

Exalead Search-based Applications for Life Sciences



Life Sciences companies, whether conducting research, developing pharmaceuticals, or producing medical devices, can gain new levels of efficiency through the use of Search-based applications

The complexities faced by the Life Science industry today are greater than any time in history. For medical device manufacturers, designs increasingly demand multidisciplinary competencies in product development, incorporating a wide range of materials and biological sciences, and an ever-increasing number of product components and options – all with ever-shortening market windows and product life cycle stages.

Pharmaceutical providers are faced with the perfect storm of ever increasing regulatory compliance requirements and diminishing number of targets for small molecule products. While offshore research provides some relief for some companies, worldwide distribution of work requires even better information systems to facilitate collaboration, re-use, coordination and process oversight.

Information is the Key

Essential to raising the performance of life science companies is the continued improvement of information systems. Challenges to overcome include integration of distributed and inaccessible information systems, simplification of user interfaces and the ability to quickly adapt to changing information needs.

Addressing these information issues can directly lead to decreased costs and improved product and service quality. So, how does that happen?

Search-based Applications

Search-based applications (SBAs) are a new class of information applications that blend advantages of search engines, business intelligence tools and semantic processing. This combination of software technology enables life sciences companies to deliver essential information to a variety of roles, ranging from scientists to product managers, to trade and distribution operations staff. SBAs overcome the technical challenges of information integration commonly found with diverse enterprise applications, complex relational databases, and external data sources.

With Search-based Applications, users gain comprehensive views on topics relevant to their daily work. Previously, providing a comprehensive view of a topic was often too expensive or technically difficult to achieve. SBAs quickly and simply integrate and provide access. The need for user training is minimized because SBAs behave just like a web search engine – users query using a few relevant terms and results appear based upon those terms, but organized to suit the specific task.

The SBA Advantage

The secret to SBAs is semantic processing. Techniques in semantic processing simplify relating of previously unrelated data, allowing data and content to be grouped and organized around topics relevant to business activity. It enables navigational aids and query interpretation, so that user interfaces are intelligent in the way they process user queries. It allows results to be presented in dashboard or abstract form, rather than a long list of web links or a cryptic table of unexplained numbers.

Leverage Exalead SBA's to:

- Develop and market new, innovative products
- Reduce time and cost to market
- Ensure multi-jurisdictional regulatory compliance

Device and pharmaceutical manufacturers must continually innovate through new methods for information discovery and retrieval to remain competitive.



SBAs enable a spectrum of tasks that range from operational oversight, to inventory management, to expert location, to regulatory compliance, to research. SBAs improve productivity by speeding access to information and helping users make connections between disparate information sources. SBAs also improve innovation by surfacing inaccessible or previously unknown information.

Some examples of Life Science Search-based Applications enabled by Exalead technology include:

Sanger Institute – uses an Exalead-based SBA to provide hundreds of researchers with ready access to human and other species genome information. Genome sequences are selected from a database that contains 500+ million entries.

AO-Synthes – uses an Exalead-based SBA to inform and educate orthopedic surgeons on current products and techniques to improve outcomes of their surgeries. Reports, training videos, on-line text books and other information are combined to provide comprehensive resources.

A Pharmaceutical manufacturer – uses an Exalead-based SBA to track instances of adverse drug effects reports found on external web sites and in their own databases. Quality and compliance managers prefer this application because it provides a comprehensive view.

The Exalead Advantage

Exalead has helped dozens of Life Sciences companies with information-based innovation. In each case, Exalead provides contextual, integrated access to data and content across multiple data and information management system silos – delivered through web-search-style simplified access. Through Search-based Applications, Exalead can help you develop and market new, innovative products, reduce time and cost to market, and ensure multi-jurisdictional regulatory compliance.

	Project Area	Exalead Capabilities	Business Value
Production/ Development <i>Faster, Lower cost of Production</i>	<ul style="list-style-type: none"> Asset and Expert Catalogs Project Oversight 	<ul style="list-style-type: none"> Real-time information consolidation Consolidate records, reports, e-mail, social data, web pages At-a-glance dashboard presentation Web-style search queries No training required 	<ul style="list-style-type: none"> Faster project team assembly Better material coordination Lower costs via better asset use Automated project status collection Improved cause and effect analysis Improved issue avoidance and resolution
Distribution <i>Lower cost, improved inventory distribution</i>	<ul style="list-style-type: none"> Channel Performance 	<ul style="list-style-type: none"> Real-time information consolidation Interactive, at-a-glance web app presentation BI-style summary dashboards Web-style search queries No training required 	<ul style="list-style-type: none"> Viral deployment to large communities Low user support Real-time access to inventory transport
Marketing <i>Faster, better customer trends understanding</i>	<ul style="list-style-type: none"> Social Media Monitoring Project Collaboration 	<ul style="list-style-type: none"> Real-time information consolidation Consolidate records, audio, video, social data, web pages Semantics processing to extract sentiment Interactive, at-a-glance web app presentation Web-style search queries No training required 	<ul style="list-style-type: none"> Early warning of negative market sentiment Enable mid-course corrections Monitor viral word-of-mouth campaigns Comprehensive view of past projects Index any kind of marketing media Enable re-use of IP and successful designs
Sales & Service <i>Better sales productivity, customer value</i>	<ul style="list-style-type: none"> 360° View of Customers Customer Self-Service 	<ul style="list-style-type: none"> Real-time information consolidation Consolidate records, audio, video, social data, web pages Interactive, at-a-glance web app presentation Web-style search queries No training required 	<ul style="list-style-type: none"> Avoid "swivel-chair" multi-system dependence Improved responsiveness through dedicated views of relevant information Reduce customer churn by allowing fine-grained control over their own experience
Business Systems <i>Extend the life of IT investments</i>	<ul style="list-style-type: none"> 360° view of Customers, Products, Markets, Channels, etc. 	<ul style="list-style-type: none"> Unlock information stored in applications Extend BI beyond "power users" Integrate information from inside and outside the firewall – structured and unstructured Add context to search to improve search results 	<ul style="list-style-type: none"> Improved decision making for large groups of users through access to complete information



Contact us to discover for yourself why Exalead is the right search platform to work with your structured and unstructured information. Visit www.exalead.com to learn more.

About Exalead

- E.U. Headquarters, Paris, France - U.S. Headquarters, San Francisco, CA
- Offices in 7 countries
- 250+ customers worldwide
- Founded in 2000 by AltaVista executives

Exalead is a division of Dassault Systèmes, whose 9000 employees and 6000 partners provide 3D based applications, PLM based applications, and Search based applications to more than 115,000 customers in 80 countries.

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