

THE ECONOMICS OF WEB-BASED SUPPORT

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17 Main Street
Watertown, Mass. 02472-4491
Telephone 617/924-3944, ext. 14
Fax 617/924-7288

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The Economics of Web-Based Support

Why do customers visit software Web sites? Almost without exception, the two top traffic-builders these days are online product sales and self-service tech support. And increasingly, e-commerce and e-support have become inseparable parts of the customer's total life-cycle relationship with a company. When a vendor behaves in a consistently friendly and helpful way, customers keep coming back; when they're treated badly, they go elsewhere.

But building customer relationships isn't cheap. Web support sites in particular can gobble up huge investments of cash, manpower, and management time. And the investments seem to be endless, because customer expectations and Web technology keep evolving at the Internet's notorious breakneck pace. Last year's state-of-the-art site is probably already due for a comprehensive makeover, with a fresh navigation scheme, hundreds of new tech notes, a more responsive search engine, localized documents for overseas users, a better online forum than the competition...

Worse, it's been almost impossible to find basic metrics for managing these constantly-escalating costs and for setting reasonable standards for productivity and efficiency. For this reason, we recently collected data from 129 Web support managers on their site maintenance costs, Web support pay levels, self-service transaction costs, e-mail metrics, and the performance of their knowledgebase software. Here's what we found:

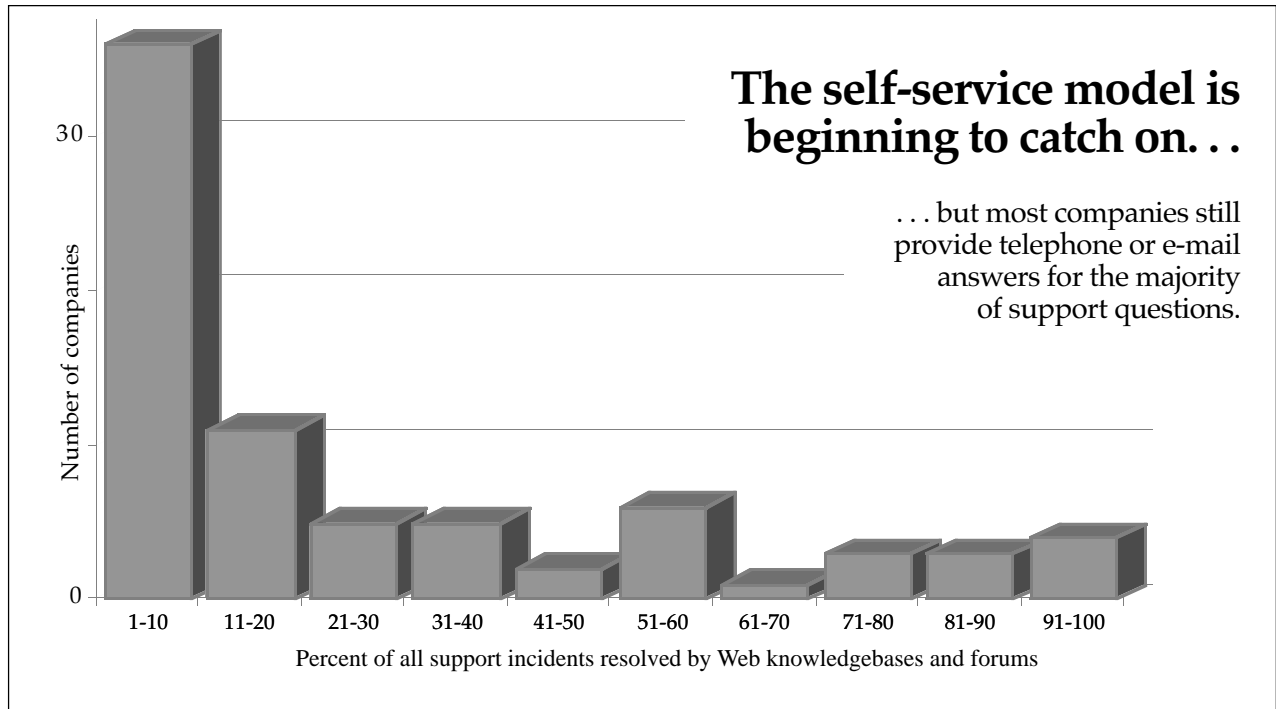
■ SITE MAINTENANCE

Initially, site managers paid the most attention to the one-time cost of building a Web operation from scratch. But it quickly became clear that Web budget-makers also need to look at hefty costs for ongoing site maintenance. In fact, annual maintenance costs often equal or even exceed the initial investment in site creation.

- * **Payroll:** Not surprisingly, staffing costs are almost always the single largest cost element in Web support budgets. The employees who maintain Web support sites generally work on other non-Web tasks as well, so it's tricky to estimate the actual amount of payroll hours that site maintenance requires. Nevertheless, 103 companies were able to estimate the percentage of support staff and payroll dedicated to Web support, and from this data we were able to calculate the approximate monthly cost of Web support staffing. Overall, the companies in our sample devote 10% (median) of their support staffing to Web-related work; the specific percentage varies primarily according to the size of the support organization:

Web-related staffing ratio	Ratio	Cost/Employee/Month
By support organization size:		
30+ employees (32 responses)	5%	\$4,000
10-29 employees (23 responses)	10%	3,689
1-9 employees (48 responses)	15%	3,695
Median (103 responses)	10%	\$3,889

- * **Other costs:** Besides payroll, companies generally incur out-of-pocket costs for Web site hosting, outside design and coding services, equipment, software, facilities, and the like. These costs can be hard to track, but as a rule of thumb we found that non-payroll costs represent about half (49% median) of the total overhead for ongoing site maintenance. Moreover, this ratio is fairly consistent, no matter how much a company spends per month on total site maintenance:



Non-payroll cost ratio	Ratio	50% Range*
By total monthly Web support expenditures:		
\$30,000+ (14 responses)	52%	
\$5,000-\$29,000 (38 responses)	43%	
Under \$5,000 (18 responses)	54%	
Median (70 responses)	49%	24%-67%

* "50% Range" represents the middle half of all responses.

■ TRANSACTION COSTS

No matter how efficiently a call center is managed, live phone support is always a one-to-one transaction—which means that the cost of support usually increases in direct proportion to transaction volume. Web support, by comparison, is a one-to-many interaction, so a large increase in transaction volume usually has little impact on costs.

At least that's the theory. But if transaction volumes aren't high enough, the fixed costs of a one-to-many model can wipe out most of the potential savings, and may even cause companies to spend *more* on a so-called "self-service" resolution than they did for a live support call. In fact, many of the companies in our survey currently resolve only a relative handful of incidents through their Web site, compared to their telephone and e-mail incident resolutions. As a result, the cost of a single Web transaction on these sites sometimes reaches hundreds of dollars. (In fairness, it's worth pointing out that many site managers don't collect statistics on Web resolution rates, so the numbers they provided reflect a certain amount of guesswork.)

Once a site achieves a critical mass of traffic, the savings from one-to-many support kick in with a vengeance. For our sample as a whole, the cost of a single Web support transaction is still a whopping \$58.33 (median). But sites that resolve 50% or more of their incidents on the Web have pushed this

number down to just \$2.20—and some site managers report that they spend as little as a few cents per Web transaction:

Cost per web transaction	Cost*
By percentage of incidents resolved on the Web:	
High-volume—50%+ (16 responses)	\$ 2.20
Mid-volume—10%-49% (19 responses)	38.33
Low-volume—1%-9% (22 responses)	160.00
Median—11% (57 responses)	\$ 58.33

* Cost per transaction is calculated by dividing total Web costs by total Web resolutions.

■ E-MAIL METRICS

Increasingly, end users have come to accept e-mail as an alternative to live phone support. With e-mail, customers generally don't expect instant answers to their questions, so support reps can handle traffic flow more smoothly and efficiently. When questions are fairly repetitious, moreover, support reps can often use stock e-mail answers to speed up the time it takes to create a reply.

Still, our numbers suggest that e-mail so far hasn't brought the industry a dramatic breakthrough in support productivity. Overall, support reps seem to handle about 20 e-mail incidents per day, roughly the same productivity that comparable telephone support reps achieve. Predictably, larger support organizations are able to squeeze more e-mail productivity from their employees than their smaller counterparts. Another significant variable in productivity measurement is the cost of the application, which often corresponds to the complexity of support questions.

E-mail productivity per support rep	E-mails/day	50% Range*
By support organization size:		
30+ employees (30 responses)	25	7.5 - 45
10-29 employees (27 responses)	20	10 - 35
1-9 employees (45 responses)	15	6 - 30
By application price:		
\$10,000+ (24 responses)	10	4 - 22.5
\$1,000-\$9,995 (29 responses)	16	7.5 - 30
\$15-\$999 (36 responses)	32	16 - 67.5
Median (103 responses)	20	7 - 35

* "50% Range" represents the middle half of all responses.

How quickly do software companies answer e-mail support questions? The prevailing guarantee is a 24-hour turnaround, but actual response times are almost always much faster; typically, customers will hear back within about five hours (median). Moreover, response time usually reflects product cost: Customers who buy higher-priced applications get the fastest service. Surprisingly, though, price has almost no impact on whether a company guarantees a specific e-mail response time:

E-mail response time	Guarantee %	Promised	Actual
By application price:			
\$10,000+ (26 responses)	54%	18 hrs	4 hrs
\$1,000-\$9,995 (34 responses)	53%	24 hrs	7 hrs
\$15-\$999 (42 responses)	52%	24 hrs	9 hrs
Median (114 responses)	53%	24 hrs	5 hrs

■ WEB SUPPORT SALARIES

Ideally, Web support employees need two kinds of expertise--conventional Web skills, plus an understanding of customer support issues. Despite these specialized requirements, however, Web support compensation is roughly comparable to the pay of support reps and department managers with traditional support backgrounds:

Web support salaries

	High	Low	Median
By support organization size:			
Senior online support manager (59 responses)	\$70,000	\$45,000	\$60,000
30+ employees (324 responses)			\$65,000
10-29 employees (11 responses)			\$70,000
1-9 employees (24 responses)			\$50,000
Knowledgebase technical editor (48 responses)	\$51,500	\$35,000	\$40,000
30+ employees (26 responses)			\$42,000
10-29 employees (8 responses)			\$50,000
1-9 employees (14 responses)			\$35,500
Knowledgebase technical writer (51 responses)	\$49,000	\$32,000	\$40,000
30+ employees (26 responses)			\$40,000
10-29 employees (8 responses)			\$43,000
1-9 employees (17 responses)			\$35,000
Web site developer/designer (61 responses)	\$60,000	\$38,000	\$50,000
30+ employees (26 responses)			\$47,500
10-29 employees (11 responses)			\$55,000
1-9 employees (24 responses)			\$50,000

"High" salary is the median for the top 50% of all salaries in each category. "Low" salary is the median for the bottom 50%.

■ KNOWLEDGEBASE METRICS

The one feature common to most Web support sites is some form of searchable knowledgebase, which usually contains hundreds or even thousands of tech notes, FAQs, application tips, documentation, detailed articles about previously-reported problems, and other documents. Our survey took a look at key areas of knowledgebase metrics and management:

- * **Productivity:** Knowledgebase authoring is clearly more complicated than answering a single e-mail question, so productivity comparisons can be even tougher to define. One company may view a short FAQ answer as a completed tech note, while another counts only articles that take a few days of in-depth research. To achieve some rough consistency of definitions, we asked our respondents how many "individual tech notes" their site contains, as well as how many tech notes a writer can create in one day:

Tech note productivity per writer	Tech notes/day
By total number of tech notes on the site:	
1,000+ (31 responses)	5/day
100-999 (46 responses)	4/day
6-99 (22 responses)	1/day
Median—500 tech notes (99 responses)	3/day

- * **Knowledgebase technology:** So far, no vendor of knowledgebase tools seems to have achieved broad market penetration. Instead, Web support site developers rely mostly on homegrown systems or have adapted literally dozens of different commercial databases, text retrieval systems, and search engines. Moreover, customers apparently don't perceive much difference among various vendors in such areas as initial installation, flexibility and customization, and performance and speed:

Knowledgebase vendor ratings*	Installation	Flexibility	Performance
By system vendor:			
Homegrown (24 responses)	2.2	2.3	2.2
Lotus Notes (9 responses)	2.1	2.5	2.2
RightNow (8 responses)	2.4	2.4	2.1
Clientele (4 responses)	2.0	2.5	2.5
Vantive (4 responses)	2.3	2.5	2.5
All (77 responses)	2.1	2.1	2.2

* Ratings: 3.0 = excellent, 2.0 = adequate, 1.0 = major problems.

- * **Resolution rates:** Arguably, the ultimate metric for knowledgebase performance is the site's resolution rate—the percentage of visitors who actually find an answer to their questions. Yet relatively few sites ask users whether their knowledgebase query was successful. (Those that do ask typically find that the majority of visitors ignore the question.) For the 26 sites in our survey that collect resolution statistics, however, knowledgebases typically resolve 42% (median) of all customer questions; half produce success rates between 30% and 65%.

■ SURVEY DEMOGRAPHICS

Data for this survey was collected during September and October 1999 through e-mail and postal survey questionnaires sent to members of the Association of Support Professionals, Soft•letter subscribers, and other respondents who oversee Web support site development. We collected a total of 129 usable questionnaires, with a mix of companies that is broadly representative of the PC software industry as a whole:

- * **Price range:** We asked for "the list price of your best-selling title or configuration," and found that respondents can be grouped into three categories: Companies with flagship products that sell for \$10,000 or more (31 responses), those with products in the \$1,000-\$9,995 range (37 responses), and "desktop" software vendors with prices in the \$15-\$999 range (48 responses). For all respondents, the median price is \$1,545.
- * **Company size:** Web support sites tend to be expensive, so our sample base has fewer small companies than we've seen in other survey profiles. Revenue ranges for this survey include the following: Over \$100 million (19 responses), over \$10 million (50 responses), \$1-\$10 million (32 responses), and under \$1 million (15 responses).
- * **Organization size:** The number of employees in the support organization is often closely tied to productivity and efficiency metrics. Among the companies in our sample, 30% have 30 or more employees (39 responses), 25% have 10-29 employees (32 responses), and 45% have nine or fewer employees (58 responses). Median organization size for the sample as a whole is 12 employees.