

Search Solutions for the Enterprise

# Making the business case for search

# Employees can be more productive and make a greater contribution to their organization if they can more easily find and use the information they need.

## INTRODUCTION: THE IMPERATIVE OF FINDING INFORMATION

The performance of any organization depends heavily on how well its people use information to make decisions and do their jobs. First, though, they have to find the information they need.

And that's not so easy. It's estimated that knowledge workers spend up to half their time looking for actionable information—information they can use to bring value to the organization. This is hugely frustrating, especially to frequent users of Internet search engines who have become accustomed to the speed, power and convenience of widely available, powerful search technology. Increasingly, enterprise users also are demanding faster and easier ways to locate the information they need for decision making and task completion.

Do search solutions for the enterprise measure up as an opportunity for dramatically improving user productivity? Can they help cut through the complexity and difficulty of finding information? BearingPoint has identified key considerations in exploring the potential of search solutions to deliver important strategic benefits.

## A CHANGING LANDSCAPE DRIVEN BY USERS

Due to the increased availability of broadband communications, the general public and workers alike increasingly rely on the Internet for everyday tasks and activities. In fact, many users take for granted that the Web will offer services that are easy to understand, easy to use and accessible anytime, anywhere. At the same time, many public- and private-sector organizations are now using Internet software services as a way to reduce costs and deliver services to a demanding and physically diverse end-user population.

These influences, especially the rapidly changing expectations of enterprise users, are driving a major shift in the software landscape. Enterprise users now expect the same level of functionality, transportability and ease-of-use in the enterprise that they experience as consumers on the Internet. The hard line between consumer software and enterprise software is steadily disappearing. For example, when people rely on online Internet services at home, they go to work and want the same type of user experience.

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# BearingPoint believes software and solutions vendors must **create solutions** that are rapidly innovated, Internet-based, modular and easy to develop and deploy.

As a result, we believe software and solutions vendors must de-emphasize the old model of large, highly complex, monolithic systems (and integration projects) and create solutions that are rapidly innovated, Internet-based, modular and easy to develop and deploy. For companies to sustain this rapid innovation, speed of development and simplicity are critical factors to their success.

## WHAT ARE PEOPLE SEARCHING FOR?

With the increasing demand for search capabilities in the enterprise, it is important to understand what type of information enterprise users need and want. Today, most users conduct two types of search in the enterprise, as described below.

Some knowledge workers spend most of their time engaged in *specialized search*. They log into a specific system either to update or use data. For example, an analyst may search within the finance system to recover all accounts receivable records associated with a specific customer. An auditor looking for evidence may search within a messaging archive for all the e-mails sent between two people over the last six years. A government intelligence agency may search all phone records for a specific individual or organization.

In contrast, *searching the enterprise* is the generalized search for information in any location, within a department, across the entire organization and beyond. Searching the enterprise is like Internet search, which aggregates results from all available information sources into one unified result. It is different from specialized search, which has complex search strings and filtering of data sources. The source of information in a search of the enterprise can range from the general to the specific, from arbitrarily found Web pages to structured documents and databases.

Search solutions for the enterprise can be used for recovery, discovery and exploration, for example:

### Recovery

- Where is the schematic for this part number?
- Where is the resume of that job candidate?
- What documents satisfy this audit request?

### Discovery

- What are the current organizational policies?
- Who else in the organization or elsewhere has done something similar?
- Who has done something I can reuse?

### Exploration

- What does the press think?
- What are our competitors doing in this area?
- What does/should it cost?

By improving individual employee productivity, search solutions for the enterprise offer a number of significant benefits. They can improve customer service by helping service representatives answer customer questions and solve problems more quickly, efficiently and completely. They can contribute to higher sales by making crucial information more readily available to the sales force. They can improve the quality of decisions by making the relevant information available.

Search solutions for the enterprise also can help improve an organization's agility and the ability to respond to market threats. They are a way to leverage intellectual capital by finding, rather than recreating, existing information. They foster innovation through improved information discovery and can contribute to shortening response and development cycle times.

### WHY IT'S HARD TO FIND WHAT YOU NEED

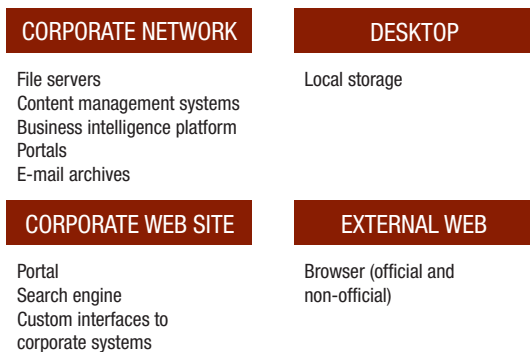
Why do people spend so much time searching for information? To start with, the number and complexity of sources of useful information are growing constantly. That means more data is stored in more places and is harder to find—in enterprise transactional databases and knowledge repositories, as well as in unstructured document collections both within and outside the enterprise (see Figure 1).

As a result, searching for information today can be inconvenient, ineffective and time consuming. Users may have to log into different systems and use different techniques to drill down for what they need. Disparate user interfaces present data differently, creating inconsistencies and confusion. For the user, this means lost productivity.

The lack of effective search solutions can represent a huge hidden burden. Significant staff time is lost searching for information, time that could be reclaimed by enabling good search solutions.

Existing information portals provide some relief. But as the number of underlying systems grows, portals must be constantly expanded to keep up. Such expansion can lag the availability of data ready to be put to use, as well as be expensive and hard to scale.

Figure 1. Information Resides in Numerous Silos



### TAKING SEARCH SOLUTIONS TO THE NEXT LEVEL

Effective search solutions for the enterprise include all available data repositories ranging from the local workstation, through enterprise systems within the enterprise firewall, to the global Internet. General-purpose search solutions are not primarily focused on compliance or deep research problems, where every data record has significance. Although they can return all items matched by narrow and focused search requests, search solutions for the enterprise typically strive to satisfy efficiently the most widely needed types of requests for the broadest community of users.

To be effective, search solutions for the enterprise need to exhibit several vital characteristics. They should be:

**Universal.** The home page of the search solution should serve as the general user interface to the organization's information. It will only become such a tool if end users perceive it as the best starting point for casting a broad net over as much information stored in as many repositories as possible. Even if, as is the case at the beginning of deployment, it does not encompass all available information, it should include enough to be immediately useful.

**Intuitive.** End-user experience is paramount. A common, simple and familiar interface is key to user adoption, allowing the delivery of the timely, relevant content required by employees to do their jobs. The search solution must feature easy search string entry, good reports and highly relevant results that are consistently the most likely based on the query and role of the searcher. While the search engine will scour many repositories with different search tools, details of each repository's personality should not show in the returned results.

**Responsive.** The search solution must perform well if users are to accept it. This means that the solution should pre-index and pre-store results where possible and provide rapid return of search results.

**Secure.** The search solution should search all accessible content and only display results appropriate to the role of the viewer with the same level of controls in place.

**Expandable.** The enterprise IT landscape changes constantly. Therefore, the search solution must provide for the seamless addition of capabilities to access and index new repositories and new data better.

**Cost-Effective.** The search solution should not require complex administration, be hard to use or be expensive to deploy. A turnkey solution requiring minimal maintenance is often preferable. While the amount of enterprise storage now grows exponentially, the cost of search should not do the same. The goal should be to make search as inexpensive as possible and to reduce its cost over time.

**Scalable.** Scalability goes hand in hand with cost-effectiveness. Increasing search volume should not result in higher cost. Boosting capacity should require minimal hardware, and the process of adding that hardware should be undetected by the user community. The search solution should find and evaluate new content automatically, without the need for an ever-growing team of content managers. Systems that require intermediation—tagging, classifying and organizing information—tend to be harder to maintain and not scalable.

**Robust.** As an enterprise utility, the search solution should be highly available and tolerate disruption of the surrounding infrastructure.

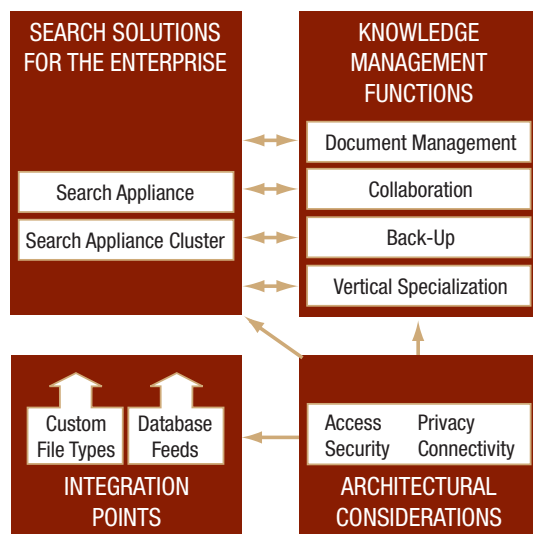
## INTEGRATING SEARCH INTO THE ENTERPRISE

Deploying a basic search solution for the enterprise can be as simple as installing it on the organization's network, pointing it at an intranet repository and turning it on. The target user community will realize immediate benefit with minimal configuration and customization. However, large-scale deployment across large, complex organizations with database retrieval requires consideration of other issues to truly unlock the value that can be provided by search solutions (see Figure 2), specifically:

- **The search solution should interact with existing knowledge management systems.** A search solution can deliver the greatest value if it complements existing knowledge management tools. Interfaces should be created to leverage the organization's existing investment in content management. Regardless of how much work may have already been completed within an enterprise, search solutions will provide incremental benefits to the existing solution. However, organizations that have yet to address knowledge management systematically stand to gain the most dramatic improvement from introducing this capability into their workforce.
- **Search results returned to individual knowledge workers should be highly relevant to their role in the organization and the task they are trying to accomplish.** A critical component for broad adoption will be how effective users find the actual results of their search. Developing the framework to provide as much relevancy as possible through mass customization will be a key component in the successful deployment and evolution of a search solution.

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Figure 2. The Elements of a Search Solution



- The search solution should integrate with heterogeneous systems for retrieval of key information and make data available to the search tool as it is dynamically updated. A good search solution will recognize various file types found within the organization. This offers the potential to obtain information from a wide range of structured and unstructured data sources, creating a comprehensive search environment.

Obtaining this information frequently requires:

- **Custom adaptors.** Search engines can find and index many types of information, but extracting information from enterprise resource planning, customer relationship management and other systems requires additional software. Information must be extracted in a way that preserves the integrity and security of underlying data, while providing access to people with the need to obtain it.
- **Database feeds.** Enterprises need to make selected content of key databases readily accessible through search solutions. This data, which is typically dynamic, is made accessible through standard interfaces, such as extensible markup language (XML) feeds, without affecting the source system and network response time.
- **Search tools should fit into the organization's overall information architecture.** A good search solution should be deployed so that it effectively and efficiently integrates with the overall enterprise IT environment. Two key areas of concern are security and disaster recovery:
  - **Security.** Searching the enterprise highlights a range of security challenges related to consolidating information and presenting that consolidated information to users. The nature of these challenges depends on the compliance and

regulatory issues of specific industries and the current security practices of the organization. Enterprise security must be evaluated in the context of today's rapidly changing environment.

- **Disaster recovery.** Because it does not store user data, a search solution may not fit the profile of a typical database or application system in disaster recovery strategies. However, a catastrophic system failure or data loss in the enterprise would compromise the effectiveness of search. A suitable disaster recovery strategy, encompassing the search solution for the enterprise, should be implemented.

#### REALIZING THE BENEFITS OF A SEARCH SOLUTION

An effective search solution for the enterprise can deliver many benefits. For end users, it can increase productivity by making relevant information easily accessible and retrievable. Workers can focus on using information, not on finding, storing and organizing it, gaining the full value of the enterprise's new search capability.

The use of a familiar interface also can reduce the need for training and dramatically increase the level of adoption by the user community. A search solution also can support significant operational improvement and lower IT expenses by reducing dependency on numerous systems and integration points.

Once enterprises fully understand the benefits of leveraging search solutions to improve the productivity and effectiveness of their workforce, they can then begin to explore the opportunities to transform the ways they use their information as never before possible.

That sounds like a real winning formula!

To learn more about how our solutions can empower your company, [Let's Talk](#).

#### GLOBAL MANAGEMENT AND TECHNOLOGY CONSULTING FOR TODAY'S BUSINESS ENVIRONMENT

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