
Quality Lighting	72%	48%*
Room for Future Staff Expansion	69%	35%*
Employees' Physical Comfort	74%	35%*
More Space for Existing Staff or Customers	54%	31%*
More Storage or Warehouse Space	54%	17%*
Ways to Increase Worker Satisfaction through the Design	39%	19%*
Ways to Increase Worker Productivity	46%	19%*
Room For More Product Display	20%	17%
Design Considerations to Reduce Worker Turnover	11%	13%

[A] *Percent of respondents giving a 4 or 5 rating on a five-point scale where 5 signified "very important" and 1 signified "not at all important."*

* *Asterisk signifies statistically significant difference at the .01 level between the responses of architects and developers.*

Developers address four of the BetterBricks.com-related criteria more than half of the time: good temperature control, low or reduced operating costs, natural light in workspace, and quality lighting. They address the remaining BetterBricks.com-related criteria less than half the time.

The frequency with which architects and developers address design criteria reflects their respective purviews. No significant differences emerged between architects and developers for the frequency with which they address good temperature control, low or reduced operating costs, and natural light in the workspace. However, developers are significantly less likely than architects to frequently address energy efficiency and meeting a company's environmental goals.

A few of the developers elaborated on the issue of energy efficiency. They said that market-driven lease prices do not enable them to recoup higher first costs for energy-efficient equipment and that energy cost changes over time are passed through to the tenant. The difference between architects and developers in meeting company environmental goals no doubt reflects the fact that developers, unlike architects, are usually making design decisions prior to knowing the client.

Developers were significantly less likely than architects to address the criteria related to the workspace within the envelope, including quality lighting, with the exception of the two criteria that were infrequently addressed by both groups – room for more product display and design considerations to reduce worker turnover.

When we investigated several factors that might influence how respondents rated the design criteria, we found that the type of building could influence the design decisions. Architects who designed schools were asked more frequently to address natural light and temperature control than those who did not design schools. Architects who designed offices were more frequently asked than those who did not design offices to address the "look" of the building but were less frequently asked to address quality lighting and provide more space for existing staff.

Developers of office space were more likely than developers who did not construct offices to address natural light and room for future staff expansion. Developers of retail space were more likely than developers who did not construct retail space to address environmental goals and room for more product display.

We found that the state in which the architect worked was associated with their responses for energy efficiency and for natural light. Idaho architects were significantly less likely than architects in Montana, Oregon, and Washington to be asked by clients to incorporate energy efficiency into the design. In addition, Idaho architects were significantly less likely than Oregon and Washington architects to be asked to address natural light. Montana architects were about halfway between the Idaho and Oregon/Washington architects, and thus did not differ significantly from either group.

We explored whether the differences in architects' responses by state could be explained by the influence of the major metropolitan areas of Seattle and Portland, but found that the response of architects in the major metropolitan areas did not differ from those in non-metropolitan areas, other than the difference attributed to Idaho architects discussed above. We also did not find statistically significant differences in the responses of developers when viewed by state or by major metropolitan area.

PHYSICAL WORKSPACE AND EMPLOYEE SATISFACTION AND PRODUCTIVITY

Architects were significantly more likely than developers to think that the physical workspace had a large effect on employee satisfaction and productivity – 95% said it had a large effect while 5% thought it had a moderate effect. In contrast, only 50% of developers thought the workspace had a large effect on employee satisfaction and productivity, 35% thought the effect was moderate, and 15% thought it was small effect, did not know the effect, or did not think the notion was even relevant.

By and large, architects believed that a good lighting system, natural light in the workspace, good temperature control, and good airflow or air quality have a large effect on satisfaction and productivity. Developers were considerably less likely than architects to attribute lighting systems, natural lighting, and air flow with large effects, but were roughly comparable to architects in noting the large effect that good temperature control has on employees. One developer mentioned that the only client he ever "lost" was due to dissatisfaction over the temperature.

Many respondents named lighting systems, natural light, and temperature control – factors congruent with Betterbricks.com purposes – in response to a "top-of-mind" query about the physical **factors most influencing** employee satisfaction and productivity (see Table 28). The physical factors identified reflect the architects' concern with both the building envelope and interior workspace and the developers' concern with the envelope. Other key factors included aesthetic appeal, especially for architects, and features of the property for developers.

Table 28: Physical Factors[A] Considered to Have a Large Effect on Employee Satisfaction and Productivity *(Multiple Responses Given)*

PHYSICAL FACTORS	ARCHITECTS (N=54)	DEVELOPERS (N =48)
FACTORS RELATED TO ENVELOPE AND OVERALL SYSTEMS		
Good Lighting System	70%	31%
Natural Light in Workspace	63%	42%
Good Temperature	52%	40%
Features of the Property	4%	27%
Good Air Flow or Air Quality	16%	4%
Rest Rooms, Break Rooms, Elevators	2%	15%
Orientation of Building, Access to Outside	6%	4%
FACTORS RELATED TO AESTHETICS OR INTERIOR WORKSPACE DESIGN		
Aesthetic Appeal of Workspace*	43%	21%
Layout of Workspace	26%	10%
Ergonomic Features	19%	8%
Individual Control of Temperature, Lighting	7%	0%
Factors Not Relevant to Developers' Concerns	NA	6%

* *"Aesthetic appeal" summarizes the open-ended responses concerned with visual appeal and comfort; "layout" summarizes responses concerning the organization and spaciousness of the space; "features of the property" summarizes responses concerning the location of the building within the community, parking, and landscaping; "ergonomic features" summarizes responses concerning work surfaces and equipment access.*

Respondents who did not include natural light, quality lighting, temperature control, or air quality among their top-of-mind items were asked to rate whether the factor had a large, moderate, or small effect on satisfaction and productivity. The "prompted" large effect ratings were then added to the top-of-mind responses, as shown in Table 29. "Large effect" ratings for the lighting system, temperature, natural light, and air quality were high for both groups (from 60% to 100%), but were higher for architects than for developers.

Table 29: Effect of BetterBricks.com Features on Employee Satisfaction and Productivity

SIZE OF EFFECT	ARCHITECTS (N=54)	DEVELOPERS (N =48)
GOOD LIGHTING SYSTEM		
Large Effect	100%	64%
Included in "Top-Of-Mind" Answers	70%	31%
Large Effect Rating (Prompted)	30%	33%
Moderate Effect Rating	0%	28%
Little or No Effect or Don't Know Responses	0%	8%
GOOD TEMPERATURE		
Large Effect	87%	80%
Included in "Top-Of-Mind" Answers	52%	40%
Large Effect Rating (Prompted)	35%	40%
Moderate Effect Rating	13%	16%
Little or No Effect or Don't Know Responses	0%	4%
GOOD NATURAL LIGHT		
Large Effect	93%	75%
Included in "Top-Of-Mind" Answers	63%	42%
Large Effect Rating (Prompted)	30%	33%
Moderate Effect Rating	7%	21%
Little or No Effect or Don't Know Responses	0%	4%
GOOD AIR FLOW OR AIR QUALITY		
Large Effect	79%	60%
Included in "Top-Of-Mind" Answers	16%	4%
Large Effect Rating (Prompted)	63%	56%
Moderate Effect Rating	19%	27%
Little or No Effect or Don't Know Responses	2%	13%

For the BetterBricks.com-related features, architects and developers were asked, in open-ended questions, to specify what steps they took to make sure these features contributed to employee satisfaction and productivity. Table 30 describes the

features of good lighting systems that enhance worker satisfaction and productivity. Only one respondent, a developer, specifically mentioned using energy-efficient lighting systems. As evidenced by fewer responses to this question, developers described less overall involvement in the lighting system than did architects.

Table 30: Features of Lighting Systems Used by Architects and Developers to Enhance Employee Satisfaction and Productivity *(Multiple Responses Given)*

LIGHTING SYSTEM FEATURES	ARCHITECTS (N=54)	DEVELOPERS (N =48)
TYPE OF EQUIPMENT		
Task Lighting, Product Lighting, Track Lighting	8	5
Indirect Lighting, Diffusers	8	1
Quality Lighting Fixtures	6	3
Lighting Color *(Full Spectrum/Color Corrected/ Warm/Cool)*	2	3
Dimmers for Individual Control	1	0
Efficient Lighting	0	1
OTHER FEATURES		
Eliminate Glare	9	1
Use Lighting Consultants, Engineers, Lighting Design Lab	5	0
Constrained By Economic Factors	5	0
"Not Too Much, Not Too Little"	3	2
Talk with Client to Understand Needs	3	0
Meet Code	2	2

Table 31 shows that architects and developers most commonly mentioned using lots of windows, skylights, and unspecified daylighting features. Architects also mentioned features they employ in the workspace interior to the envelope, such as clerestory windows, relights, and reflectors. Architects may also design the layout of the space to take advantage of the natural light access.

Table 31: Natural Lighting Features Architects and Developers Use to Enhance Employee Satisfaction and Productivity *(Multiple Responses Given)*

NATURAL LIGHTING FEATURES	ARCHITECTS (N=54)	DEVELOPERS (N =48)
FEATURES RELATED TO ENVELOPE		
Daylighting Features, Unspecified	16	4
Lots of Windows, Placement of Windows	11	9
Skylights	8	5
Clerestory Windows	5	0
Reflectors	4	0
Provide Views	4	0
Sunscreens	3	0
Atriums	2	0
No Deep Buildings	0	2
Perimeter Offices	0	2
Interior Offices; Continuous Window Line on Shell	0	1
Deep Bays	0	1
Outdoors Plazas, Courtyards	0	1
High Ceilings	0	1
FACTORS RELATED TO WORKSPACE		
Layout, Grouping Workstations to Access Light, Half-Height Partitions, Space Planning	4	0
Relights, Bring Natural Light Deep into Space	4	0
Light Shelves	1	0
Use Lighting Consultants	1	0

In addition to those comments, architects said: "I try to have natural light in two-thirds or more of the offices"; and "The building code doesn't allow a lot of windows." A developer said, "My main criterion in selecting a building to renovate is whether I

can get natural light into it." In contrast with those architects who said they use lots of windows, one designer said that he uses few windows to reduce glare for computer users.

Developers expressed conflicting perspectives on getting workers access to natural light: two put individual offices along the perimeter and "large, open spaces in the interior," while another places individual offices in the interior. Another developer said that he tries to incorporate natural light features, but that he is constrained because essentially he just builds "fancy boxes."

Table 32: Heating, Cooling, and Air Flow Systems Used by Architects and Developer to Enhance Employee Satisfaction and Productivity *(Multiple Responses Given)*

HEATING, COOLING, AND AIR FLOW SYSTEM FEATURES	ARCHITECTS (N=54)	DEVELOPERS (N =48)
TYPE OF EQUIPMENT		
Zones, Meet Individual Worker's Needs	7	6
High Quality Equipment	2	6
Passive Solar, Passive Ventilation	4	0
Controls	2	1
Operable Windows	2	0
Efficient Units, Efficiency in Trade Off with Cost	0	2
Separate Controls for Tenants; Building Has Main System and Tenant Has Individual System that Feeds into It	0	2
OTHER FEATURES		
Use HVAC Consultants, Engineers	7	0
Sizing, Good Mechanical Design	2	3
Constrained by Economic Factors; Consider Value	3	0
Always A Big Challenge, No Good Solutions	3	0
Test And Balance System After Installed; Good Maintenance	1	1
Work With Client's Upper Management	0	1

Table 32 presents the features that architects and developers reported incorporating into the heating, cooling, and ventilation system to enhance employee satisfaction and productivity. Both architects and developers most frequently mentioned creating space conditioning zones. Both groups also acknowledged the importance of good mechanical design. In addition, architects mentioned passive systems and, in a response related to zoning, emphasized the importance of being able to address individual needs. Developers frequently mentioned using high quality equipment.

Both architects and developers frequently said that good temperature control was one of the hardest objectives to achieve because people judge temperature comfort differently; few people like to have cold or hot air blowing on them; and the heat load differs on different sides of the building and changes throughout the day. Finally, people are quick to complain about temperature and do so frequently.

INFORMATION SOURCES

The BetterBricks.com website is intended to increase demand by employees, decision-makers, and influential staff for quality commercial buildings that are energy efficient. In our study of architects and developers, we identified the information sources that they use or would use to learn more about designing workspaces that enhance worker productivity and satisfaction (see Table 33).

The architects said that they would turn to a variety of sources to learn how to enhance productivity through workspace design. Architects most frequently said they would consult reference materials, including journals, the Internet, and books and libraries. They would also turn to professional organizations such as the AIA or the Seattle Lighting Lab, to professionals in related design and construction fields such as interior designers, engineers, or lighting consultants, to manufacturers' catalogues or reps, or they would conduct their own assessment of the relationship between workspace design and worker satisfaction and productivity. Only one architect responded that he did not know where to find information on this topic.

Developers overwhelmingly would turn to architects and associated design and construction professionals—interior designers, engineers, lighting consultants, and contractors). Next in importance were reference materials, including the Internet. Developers also said that they would be likely to make their own assessment of the relationship between workspace design and productivity. They would do this through surveying current market conditions, talking with tenants, or referencing their own past experience. Eight developers said that either they did not know

where to get information on this issue or that the issue was not relevant to them, and instead concerned their tenants.

Table 33: Information Sources Used by Architects and Developers ***(Multiple Responses Given)***

INFORMATION SOURCES	ARCHITECTS (N=54)	DEVELOPERS (N =48)
Other Professionals:	**33%**	**75%**
Architects	0%	67%
Interior Architects, Workspace Consultants, Specialists within The Company	24%	15%
Engineers	11%	15%
Lighting Consultants	14%	6%
Contractors, Construction Consultants	2%	6%
Reference Materials:	**61%**	**19%**
Journals, Magazines	41%	4%
Internet	28%	13%
Books, Standards, Library	26%	6%
BetterBricks.com	0%	0%
Professional Organizations, Colleagues, Seminars:	**35%**	**6%**
AIA	7%	2%
Seattle Lighting Lab	4%	2%
BOMA	2%	2%
Green Building Council	4%	0%
Manufacturers:	**30%**	**4%**
Manufacturers, Catalogues	24%	4%
Office Equipment Company	9%	0%
Own Assessment:	20%	17%
Survey The Market, Talk With Workers And Tenants, Visit Buildings	11%	35%
Own Experience	19%	8%
Talk With Current Client, User Groups	14%	0%
Don't Know:	2%	17%
Don't Know	2%	10%
Not Relevant To Developer; A Tenant Concern	0%	29%

Television ads for BetterBricks.com began airing at the start of the two-week interviewing period for this baseline study. We asked respondents whether they had seen any advertising or news stories about how to improve worker satisfaction and productivity by changing the design of the workspace. Any respondents that said they had seen such advertising or news stories were asked if they recalled a website mentioned in the advertising and, if so, whether they recalled the website's name.

Nearly one-third of the architects (17) and one-quarter of the developers (11) said that they had seen advertising or news stories about improving worker satisfaction and productivity through workspace design. However, only four architects and one developer recalled that a website was mentioned in the ad or news story. Of these, only one architect could remember the website's name, stated it was the AIA's website, and said that he had not visited it nor did he have plans to visit it. Thus, none of the surveyed architects or developers appears to have seen the BetterBricks.com advertisements.

So what ads and news stories, then, were they seeing? Three architects responded that such ads and stories were "really common; I see them all the time." One person elaborated that productivity is used to sell all sorts of things for the workplace. "That's the hook that manufacturers use to sell their products. Everything is sold that way."

Only one respondent, a developer, reported seeing an ad or news story on the television, and one designer reported hearing one on the radio (by National Public Radio). Two architects and three developers reported reading about this topic in a newspaper article. One designer reported hearing about the topic at professional conventions and code seminars and one designer reported hearing about it from another architect. Twelve architects (71% of those who said they had seen an ad or a news story) and five developers (46% of those seeing an ad or story) said they saw the ad or story in a trade journal or magazine. They mentioned a furniture manufacturer's newsletter, *Design Build Magazine*, *Learning by Design*, *CEO Magazine*, *Homes and Lifestyles*, and the annual *Business Week*/AIA awards for the effect of design on corporate profitability.

CHAPTER 5: SUMMARY OF KEY PERFORMANCE INDICATORS

This section summarizes the key baseline data, or performance indicators, that will be compared with similar data gathered in subsequent BetterBricks.com evaluations.

EMPLOYEES, DECISION-MAKERS, AND INFLUENTIAL STAFF

Importance of Various Criteria in Making Workspace Changes

Table 34 presents the baseline data on the importance to decision-makers of various criteria they would find important when undertaking workspace changes; these data will be compared with the results of subsequent evaluations of the BetterBricks.com project. Increased productivity emerged as the most important criteria to decision-makers that were planning or undertaking a change in facilities. On the other hand, decision-makers rated reduced operating costs and meeting company environmental goals equal to most of the non-BetterBricks.com-related criteria.

Table 34: Importance to Decision-Makers of Workplace Change Criteria

CRITERIA	% IMPORTANT OR VERY IMPORTANT[B] (N=181)
Increased Productivity	*79%*
More Space For Existing Staff Or Customers	69%
Reduced Operating Costs	*61%*
Room For Future Staff Expansion	62%
Meeting Company Environmental Goals	*62%*
Improved "Look" For Customers Or Clients	61%
More Storage Or Warehouse Space	45%
Room For More Product Display	19%

[A] *Percent of decision-makers giving a 4 or 5 rating on a five-point scale where 5 signified "very important" and 1 signified "not at all important."*

Effects of the Physical Workspace on Employee Productivity

Many influential staff and decision-makers believed the physical workspace has a large effect on productivity, but their views on what specific factors produced this large effect varied. About 15-20% of employees, decision-makers, and influential staff mentioned the lighting system when asked for top-of-mind responses to the question of what components of the physical workspace have a large effect on employee productivity. About 10% of respondents mentioned natural light and comfortable temperature in their top-of-mind responses. Table 35 provides the baseline data for subsequent BetterBricks.com evaluations.

Table 35: Effect of Workspace Components on Productivity

COMPONENT	% OF RESPONDENTS SAYING "LARGE"		
	EMPLOYEES (N=506)	INFLUENTIAL STAFF (N=521)	DECISION-MAKERS (N=516)
Physical Workspace	65%	59%	63%
Lighting System	15%	18%	19%
Natural Light	11%	8%	9%
Temperature	8%	15%	15%

Information Sources Used to Learn about Workspace and Productivity

Just under 20% of employees, influential staff, and decision-makers reported they would use the Internet to learn more about the relationship between the workspace and productivity. All three groups also would turn to reference materials (including the Internet) at about the same rate (30%).

However, the groups differed in the relative rankings they gave different information sources. Decision-makers most often mentioned they would use reference materials (31%). A third of influential staff also mentioned reference materials but an equal proportion would turn to internal staff (32%). About 20% of influential staff and decision-makers would also rely on professional organizations, colleagues, and seminars, and on professional design and construction firms. On

the other hand, 45% of regular employees reported they would turn to internal staff and managers, with reference materials a distant second (28%).

Internet Use and TV Viewing Patterns

The amount of time employees, influential staff, and decision-makers use the Internet, watch TV, and watch news, sports, and prime time TV is similar. In addition, about 70% of all groups use the Internet on the job at least occasionally. More than half of these users reported that they access the Internet for four hours or less per week. Over 95% of respondents typically watch some TV during the week. About 90% of respondents watch some news during the week, about 80% watch some primetime TV, and just less than 60% watches some sports.

ARCHITECTS AND DEVELOPERS

Requests to Provide Workspaces That Enhance Productivity

Architects and developers concern themselves with different aspects of commercial workspace design. Both architects and developers address the building envelope and the overall mechanical systems but only architects tend to address the workspace within the envelope. The occupants of space also help determine the design of the workspace.

Both architects and developers report frequently addressing good temperature control, low or reduced operating costs, and natural light in the workspace. Developers are somewhat less likely than architects to address quality lighting, but both groups reported they were addressed it more often than not. Architects also frequently address energy efficiency, yet developers less frequently concern themselves with this. Based on anecdotal comments, developers may not feel that they can recoup the higher first-costs often associated with energy efficiency measures.

Because of their concern with the interior workspace, architects reported addressing worker productivity and satisfaction with much greater frequency than developers. Architects' clients ask them to address employees' physical comfort, satisfaction, and productivity more often than not. Only occasionally do clients request designs to meet their environmental goals or design considerations to reduce turnover. However, a few architects reported anecdotally that both environmental goals and worker turnover are increasing in importance to their clients. To date, mainly high-tech clients that face a tight labor market have expressed concern with turnover.

Table 36 provides the baseline data that will be used to measure any changes in the frequency with which architects and developers address BetterBricks.com-related design criteria over the course of the BetterBricks.com program.

Table 36: Frequency of Requests to Address Key Design Components [A]

DESIGN CRITERIA	TOP 2 RATINGS	
	ARCHITECTS (N=54)	DEVELOPERS (N=48)
CRITERIA RELATED TO ENVELOPE AND INTERNAL SYSTEMS		
Good Temperature Control	85%	79%
Low or Reduced Operating Costs	76%	65%
Energy Efficiency	59%	27%
Natural Light In Workspace	59%	56%
Meeting Company Environmental Goals	28%	13%
CRITERIA RELATED TO AESTHETICS AND WORKSPACE DESIGN		
Improved "Look" for Customers or Clients	72%	48%
Quality Lighting	57%	50%
Room for Future Staff Expansion	69%	35%
Employees' Physical Comfort	74%	35%
More Space for Existing Staff or Customers	39%	19%
More Storage or Warehouse Space	57%	31%
Ways to Increase Worker Satisfaction through the Design	54%	17%
Ways To Increase Worker Productivity	46%	19%
Room For More Product Display	11%	13%
Design Considerations To Reduce Worker Turnover	29%	17%

[A] *Percent of respondents giving a 4 or 5 rating on a five-point scale where 5 signified "all the time" and 1 signified "never."*

Table 37 presents baseline data on the percent of architects and developers who think various components of the workspace have a large effect on employee satisfaction and productivity. Nearly all architects (about 95%) thought the physical workspace in general had a large effect; about two-thirds thought the lighting system and natural light specifically have a large effect. Less than 50% of the developers attributed large effects to the physical workspace or to components.

Table 37: Effect of Workspace Components on Employee Satisfaction and Productivity

COMPONENT	ARCHITECTS (N=54)	DEVELOPERS (N=48)
Physical workspace	95%	50%
Lighting system	70%	31%
Natural light	63%	42%
Temperature	52%	40%
Air flow air quality	16%	4%

Some developers spoke of having requirements for the building shape (i.e., not too deep) and orientation, features potentially related to a BetterBricks.com design. As implied by their comments, however, they think of building orientation in terms of access and not in terms of productivity, comfort, or energy efficiency. And the link between building orientation and occupant productivity and comfort may be obscure to them since it is their tenants that specify or select the portion of the building to occupy and then configure the occupied space.

Enhancing Productivity through Energy-Efficiency Solutions

Architects, in their concern with the building envelope, the mechanical systems, and the interior workspace, make more decisions than developers that affect worker productivity and building energy use. Both groups identified productivity solutions that can offer energy-efficiency benefits.

Both groups are concerned with getting natural light into the workspace and use a variety of methods to do so. Both groups often match lighting systems to the use to

which the space will be put. Unprompted, a few architects specifically mentioned that they rely on the Lighting Design Lab for assistance; one developer mentioned using efficient lighting. Both groups use heating and cooling zones, although only architects are able to tailor the system capability to individual workers. Developers emphasized using quality equipment, appropriate sizing, and good mechanical design. Architects emphasized using consulting engineers.

Although there was individual variation, at the group level both architects and developers clearly are interested in the satisfaction of the workspace use and build in features to ensure that satisfaction. The degree to which the solutions are energy efficient cannot be directly assessed through a study such as this. Yet the actions that architects and developers are already taking likely could be enhanced to encompass energy efficiency, were the knowledge of or demand for energy efficiency to be cultivated.

Sources of Information about Workspace Design, Productivity, and Satisfaction

Architects would be most likely to turn to reference materials, including the Internet, to learn more about the relationship between workspace design and worker satisfaction and productivity. The top three sources of information most frequently cited by architects were professional journals and magazines (41%) – a subset of reference materials, professional organizations, seminars, and colleagues (35%), and the Internet (28% – also a subset of reference materials).

Developers would be most likely to turn to architects and other design and construction professionals were they interested in learning more about how to design workspaces to enhance worker satisfaction and productivity. However, given their focus on the building envelope and system and not on the interior workspace, it seems unlikely that they would pursue such a line of inquiry.

Neither the architects nor developers surveyed had heard of BetterBricks.com nor remembered the advertising associated with the website. This finding is expected for this baseline study as it was conducted during the first two weeks that the television advertisements aired.

Productivity advertisements and news stories were familiar to architects and developers. Nearly one-third of architects and one-quarter of developers recalled hearing or seeing recent advertisements or news stories relating building design and worker productivity. Several respondents said that such promotion is ubiquitous, since claiming one's product will enhance the "bottom line" through worker productivity is a common marketing strategy.

CHAPTER 6: CONCLUSIONS AND ISSUES

Given that this report focuses on the baseline conditions surrounding the campaign, there are very few recommendations that can surface at this time. However, the following issues are worthy of consideration.

1. BetterBricks.com messages are competing with other messages.

A challenge for BetterBricks.com is likely to be the variety of attributions that commercial employees, decision-makers, influential staff, architects, and developers attach to the notion of workplace productivity. When asked, over 50% of each group thought that the physical workspace has a large effect on workplace productivity. Yet, the factors that each group felt specifically had a large effect were quite varied. Clearly testing whether the issues of concern to BetterBricks.com are heard amidst this already existent concern and interest in workplace productivity is one purpose of this evaluation.

2. BetterBricks.com messages may not currently attract developers.

Developers do not concern themselves with the interior workspaces; however, they make decisions regarding building orientation, access to natural light, HVAC systems, and, to some degree, lighting systems. Providing occupants with a comfortable temperature is of paramount importance for many developers, but often very difficult. This concern may offer a means to hook them into the BetterBricks.com project.

For most developers, the link between their role in building renovation or construction and occupant productivity and comfort may be obscure since it is their tenants that specify or select the portion of the building to occupy and then configure the occupied space.

3. Primary target audiences prefer news and prime time TV to sports.

When considering ad placement, it appears that news and prime time may be better venues than general sports. This does not mean that the Olympics is not a good venue, but rather than news and prime time is better than Monday night football.

4. Preferences for information sources may vary by audience.

The responses of employees, decision-makers, and influential staff regarding the information sources to which they would turn to learn more about productivity and the workspace reflect their differing positions within the corporate hierarchy. Employees most frequently reported that they would turn to internal staff, including their managers, to learn more about productivity and the workspace. In contrast, decision-makers most frequently reported that they would turn to sources external to the company. Influential staff would turn to internal and external sources with the same frequency.

On the one hand this may support the premise of the campaign that general employees will talk to internal staff about what they learn at BetterBricks.com. On the other hand, it may mean that general employees are less likely to turn to BetterBricks.com. These pathways are not clearly understood, but should be monitored to assess whether the anticipated message direction is likely to occur.

APPENDICES

APPENDIX A: SAMPLE DISPOSITION FOR INFLUENTIAL STAFF, DECISION-MAKERS AND EMPLOYEES

Appendix A: Sample Disposition For Influential Staff, Decision-Makers and Employees

APPENDIX A: SAMPLE DISPOSITION FOR INFLUENTIAL STAFF, DECISION-MAKERS AND EMPLOYEES

The business decision-makers and influential staff people are described below as the business sample as the two groups were recruited at the same time. The general commercial employees are reported as the employee sample. The survey used with each group was similar though some specific questions were targeted at the business sample. The business survey was conducted during business hours while the employee survey was conducted during evening hours. The surveys were conducted between April 13 and May 1, 2000. The results of the surveys are presented together.

The business sample used a purchased list of businesses in the targeted SIC codes. The 516 business decision-makers and 521 influential staff that completed the baseline survey represent 831 companies. In conducting the survey we attempted to obtain a decision-maker and an influential staff person for each company we contacted. We were able to do this for 206 companies.

The difficulty in identifying a decision-maker and an influential staff person for each company occurred for two reasons. First, we found 320 firms where the decision-maker for the company was not located in the four-state Pacific Northwest region. These companies, while meeting our other screening criteria by size and type of SIC, had headquarters located out of the region. For these companies we were only able to talk to an influential staff person. We also found that some influential staff people and some decision-makers were unwilling to refer us to another employee. This lead to the second reason we could not always talk to a decision-maker and influential staff person at each firm we contacted.

The sample quotas were difficult to achieve for other reasons as well. The refusal rate was quite high, as can be seen in Table A-1, and 29% of the numbers did not qualify. Reasons for failure to qualify include the number of employees in the firm, the lack of a local decision-maker, and the existence of company policies to not participate in surveys.

Table A - 1: Business Sample Outcome

SAMPLE OUTCOME	NUMBER	PERCENT
Total Sample	5203	100%
Numbers Not Reached	399	7.7%
"Good" Numbers in Total Sample	4875	93.7%
Qualified Numbers from "Good" Numbers	3476	71.3%
Refusals of "Good" Numbers	1047	21.5%
Completed Surveys of Qualified Numbers	1039	29.9%

The details of the sample disposition are displayed below. Table A.2 presents the disposition of the sample for decision-makers and influential staff.

Table A - 2: Business Sample Disposition

FINAL DISPOSITION	TOTAL	BY COMPANY
Complete	1037	829
Call Back - Unscreened - Soft/Hard	475	475
Too Busy, Unavailable	486	486
No Answer	85	85
Answering Machine	275	275
Blocked Number	14	14
Busy Line	39	39
Incomplete - Call Back	39	39
Referred To Different Number	16	16

Continued

FINAL DISPOSITION	TOTAL	BY COMPANY
Initial Refusal – Soft	625	625
Initial Refusal – Hard	343	343
Disconnect	278	278
Business / Residential Number	22	22
Fax / Modem	28	28
Language Barrier	7	7
Hearing Problem, Etc.	3	3
Respondent Gone For Duration	98	98
Terminated Survey	42	42
Duplicates	156	156
NQ - Company Size Under 20 Employees	332	332
NQ - Company Size, Refused	12	12
NQ - Decision Made Out Of 4 State Area	320	320
NQ – Decision-Maker – Quota Filled	16	16
NQ - Company Policy, No Surveys	253	253
NQ - Miscellaneous	202	202
Total Sample	**5203**	**4995**

Table A-3 provides the disposition for the employee sample.

Table A - 3: Employee Sample Disposition

FINAL DISPOSITION	TOTAL	IDAHO	MONTANA	OREGON	WASHINGTON
Complete	506	55	35	151	265
Call Back – Unscreened – Soft/Hard	25	1	4	4	16
Too Busy, Unavailable	188	16	16	23	133
No Answer	907	76	84	160	587
Answering Machine	495	37	39	72	347
Blocked Number	146	35	0	93	18
Busy	54	5	7	13	29
Initial Refusal – Soft	170	20	15	29	106
Initial Refusal – Hard	510	74	28	201	207
Disconnect	1330	120	82	513	615
Business / Residential Number	618	72	44	236	266
Fax / Modem	299	41	19	103	136
Language Barrier	116	12	0	36	68
Hearing Problem, Etc.	16	6	0	4	6
Respondent Gone For Duration	24	5	0	12	7
Terminated Survey	25	2	2	6	15

Continued

Duplicates	5	0	0	3	2
NQ - No One Works Outside The Home	1203	122	95	419	567
NQ - Works Mostly Outdoors &/Or <20 Hrs	441	68	43	156	174
NQ - Wrong Industry	211	31	15	85	80
NQ - DK/Refused Building Type	4	0	0	2	2
NQ – Miscellaneous	11	1	1	4	5
Total Sample	7304	**799**	**529**	**2325**	**3651**

APPENDIX B: POPULATION AND SAMPLE DESCRIPTORS FOR BASELINE STUDY OF ARCHITECTS AND DEVELOPERS

APPENDIX B: POPULATION AND SAMPLE DESCRIPTORS FOR BASELINE STUDY OF ARCHITECTS AND DEVELOPERS

ARCHITECTS

We drew the sample of architects from a 1998 list of AIA members in the four-state region. The AIA list included the architect's name, firm affiliation, and address. As shown in Table B-1, about one-third of the AIA-member architects did not identify a firm with which they were affiliated and another one-fourth listed firms that no other AIA member reported. We did not sample from these two groups, as we wanted to maximize the likelihood that we would reach architects working for commercial design firms. We reasoned that commercial – as opposed to residential – design typically requires a design team and not an individual.

Speculation suggests that these two categories of architects included: those who simply did not wish to identify the architectural firm that employed them; those who worked for employers other than architectural firms and who perhaps therefore did not think it relevant to identify their employer; those who were not working as architects at the time they submitted their membership information: and those who were self-employed.

Table B - 1: Affiliation of AIA Member Architects

AIA MEMBERS	IDAHO	MONTANA	OREGON	WASHINGTON	TOTAL
Total AIA Member Architects	211	170	735	1,466	**2,582**
Percent of Architects with No Affiliation Given	37%	28%	27%	38%	**34%**
Percent of Architects in Firm with One Listed AIA Member	21%	29%	23%	26%	**25%**
Percent of Architects in Firm with Two or More Listed AIA Members	42%	43%	50%	36%	**41%**

Although a plurality of architects work for firms with two or more listed AIA members, there are fewer such firms than firms identified by a single AIA member (see Table B-2). Only 26% of the firms were listed by multiple AIA members. It is from this group of firms that we sampled.

Table B - 2

FIRMS IDENTIFIED BY AIA MEMBER ARCHITECTS

FIRMS	IDAHO	MONTANA	OREGON	WASHINGTON	TOTAL
Total Firms Listed	**66**	**70**	**237**	**484**	**857**
Firms with One Listed AIA Member	44 (67%)	50 (71%)	166 (70%)	377 (78%)	637 (74%)
Firms with Two or More Listed AIA Members	22 (33%)	20 (29%)	71 (30%)	107 (22%)	220 (26%)

We looked at the distribution of AIA member architects by location, distinguishing between those working in major metropolitan areas and those working outside of each state's largest metro area. We defined the major metropolitan area in Idaho to be Boise, in Montana to be Billings, in Oregon to be Portland and the surrounding communities, and in Washington to be Seattle and the surrounding communities. The larger firms tended to be located in the largest metro areas, while smaller firms and individuals were more scattered throughout the state.

We drew our sample from the firms with two or more architects listed as AIA members. As shown in the last row of Table B-3, we surveyed between 20% and 26% of the qualifying firms in each state. Idaho and Montana firms each comprised about 10% of the sample, Oregon firms comprised about 30%, and Washington firms comprised just over 50% of the sample.

Table B - 3: Sample: Firms with Two or More Listed AIA Member Architects

SAMPLE	IDAHO	MONTANA	OREGON	WASHINGTON	TOTAL
Firms with Two or More Listed AIA Members	22	20	71	107	220
Firms Contacted	8	5	27	92	132
Firms Disqualified[a]	1	0	7	14	22
Firms Disqualified as Percent of Contacted	13%	0%	26%	15%	17%
Estimated Number of Qualifying Firms	19	20	53	91	183
State as Percent of Region Total	10%	11%	29%	50%	100%
Firms Surveyed	5[b]	5	16	28	54
Firms Surveyed as Percent of State's Estimated Number of Qualifying Firms	26%	25%	30%	31%	30%
State as Percent of Region Total	9%	9%	30%	52%	100%

[a] *Firms were disqualified because of limited or no involvement in commercial and institutional building design. Disqualified firms focused on residential design (n=13), industrial design (n=2), or unspecified noncommercial design (n=3), or were an engineering firm (n=2), a grocery store chain (n=1), or had no phone number listed in the directory (n=1).*

[b] *Sample of five includes three firms from which one architect was interviewed and one firm from which two architects that specialized in different building types were interviewed.*

Just as we surveyed region-wide 30% of the estimated number of qualifying firms (Table B-3), Table B-4 shows that we surveyed 30% of the estimated number of architects in the region.

For the region as a whole and for the states of Idaho, Oregon, and Washington, the sample matches the population as characterized by metropolitan location. For Montana, the sample over-represents firms located in Billings as compared with firms statewide.

Table B - 4: Surveyed Architectural Firms as Characterized by AIA Members Listed

ARCHITECTS	IDAHO	MONTANA	OREGON	WASHINGTON	TOTAL
AIA Member Architects Listed as Working for Surveyed Firms [A]	31	29	99	124	283
Number of Architects in Estimated Number of Qualifying Firms [B]	85	73	322	490	939
Percent of Listed Architects Surveyed [= A/B]	37%	40%	31%	25%	30%

[a] *Note that the average number of architects listed in the AIA dataset as working for surveyed firms is different than the average number of employees in a firm as indicated by a survey respondent.*

DEVELOPERS

We purchased a listing of firms in the four-state region whose SIC code indicated that the firm engaged in property development (SIC 655202). The SIC designation is not very precise, however. Included in the designation are raw land developers, developers of residential and other noncommercial properties, real estate companies that have previously developed land that they now lease, entities that develop their own land for their own use (such as port authorities and national chains), and so on.

The purchased data set provided each firm's name, address, phone number, a contact name, and a code designating the magnitude of the firm's assets. Tables B-5 through B-9 identify, for each of the four states and the region as a whole, the population (firms developing commercial and institutional buildings) and sample size (surveyed firms) by asset size category.

In the largest size category (assets of $5 million or more), we surveyed between 41% and 100% of the firms in each state, for a region-wide average of 50%. Of firms with assets between $2.5 and $5 million, we surveyed 27% and 100% of the firms in each state, for a region-wide average of 39%. We surveyed 9% of the firms in the region with assets between $1 and $2.5 million, and we surveyed no firms smaller than this.

Table B - 5: Idaho Population and Sample of Developer Firms

IDAHO POPULATION AND SAMPLE	FIRMS' ASSETS			
	$5 M OR MORE	$2.5 M TO $5 M	$1 M TO $2.5 M	$0.5 M TO $1M
Total in state	6	14	37	23
Contacted	6	7	0	0
Disqualified	2	2	0	0
Percent of Contacted Firms Disqualified[a]	33%	29%	NA	NA
Estimated Qualifying Firms	4	10	NA	NA
Surveyed Firms	3	3	0	0
Percent of Estimated Qualifying Firms Surveyed[b]	75%	30%	0%	0%

[a] *This percentage indicates a minimum floor for the proportion of listed firms that were not suitable for the current study. The actual proportion may be higher. Percentage was derived from those firms that provided information on their business activities when initially contacted for the survey. Some firms did not provide such information and the contact never resulted in an opportunity to further explore their business activities.*

[b] *This percentage is a minimum floor. If the proportion of disqualifying firms is higher than reported, then the proportion of estimated qualifying firms surveyed is likewise higher than stated.*

Table B - 6: Montana Population and Sample of Developer Firms

MONTANA POPULATION AND SAMPLE	FIRMS' ASSETS			
	$5 M OR MORE	$2.5 M TO $5 M	$1 M TO $2.5 M	$0.5 M TO $1M
Total in state	3	1	11	20
Contacted	2	1	11	2
Disqualified	2	0	7	1
Percent of Contacted Firms Disqualified[a]	100%	0%	64%	50%
Estimated Qualifying Firms	0	1	4	10
Surveyed Firms	0	1	2	0
Percent of Estimated Qualifying Firms Surveyed[b]	NA	100%	50%	0%

[a] *This percentage indicates a minimum floor for the proportion of listed firms that were not suitable for the current study. The actual proportion may be higher. Percentage was derived from those firms that provided information on their business activities when initially contacted for the survey. Some firms did not provide such information and the contact never resulted in an opportunity to further explore their business activities.*

[b] *This percentage is a minimum floor. If the proportion of disqualifying firms is higher than reported, then the proportion of estimated qualifying firms surveyed is likewise higher than stated.*

Table B - 7: Oregon Population and Sample of Developer Firms

OREGON POPULATION AND SAMPLE	FIRMS' ASSETS			
	$5 M OR MORE	$2.5 M TO $5 M	$1 M TO $2.5 M	$0.5 M TO $1M
Total in state	11	16	98	22
Contacted	11	16	12	0
Disqualified	8	8	4	0
Percent of Contacted Firms Disqualified[a]	73%	50%	33%	NA
Estimated Qualifying Firms	3	8	66	NA
Surveyed Firms	2[b]	6	5	0
Percent of Estimated Qualifying Firms Surveyed[b]	66%	75%	8%	0%

[a] *This percentage indicates a minimum floor for the proportion of listed firms that were not suitable for the current study. The actual proportion may be higher. Percentage was derived from those firms that provided information on their business activities when initially contacted for the survey. Some firms did not provide such information and the contact never resulted in an opportunity to further explore their business activities.*

[b] *A third developer agreed to participate in the survey, but upon hearing the initial question about frequency with which design criteria are addressed, he referred us to his interior designer. He did not think the questions were relevant to his development work.*

[c] *This percentage is a minimum floor. If the proportion of disqualifying firms is higher than reported, then the proportion of estimated qualifying firms surveyed is likewise higher than stated.*

Table B - 8: Washington Population and Sample of Developer Firms

WASHINGTON POPULATION AND SAMPLE	FIRMS' ASSETS			
	$5 M OR MORE	$2.5 M TO $5 M	$1 M TO $2.5 M	$0.5 M TO $1M
Total in state	47	55	168	74
Contacted	34	41	42	18
Disqualified	11	22	25	14
Percent of Contacted Firms Disqualified[a]	32%	54%	60%	78%
Estimated Qualifying Firms	32	25	68	16
Surveyed Firms	13	7	6	0
Percent of Estimated Qualifying Firms Surveyed[b]	41%	27%	9%	0%

[a] *This percentage indicates a minimum floor for the proportion of listed firms that were not suitable for the current study. The actual proportion may be higher. Percentage was derived from those firms that provided information on their business activities when initially contacted for the survey. Some firms did not provide such information and the contact never resulted in an opportunity to further explore their business activities.*

[b] *This percentage is a minimum floor. If the proportion of disqualifying firms is higher than reported, then the proportion of estimated qualifying firms surveyed is likewise higher than stated.*

Table B - 9: Region-Wide Population and Sample of Developer Firms

REGION-WIDE POPULATION AND SAMPLE	FIRMS' ASSETS			
	$5 M OR MORE	$2.5 M TO $5 M	$1 M TO $2.5 M	$0.5 M TO $1M
Total in Region	67	86	314	139
Contacted	53	65	65	20
Disqualified	23	32	36	15
Percent of Contacted Firms Disqualified[a]	43%	49%	55%[b]	75%[c]
Estimated Qualifying Firms	38	44	140	35
Surveyed Firms	18	17	13	0
Percent of Estimated Qualifying Firms Surveyed[b]	47%	39%	9%	0%

[a] *This percentage indicates a minimum floor for the proportion of listed firms that were not suitable for the current study. The actual proportion may be higher. Percentage was derived from those firms that provided information on their business activities when initially contacted for the survey. Some firms did not provide such information and the contact never resulted in an opportunity to further explore their business activities.*

[b] *Based on data from Montana, Oregon, and Washington. No Idaho firms in this size range were contacted.*

[c] *Based on data from Montana and Washington. No Idaho or Oregon firms in this size range were contacted.*

[d] *This percentage is a minimum floor. If the proportion of disqualifying firms is higher than reported, then the proportion of estimated qualifying firms surveyed is likewise higher than stated.*

Table B-10 shows the distribution of surveyed developers by state. Although Washington developers comprise just over half of the sample, surveys were completed with a lower proportion of Washington developers than developers in other states. In the interest of obtaining responses from firms located in all four states, Washington's representation in the sample is lower than is its representation in the population.

Table B - 10: Sample Distribution of Developers by State

SURVEYED FIRM	FIRMS' ASSETS			TOTAL FIRMS
	$5 M OR MORE	$2.5 M TO $5 M	$1 M TO $2.5 M	
Region-Wide	18	17	13	49
Idaho	3	3	0	6
. . . Percent of Region	16%	18%	0%	12%
Montana	0	1	2	3
. . . Percent of Region	0%	6%	17%	6%
Oregon	2	6	5	14
. . . Percent of Region	14%	35%	33%	29%
Washington	13	7	6	26
. . . Percent of Region	68%	41%	50%	53%

The surveyed developers resembled the population of estimated qualifying developers with respect to whether they were located in their state's main metropolitan area.

SURVEYED ARCHITECTS AND DEVELOPERS

The previous sections describe the designer population and sample in terms of number of AIA architects listed in the firm and the developer sample in terms of financial assets. When we interviewed the architects and developers, we asked them the number of employees in their firm. Table B-11 provides these results.

Table B - 11: Number of Employees

NUMBER OF EMPLOYEES	ARCHITECTS (N=53)	DEVELOPERS (N=48)	TOTAL (N=97)
1 to 5	6%	26%	15%
6 to 10	32%	23%	28%
10 to 20	26%	26%	26%
21 to 35	19%	6%	13%
36 to 100	15%	10%	13%
101 to 200	2%	4%	3%
201 to 1,000	0%	4%	2%

APPENDIX C: BASELINE SURVEY INSTRUMENT – SUPPLY SIDERS

APPENDIX C: BASELINE SURVEY INSTRUMENT – SUPPLY SIDERS

Hello, I'm _____, with the NW Alliance. We're a non-profit agency that's working with architects, developers, and business owners to help them design and build better office and retail spaces in the Northwest. Does your firm (design) (develop) office, retail, or institutional space? IF YES: Could I please have the name of someone in your firm (a principal, project manager, or head of design team) who could talk with me on this topic?

_____

RECORD NAME AND TITLE; ASK TO SPEAK WITH THAT PERSON.

WHEN COMPLETE: RECORD FIRM NAME AND PHONE NUMBER

WHEN CORRECT PERSON ON PHONE:

Hello, I'm ____ of _____. I'm working with a non-profit agency that's researching how (architects) (developers) design commercial workspaces to meet client and worker needs. We'd like to include your experience and opinions in this brief study.

If needed: This is not a sales call, it's a research project for a nonprofit organization focused on improving the quality of the workspace.{If pressed, tell respondent you will identify the sponsor at the end of the survey. The sponsor is a consortium of electric utilities, based in Portland -- the Northwest Energy Efficiency Alliance.}

A. Is your firm mainly a design firm, a development firm, a design/build firm or some other type of firm?

   a. Design -- Continue
   b. Development -- Continue
   c. Design/build -- Continue
   d. Other: (record. probe to determine if appropriate to continue; if not, terminate)

B. Does your firm (design)(develop) commercial buildings? Institutional buildings? (Both or neither are derived)? (NOTE: Acceptable sectors for commercial/institutional building include office, retail, medical, banking, education etc.; **do not include if only restaurant/hotel; industrial manufacturing; agricultural; warehouses**)

a. Commercial -- Continue
b. Institutional -- Continue
c. Both -- Continue
d. Other: (record. probe to determine if appropriate to continue; if not, terminate)
e. Neither or residential only -- Terminate politely

C. What types of buildings do you usually design? _____
(If needed, find out if they build "to suit," on spec, or otherwise [usually for developers]. If R doesn't design commercial/institutional space, ask to be referred to someone who does.)

1. (Architects) How often do clients ask you to incorporate the following design criteria in the institutional or commercial workspaces you design?

(Developers) How often do clients ask you to incorporate the following design criteria in the institutional or commercial workspaces you develop? (Note: It may make a difference if they do design built or spec built projects. If spec, the client may be the "market.")

Please use a scale of 1-5, where 1 is never and 5 is all the time.

(ROTATE ITEMS)	Never				All the time	DK/ NA
Energy efficiency	1	2	3	4	5	8
Natural light in work space	1	2	3	4	5	8
Quality lighting	1	2	3	4	5	8
Ways to increase **worker satisfaction through design**	1	2	3	4	5	8
Good temperature control	1	2	3	4	5	8
Room for more product display	1	2	3	4	5	8
More space for existing staff or Customers	1	2	3	4	5	8
Room for future staff expansion	1	2	3	4	5	8
Ways to increase **worker productivity**	1	2	3	4	5	8
Improved "look" for customers or clients	1	2	3	4	5	8
Physical comfort of employees	1	2	3	4	5	8
Reduced operations cost	1	2	3	4	5	8
More storage or warehouse space	1	2	3	4	5	8
Meeting company environmental goals	1	2	3	4	5	8
Design considerations to reduce **worker Turnover**	1	2	3	4	5	8

(ROTATE ITEMS)

2. Would you say that the physical workspace has a large effect, moderate effect, or little or no effect on employee satisfaction and productivity?

   1. Large effect
   2. Moderate effect
   3. Little or no effect
   8. Don't Know

3. When you think about the physical workspace, what factors do you feel contribute the most to employee satisfaction and productivity? (If mention "comfort", probe on what they mean.) DO NOT READ;WRITE DOWN VERBATIM ANSWERS. (**Probe for up to five mentions)**

_____
_____
_____
_____
_____

Codes (come back and code after interview completed):

01. Good lighting system----------→**IF MENTIONED, ASK Q3a & SKIP Q4a**
02 Natural light/windows/daylight-→**IF MENTIONED, ASK Q3a & SKIP Q4b**
03. Heat/cooling comfort----------→**IF MENTIONED, ASK Q3a & SKIP Q4c**
04. Air flow/ air quality----------→ **IF MENTIONED, ASK Q3a & SKIP Q4d**
05. Low noise levels
06. Technology or other machinery working well with no breakdowns
07. Lack of crowding
08. Comfortable desks/ chairs/ other furniture
09. Plenty of filing/ storage space
10. Easy access to support/ other personnel
11. Good traffic patterns

3a. You mentioned _____ **(Ask this question only for lighting; natural light; heating/cooling; airflow/ventilation answers from Q3)**. What do you do to achieve this as you (design) (develop) commercial buildings? (Go through each element mentioned)

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

IF NOT MENTIONED IN Q3:

4a. What about a **good lighting system**? Would you say good lighting has a large effect, moderate effect, or little or no effect on employee satisfaction and productivity?

1. Large effect
2. Moderate effect
3. Little or no effect
8. DK

IF NOT MENTIONED IN Q3: (DAYLIGHT)

4b. What about having **natural light** in the workspace? Would you say having natural light in the workspace has a large effect, moderate effect, or little or no effect on employee satisfaction and productivity?

1. Large effect
2. Moderate effect
3. Little or no effect
8. DK

IF NOT MENTIONED IN Q3: (HEAT COOLING COMFORT)

4c. What about **temperature**? Would you say a comfortable temperature has a large effect, moderate effect, or little or no effect on employee satisfaction and productivity?

1. Large effect
2. Moderate effect
3. Little or no effect
8. DK

IF NOT MENTIONED IN Q3: (AIR FLOW, VENTILATION)

4d. What about **air flow and air quality**? Would you say that this has a large effect, moderate effect, or little or no effect on worker satisfaction and productivity?

1. Large effect
2. Moderate effect
3. Little or no effect
8. DK

5. If you wanted to look for more information on how to design workspaces that enhance worker satisfaction and productivity, where would you go?

(DO NOT READ LIST - **UP TO 5 MENTIONS.** Order unimportant. PROBE: if they give a company name, ask what type of company it is to fit code list. IF NOT EXACTLY as listed, write in extra details.)

1. The Internet/worldwide web
2. BetterBricks.com
3. Architecture firm
4. Engineering firm
5. Construction firm
6. A workplace consulting company
7. An office equipment company
8. In-house library
9. Magazines/trade journals
10. Product catalogues/manufacturers' information
11. Internal staff
12. Professional organizations/peers
13. Other (Specify)_____
14. Don't know/ no idea

6. Have you recently seen or heard any advertising or news stories that talk about how to improve worker satisfaction and productivity by changing the design of commercial buildings?

1. Yes---→ **ASK Q6a**
2. No----→ **SKIP TO Q7**
3. Don't know/don't remember----→ **SKIP TO Q7**
4. Refused ----→ **SKIP TO Q7**

6a. Where do you recall seeing or hearing that? Where else? (UP TO 5 RESPONSES. Order unimportant.)

1. Television
2. Radio
3. Newspaper
4. Magazines/trade journals
5. Trade shows
6. Internet advertising
7. Direct mail
8. Other (SPECIFY) _____-
9. Don't know/refused

6b. Do you recall if there was a website mentioned in the advertising or news story you saw?

1. Yes
2. No/Don't Know ----→ **SKIP TO Q7**

6c. Do you recall the name of that website? _____ **----IF NO: → SKIP TO Q7**

6c. Have you visited the website?

1. Yes
2. No

6c1. {**If no to 6c**} Do you intend to visit the website in the next two weeks?

1. Yes
2. No

6c2. {**If no to 6c1**} How about in the next three months?

1. Yes
2. No

7. How many employees are there in your firm? _____

8. What percentage of the time do you use the Internet to do your job? _____

9. Finally, in the event that we do more research on this topic, may we contact you again?

1. Yes
2. No

9a. IF YES: Would you prefer by phone or by e-mail?

Phone

E-mail (Carefully record address below)

_____

EMAIL ADDRESS – READ BACK TO CONFIRM

Thank you very much for your time and cooperation

APPENDIX D: INFLUENTIAL AND DECISION-MAKER SURVEY

APPENDIX D: INFLUENTIAL AND DECISION-MAKER SURVEY

SIC

SIC

ZIP

zip from sample

STATE

state

Idaho	ID
Montana	MT
Oregon	OR
Washington	WA

COMP

Company name

SIZE

size of business

Unknown	0
1-4 Employees	1
5-9 employees	2
10-19 employees	3
20-49 employees	4
50-99 employees	5
100-249 employees	6
250-499 employees	7
500-999 employees	8
1000+ employees	9

```
COMPANY NAME:  <Comp                                                    >
Hello, I'm _____ of Gilmore Research Group.  We are conducting a brief study
for a nonprofit organization focused on improving the quality of the workspace.
I need to reach the person in your organization who makes decisions about the
space where your employees work.  Who would that be at this location?  ASK TO
SPEAK TO THAT PERSON. BEFORE ARRANGING CALL-BACK - CONFIRM THAT THIS SITE HAS
EMPLOYS 20 OR MORE PEOPLE. IF NOT, CODE APPROPRIATELY.
WHEN CORRECT PERSON ON LINE:  Hello, I'm _______ of Gilmore Research Group.  We
are conducting a brief study on what businesses want for the space where their
employees work.  Are you the person in your organization who makes or
influences decisions about employee work space at this location?  IF NO, ASK
TO SPEAK TO THAT PERSON
IF NEEDED:  This is not a sales call, it's a research project for a nonprofit
organization focused on improving the quality of the workspace.
                      51  Yes, continue                  PRESS CODE @int02
                      02  Arrange call-back
                      65  Decision not made (WA OR ID MT)
   1  RECORD PERSON'S NAME @Qx1     1   RECORD PERSON'S TITLE @qx2
 PRESS F1 TO SCROLL AND SELECT OTHER CODES.  PRESS F7 FOR IF NEEDED STATEMENTS
```

INT02

IF NOT AVAILABLE, ARRANGE CALL-BACK

screen

Continue 51

02 ARRANGE CALL-BACK - OUT OF HOME.....02 => /NAME

QA

DO NOT READ. PROBE TO FIT

What is the approximate number of people who work at this location?

0-19.....0

20-49.....1

50-99.....2

100-249 3

250-500 4

Over 500.....5

Don't know/Not sure.....6

Refused.....7

INT03

=> +1 if NOT QA=0

THANK & TERMINATE

Under 20 Employees .....60 => /END

QB

Does your company own or lease your employee work space?

Own 1

Lease/Rent.....2

Don't know/Not sure.....3

Refused.....4

QC

READ 1-5

Which of the following statements best describes your position within your company? Would you say. . .

You're the one in charge of making decisions about employee work space company-wide 1
You play a key role in the deciding about the kinds of space your company uses 2
You have a significant amount of unofficial influence on these issues 3
You are often asked for your opinion about these issues but don't make the decisions 4
You have no influence and are not asked for your opinions on these issues. 5

Don't know/Refused 6

INT04

=> +1 if NOT QC=5 6

I need to talk to someone in your organization who makes or influences decisions about work space at this location? Who would that be? ASK TO SPEAK TO THAT PERSON WILL RETURN TO INT02

New person available/Not available .....51 => INT02
Refused .....61 => /END

QUCHK

check quota

Both quotas open 1
decision maker closed 2
influence closed 3

INT07

=> +1 if NOT QUCHK=2

I really need to talk to someone who could talk about your workspace from an employee rather than a management point of view. Is there some one who is familiar with your workspace issues but doesn't actually make the decisions? WILL GO BACK TO INTR02

New person available/Not available .....51 => INT02
Refused .....61 => /END
Decision made out of area (WA OR MT ID) .....65 => /END

INT08

=> +1 if NOT QUCHK=3

I really need to talk with person who makes the decisions about your employee work space. Who would that be? WILL GO BACK TO INTR02

New person available/Not available .....51 => INT02
Refused .....61 => /END
Decision made out of area (WA OR MT ID) .....65 => /END

SETA

=> * if	IF ((QC=1 2),1,2)

SET WHO
Decision maker.....1
Influence.....2

Q1A

PROBE TO FIT $B

How old would you guess your building is. . .
Less than 5 years old.....1
Between 5 and 20 years.....2
Older than 20 years.....3
Don't know/Not sure.....4
Refused.....5

Q2A

READ 1-5 IF NEEDED

And, about how much square footage would you say your company occupies? IF DON'T KNOW/NOT SURE, SAY; Just give me your best estimate.
Under 10,000 square feet.....1
10,000 to just under 25,000 square feet.....2
25,000 to just under 50,000 square feet.....3
50,000 to just under 100,000 square feet.....4
Or 100,000 square feet or more.....5
---------- .....
Don't know/Not sure.....6
Refused.....7

Q3A

=> Q5A if	NOT SETA=1

The remaining questions will just take a few minutes. Are you planning to make, or are you in the process of making, any of the following changes in your work space at this location. . .
Continue.....1 D

Q3AA

(Are you planning to make, or are you in the process of making, any of the following changes in your work space at this location. . .)
Renovating your current space?
Yes.....1
No.....2
Don't know/Not sure.....3
Refused.....4

Q3AB

Constructing your own building?

Yes.....1
No.....2
Don't know/Not sure.....3
Refused.....4

Q3AC

Moving to a new leased space?

Yes.....1
No.....2
Don't know/Not sure.....3
Refused.....4

Q4A

=> Q5A if NOT Q3AA=1 AND NOT Q3AB=1 AND NOT Q3AC=1

As you are thinking about making this change how important are the following factors? Please use a 1 to 5 scale where 1 is not at all important and 5 is very important.

Continue.....1 D

Q4AA

Rotation => Q4H

(As you are thinking about making this change how important is. . .) Room for more product display? IF NEEDED: Would you say 1, not at all important, 5, very important or some number in between?

Not at all important.....1
2.....2
3.....3
4.....4
Very important.....5
Don't know/Not sure.....6
Refused.....7

Q4AB

(As you are thinking about making this change how important is. . .) More space for existing staff or customers? IF NEEDED: Would you say 1, not at all important, 5, very important or some number in between?

Not at all important.....1
2.....2
3.....3
4.....4
Very important.....5
Don't know/Not sure.....6
Refused.....7

Q4AC

(As you are thinking about making this change how important is. . .) Room for staff expansion? IF NEEDED: Would you say 1, not at all important, 5, very important or some number in between?

Not at all important.....1
2.....2
3.....3
4.....4
Very important.....5
Don't know/Not sure.....6
Refused.....7

Q4AD

(As you are thinking about making this change how important is. . .) Increased productivity? IF NEEDED: Would you say 1, not at all important, 5, very important or some number in between?

Not at all important.....1
2.....2
3.....3
4.....4
Very important.....5
Don't know/Not sure.....6
Refused.....7

Q4AE

(As you are thinking about making this change how important is. . .) Improved "look" for your customers or clients? IF NEEDED: Would you say 1, not at all important, 5, very important or some number in between?

Not at all important.....1
2.....2
3.....3
4.....4
Very important.....5
Don't know/Not sure.....6
Refused.....7

Q4AF

(As you are thinking about making this change how important is. . .) Reduced operations cost? IF NEEDED: Would you say 1, not at all important, 5, very important or some number in between?

Not at all important.....1
2.....2
3.....3
4.....4
Very important.....5
Don't know/Not sure.....6
Refused.....7

Q4AG

(As you are thinking about making this change how important is. . .) More storage or warehouse space? IF NEEDED: Would you say 1, not at all important, 5, very important or some number in between?

Not at all important.....1
2.....2
3.....3
4.....4
Very important.....5
Don't know/Not sure.....6
Refused.....7

Q4H

(As you are thinking about making this change how important is. . .) Meeting company environmental goals? IF NEEDED: Would you say 1, not at all important, 5, very important or some number in between?

Not at all important.....1
2.....2
3.....3
4.....4
Very important.....5
Don't know/Not sure.....6
Refused.....7

Q5A

Think about the image your company portrays to customers and clients. Using a scale from 1 to 5, where 1 is strongly disagree and 5 is strongly agree, how much do you agree with the following statements? My company is. . .

Continue.....1 D

Q5A1

Rotation => Q5A6

(My company is. . .) Cutting edge? IF NEEDED: Would you say 1, strongly disagree, 5, strongly agree or some number in between?

Strongly disagree.....1
2.....2
3.....3
4.....4
Strongly agree.....5
Don't know/Not sure.....6
Refused.....7

Q5A2

(My company is. . .) Mainstream? IF NEEDED: Would you say 1, strongly disagree, 5, strongly agree or some number in between?

Strongly disagree 1
2.....2
3.....3
4.....4
Strongly agree.....5
Don't know/Not sure 6
Refused.....7

Q5A3

(My company is. . .) Slow to change? IF NEEDED: Would you say 1, strongly disagree, 5, strongly agree or some number in between?

Strongly disagree 1
2.....2
3.....3
4.....4
Strongly agree.....5
Don't know/Not sure 6
Refused.....7

Q5A4

(My company is. . .) Good to employees? IF NEEDED: Would you say 1, strongly disagree, 5, strongly agree or some number in between?

Strongly disagree 1
2.....2
3.....3
4.....4
Strongly agree.....5
Don't know/Not sure 6
Refused.....7

Q5A5

(My company is. . .) Environmentally conscious? IF NEEDED: Would you say 1, strongly disagree, 5, strongly agree or some number in between?

Strongly disagree 1
2.....2
3.....3
4.....4
Strongly agree.....5
Don't know/Not sure 6
Refused.....7

Q5A6

(My company is. . .) Concerned about worker productivity? IF NEEDED: Would you say 1, strongly disagree, 5, strongly agree or some number in between?

Strongly disagree 1
2 2
3 3
4 4
Strongly agree 5
Don't know/Not sure 6
Refused 7

Q6A

READ 1-3

How large an effect do you think the physical workspace has on employee productivity? Would you say it has a . . .

Large effect 1
Some effect 2
Or no effect 3
---------- .....
Don't know/Not sure 4
Refused 5

```
When you think about your organization's physical space, what factors do you
feel contribute the most to employee productivity?

IF RESPONDENT MENTIONS COMFORT, PROBE:  What do you mean by that?
DID THE RESPONDENT MENTION:
                              1  Good lighting                    PRESS CODE @q7a2
                              2  Natural light/windows/daylight
                              3  Heat/Cooling comfort/Temperature
                              4  None of the above
```

Q7A1

CLARIFY. PRESS ENTER TO CONTINUE

screen
RECORD COMMENTS .....01 O
Don't know/Not sure .....98 X => Q8A
Refused .....99 X => Q8A

Q7A2

Good lighting 1
Natural Light/Windows/Daylight 2
Heat/Cooling comfort/Temperature 3
None of the above .....4 X

Q8A

CLARIFY. PRESS ENTER TO CONTINUE

Thinking of the factors you just mentioned as important for employee productivity, what steps have you taken to increase productivity in your workplace?

Nothing/No steps .....00 X
RECORD COMMENTS.....01 O
Don't know/Not sure.....98 X
Refused.....99 X

Q9A

=> Q10A if Q7A2=1 AND Q7A2=2 AND Q7A2=3

I'd like to ask you about some other things that may be important to employee productivity in the workplace.

Continue .....1 D

Q9AA

Rotation => Q9AC
=> +1 if Q7A2=1

What about good lighting? Would you say good lighting is very important, somewhat important or not important to employee productivity?

Very important 1
Somewhat important 2
Not important.....3
Don't know/Not sure.....4
Refused.....5

Q9AB

=> +1 if Q7A2=2

What about natural light? Would you say natural light is very important, somewhat important or not important to employee productivity?

Very important 1
Somewhat important 2
Not important.....3
Don't know/Not sure.....4
Refused.....5

Q9AC

=> +1 if Q7A2=3

What about temperature? Would you say temperature is very important, somewhat important or not important to employee productivity?

Very important 1
Somewhat important 2
Not important.....3
Don't know/Not sure.....4
Refused.....5

Q10A

DO NOT READ PROBE TO FIT PRESS ENTER TO CONTINUE

If you wanted to find out more about how to improve productivity in your workplace, where would you go? IF RESPONDENT GIVES NAME OF COMPANY, ASK: What kind of company is that? PROBE UP TO 2 MENTIONS

The Internet/Worldwide Web	01	
BetterBricks.com	02	
An architecture firm	03	
An engineering firm	04	
A construction firm	05	
A workplace consulting company	06	
An office equipment company	07	
The library	08	
Magazines	09	
Use internal staff	10	
Other (SPECIFY:)	97	O
Don't know/have no idea	98	X
Refused	99	X

Q11A

Have you seen or heard any advertising or news stories about a website that provides information on improving productivity in commercial buildings?

Yes	1	
No	2	=> Q12A
Don't know/Not sure	3	=> Q12A
Refused	4	=> Q12A

Q11AA

PROBE TO FIT. UP TO 5 RESPONSES PRESS ENTER TO CONTINUE

Where do you recall seeing or hearing that? PROBE: Where else?

Conference/Business meeting	01	
Direct Mail	02	
Internet advertising	03	
Magazines/Trade Journals	04	
Newspaper	05	
Radio	06	
Television	07	
Trade shows	08	
Other (SPECIFY:)	97	O
Don't know/Can't remember	98	X
Refused	99	X

Q11AB

PROBE AND CLARIFY. PRESS ENTER TO CONTINUE

What, specifically, did you see, hear or read? PROBE: What else?

RECORD COMMENTS	01	O
Don't know/Not sure	98	X
Refused	99	X

Q12A

IF DON'T KNOW/NOT SURE, SAY: Just give me your best estimate

What percent of the time do you use the Internet to do your job?

Don't know/Not sure 101
Refused 102

Q13A

How many hours would you say you typically watch television in a week?

None ..... 000 => EMAIL
Don't know/Not sure 998
Refused 999

Q14A1

```
What percent of your TV watching time do you spend watching the following types
of shows. . .READ a-c

 a.  Sports
 b.  News
 c.  Prime time TV besides sports
```

Don't know/Not sure 101
Refused 102

Q14A2

Don't know/Not sure 101
Refused 102

Q14A3

Don't know/Not sure 101
Refused 102

WRNG1

=> +1 if ADD1<101

You said that you watch <add1> percent watching the various types of television. Do you wish to change your answer?

Yes ..... 1 => Q14A1
No 2

EMAIL

In the event that we do more research on this topic, may we contact you again by e-mail?
AFTER TYPING E-MAIL ADDRESS, READ BACK TO CONFIRM.

Ok to contact again via e-mail (RECORD E-MAIL:) ..... 1 O
Ok to contact again but won't give e-mail 2
Ok to contact again, but don't have access to e-mail 3
Decline further contact 4

```
If possible I would like to speak with someone else within your company who
could talk about these same issues from an employee point of view.  Ideally, I
would like it to be a person who has been with your organization long enough to
know and understand your company values and who likes to get things done.  By
that I mean, someone who takes the lead in looking at or asking for new company
programs, employee benefits, or other things that affect satisfaction in the
workplace. Whom should I contact?

    1  Continue             PRESS CODE @Q15
```

Q15A

RECORD PERSON NAME.....1 O
Refused.....2 => SET1

Q15AA

Person title.....1 O

Q15B

Phone number including area code

Q15C

Record extension.....1 O
No extension.....0

```
Can you think of anyone else, just in case I can't reach this first person?

AFTER RECORDING INFORMATION OR IF NO SECOND PERSON, SAY:  May I speak to
<q15a                                                                  >
```

Q15D

No other person.....0 => SET1
RECORD PERSON NAME.....1 O
Refused.....2 => SET1

Q15DD

Record title.....1 O

Q15F

RECORD EXTENSION.....1 O
No extension.....0

```
If possible I would like to speak with the person in your company who is in
charge of making decisions about your work space who could talk about these
same issues from a management point of view.  Whom should I contact?

AFTER RECORDING INFORMATION, SAY:  May I speak to that person?
```

Q15DM

=> SET1 if SETA=1

RECORD PERSON NAME.....1 O
Refused.....2 => SET1

Q15D1

Person title.....1 O

Q15D2

Phone number including area code

Q15D3

Record extension.....1 O
No extension.....0

SET1

=> * if IF ((SETA=1),1,2)

decision maker
Decision maker.....1
Influence.....2

```
Hello, I'm_____ of Gilmore Research Group.  We recently spoke with <       >
of your company regarding a study of the space where employees work. (He)/(she)
suggested you as someone we might interview because you have unofficial
influence on these issues or often asked for your opinion even if you don't
make the decisions. Is this correct?
IF NEEDED:  This is not a sales call, it's a research project for a non-profit
organization focused on improving the quality of the workspace.
```

Yes, continue with first contact.....51 => Q1B
Yes, continue with second contact.....52 => Q1B

```
Hello, I'm_____ of Gilmore Research Group.  We recently spoke with <     >
of your company regarding a study of the space where employees work. (He)/(she)
suggested you as someone we might also interview because you're the one in
charge of making decisions about work space company wide or play a key role in
deciding about the kinds of space your company uses. Is this correct?
IF YES, CONTINUE.  IF NO, ASK WHO WOULD BE A DECISION MAKER.
IF NEEDED:  This is not a sales call, it's a research project for a non-profit
organization focused on improving the quality of the workspace.
```

Q1B

PROBE TO FIT $B

How old would you guess your building is. . .

Less than 5 years old 1
Between 5 and 20 years 2
Older than 20 years 3
Don't know/Not sure 4
Refused 5

Q2B

READ 1-5 IF NEEDED

And, about how much square footage would you say your company occupies? IF DON'T KNOW/NOT SURE, SAY; Just give me your best estimate.

Under 10,000 square feet 1
10,000 to just under 25,000 square feet 2
25,000 to just under 50,000 square feet 3
50,000 to just under 100,000 square feet 4
Or 100,000 square feet or more 5
---------- .....
Don't know/Not sure 6
Refused 7

Q3B

=> Q5B if SETA=1

The remaining questions will just take a few minutes. Are you planning to make, or are you in the process of making, any of the following changes in your work space at this location. . .

Continue .....1 D

Q3BA

(Are you planning to make, or are you in the process of making, any of the following changes in your work space at this location. . .)

Renovating your current space?

Yes 1
No 2
Don't know/Not sure 3
Refused 4

Q3BB

Constructing your own building?

Yes 1
No 2
Don't know/Not sure 3
Refused 4

Q3BC

Moving to a new leased pace?

Yes.....1
No.....2
Don't know/Not sure.....3
Refused.....4

Q4B

=> Q5B if NOT Q3BA=1 AND NOT Q3BB=1 AND NOT Q3BC=1

As you are thinking about making this change how important are the following factors? Please use a 1 to 5 scale where 1 is not at all important and 5 is very important.

Continue.....1 D

Q4BA

Rotation => Q4BH

(As you are thinking about making this change how important is. . .) Room for more product display? IF NEEDED: Would you say 1, not at all important, 5, very important or some number in between?

Not at all important.....1
2.....2
3.....3
4.....4
Very important.....5
Don't know/Not sure.....6
Refused.....7

Q4BB

(As you are thinking about making this change how important is. . .) More space for existing staff or customers? IF NEEDED: Would you say 1, not at all important, 5, very important or some number in between?

Not at all important.....1
2.....2
3.....3
4.....4
Very important.....5
Don't know/Not sure.....6
Refused.....7

Q4BC

(As you are thinking about making this change how important is. . .) Room for staff expansion? IF NEEDED: Would you say 1, not at all important, 5, very important or some number in between?

Not at all important.....1
2.....2
3.....3
4.....4
Very important.....5
Don't know/Not sure.....6
Refused.....7

Q4BD

(As you are thinking about making this change how important is. . .) Increased productivity? IF NEEDED: Would you say 1, not at all important, 5, very important or some number in between?

Not at all important.....1
2.....2
3.....3
4.....4
Very important.....5
Don't know/Not sure.....6
Refused.....7

Q4BE

(As you are thinking about making this change how important is. . .) Improved "look" for your customers or clients? IF NEEDED: Would you say 1, not at all important, 5, very important or some number in between?

Not at all important.....1
2.....2
3.....3
4.....4
Very important.....5
Don't know/Not sure.....6
Refused.....7

Q4BF

(As you are thinking about making this change how important is. . .) Reduced operations cost? IF NEEDED: Would you say 1, not at all important, 5, very important or some number in between?

Not at all important.....1
2.....2
3.....3
4.....4
Very important.....5
Don't know/Not sure.....6
Refused.....7

Q4BG

(As you are thinking about making this change how important is. . .) More storage or warehouse space? IF NEEDED: Would you say 1, not at all important, 5, very important or some number in between?

Not at all important.....1
2.....2
3.....3
4.....4
Very important.....5
Don't know/Not sure.....6
Refused.....7

Q4BH

(As you are thinking about making this change how important is. . .) Meeting company environmental goals? IF NEEDED: Would you say 1, not at all important, 5, very important or some number in between?

Not at all important.....1
2.....2
3.....3
4.....4
Very important.....5
Don't know/Not sure.....6
Refused.....7

Q5B

Think about the image your company portrays to customers and clients. Using a scale from 1 to 5, where 1 is strongly disagree and 5 is strongly agree, how much do you agree with the following statements? My company is. . .

Continue.....1 D

Q5B1

Rotation => Q5B6

(My company is. . .) Cutting edge? IF NEEDED: Would you say 1, strongly disagree, 5, strongly agree or some number in between?

Strongly disagree.....1
2.....2
3.....3
4.....4
Strongly agree.....5
Don't know/Not sure.....6
Refused.....7

Q5B2

(My company is. . .) Mainstream? IF NEEDED: Would you say 1, strongly disagree, 5, strongly agree or some number in between?

Strongly disagree 1
2.....2
3.....3
4.....4
Strongly agree.....5
Don't know/Not sure 6
Refused.....7

Q5B3

(My company is. . .) Slow to change? IF NEEDED: Would you say 1, strongly disagree, 5, strongly agree or some number in between?

Strongly disagree 1
2.....2
3.....3
4.....4
Strongly agree.....5
Don't know/Not sure 6
Refused.....7

Q5B4

(My company is. . .) Good to employees? IF NEEDED: Would you say 1, strongly disagree, 5, strongly agree or some number in between?

Strongly disagree 1
2.....2
3.....3
4.....4
Strongly agree.....5
Don't know/Not sure 6
Refused.....7

Q5B5

(My company is. . .) Environmentally conscious? IF NEEDED: Would you say 1, strongly disagree, 5, strongly agree or some number in between?

Strongly disagree 1
2.....2
3.....3
4.....4
Strongly agree.....5
Don't know/Not sure 6
Refused.....7

Q5B6

(My company is. . .) Concerned about worker productivity? IF NEEDED: Would you say 1, strongly disagree, 5, strongly agree or some number in between?

Strongly disagree 1
2.....2
3.....3
4.....4
Strongly agree.....5
Don't know/Not sure.....6
Refused.....7

Q6B

READ 1-3

How large an effect do you think the physical workspace has on employee productivity? Would you say it has a . . .

Large effect 1
Some effect 2
Or no effect 3
---------- .....
Don't know/Not sure.....4
Refused.....5

Q7B1

When you think about your organization's physical space, what factors do you feel contribute the most to employee productivity?

screen

RECORD COMMENTS.....01 O
Don't know/Not sure.....98 X => Q8B
Refused.....99 X => Q8B

Q7B2

Good lighting.....1
Natural Light/Windows/Daylight 2
Heat/Cooling comfort/Temperature.....3
None of the above.....4 X

Q8B

Thinking of the factors you just mentioned as important for employee productivity, what steps have you taken to increase productivity in your workplace?

Nothing/No steps .....00 X
RECORD COMMENTS.....01 O
Don't know/Not sure.....98 X
Refused.....99 X

Q9B

=> Q10B if Q7B2=1 AND Q7B2=2 AND Q7B2=3

I'd like to ask you about some other things that may be important to employee productivity in the workplace.

Continue .....1 D

Q9BA

Rotation => Q9BC
=> +1 if Q7B2=1

What about good lighting? Would you say good lighting is very important, somewhat important or not important to employee productivity?

Very important 1
Somewhat important 2
Not important.....3
Don't know/Not sure 4
Refused.....5

Q9BB

=> +1 if Q7B2=2

What about natural light? Would you say natural light is very important, somewhat important or not important to employee productivity?

Very important 1
Somewhat important 2
Not important.....3
Don't know/Not sure 4
Refused.....5

Q9BC

=> +1 if Q7B2=3

What about temperature? Would you say temperature is very important, somewhat important or not important to employee productivity?

Very important 1
Somewhat important 2
Not important.....3
Don't know/Not sure 4
Refused.....5

Q10B

DO NOT READ PROBE TO FIT PRESS ENTER TO CONTINUE

If you wanted to find out more about how to improve productivity in your workplace, where would you go? IF RESPONDENT GIVES NAME OF COMPANY, ASK: What kind of company is that? PROBE UP TO 2 MENTIONS

The Internet/Worldwide Web	01	
BetterBricks.com	02	
An architecture firm	03	
An engineering firm	04	
A construction firm	05	
A workplace consulting company	06	
An office equipment company	07	
The library	08	
Magazines	09	
Use internal staff	10	
Other (SPECIFY:)	97	O
Don't know/have no idea	98	X
Refused	99	X

Q11B

Have you seen or heard any advertising or news stories about a website that provides information on improving productivity in commercial buildings?

Yes	1	
No	2	=> Q12B
Don't know/Not sure	3	=> Q12B
Refused	4	=> Q12B

Q11BA

PROBE TO FIT. UP TO 5 RESPONSES PRESS ENTER TO CONTINUE

Where do you recall seeing or hearing that? PROBE: Where else?

Conference/Business meeting	01	
Direct Mail	02	
Internet advertising	03	
Magazines/Trade Journals	04	
Newspaper	05	
Radio	06	
Television	07	
Trade shows	08	
Other (SPECIFY:)	97	O
Don't know/Can't remember	98	X
Refused	99	X

Q11BB

PROBE AND CLARIFY. PRESS ENTER TO CONTINUE

What, specifically, did you see, hear or read? PROBE: What else?

RECORD COMMENTS	01	O
Don't know/Not sure	98	X
Refused	99	X

Q12B

IF DON'T KNOW/NOT SURE, SAY: Just give me your best estimate

What percent of the time do you use the Internet to do your job?

Don't know/Not sure 101
Refused 102

Q13B

How many hours would you say you typically watch television in a week?

None ..... 000 => EMAL2
Don't know/Not sure 998
Refused 999

Q14B1

```
What percent of your TV watching time do you spend watching the following types
of shows. . .READ a-c
 a.  Sports
 b.  News
 c.  Prime time TV besides sports
```

Q14B2

Don't know/Not sure 101
Refused 102

Q14B3

Don't know/Not sure 101
Refused 102

BACK1

=> +1 if ADD2<101

You said that watch <add2> percent watching the various types of television. Do you wish to change your answer?

Yes ..... 1 => Q14B1
No 2

MAL2

In the event that we do more research on this topic, may we contact you again by e-mail?
AFTER TYPING E-MAIL ADDRESS, READ BACK TO CONFIRM.

Ok to contact again via e-mail (RECORD E-MAIL:) ..... 1 O
Ok to contact again but won't give e-mail 2
Ok to contact again, but don't have access to e-mail 3
Decline further contact 4

SET2

=> * if IF ((SETA=1),2,1)

Influence

Decision maker 1
Influence 2

SET3

=> * if	IF ((SET1>0 AND SET2>0),3, IF ((SET1>0),1,2))

set in all completes
Decision maker.....1
Influence.....2
Completed with both.....3

INT01

That concludes my questions. Thank you very much for your time and cooperation.
Completed Interview.....01 D => /ATMPT