

Brochure



# Increase your return on Big Data

HPE IDOL—advanced search and analytics platform



**Hewlett Packard**  
Enterprise

### Increase your return on information

#### Quickly access relevant data from a

**single point:** Via a centralized, single point of access, users search across diverse internal and external sources of information.

#### Leverage all data, including rich media:

Understand and find relationships and patterns among more than 1,000 different data formats (structured and unstructured), including email, audio, images, video, and social content, from enterprise systems, the Web, social networks, call centers, and other channels.

#### Automatically adapt to incoming data:

The self-learning IDOL system derives insights from real-time data, so you can make decisions based on the latest information.

#### Get more insight via pattern-matching

**data analytics:** Over 500 advanced functions, including personalization, sentiment analysis, concept clustering, and more, may be used to analyze free text, audio, images, and video.

#### Achieve Big Data scalability and

**security:** IDOL has a track record of supporting the largest enterprises in volume of information, number of users, and frequency of transactions while adhering to strict security standards.

**Manage data in place:** Manage data within its original repository while ensuring its accessibility.

**Available from the cloud:** Available as an in-house installation or as a managed cloud service with minimum investment costs.

## Get valuable insight from Big Data

Many of the traditional business intelligence systems in use today are geared toward answering the question, “what happened?” Finding out what happened gives you a summary of individual facts that you can compare manually, assuming you can easily “see” all the correlations. But to gain deeper insight, you really need to discover the relationships that exist between key data, so you can proactively answer the question, “why did this happen?” With deeper insight into your information, you can look beyond the obvious circumstances to understand how to shift your strategy and increase your performance.

The next-generation information analytics platform, HPE Intelligent Data Operating Layer (IDOL) 10 helps you access, understand, and derive insights from virtually any data, including audio, video, images, social media, email, and Web content, as well as structured data such as customer transaction logs. Offering far more than simple search, IDOL empowers you to use critical information for maximum benefit through more than 500 advanced search and data analytics functions, including sentiment analysis, entity extraction, and speech-to-text conversion.

IDOL adapts to incoming data by probing and exploring information to discover the unknown unknowns—the questions you did not know to ask. Virtually all business areas and industries, whether management, sales, marketing, legal, customer service, R&D, IT, or HR, have applied and benefitted from the adaptive data analytics of IDOL to make smart, data-driven decisions that transform business processes and elevate customer engagement.

“With IDOL we can search millions of documents in several formats to accelerate our TV and Radio programs’ production process.”

– Chief Information Officer, Large Enterprise Media & Entertainment Company

## Make your data matter with HPE IDOL technology

Traditional ways of understanding and using information rely on outdated methods to find answers or uncover predictive patterns in the rows and columns of a database. These tactics take too much time, leave out gaps of knowledge, and often yield incomplete results. Similarly, keyword- and metadata-based search return too many irrelevant and incomplete results, without providing the kind of actionable insights that make the information count.

In contrast, IDOL 10 uses patented probabilistic and pattern-matching algorithms to recognize concepts and ideas in information automatically. Because the technology is based on the universal language of mathematics, it treats words as “symbols” and understands different languages. IDOL 10’s unique technology detects patterns, emotions, sentiments, intentions, and preferences as they happen. This allows you to find out more about your data in less time, so you can speed the pace of business and strengthen your ability to compete.

#### What are the ramifications of not using your data to its fullest?

- Uninformed decisions taken by management
- Lack of visibility into risk
- Dissatisfied business partners
- Inadequate customer service
- Missed sales opportunities
- Inefficient processes

**Achieve a 360-degree view of information:** The information you find on Twitter and Facebook is becoming just as important as the information you find in contracts and spreadsheets. Multimedia files such as video, audio, and images are proliferating at an unprecedented rate and can hold valuable information about your organization. IDOL 10 helps you search and analyze content of diverse formats inside and outside the enterprise, ranging from free text, images, audio and video files, transaction and database data, as well as chats, tweets, and social media posts. When you search using IDOL, you can decide to do so across many repositories, from internal silos and application repositories to private and public clouds and the Internet.

**Automatically adapt to evolving information:** A core component of IDOL technology is its ability to learn and adapt to changing data sets. Instead of depending on grammar and linguistic rules, IDOL begins with a blank slate and allows incoming data to dictate the model. This ability to adapt is especially important in social media where new terms are coined and can take on new meaning from one moment to the next. This learning capability is also reflected in IDOL profiling technology, which updates an individual user's profile based on their content consumption habits.

**Highest level of security:** IDOL 10 stores security information in its native form directly in the kernel of the engine itself, and performs automatic updates to keep the security data current. This speeds query response times and enables security entitlements to be respected.

**Powerful and flexible:** HPE IDOL is just as suitable for small department installations as it is for comprehensive IT infrastructures with data volumes in the petabyte range. The number of IDOL users is also virtually unlimited.

**One search and data analytics platform for all applications:** Whether your organizational requirements include search, knowledge management, eDiscovery, information governance, or content management, HPE IDOL provides a common search and data analytics platform for HPE information management applications, allowing you to address and manage a wide range of business functions.

## Big Data assets going undiscovered

Organizations today invest large amounts of time and money in the development and procurement of information. After the information is created, there are subsequent cost factors related to searching and classifying it. However, despite these efforts, usually only a small fraction of the information assets are found and used productively. There are a number of reasons for this:

1. **Explosive data growth:** Beyond traditional business applications, an increasing number of connected systems, social networks, and mobile devices are generating expanding volumes of data.
2. **Rapid proliferation of unstructured data sources:** Until recently, enterprise resource planning (ERP), customer relationship management (CRM), and other operational transaction systems that generated structured data accounted for most of the information landscape. Today, the information landscape also includes images, videos, audio recordings, free text notes, emails, Web logs, and social media—all sources which are largely unstructured.
3. **Dearth of metadata in unstructured data:** Manually tagging unstructured information is extremely time consuming. As a result, only a small percentage is tagged with metadata that would make it possible to analyze it using conventional business intelligence systems. And even if it was properly tagged, relying on metadata is not a dependable approach since it is often riddled with inconsistencies, misspellings, generic terms, and inaccuracies. For instance, a large number of PowerPoint presentations and Word documents are automatically tagged to be authored by the system administrator.

**4. Vast amount of data in enterprises does not have business, legal, or regulatory value:**

The simpler IT makes the process of collecting data, the more information (including useless information) will be accumulated, which can obscure relevant search results.

- 5. Lower productivity due to excessive time spent searching for information:** Because information is scattered across numerous disparate data silos and have incomplete or missing metadata, the search process is very time consuming for the average worker.

## Four steps to becoming a smarter enterprise

Every company can become data-driven to ensure you're getting to the valuable insight that your information holds. A structured step-by-step approach with a defined improvement process ensures long-term success. You can start small and grow to meet your unique needs.

1. **Scoping:** Within the framework of a scoping workshop, gather all key stakeholders in your organization and form some common understandings. Determine how to establish standard information analysis practices, how data will be captured within your enterprise, and then devise a roadmap on how to proceed.
2. **Use cases:** Define specific use cases that make sense for your organization and let these form the basis for identifying all relevant internal and external data sources that you would want to put "under management" with HPE IDOL.
3. **Single Point of Information:** Connect all defined data sources and make them centrally available, in order to create a Single Point of Information (SPOI) for all users.
4. **Continuous improvement:** Implement a continuous improvement process to enhance system information over the long term, enable better decision-making, and derive more value from your content.

## How you benefit from HPE IDOL

- Make all relevant information from internal and external sources centrally available at the click of a mouse to help your employees become far more efficient and productive
- Take an intelligent approach to processing information in real time, so you can make faster, more informed business decisions
- Analyze your unstructured data intelligently and comprehensively to gain substantial insights about your products, markets, customers, and projects in a way that was previously impossible
- Accelerate the knowledge transfer in your organization by identifying internal, as well as external, knowledge carriers quickly and reliably
- Get detailed real-time monitoring of markets, customer behavior, and competitors to help you respond faster to trends and new business opportunities
- Increase your pace of innovation and competitiveness measurably through enhanced information management
- Gain the certainty of being able to respond quickly and comprehensively to compliance requests

## Healthcare: Deliver 360-degree clinical intelligence with HPE IDOL

Improving the state of healthcare requires clinicians to have 360-degree clinical intelligence, to support better care, lower cost, and higher efficiency. HPE IDOL revolutionizes healthcare through consolidated and systematic analysis of healthcare data from virtually any sources. You can advance healthcare delivery and get enhanced analytical insights for healthcare operations, patient safety, clinical informatics, compliance reporting, and disease surveillance.



**Improve patient outcomes with complete search and analysis:** In healthcare environments, enormous amounts of clinical records are scattered across a diverse collection of medical settings and specialties. Because of the diverse and disparate nature of the information, extensive search time is required to find specific clinical data within a single patient's medical record and across thousands of patient medical records. A large portion of these records are unstructured, consisting of clinical narratives that include free-text notes created by users with individual writing styles and terminology preferences. The result: clinical notes are as unique as each patient and each clinician.

HPE IDOL analyzes and understands unstructured data in context, and is designed to harness this untapped clinical data and unlock actionable insights. So regardless of how unique your information may be, IDOL levels the playing field to unlock the intelligence held within the data.

**Better treatment:** HPE IDOL connects healthcare workers directly to their data through self-service data analytics that enables clinicians to easily access information they need. There is also built-in intelligence for reducing errors and the occurrence of unnecessary treatments. These capabilities and others enable a better understanding of how delivery affects outcomes.

**Improved cost efficiency:** Analysts can identify duplicate claims, processes, and inconsistent data that can lead to cost savings.

**Reduced medical miscoding:** Under coding and over coding can have a substantial financial impact, including under reimbursement and liability from Recovery Audit Contractor (RAC) audits. HPE IDOL reconciles coding with clinical documentation to reveal discrepancies and improve accuracy before audits occur.

**Increased quality:** HPE IDOL uncovers insights for preventive measures to decrease the rate of avoidable diseases. Using the technology this way could actually reduce morbidity rates by catching the unknown unknowns or the questions that a clinician may not have thought to ask.

**Faster knowledge transfer:** The ability to access external information from medical associations, research institutions, and pharmaceutical companies, enables medical specialists to remain up-to-date with industry knowledge. As soon as new insights are available, an automatic notification can be issued.

## Finance: Reduce risk and meet compliance requirements

In financial institutions, meeting compliance requirements is a requirement that must be built into business processes. Because HPE IDOL enables organizations to understand virtually any type of information they use, it is possible to put the necessary controls in place to avoid regulatory missteps. With a high level of control over information, institutions can improve decision-making, fulfill compliance requirements, and enforce greater control over business processes and transactions. IDOL is also widely used in risk management solutions to provide intelligence that can help professionals increase the value of the products they manage.

**Fulfill compliance requirements and the duty to furnish information:** Many of the world's leading financial service providers rely on HPE IDOL to help them comply with stringent regulatory requirements through the ability to find and catalog information concerning a specific customer or an activity. Access to information can be defined via roles with full recording capabilities to enable a complete audit trail. Information is also accessible regardless of application or storage facility, virtually in real time, and can be governed via rules that ensure deletion at the end of a retention period.





**Increase legal preparedness:** Through a complete indexing of data sources, information can be presented in the event of a legal dispute in a defensible manner, according to court requirements such as the U.S. Federal Rules of Civil Procedure.

**Comply with regulations:** Financial service providers can maintain an overview of the many different national and international regulations at all times by linking to the news pages of Financial Market Supervisory Authority (FINMA), the Swiss Bankers Association, the Swiss Official Gazette of Commerce, and international regulators.

**Identify potential risks:** Performing cross-system, real-time risk analyses can help you to identify high-risk customers, high-risk products, and high-risk partners at an early stage.

**Recognize market potential:** The evaluation of information about your company and your competitors' supports the continuous enhancements of products and services, as well as their positioning in the market.

**Consolidate legacy systems:** Consolidating legacy systems can help increase efficiency and streamline the management of information by offloading information that is no longer in use. You can use IDOL to index all data in legacy systems that are no longer productive, but are expensive to maintain. This allows you to consolidate applications and typically leads to a reduction in costs in storage and software license costs.

## **Public authorities: Improve public service, security, and process efficiency**

Public authorities rely on HPE IDOL to cope with the growing volumes of structured and unstructured data, to streamline administration management and improve public service.

**Improve eGovernment services:** With HPE IDOL, public authorities can cleanly process so-called open data such as demographic, geographical, and environmental, and make it available to various constituents. eGovernment processes can also be improved by using real-time analyses of media and user behaviors.

**Increase efficiency in judicial and law enforcement agencies:** Judicial authorities and emergency services can analyze external and internal services in near real time, including social media. This capability can significantly improve the search for offenders and support decision making in the field of public safety.

**Improve administrative processes:** Administrative processes can be improved in a targeted manner by obtaining meaningful information from extremely heterogeneous application landscapes, as well as from external sources.

**Perform more effective statistical analyses:** Customized analyses can shed light on local changes, such as crime statistics, tax-related data, or general public health incidents to allow public officials to spot areas of concern and quickly respond with targeted measures.

## **Industrial enterprises and services providers: Innovate, improve customer service, and increase sales opportunities**

Industrial enterprises and services providers distinguish themselves when their offerings are delivered at the highest possible levels of quality. However, to meet this objective, it's critical

to keep up the pace of innovation to remain competitive in the international marketplace. HPE IDOL helps organizations achieve these goals in several ways, including the following:

**Recognize opportunities for innovation:** Using detailed market and competitive analyses, trends, and current customer needs, new business opportunities and the potential for innovation can be identified faster.

**Comply with legal requirements:** Industrial enterprises and service providers can comply with their duty to furnish information with customers and authorities at any time by being able to disclose customer or case-related information virtually at the click of a mouse.

**Increase the quality of service:** IDOL allows companies to find needed information quickly, to determine at any time which products and individual components a customer is using. This enables a high level of traceability, for example of firmware versions, and is particularly helpful in onsite service cases.

**Increase sales opportunities:** During a meeting, having the ability to list relevant information about a customer, from relevant sources, can uncover areas where customized services can be offered.

## Key advantages of HPE IDOL

**Conceptual search:** IDOL uniquely supports conceptual search, allowing you to input a sentence, or even an entire document, as your query, allowing IDOL to find related concepts vs. just exact keywords. IDOL also supports a range of search approaches, including keyword, Boolean, parametric, phonetic, fuzzy, wildcard, federated, geospatial, social, and many other approaches. Over 100 different search operators and modifiers are offered.

**Language recognition:** Supports more than 150 languages, and automatically recognizes slang, idioms, and misspellings.

**File format agnostic:** Understand over 1,000 data formats, including text, audio, video, and images.

**Wide connectivity:** Connects over 400 data repositories, including Exchange, SharePoint, ERP and CRM systems, as well as databases and the cloud.

**Flexible extensibility:** Highly flexible due to simple and standardized HTTP interfaces and direct XML input/output.

**Learning ability:** Fundamentally based on pattern-matching and probabilistic modeling, IDOL is a continuously learning system that adapts to incoming data.

**Security:** Store security information in its native form directly in the kernel of the engine itself with automatic updates to keep the security data current. This speeds query response times and enables security entitlements to be respected.

**Forensics and leak prevention:** Intelligently search log files to investigate crimes and perform reliable legal hold functionalities.

**Manage in place:** Keep indexed data in its original location.

## HPE IDOL capabilities

**Semantics and ontology:** The unique and patented technologies of HPE IDOL enable you to analyze intelligently both the significance of individual syllables and words (semantics) and their high-level logical crosslinking (ontology).

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**Taxonomy:** For various industries such as healthcare and finance, comprehensive, specific classification taxonomies are available. Newly identified categories are integrated automatically by the adaptive system.

**Video analytics:** Search videos by concept via the ability of IDOL to understand the content of the video without relying on metadata. IDOL also performs functions such as intelligent scene analysis, key framing, facial identification, optical character recognition (OCR), logo recognition, and barcode detection; as well as facial characteristic, skin type, and clothing recognition; security event (e.g., a gunshot) identification, and many more.

**Audio analytics:** IDOL combines phonetic and conceptual approaches to analyze speech with a high degree of accuracy. You can identify speaker, dialect, accent differences, background noise, codec variations, and speech volume, as well as topics being discussed, genders, emotional tones of speech, music, and the linguistic origins of speakers.

**Image analytics:** IDOL provides numerous image functions, including OCR, the ability to detect subtle patterns in images, the identification of the same images from different angles, and recognition and analysis of objects such as faces, bodies, gender, age range, expressions, and clothing. IDOL can also extract key data fields from scanned documents.

**Parametric search:** The parametric search function of IDOL enables you to search for several attributes and criteria. For example you could filter out, all employees within the company who are below the age of 30, have specific expert qualifications, and work at a specific location.

**Entity extraction:** IDOL automatically identifies and extracts terms in documents that lend themselves to key fields such as the names of companies or people, locations, addresses, and telephone numbers. IDOL 10 offers hundreds of entities out-of-the-box across numerous languages.

**Sentiment analysis:** You can gain an understanding of what customers, business partners, or investors really think of your company or your products. IDOL recognizes positive and negative comments, as well as emotions and opinions expressed by people across sources such as news pages, logs, and social networks, as well as other sources.

**Clustering:** IDOL can take a large set of data and automatically partition it so that similar information, even of varying formats, is clustered together. Each cluster represents a concept area, making it easier for you to identify inherent themes and emerging trends.

**Personalization:** IDOL recognizes and learns which information is of particular interest for individual users, and prioritizes the search results accordingly. To this end, browser histories are created, among other things, and sought-after contents as well as interactions are analyzed with colleagues.

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[hpe.com/software/idol](http://hpe.com/software/idol)