



Universal Search in Life Sciences Organizations

While many pharmaceutical and biotech companies, makers of medical supplies and devices, and other life sciences organizations enjoy high profit margins, public concern about rising drug and health care costs and causing them to be increasingly cost conscious. More and more, they're focused on simplifying the product-development process, which can take as long as 10 years and cost in excess of \$1 billion, and involves close scrutiny by the FDA and other agencies. To increase productivity, many companies are turning to IT solutions. Indeed, according to AMR Research, 28% of IT and business managers at 61 major life sciences companies cite improving the utilization, sharing, and analysis of data across disconnected operations as a top business priority.



Central to the improving users' utilization and sharing of data is improving their ability to access data. While data needs in life sciences companies are typically intense, often researchers and other users simply cannot find the documents they need when they need them. According to IDC and Accenture, users typically spend more than 25% of their time simply looking for information, and in excess of 50% of end users search for the information they need in more than 5 repositories.

To improve information access, many organizations are turning to search. At Google, our vision for enterprise search is simple: All the information you need to be productive at work should be available through a single search box - including all the content within your enterprise firewall, on your desktop, and on the World Wide Web. Our vision, in other words, is universal search.

Universal search results in significant benefits for life sciences organizations:

- **Increased research productivity.** Researchers are the lifeblood of most life sciences companies, driving the development of drugs and devices from conception to approval. In many companies, researchers are using Google's universal search solutions to be more efficient in their day-to-day tasks. Universal search helps them find forms and applications, look up the scientific names of products, access documents from other departments, and track down documents associated with drug approvals. Freed from some of the more frustrating aspects of their jobs, researchers using universal search are able to focus more on their core job responsibilities.
- **Simplified new drug/device application process.** Drug and device approval processes are data intensive, requiring the completion of many forms and collaboration among many people (often in the thousands) over many years. In many cases, to meet FDA and other compliance requirements, companies create specific repositories (often using Documentum) to store relevant documents. Google's universal search solutions come with built-in connectivity to Documentum, and provide search capability that's far faster and more relevant than Documentum's native search tool, enabling all those involved in the approval process to easily access exactly the information they need, exactly when they need it. In addition, we've designed our search technology to work with all of your security and authentication mechanisms to ensure that only users with appropriate rights can access any given document.
- **Salespeople equipped with the right data.** In many life sciences companies, salespeople constitute a significant portion of the workforce. Those in life sciences sales usually have rigorous schedules, often spending 80% of their time selling, making eight to ten calls a day with physicians and three to four presentations with key hospital personnel. To make their sales calls as effective as possible – to understand doctors' activity levels, prescription rates, etc. – they need ongoing access to CRM and other systems. In addition, pharmaceutical sales calls typically last 30 to 90 seconds; in such a fast-paced environment, having the information you need to answer a doctor's question at your fingertips can mean the difference between making a sale and not making a sale. Google's universal search solutions enable salespeople to access all their company's data from a single search box that they can access from their mobile handset while in the field on sales calls.

The cost of delay: \$4 million per day

The effect of productivity increases on the bottom line can be difficult to measure. But in the case of pharmaceutical companies, for instance, increasing the productivity of researchers and others involved in the drug development and approval process can have a significant impact on revenue and profit. According to the Pharmaceutical Research Manufacturers of America (PhRMA), the average cost of moving a new drug through the development process in the U.S. is well over \$800 million. On average, the process takes between 12 and 15 years, leaving only five to eight years of patent protection. In other words, every delay in the process can have a significant impact on the bottom line.

According to a detailed ROI analysis published in Specialty Pharma, “Time is worth about \$4 million per business day in lost profits and \$6 million in lost sales for a product with peak sales of \$700 million ... a delay of one year in gaining approval reduces launch net present value by about 25%.”¹

Universal search: part of the workflow

As a result of the high cost of development delays, pharmaceutical and other life sciences companies are more focused than ever on increasing productivity, not just among researchers but throughout the organization. But providing tools that enable users to access all the information in the organization isn't enough; to facilitate speed and efficiency, the tools must fit within the organization's defined workflow. In other words, specific user groups must have access only to information they need. We've designed our universal search solutions to be tailored to each user, based on authentication and authorization rights to different sets of data. (See below for an illustration using the example of a pharmaceutical company.) By saving the time of researchers, project managers, quality assurance personnel, and operations staff, universal search can help streamline the overall drug development process by days, weeks, or even months.



The Google Search Appliance

The Google Search Appliance can power universal search across the enterprise. The Search Appliance optimizes Google's core search technology for business use. The result is universal search across a variety of internal and external sources – everything from file shares, intranets, and databases to applications, hosted services, and content management systems. The Search Appliance can search in any language and recognizes 220 file types, including HTML, PDF, MS Office, and IBM Office suites. Already among Search Appliance customers are Global 1000 companies such as Eli Lilly and Company, Medtronic, and Essilor.



The Search Appliance offers a variety of benefits you won't get with other search tools:

- **The ability to search all your content.** The Search Appliance provides built-in connectivity with intranets, databases, file shares, and popular content management systems including Documentum, Livelink, FileNet, and SharePoint. In addition, an open connector framework enables users to connect to virtually any other content management system.
- **Easy integration with other business applications.** With the OneBox for Enterprise feature, users can seamlessly connect to any business application - such as ERP, CRM, business intelligence, or other systems - in real time. For instance, a query for 'east coast sales' might tap your business intelligence system and return a chart displaying the actual sales in the eastern region for that quarter.
- **Relevance & speed.** Users receive accurate, ranked results with features like a self-learning spell checker and intelligent query expansion – all with sub-second response times.

¹ Josef Bossart, PhD, “Estimating the Value of Time in Biopharmaceutical Development”, Specialty Pharma, Jul/Aug 2006.

- **Ease of use.** End users are very familiar with the Google.com interface, and are pleasantly surprised when they can search enterprise data with the same interface. And features like alternate search string suggestions and other advanced search options help end users find exactly what they're looking for.
- **Security.** The Search Appliance has built-in integration with existing security systems - including NTLM, Windows Integrated Authentication, single sign-on systems, native LDAP authentication, and X.509 client certificates - to ensure that users can only access information they're authorized to view.
- **Simplicity for IT.** We designed the Search Appliance with the understanding that IT organizations cannot dedicate an army to manage their search function. The Search Appliance provides high relevancy out of the box, without requiring any customization. And it requires minimal installation and maintenance time; a fraction of a single IT administrator's time is typically sufficient to manage an entire enterprise's search needs.

Case Study: Leading pharmaceutical company

When a leading global pharmaceutical company needed to help its knowledge workers find vital information regardless of its location within the organization, it turned to the Google Search Appliance and the expertise of BearingPoint.

Overview

Pharmaceutical companies are only as productive and innovative as their knowledge workers. To do their jobs, these workers need immediate access to data, from safety, marketing, and personnel information to product-related data. One global pharmaceutical company found that it was storing redundant data in multiple systems and was using at least 13 different search solutions; it had no common approach to search and few efficiencies. The time required by knowledge workers to find information was reducing their productivity, and the quantity of information within the company was growing rapidly, intensifying its need for an effective overall search solution.

Approach

BearingPoint, a certified Google Enterprise Partner, helped the company test and deploy the Search Appliance in a variety of business environments. The company's goals included identifying potential cost advantages over traditional business intelligence and integration methods and leveraging existing investments in search technology.

The company's overall architecture included not only the Search Appliance, but also software adapters to link the Search Appliance to several dozen back-end data sources.

BearingPoint led four projects leveraging the Search Appliance, testing its productivity benefits across diverse business units and proving its technical feasibility across the enterprise.

The first project involved safety data in clinical information management. While the integration of available evidence on safety was of central importance to the company, its medical and clinical information was spread across multiple systems in structured and unstructured formats. The Search Appliance provided easy, customized access to a wide variety of public and private clinical information via a single Clinical Information Management website, providing an integrated approach to managing and retrieving medical and clinical data.

The second project used the Search Appliance to unlock information about products from different locations and systems and in different file formats to provide a one-stop shop for product information.

For the third project, BearingPoint created a talent management system using the Search Appliance to simplify the process of searching for qualified candidates to meet specific personnel needs. The solution can access employee data across multiple systems and provide a comprehensive presentation of search results to personnel managers.

The fourth project involved uniting marketing data stored in email, Lotus Notes, and various hard drives to enable marketing management to access information with ease and efficiency.

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Results

Each project yielded positive results. Improved access to safety information means the company can now manage business risks with greater efficiency and cost savings. Instead of having to employ 20 different search processes involving 33 disparate information sources, now the company's employees can access aggregated search results. With a single source for product safety information, it's easier for them to identify safety-information inconsistencies and initiate processes to help improve product quality.

The company's improved access to product information has also resulted in greater efficiencies and cost savings. The company receives 71,000 calls each year from customers requesting product information, and with a single, intuitive search page aggregating information from different information sources, employees answering those calls are able to provide higher-quality responses.

In addition, with improved access to employee information, the company's employees can search for talent faster and more efficiently, and open positions can be filled on a more timely basis.

Finally, today the company's marketing data is more readily available to its employees, accelerating the marketing research process, helping employees identify the appropriate documents, and minimizing the risk of unnecessary work redundancies. The company has experienced an improvement in the quality of its marketing decisions because of the newly easy accessibility to marketing documents.

The projects headed by BearingPoint have had far-reaching consequences. Within 90 days, 69 percent of the company's knowledge workers agreed that the solutions based on the Search Appliance had proved beneficial, increased their productivity, and enhanced the accuracy of their search results.

Based on the results of the four initial projects, IT leadership at the company plans to make the Search Appliance a cornerstone of the its ongoing IT strategy and architecture.

CONTACT US

Google Enterprise
www.google.com/enterprise
(650) 253-4370
appliance1@google.com

