June 2003
Best Practices For Employee Portal Design
Best Practices For Employee Portal Design

Firms build employee portals to cut costs and improve productivity. But these projects fail when employees don’t use them. To succeed, firms need clear goals, Scenario Design, and ongoing usability support.

2 MARKET OVERVIEW
- Executives at $1B-plus firms fall short of achieving their ambitious goals for employee-facing portals.
- Only 28% say usability is not a problem.

5 ANALYSIS
- American Airlines saves $3 million per year by serving top employee goals online.
- P&G saves $2 million and 32,000 worker hours with collaboration tools.

8 ACTION
- Personalization is not a remedy for bad design.

9 RELATED MATERIAL

10 GRAPEVINE

11 ENDNOTES
EMPLOYEE PORTALS FALL SHORT OF ACHIEVING BUSINESS GOALS

In 2001, firms had high expectations for employee portals: a single user interface to multiple internal systems like intranets, file servers, and enterprise software (see the August 2001 Forrester Report “Making Enterprise Portals Pay”). To find out how these projects fare in 2003, we surveyed decision-makers at 54 $1 billion-plus firms.

All of our respondents have initiatives planned or in progress for this year: 72% will add new features or function to a portal, 37% will create a new portal, and 33% will plan redesigns. Budgets range from small to robust: 46% will spend $500,000 or less, while 25% will allocate $1 million or more (see Figure 1-1). Despite the wide range in funding, we found:

• Remarkably similar goals . . . Ninety-three percent expect their employee portals to increase end user productivity and improve access to content (see Figure 1-2). Eighty percent hope to improve collaboration. Execs also build employee portals to reduce expenses: 72% expect to cut administration costs, and 69% want to trim spending on printing and distribution.

• . . . that are barely being achieved. Only 67% of respondents report that their employee portals have improved access to content, just 54% have seen an increase in employee productivity, and a mere 35% report improved collaboration. Eleven percent have not achieved any of their goals.

Initiatives Include A Slew Of Software

Interviewees throw a lot of technology at their employee portals. Our data shows a:

• Plethora of portal vendors. Ninety-six percent of interviewees have purchased portal products, but no single vendor emerges as the dominant choice. Microsoft tops the list at 22%, and SAP comes in second at 20%. IBM, Plumtree, and Vignette are not far behind: Each is used by 17% of respondents (see Figure 1-3).

• Proliferation of client software types. HTML tops the list of technologies used to build portal interfaces at 83%. But interviewees don’t limit projects to static pages -- 56% use ASP, 56% use Java, and 48% use Flash. DHTML and audio show a 30% and 28% penetration, respectively.

• Variety of functions. Eighty-three percent of portals support search, and 65% offer online training courses. Expense reports and travel booking tie for third
**Figure 1** Budgets And Technologies Run The Gamut, But Goals Are Elusive

**1-1** “How much will you spend on your intranet/employee portal?”

<table>
<thead>
<tr>
<th>Budget Range</th>
<th>2003</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $250K</td>
<td>31%</td>
<td>22%</td>
</tr>
<tr>
<td>$250K to $499K</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>$500K to $999K</td>
<td>19%</td>
<td>17%</td>
</tr>
<tr>
<td>$1M to $2.9M</td>
<td>6%</td>
<td>2%</td>
</tr>
<tr>
<td>$3M to $4.9M</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>$5M or more</td>
<td>13%</td>
<td>6%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>6%</td>
<td>2%</td>
</tr>
<tr>
<td>Would not disclose</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**1-2** “What are the business goals for your intranet/employee portal?”

<table>
<thead>
<tr>
<th>Goal</th>
<th>Stated goals</th>
<th>Goals already achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased end user productivity</td>
<td>54%</td>
<td>93%</td>
</tr>
<tr>
<td>Improved access to content</td>
<td>67%</td>
<td>93%</td>
</tr>
<tr>
<td>Improved collaboration</td>
<td>35%</td>
<td>80%</td>
</tr>
<tr>
<td>Cut administration costs</td>
<td>41%</td>
<td>72%</td>
</tr>
<tr>
<td>Improved access to function</td>
<td>31%</td>
<td>70%</td>
</tr>
<tr>
<td>Cut printing and distribution costs</td>
<td>31%</td>
<td>69%</td>
</tr>
<tr>
<td>Easier deployment of apps</td>
<td>31%</td>
<td>59%</td>
</tr>
<tr>
<td>Improved access to apps</td>
<td>30%</td>
<td>57%</td>
</tr>
<tr>
<td>Easier integration</td>
<td>28%</td>
<td>56%</td>
</tr>
<tr>
<td>Reduced errors</td>
<td>24%</td>
<td>41%</td>
</tr>
<tr>
<td>Cut software costs</td>
<td>22%</td>
<td>33%</td>
</tr>
<tr>
<td>Cut hardware costs</td>
<td>17%</td>
<td>31%</td>
</tr>
<tr>
<td>Cut network costs</td>
<td>17%</td>
<td>30%</td>
</tr>
<tr>
<td>Reduced headcount</td>
<td>15%</td>
<td>22%</td>
</tr>
<tr>
<td>Other</td>
<td>6%</td>
<td>2%</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>11%</td>
</tr>
<tr>
<td>None of these</td>
<td>N/A</td>
<td>15%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>N/A</td>
<td>9%</td>
</tr>
</tbody>
</table>

(multiple responses accepted)

**1-3** “Do you use portal products from any of the following vendors?”

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft</td>
<td>22%</td>
</tr>
<tr>
<td>SAP</td>
<td>20%</td>
</tr>
<tr>
<td>IBM</td>
<td>17%</td>
</tr>
<tr>
<td>Plumtree</td>
<td>17%</td>
</tr>
<tr>
<td>Vignette (Epicentric)</td>
<td>17%</td>
</tr>
<tr>
<td>PeopleSoft</td>
<td>15%</td>
</tr>
<tr>
<td>Citrix (Sequoia)</td>
<td>11%</td>
</tr>
<tr>
<td>Oracle</td>
<td>11%</td>
</tr>
<tr>
<td>Don’t know</td>
<td>9%</td>
</tr>
</tbody>
</table>

Base: 54 $1B-plus companies (multiple responses accepted)

Source: Forrester Research, Inc.
place with 57% penetration each. However, in two years, both training and collaboration will move up to tie search in first place, with all three coming in at 89% adoption.³

Usability Disappoints
Fifty-nine percent of interviewees report that usability is a problem for end users. Another 13% don’t know whether it’s a problem or not. Despite this:

- **Few test usability.** Only 48% of interviewees perform usability tests. Seventy percent of respondents rely on end user complaints and surveys to understand whether or not usability is a problem.

- **Even fewer use outside design firms.** Only 31% hire third-party experts to create portal interfaces (see Figure 2-1). Fifty-four percent rely solely on internal resources for UI design.

- **Only a handful have in-house design expertise.** A mere 15% have an interaction designer on their employee portal team, and only 24% have a usability engineer (see Figure 2-2). In contrast, 78% have application developers on staff.
ANALYSIS

EMPLOYEE PORTALS MUST FOCUS ON USERS
Increasingly sophisticated function means that designing usable interfaces for employee portals will become even harder. Low budgets and a shortage of design expertise make this challenge harder still. But firms can improve today’s underperforming initiatives and guard against future failure by applying best practices in three key efforts:

• **Align business goals and user goals.** Employee portals succeed when business goals are specific and directly related to what users want to accomplish.

• **Apply Scenario Design.** Firms can create usable, useful employee portal interfaces with Scenario Design, a framework that focuses on designs that help users accomplish their goals.

• **Plan ongoing support for usability.** To maintain usability as sites expand and undergo redesigns, employee portals need the right mix of skills, process, and organizational support.

Align Business Goals And Employee Goals
Firms can improve the user experience and support business goals when they (see the June 2001 Forrester Report “Get ROI From Design”):

• **Identify specific business goals . . .** To design its employee portal, Jetnet, American Airlines focused on solving business problems like cutting distribution and support costs. The solution: offering comprehensive self-service benefits administration online.

• **. . . that correspond with employee goals.** Jetnet supports employees by letting them view payroll information instead of calling HR, and book discounted travel. These two apps — the most popular on the site — help drive Jetnet’s 40,000 logins per day and save American $3 million a year.

Apply Scenario Design
Even when firms can’t afford the time and money required for a full-blown Scenario Design process, they can improve usability when they (see Figure 3 and see the December 2000 Forrester Report “Scenario Design”):
### Best Practices For Employee Portal Design

#### ANALYSIS

<table>
<thead>
<tr>
<th>Best practice</th>
<th>Tips and tricks</th>
</tr>
</thead>
<tbody>
<tr>
<td>A J&amp;J survey of employees found that paycheck and benefits information were the top two items they wanted on the portal.</td>
<td>Use email surveys to uncover employee goals. Zoomerang automates the process for up to 10,000 responses per year at a cost of $599.</td>
</tr>
<tr>
<td>Sapient conducted in-depth interviews to determine the needs of employees at a large telecom client. The resulting redesign took site usage from 30% of employees to a sustained rate of 80%.</td>
<td>If you can’t afford help from an expert, send members of the design team to observe employees as they work. Conduct follow-up interviews to review observations and probe into why employees did what they did.</td>
</tr>
<tr>
<td>Verizon interviewed employees to discover how they used the intranet. A key finding: Workers frequently called the help desk with questions about how to find content on the site.</td>
<td>Start by interviewing help desk employees -- monthly -- to identify the top 10 questions that people ask. This practice uncovers gaps in content and function as well as navigation flaws.</td>
</tr>
<tr>
<td>To create menus that made sense to employees, J&amp;J designers put the name of each item on an index card and asked employees to sort the cards into logical groups.</td>
<td>100% agreement on menu categories is neither practical nor, in most cases, possible. When employees reach 80% agreement, declare victory.</td>
</tr>
<tr>
<td>Post-redesign measurement by J&amp;J found that site usage increased by 235%.</td>
<td>Use Web analytics tools to benchmark performance for key scenarios before redesigns. Many companies omit this step and therefore can’t measure improvements.</td>
</tr>
<tr>
<td>American Airlines creates HTML prototypes that allow them to eliminate problems before the site goes into development.</td>
<td>Low-fidelity paper prototypes let teams quickly test scenarios -- no coding required.</td>
</tr>
</tbody>
</table>

Source: Forrester Research, Inc.

- **Study employees to understand their needs.** Procter & Gamble takes a grassroots approach to identifying possible enhancements to its portal. For example, after observing employees track daily task performance on a whiteboard, managers at a paper production plant suggested that P&G add a collaboration tool. Managers, floor technicians, and even back-end systems now have streamlined access to data. The results: annual savings of 32,000 worker hours and $2 million.

- **Create seamless scenarios.** With the aid of Logical Design Solutions, Verizon built a self-service HR site that consolidates support for tasks like looking up benefits and changing options -- content and function previously scattered across multiple sites and systems. The result: Usage went up 11%, and call center requests for help with finding content dropped (see the February 14, 2003 Forrester Brief “Best Practices: Verizon’s Process Portal”).

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*Figure 3 Practical Application Of Scenario Design*
• **Measure results against goals.** A manufacturer consolidated disparate intranet sites with an employee portal. The top goal: improve productivity by enabling easier access to information. The redesign made navigation consistent and made critical content accessible within two clicks. The result: a portal that draws four times as many visitors but generates only twice as many page views. Because the designers set out to make information access more efficient, they weren’t thrown by the relatively small increase in page views versus the giant leap in visitors.

**Plan Ongoing Support For Usability**

To keep employee portals from degrading over time, firms need the right skills, process, and organizational support (see the December 2001 Forrester Report “You Get The Site You Deserve”). Companies should provide:

• **Design standards and human support.** To ensure consistent design, one manufacturer has an intranet site dedicated to guidelines. But the portal team doesn’t just provide templates and manuals; it also offers support to 200 part-time content contributors. For example, team members walk site owners through a standard questionnaire that helps them focus on the business purpose of their sites. The team also sends email reminders to update content.

• **Testing and training.** The employee portal team at one manufacturer conducts usability tests on sites built by other departments and business units. Portal team usability leads also give site developers feedback during the design process as to how well the site conforms to known usability principles. As developers learn these principles, they review each other’s sites, catching problems earlier, so that sites require fewer corrections when they undergo a final review by the usability project lead from the portal team.

• **Content advocates.** IBM’s employee portal has a content team, including an editorial staff. But Big Blue also delivers highly useful content to employees by enlisting the aid of “information brokers.” These individuals -- most of whom commit one-quarter to one-half of their time to this project -- identify content for specific audiences like managers and software developers. They also advise designers who maintain user profiles for news portlets targeted at their constituencies. The results show: IBM employees rate their intranet as the best source of information about IBM.

• **Surveys and site statistics.** The intranet team at business and technology consultancy Sapient looks at site analytics data weekly to monitor usage, conducts annual online surveys to test against business objectives, and administers usability tests whenever they redesign. This comprehensive approach to measurement enables
teams to focus their design and development efforts. For example, they found that when they added an application with an interface that was inconsistent with the rest of the intranet, it caught on more slowly than apps with a consistent UI.

ACTION

Leading employee portals show surprising sophistication. But even the best can benefit from a more advanced application of Scenario Design principles. Employee portal managers should:

✔️ Create employee personas.
Personas give design teams a common understanding of their most important users (see the August 14, 2001 Forrester Brief “Scenario Design Depends On Personas”). The in-depth research needed to create personas requires from two days to six weeks and costs from $10,000 to $200,000 for skilled outside help. Firms with less cash can still interview target users and then write narrative descriptions of their needs, goals, preferences, and pet peeves.

✔️ Prioritize good design over personalization.
Even on the well-designed and highly tested IBM employee portal, less than 10% of users customize their home page. Instead of pinning hopes on customization, firms must identify the right content and function for the most important employee groups and prioritize page layout based on frequency of usage. When designing navigation, optimize for menu structure, language, and interface elements that serve the most demanding mainstream users. An interface that serves the hardest-to-satisfy employees will serve all employees.

✔️ Plan to design portal UIs -- even if using portal software.
Portal vendors like Plumtree Software aim to provide usable interfaces out of the box. In contrast, BEA Systems just provides a tool kit for developing a UI. Either way, plan to build or tailor UIs for employees' specific needs. Budget $250,000 for outside help for a major initiative like an HR self-service portal or hire interaction designers and usability engineers to do this in-house.
Related Material

Methodology

For this report, we conducted an online survey of 54 decision-makers at $1 billion-plus companies. Titles include: CIO, director, executive vice president, and general manager. We also conducted in-depth interviews with experts at a variety of user companies and vendors.

Companies Interviewed For This Report

A2i  www.a2i.com
AGENCY.COM  www.agency.com
American Airlines  www.aa.com
BEA Systems  www.bea.com
Carbon Five  www.carbonfive.com
Cooper  www.cooper.com
Curl  www.curl.com
Delta Air Lines  www.delta.com
Fidelity Investments  www.fidelity.com
Fluid  www.fluid.com
Human Factors International  www.humanfactors.com
IBM  www.ibm.com
Johnson & Johnson  www.jnj.com
Logical Design Solutions  www.lds.com
Macromedia  www.macromedia.com
MAYA DESIGN  www.maya.com
Mellon Financial  www.mellon.com
Microsoft  www.microsoft.com
PeopleSoft  www.peoplesoft.com
Plumtree Software  www.plumtree.com
PricewaterhouseCoopers  www.pwc.com
Procter & Gamble  www.pg.com
Project Performance Corporation  www.ppc.com
SAP  www.sap.com
Sapient  www.sapient.com
Stellent  www.stellent.com
Verizon  www.verizon.com
Vignette  www.vignette.com

Related Research

December 2001 Forrester Report “You Get The Site You Deserve”
August 14, 2001 Forrester Brief “Scenario Design Depends On Personas”
August 2001 Forrester Report “Making Enterprise Portals Pay”
June 2001 Forrester Report “Get ROI From Design”
December 2000 Forrester Report “Scenario Design”
Three strikes and you’re out . . . out the door, that is.
A large financial services institution fielded a user satisfaction survey on the day it launched a new UI for its intranet. Initial results were very positive, but after about 2 hours there was a wave of negative responses. This 2-hour cycle repeated and then repeated again. Finally, someone discovered that a few members of the IT team -- the team that had owned the interface until the redesign -- had hacked into the server to send the waves of unfriendly feedback. The ballot-box-stuffing crackers lost both the battle and the war: The new UI stayed, and they got the boot.

Consider the opportunity cost of poor design.
Here’s a slam-dunk example of lost productivity -- and money -- due to poor usability. When a new expense reporting system was rolled out in the employee portal at a Fortune 500 insurance firm, one exec struggled to file a report for more than an hour. He finally asked another exec for help and got directed to the key piece of functionality he needed. He then filed the report electronically -- only to have his boss struggle with it for another hour.

Quick -- who wrote the first-aid manual?
One design firm that we spoke with related a story about a large chemical company with critical documents on its intranet like bulletins on what type of gloves to wear when dealing with specific types of dangerous chemicals. Too bad the company filed the information where few will find it . . . under the names of the people who wrote the documents. Imagine having to clean up a spill and needing to first find out who wrote the report about the last incident.
ENDNOTES

1 Forrester interviewed portal managers at 49 Global 3,500 firms that had or planned to have an enterprise portal by the end of 2001. Firms expected to improve access to information and cut costs with their initiatives, but they did not measure the results of their efforts.

2 To view spreadsheets with details on data that does not appear within a figure, please click on the “Get Data” button above Figure 1 or Figure 2.

3 Some of the respondents to our survey only selected items that they would add in two years -- omitting items that they have now from their selections under “in two years.” For the purposes of consistency, we assumed that if interviewees reported that a type of content, function, technology, or system was incorporated into the portal today, it would also be in the portal in two years.

4 Firms can achieve measurable results from design improvement when they model user scenarios that are key to supporting business goals and make improvements that remove obstacles blocking users from accomplishing their goals.

5 To design sites that enable users to accomplish their goals, firms need Scenario Design -- a comprehensive, user-centered approach to designing usable, useful sites. The methodology is based on an understanding of users, their goals, and their behavior.

6 As a result of the Bell Atlantic and GTE merger, Verizon faced the challenge of merging 12 HR sites and 8,000 subsites into one.

7 Forrester discovered that while managers for external-facing sites were satisfied with their design efforts, their sites showed little evidence of organizational support for user goals, strong user experience skills, or solid design methodology -- all critical elements for creating a compelling online experience.

8 Personas -- vivid, narrative descriptions of user archetypes that represent user groups -- provide the critical foundation required for creating a great user experience.
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