



IHS ENGINEERING SOLUTIONS

## Accessing and Leveraging Technical Knowledge Scattered Across the Enterprise

Outdated information access strategies are no longer sufficient for engineering organizations that require instant, automated and highly relevant access to technical information inside and outside the organization.

One of the greatest challenge facing engineers, scientists and other technical professionals is leveraging the information they need in order to solve problems and make informed decisions.

With companies, on average, producing more than 100 terabytes of information annually – most of which is siloed in different parts of the business – organizations are struggling to give technical professionals access to the knowledge they seek. Accessing internal corporate knowledge is a time-consuming, tedious and often fruitless undertaking, with engineers spending 40 percent or more of their time ‘searching’ for relevant answers and concepts buried internal content sources such as: personal folders, shared drives and networks, corporate libraries and directories, intranets and portals, email, product data and lifecycle management systems, document and content management systems, and more.

It’s clear that current information access strategies are no longer sufficient for enterprises that require instant, automated and highly relevant access to information inside and outside of the organization – from enterprise documents and email to trusted, authoritative content like patents and journal articles. The loss of productivity from not being able to quickly access research or quickly identify subject matter experts is tremendous – but the opportunity cost is far greater.

Exacerbating the knowledge access challenge is the ‘graying’ of the workforce. With each engineer or scientist that becomes eligible for retirement, companies risk losing decades of product- and project-related experience. Organizations across the globe and in every industry are scrambling to document processes and establish tools for harnessing and leveraging their tremendous knowledge capital, but customary search and knowledge management strategies have not delivered on the value promised.

**A 2014 AIIM study found that 75% of those surveyed felt it easier to find information *outside* of the organization than *within*.**

Most organizations have invested heavily in information management systems to drive productivity and enable complex work processes across the enterprise. Despite these investments, engineering groups remain unable to systematically increase product innovation and deliver the operational improvements that support business growth and profitability.

Significant opportunities remain to ensure technology capabilities are responsive to the needs of these important engineering and scientific knowledge workers.

### **Searching, but Not Finding**

Traditional search tools deliver too many results and not enough relevant answers. For innovation and technical problem solving, what's required is an understanding of the context of a user's query – their design intent and need. Instead, simple keyword searches, advanced Boolean searches and statistically-based search methods retrieve piles of seemingly disconnected documents, rather than the precise answers engineers and other technical professionals seek.

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Enterprise search applications are designed to find documents and objects – so long as you know *what* you are looking for, such as an engineering change number or a specific part number – and so long as you know where to look. But when technical professionals need to find concepts and answers – information on how a problem was solved in the past, or why a problem was solved in a certain way previously – information found in data siloes throughout the organization, enterprise search falls short.

What's more, enterprise search can only uncover internal documents and data classified and tagged within the organization – it does not pinpoint answers in unstructured content like email or in technical content sitting outside the organization such as patents, journal articles, ebooks and other reference works.

### **Content Repositories Great for Storing Documents, Not for Retrieving Answers**

Studies show that for every dollar an organization spends creating a document, they spend 10 dollars managing the document – with a staggering 85 percent of documents never being retrieved once they are stored.

Document management systems, most of which have been in place for many years, are being pushed beyond their original use models to the point that they are becoming slow and difficult to search. In order to be 'found', documents must be tagged with proper metadata. This is typically not done well or consistently and is rarely monitored and enforced. Thus, the content being surfaced by these systems requires such extensive time to locate and then review for relevance that technical managers often miss locating the right information.

Content stores like Microsoft Sharepoint® and document management systems like EMC Documentum® do a great job of capturing corporate knowledge, but do not enable engineers and other technical professionals to search ideas and related concepts across that content and across a broader range of relevant data stores. And, despite deep investments in content and document management applications, AIIM Research studies claim *half of all an organization's content sits outside of their enterprise content management system* – inaccessible to those who do not know where to look for pertinent knowledge.

## BENEFITS:

By accelerating knowledge discovery across corporate repositories and data stores, IHS Engineering Solutions enable organizations to:

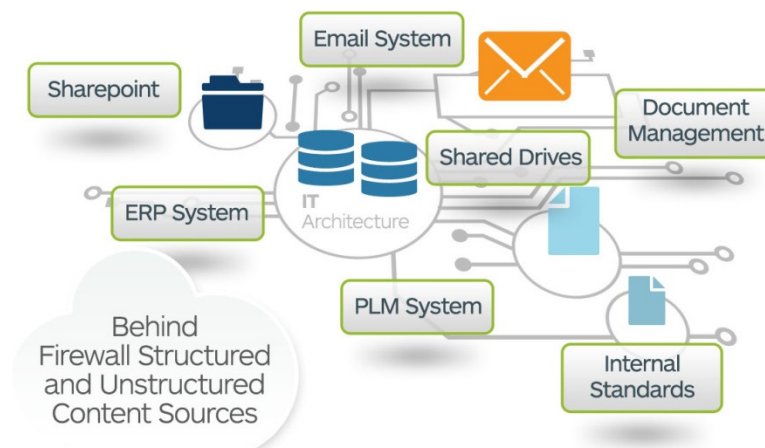
- Empower faster and more informed decision-making
- Leverage lessons of the past to minimize waste, rework, re-invention and redundancy
- Automate the capture and reuse of subject-matter-expertise to preserve the wisdom of the graying workforce
- Reduce the learning curve for new employees
- Enhance and extend existing content and document management systems, and other enterprise applications with improved ability to discover knowledge wherever it resides

## IHS Delivers Answers Buried in Corporate Knowledge

Companies already using IHS Engineering Solutions are gaining a competitive edge by leveraging real corporate knowledge in the answers and insights in related concepts that have historically been buried in disparate internal databases and unstructured text, not accessible across the enterprise, nor accessible to new innovation and design processes.

IHS Engineering Solutions makes the finding and leveraging of corporate knowledge faster, easier and more effective, helping technical professionals improve the quality of their problem solving, reducing research time and avoiding effort duplication.

Powered by advanced research and knowledge discovery technologies, IHS Engineering Solutions federate search to enable rapid discovery and retrieval of key intelligence based on meaning - extracting relevant solutions, concepts, and ideas from design documents, voice of the customer surveys, product manuals, field reports, warranty claims, material specs, proposals, technical specs and other content housed in document management systems, email, shared drives and other corporate data stores.



Unlike traditional search queries, which deliver piles of irrelevant results, IHS Engineering Solutions feature world-class question-answering technology which uncovers answers and concepts - across document types and formats, locations, and even languages of authorship.

- **Across Disparate Corporate Data Silos**

IHS Engineering Solutions pinpoint answers and concepts buried in internal knowledge repositories transforming any internal knowledge source into an index that, when searched, delivers precise and relevant results. The information is indexed where it currently resides – no categorization, taxonomy building, or scrubbing required. IHS Engineering Solutions include connectors to most of the major content management systems, document management systems, product lifecycle managements systems, and more. IHS does not change the way in which documents are managed, but rather, how technical professionals access the knowledge within those documents. IHS also honors existing document-level security controls to ensure that users who search collections are able to access only the documents that they are allowed to see.

**Most organizations have spent 90% of their IT resources dealing with structured information... Organizations need to create a strategy to pull structured and unstructured information together.**

**2.5% of total revenues are lost due to decreased productivity resulting from learning curve for new hires.**

*Source: Mellon Financial Corp*

- **Across Document Types and Formats**  
IHS Engineering Solutions surface concepts from more than 400 hundred document types and across structured and unstructured text alike. This is critical because analysts predict massive growth of both structured data such as point of sale and service tickets data and unstructured enterprise data such as email, call center transcripts, blogs, forums and more.
- **Across Concepts**  
IHS Engineering Solutions include a console of more than 70 unique concept lenses that enables users to rapidly research, browse, and filter through internal knowledge sources and helps users ask questions that they may not have thought to ask around a concept's definitions, applications, advantages, disadvantages and more.
- **Across Languages of Authorship**  
IHS Engineering Solutions feature an intuitive natural language query interface that supports English, German, French, Japanese, and Chinese queries and uniquely enables simultaneous cross-language queries and results summarization — a critical benefit since both content and global team communications are often multi-lingual.

### **IHS Stems Knowledge Loss and Reduces the Learning Curve for New or Younger Engineers**

Every day, the same scenario plays out in business around the world: employees retire as the workforce ages and key individuals move on to new roles. New employees can't fill the gap because when employees leave their knowledge exits with them, or lies buried in files, presentations, shared folders, or other hard to access locations. As a result, up to 2.5 percent of total revenues are lost due to decreased productivity resulting from learning curve for new hires.

IHS Engineering Solutions give new hires and junior engineers a single point-of-access for information inside and outside the enterprise enabling organizations to automate the capture and reuse of subject matter expertise, preserve wisdom of the graying workforce, reduce the learning curve for new employees, and leverage lessons of the past to minimize waste, rework, re-invention and redundancy.

### **IHS Speeds Time-to-Decision**

With precise access to relevant internal and external engineering knowledge, technical professionals can accelerate decisions and more effectively respond to threats and opportunities.

## **Contact IHS to learn more**

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### **ABOUT IHS**

IHS is a global information company with world-class experts in the pivotal areas shaping today's business landscape: energy, economics, geopolitical risk, sustainability and supply chain management. We employ more than 8,000 people in more than 31 countries around the world.

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