MAKING THE CASE FOR WEBSITE SEARCH TECHNOLOGY:

4 STEPS TO DERIVING MEASURABLE BENEFITS

July 1, 2004, © ISYS Search Software, Inc.

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BEYOND NAVIGATION – MAKING THE CASE FOR SITE SEARCH

The advent of the Web has forever changed the global business landscape, where a company's website is often its most valuable tool for generating revenue. For many Internet-based businesses, it's their only tool. As such, going beyond basic navigation to provide site visitors with a direct path to the information they seek is paramount.

According to Jupiter Media Metrix, when navigation attempts fail, 50% of site visitors will turn to search[1]. It would seem that despite best efforts to improve site navigation, not even the best directory structures enable users to quickly and easily find the information they're seeking. Yet traditionally, site search technologies haven't fared much better, with Jupiter reporting as much as an 85% failure rate.

Put simply, web users have matured considerably, which means they demand a frictionless experience and are less patient with sites that can't deliver on these expectations. The saying "The competition is only a click away" has never been more applicable.

Site search deficiencies not only negatively impact conversions and site revenue, but they also harm a company's brand reputation. Consider, for example, what happens when a person gets zero results when searching for the term "hamburger" on a fast food restaurant chain's website. Multiply this failure by the number of site visitors conducting this basic search, and suddenly you have a company that appears as though it doesn't know its own business.

Thus, adding competent site search capabilities into the mix is not only a means for reaping incremental revenue, but also an absolute necessity in delivering a top-notch user experience. Key benefits for advanced site search technology include:

1. Provide users with the ability to pinpoint desired information … in seconds or less
2. Gain valuable insight into customer search and navigation behavior
3. Collect metrics that spawn navigation and content enhancements
4. Reinforce brand credibility through a seamless site experience
5. Offer a broader range of content to a larger number of audiences

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[1] http://www.internetretailer.com/article.asp?id=6476

4 Steps to Deriving Benefit From Website Search

To better understand exactly how these benefits are derived, this paper will cover in detail the four steps to leveraging the potential of website search technology. At the end of this paper, you'll find a checklist to help you map out and follow these steps. And while each company will have its own set of specific search requirements to address, the four primary keys to deriving measurable benefit are:

1. Outline the goals and benefits you wish to achieve via site search

2. Identify the search features that best address your goals

3. Understand the Total Cost of Ownership and ROI of your proposed search solution

4. Measure both tangible and intangible results and expand the scope of site search using lessons learned

THE 4 STEPS TO DERIVING MEASURABLE BENEFITS FROM SITE SEARCH

1. Outline the goals and benefits you wish to achieve via site search

At its most basic level, site search should enable your visitors to find relevant information fast. However, your specific goals for website search will differ depending on the nature of your business, and the way in which you wish to interact with customers. You can use the following Top 10 list as a guide for some of the key goals that can be met through the deployment of search technology.

1. Provide access via your website to a wider range of content, such as PDFs, databases, Flash and other document formats that aren't covered with standard 'find' features.

2. Reduce the time taken for your website visitors to find required content.

3. Incorporate partner websites, or websites from other divisions of the company, into your site content repository.

4. Drive website visitors towards certain types of content when they conduct a search, such as product information or customer service FAQs.

5. Improve the usability of your site search, catering to both basic and advanced users.

6. Improve the accuracy of searching to enable the pinpointing of very specific information on your website.

7. Improve the search scope so that users see similar results for words with similar meanings, or questions posed in similar ways.

8. Enable your website visitors to search within document metadata.

9. Provide automatic "searchability" of newsgroups, blogs and other user-generated content on your website.

10. Provide for fast viewing and navigation of very large files on your website, such as large PDFs.

2. Identify the search features that best address your objectives

Beyond typical budget and interoperability considerations, selecting a site search engine and defining its scope requires a better understanding of the technologies available and how various features can assist you in reaching your goals. It also requires that you recognize how various site search tools address different site types. An online retail site will undoubtedly have different criteria to assess than a general information site.

Additionally, determining your specific list of requirements and parameters also means understanding that search is *not* a one-step process. Any engine can fire a query and return a list of results. To truly capitalize on the promise of site search, you need to evaluate how well a given engine delivers on the Three-Step Search Process:

1. The Query Phase – what options do users have for constructing a query?
2. Results Generation – how fast are results generated and how are they presented?
3. Navigation and Discovery – what tools can users rely on to pinpoint information?

The most critical component in this step is determining how well features match your objectives. It's tempting to deploy everything a search engine has to offer, but by mapping features back to your goals, you'll be able to focus on just those options that are most practical to your needs. For example, proximity operators (e.g., '**dog** within 10 words of **cat**') and 'sort by date' are excellent search features for news content sites, but generally irrelevant for online retail sites.

To aid you in this process, the following table illustrates the site search features you should look for and how they correspond to your objectives. These are designed to map back to the Top 10 site search goals provided in the previous section. At the conclusion of the paper, you will also find sample screenshots that highlight the Search and Search Results pages, and their features (Appendix A). Both of these pages are critical to the usability of your site, and the features highlighted will aid you in your quest to derive maximum benefit from site search.

2. Identify the search features that best address your objectives (cont…)

	Goal	Search features that deliver on this goal
1	Provide access via your website to a wider range of content, such as PDFs, databases, Flash files and other document formats that aren't covered with standard 'find' features.	First, understand the formats used in your organization, and decide which of these you'd like to make available via the website. You'll find a list of possible formats in the checklist at the end of this white paper. Ensure the search engine supports your selected formats without the need for document reformatting, relocation or manipulation. In addition, language support might be required, should your organization's website cross over multiple geographies and languages.
2	Reduce the time taken for your website visitors to find required content.	There are many search engine features that help to make searching more efficient. Some of these include: ▪ Searching within certain categories of information. This enables you to group types of content into categories, such as 'Products', 'Technical Info', 'Press releases'. Users can then restrict their searches to specific groups using a check box or dropdown list. ▪ Hit-highlighting in results. Highlighting the key terms in a document makes it much easier for the user to see where the relevant words appear within a document. ▪ Hit-to-hit navigation. This enables users to jump from one instance of a hit to the next, which means they don't have to scroll through large sections of irrelevant documents to find the right information ▪ Sorting options. Allowing users to sort their search results by file type, document name, date or other fields helps them to get to the relevant content more quickly. ▪ Relevance ranking. A site search engine should incorporate some form of relevance ranking, so that the most relevant results are presented at the top of the results list. ▪ Context views of content. Providing some context around each search result, for example displaying a line above and below the first hit in the document, helps the user to see whether or not the document is what they're looking for, without having to open it. ▪ Search refinement options. Enabling users to conduct another search within the results set they received helps them narrow down the field.

2. Identify the search features that best address your objectives (cont…)

	Goal	Search features that deliver on this goal
3	Incorporate partner websites, or websites from other divisions of the company, into your site content repository.	You require a search technology known as 'spidering'. Check with your search vendor to determine if their software can 'spider' external website results into your own search index.
4	Drive website visitors towards certain types of content, such as customer service FAQs or product information.	Some search engines provide the ability for you to weight certain categories of information so that, for example, results in the Product Information category appear at the top of the search results list.
5	Improve the usability of your site search, catering to both basic and advanced users.	Some search engines offer a variety of different search types to cater to your different users. Natural language enables the user to enter their query as if they were asking a question. Menu-assisted provides a toolbar of common operators so that users can construct their query using a point-and-click method. Other features that aid usability include spell-checkers and 'sounds like' prompts.
6	Improve the accuracy of searching to enable the pinpointing of very specific information on your website.	Search engines differ with regards to the level of specificity that their queries can support. If it's important to your users, you can offer them features such as proximity searching, where they can search for key words within a certain distance of each other or in a certain order. This can support searching within the same paragraph, or one key word following the other. You can also offer searching for a key word where another does <u>not</u> appear.
7	Improve the search scope so that users see similar results for words with similar meanings, or questions posed in similar ways.	A built-in thesaurus will enable your site search to return the same results when similar words are used, for example 'very' and 'extremely'. If your organization uses specific taxonomies or language, you can use synonym functionality to build your own custom thesaurus. As an example, this could enable you to return results containing the word 'cardiac' when a user actually searches on the word 'heart'. Another feature is tense stemming, which enables users to search for 'walk' and return documents containing 'walked', 'walking', 'walker', etc.

2. Identify the search features that best address your objectives (cont…)

	Goal	Search features that deliver on this goal
8	Enable your website visitors to search within document metadata.	If you use a content management system or some form of organizational metadata specification, it can be extremely useful to provide search across not only document content, but also metadata. Some search engines will enable you to search for results in specific metadata fields, such as 'Author' = 'Graham Greene'.
9	Provide automatic "searchability" of newsgroups, blogs and other user-generated content on your website.	To provide searching across your user forums and content that is updated throughout the day, you need a search engine that can update that information into the search index on a regular basis. Flexible index updating and broad file format support are required to support this.
10	Provide for fast viewing and navigation of very large files on your website, such as large PDFs.	Some websites contain large, unwieldy documents such as PDFs with many pages. Loading these and viewing them can be time-consuming and confusing for the user. Features such as Fast PDF Preview enable users to view just the sections of the document that contain the key words they entered. Expand Up and Expand Down functionality within this feature enables users to view the adjacent content, again without needing to load up the entire document. Combined with hit-to-hit navigation, this can vastly improve the experience of finding information in very large documents.

3. Understand the Total Cost of Ownership and ROI of your proposed search solution

As with most technology implementations, the fundamental elements of return on investment and total cost of ownership are critical to maximizing the potential of site search. While some companies might tell you that such variables are difficult to measure where site search is concerned, the metrics involved in measuring these factors are actually quite simple.

In theory, site search should begin paying dividends once it goes live. By providing site users with faster, more efficient means for locating information, they'll be more likely to stay on your site, thus yielding higher conversion rates. Whether these conversion rates translate into more prospects evaluating your products or actually purchasing them, the benefit is well established and easily measured.

Painting an accurate picture requires also figuring your investment costs into the equation. Recognizing how different vendors charge for their solutions and the total costs associated with the technology will help you get a better idea of how valuable a particular vendor will be to your organization both in the short and long term. The following questions provide you with a framework for evaluating vendors on this level.

1. What pricing structure does the proposed site search solution offer? Per server, per document or per month (for ASPs)?
2. For per-document pricing, what are the price ranges and penalties for exceeding them?
3. For per-month pricing, what are the different pricing tiers and how are they calculated?
4. Does the solution provider license or lease its technology, requiring a regular payment (for example, every two years) or a single upfront payment?
5. How many internal support hours are required for installation? Ongoing maintenance?
6. How many hours of outside professional services or consulting are required for implementation? Ongoing maintenance?
7. What is the cost of an annual maintenance agreement?
8. What are the hardware requirements for the proposed site search solution? Will additional equipment need to be purchased?

If you have a fairly static content base, a per-document pricing formula can be suitable, provided there are no plans to increase the amount of content being offered via search. The hosted model of an ASP can also be a valid option for businesses with minimal internal support resources, or those wishing to avoid upfront costs. Unfortunately, both options can be limiting – per-document pricing for preventing growth, and ASPs for the limited control and ongoing costs.

By its very nature, search technology is not resource intensive, which means there should be no need for additional hardware, outside consulting or a team of internal knowledge engineers. At its very best, site search technology should be deployed in a matter of days on hardware you already have, with only one person responsible (part-time) for care and feeding.

4. Measure both tangible and intangible results and expand the scope of site search using lessons learned

At the end of the day, site search is only as good as the metrics you assign to it. Yes, businesses should expect site search to increase conversion rates and revenue, as well as deliver a rapid return on investment. There's little sense in evaluating site search technology if it **can't** provide these benefits. But success can be measured in a more indirect fashion as well.

Take the case of an online retailer of shoes. By analyzing search logs, the retailer can glean quite a bit. For starters, the company can spot common misspellings of brand or product names. By using features like 'user-defined synonyms' or a 'did you mean?' spell-checking tool, the retailer can overcome this obstacle and ensure sales aren't lost. Additionally, search logs can help the company recognize increasing demand for a brand it might not carry, and thus prompt it to make an effort to bring that brand to its site.

Start your evaluation process by answering the following questions:

1. Did we increase conversion rates and revenue since implementation? By how much?
2. Do these results meet or exceed the goals we established in the beginning?
3. Have we increased the number of searches being performed on our site?
4. Do the visitors who conduct searches spend a greater amount of time on our site today? Is that a good thing?
5. What have we learned about the search habits of our visitors, and how have these lessons translated into new opportunity for the company?
6. What can we conclude about our overall site experience and how it has impacted our brand reputation?
7. Can we use these results to extend site search to new websites, new collections of content, partner portals or an intranet?
8. Can we leverage site search to boost up-sell, cross-sell and advertising revenues?
9. What other opportunities exist with site search?

It goes without saying that the answers to these questions feed the continuous loop that enables a company to gradually fine-tune its site experience and surpass its initial goals.

PUTTING IT ALL TOGETHER

As this document has outlined, site search offers more than just a convenient method for connecting users with content. By better understanding your own goals for site search, the role it can play and the features that best meet those objectives, a website search engine can deliver far more than just the fundamental utility of information retrieval. Following these four steps to deriving measurable benefit from site search will not only help you think strategically about site search, but will also aid in your quest to find the search vendor best suited to meet your needs.

TO FIND OUT MORE …

Contact ISYS Search Software in your area for more information on site search solutions

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4 Steps to Deriving Benefit From Website Search

APPENDIX A: 'SEARCH PAGE' AND 'RESULTS PAGE' SCREENSHOTS

Sample Search Page and Its Features

1 **Multiple Query Methods**

● Plain English
● Menu Assisted
● Command Based
● Concept Tree

Find all documents that contain:

Search   Reset

&AND which ALSO contain...
OR which contain ...
BUT do NOT contain...
Within a PARAGRAPH of...
In the same PARAGRAPH as...
10 Within 10 words of...
Followed anywhere by...

2 **Easy creation of advanced queries**

Auto-conflate: ☐ No synonyms: ☐

3 **Tools to compensate for tense, word choice or spelling**

Results per page: 10 ▾

Sort results by: Document relevance ▾

Search criteria: Whole site ▾

4 **Ability to restrict search to certain groups of information**

APPENDIX A: 'SEARCH PAGE' AND 'RESULTS PAGE' SCREENSHOTS

Sample Results Page and Its Features

(5) **Resorting of results**

Found 62 hits in 9 documents for "mental health conference"

Showing documents 1 to 9

Sort By: Best Match | ▼Hit Count▼ | Title

Result Page: 1

(6) **Search within**

Search within results: [   ] Search

1. Microsoft Word - Modernisation Bulletin - March 03.doc

(7) **Document preview**

7 AND 8 MAY 2003 – SAINSBURY'S CENTRE 6th ANNUAL PRIMARY CARE **MENTAL HEALTH CONFERENCE** (£195 registration fee) ... The **conference** will concentrate on some of the major debates facing PCTs and **Mental Health** Trusts in implementing the National Service Framework for **Mental Health** and the NHS Plan. In particular

Draft PDF - Outline View - 151 KB - 11 hit(s) - ▮▮▮ 74%

(8) **Summary information**

2. CMSHA - MB No 7 - Diary Dates

th ANNUAL PRIMARY CARE **MENTAL HEALTH CONFERENCE** (£195 registration fee) ... The **conference** will concentrate on some of the major debates facing PCTs and **Mental**

Native HTML - 19 KB - 11 hit(s) - ▮▮▮ 100%

(9) **Hit highlighting**

3. MODERNISATION BULLETIN : NO 4 : DECEMBER 2002

PERSONAL MEDICAL SERVICES This **conference** was funded by the Federation of Older People's Collaboratives, a Modernisation ... opportunity to attend workshops on intermediate care, **mental health**, single assessment and of course, the work of the collaboratives. In his opening address,

Draft PDF - Outline View - 587 KB - 11 hit(s) - ▮▮▮ 20%

(10) **Fast previews of large files**

APPENDIX B: THE '4 STEPS' CHECKLIST

The following checklist will help step you through the process of ensuring your organization derives maximum return from its site search technology.

1. OUTLINE THE GOALS AND BENEFITS YOU WISH TO ACHIEVE VIA SITE SEARCH

Select the goals that best meet your needs, based on the role your website plays for your organization, and the role you wish it to play.

☐   Provide access via your website to a wider range of content.

☐   Reduce the time taken for your website visitors to find required content.

☐   Incorporate partner websites, or websites from other divisions of the company, into your website.

☐   Drive website visitors towards certain types of content when they conduct a search.

☐   Improve the usability of your site search.

☐   Improve the accuracy of searching to enable the pinpointing of very specific information on your website.

☐   Improve the search scope so that users see similar results for words with similar meanings, or questions posed in similar ways.

☐   Enable website visitors to search within document metadata.

☐   Provide automatic "searchability" of newsgroups, blogs and other user-generated content.

☐   Provide fast viewing and navigation of very large files.

Detail any other goals you wish to achieve via site search:

1. _____

2. _____

3. _____

2. IDENTIFY THE SEARCH FEATURES THAT BEST ADDRESS YOUR OBJECTIVES

Place an "x" next to the features you require from your site search solution, and then map it back to the capabilities of the search vendors you're evaluating:

Access to a wider range of content

__ PDF

__ Microsoft Word

__ Rich Text format (RTF)

__ Flash

__ Database (what type? ODBC compliant, SQL, Oracle etc)

__ Lotus Notes

__ Email

__ XML

__ Other custom or legacy formats

__ Multi-language support (which languages?)

Reduce the time taken to find required content

__ Restrict search to categories of information

__ Hit highlighting in results

__ Hit-to-hit navigation

__ Sort by file type, number of hits, etc

__ Relevance ranking of results

__ View results in context

__ Search within results

Incorporate other websites

__ Spider technology

Drive users towards certain types of content

__ Categorization of information available

__ Weighting of categories possible

Provide user-friendly searching

__ Natural language queries

__ Boolean operators

__ Menu-assisted queries

__ Sounds like

__ Spell check

__ Stemming

Improve the accuracy of searching

__ Proximity operators

__ Negative operators

__ Phrases

3. UNDERSTAND THE TOTAL COST OF OWNERSHIP AND ROI OF YOUR PROPOSED SEARCH SOLUTION

Calculating the total cost for your site search solution, the results it yields and, hence, the return on your investment, is as simple as answering the following questions:

- How is the search solution priced (per server, per document or per month), and what are the upfront costs?

- Will outside consultants be required to implement your solution? If so, how many hours are needed to get the job done, and what will it cost?

- Are there any ongoing or recurring charges, such as annual maintenance, lease renewal, monthly charges (for ASPs)?

- What measurable results have you seen, in terms of traffic, the number of searches performed, conversion rates and sales (see below for additional metrics)?

4. MEASURE BOTH TANGIBLE AND INTANGIBLE RESULTS AND EXPAND THE SCOPE OF SITE SEARCH USING LESSONS LEARNED

Ensuring you get the most out of your site search technology means measuring the results of your implementation. Track the following metrics to determine results.

- **Conversion Rates:** Whether measuring the percentage of site visitors who download your product or those who make a purchase, how do these rates compare to the numbers achieved prior to implementing search?

- **Searches Performed:** Are you securing a greater number of searches since you upgraded or enhanced your site search capabilities?

- **Average Length of Visits:** If this is your first implementation of site search technology, you can measure its effectiveness by comparing the average time a user spends on your site today versus the average time spent prior to implementing search.

- **Search Log Analysis:** Site search tools should provide analytics for measuring aspects such as the top search terms, most commonly accessed files, most popular 'zero-result' searches. What do these metrics illustrate about your users?

- **Branding:** What aspects of your marketing achievements can you attribute to site search? This is a fairly indirect benefit that can be measured by analyzing media coverage, usability awards and an increase in the general public's perception of the site experience you offer. Usability studies also play a valuable role in determining positive effects on your branding. Compare the results of these studies to the information gleaned from previous studies to determine possible correlations.

- **Growth:** Can the results of all metrics support the decision to roll site search out to your other websites (other divisions, sister companies, partners) or your intranet?