Magic Quadrant for Insight Engines

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Insight engines augment search technology with artificial intelligence to deliver insights — in context and using various modalities — derived from the full range of enterprise content and data. This Magic Quadrant profiles 13 vendors to help you make the best choice for your organization.

Strategic Planning Assumptions

By 2019, 50% of analytic queries will be generated using search, natural-language processing, voice or autogeneration.

By 2022, information will proactively find more employees more often, thereby providing the insight needed to progress decisions and actions, and reducing reactive searching by 20%.

Market Definition/Description

Insight engines apply relevancy methods to describe, discover, organize and analyze data. This allows existing or synthesized information to be delivered proactively or interactively, and in the context of digital workers, customers or constituents at timely business moments.

Whether for an employee progressing work or a customer pursuing a purchase, decisions and actions require insight: accurate and deep understanding. At the limits of personal knowledge, information becomes essential to attain insight. Traditionally, the task of finding relevant information among the mass of enterprise data and content has relied on enterprise search technologies. But using these demands significant time and effort, and deviation from the immediate context, which disrupts the work at hand. Whereas enterprise search tools merely enable you to seek information, insight engines go further. They enable delivery of information in context. As such, they *inform*.

Products in this market use connectors to crawl and index content from multiple sources. They index the full range of enterprise content, from unstructured content such as word processor and video files through to structured content, such as spreadsheet files and database records. Various "pipelines" are used to preprocess content according to type, and to derive from it data that can be indexed for query, extraction and use via a range of touchpoints. This data might, for example, be raw data in tabular form, or a feed for further processing and analysis, or information in the form of an extract, answer or visualization.

Insight engines differ from search engines in terms of capabilities that enable richer indexes, more complex queries, elaborated relevancy methods, and multiple touchpoints for the delivery of data (for machines) and information (for people). These capabilities stem from the use of artificial intelligence (AI) technologies, specifically natural-language processing, graph-based data structures and machine learning.

Gartner's Magic Quadrant for Insight Engines is now in its second year. It covers a market that emerged from the enterprise search and text analytics sectors. It is adjacent to many other markets, including those for digital commerce search, metadata management, data science and machine learning platforms, file analysis, content services platforms, e-discovery solutions and enterprise legal management solutions. Many of these markets include vendors that also use relevancy methods to describe, discover, organize and analyze data, and to a lesser extent allow existing or synthesized information to be delivered interactively, if not proactively. But insight engines are distinguished by their capability to deliver insights in context to the right person, in the right place, at the right time.

Magic Quadrant

Figure 1. Magic Quadrant for Insight Engines

Source: Gartner (July 2018)

Vendor Strengths and Cautions

Attivio

Attivio is a privately held company that was founded in 2007. Its sole office is in Newton, Massachusetts, U.S. Attivio's product — the Attivio Platform — offers comprehensive capabilities for codifying content and data in support of insight-related use cases within, upon or outside the platform. This in part reflects Attivio's attraction as an OEM, to which some of its revenue is attributable.

Attivio's customer base — which, in this market, is in the hundreds — includes customers in the financial services, technology, life sciences, energy (oil and gas) and government sectors, among others. Its product roadmap and vision are particularly appealing to customers, who select it to improve customer relations and customer service and to create internal operational efficiencies. The product's ability to analyze result sets is a key selling point.

Attivio's position in the Visionaries quadrant reflects a comprehensive vision, as demonstrated by the company's innovation and market understanding, together with robust execution founded on its product, customer experience and marketing execution. Its product serves organizations that aspire to establish a common platform for the extraction and delivery of insight in support of multiple use cases, such as digital workplace, customer support and risk avoidance.

Strengths

- Attivio is respected for its perspective on where the search and insight markets are heading. A significant number of its reference customers indicated that they chose it for its roadmap and general vision.

- Attivio is exceptionally skilled at providing tools to analyze result sets. Since its foundation, it has advanced these tools' capabilities. Reference customers scored it significantly higher than the average in this regard.

- Attivio's product includes connectors to a broad range of data sources, enabling it to capture and codify a variety of content types. Attivio created these connectors and includes them without additional charge. Their breadth is reflected in the number of repositories that Attivio's reference customers connect to, which is greater than that of most other vendors.

Cautions

- Attivio projects tend to be more complex and challenging than those of some other vendors. The responses of surveyed reference customers indicate that implementing and maintaining this vendor's product requires more staff than the average for vendors in this market.

- The complexity and depth of Attivio's product makes it less easy to use than some other products, although Attivio continues to invest in improving its interface for administrators.

- Attivio's comparatively small customer base reflects its focus on a few large enterprises. Its focus on providing strategic value from complex projects makes it less attractive for tactical purposes that demand simple implementations with rapid deployment.

Coveo

Coveo is a privately held company that was founded in 2005. Its headquarters are in Quebec City, Canada, and it has a further three offices in North America and EMEA. Coveo offers an array of variants (including, for example, Coveo for Salesforce) of its core product — Coveo Platform — to address both cloud and on-premises deployment scenarios. Coveo's emphasis on factoring search usage into relevancy calculations has brought it success with self-service use cases in the fields of digital commerce and customer- and employee-facing support.

Coveo's customer base — which, in this market, is in the thousands — includes organizations in the software and technology, financial services, manufacturing, healthcare and retail sectors, among others. Its product roadmap and general vision of the future are particularly appealing to customers, who select it to improve the outcomes of business processes and drive innovation. Coveo's abilities to evaluate and tune relevance, and to include key data sources, are key selling points.

Coveo's position in the Leaders quadrant reflects a comprehensive vision, as demonstrated by its market understanding and sales strategy, together with strong execution founded on its product, operations and customer experience. Coveo is relevant to both central and outlying use cases relating to the delivery of search and insight, and has recently expanded its on-premises capabilities by offering the capability to layer on top of Elasticsearch.

Strengths

- Coveo is well-regarded for offering products that are easy to deploy and use. A significant proportion of its reference customers indicated that it was easy to evaluate, tune and control relevance calculations. They also tended to require fewer staff to install and manage products, compared with the average for vendors in this Magic Quadrant.

- Coveo offers support to customers — from presale proofs of concept, to help with handling complex business requirements during implementations, and assistance to ensure product delivery and continued success.

- Reference customers reported that it is particularly easy to manage and tune Coveo's interface and relevance modeling. Over half of Coveo's reference customers said this capability was key to their selection decision.

Cautions

- Coveo is still growing its international presence. In particular, there are gaps in the locally supported services it offers directly in Latin America and Asia.

- Although Coveo offers both on-premises and cloud products, its focus is cloud-based deployment. Its machine learning capabilities, for instance, are cloud-based. This may deter

organizations unwilling or unable to accept such a delivery model due to security or other concerns about third-party processing of data.

- Some reference customers indicated disappointment with Coveo's ability to deliver results within the interfaces of other vendors' applications.

Dassault Systèmes

Dassault Systèmes is a publicly traded company that was founded in 1981. Its headquarters are near Paris, France, and a further 178 offices are located in Asia/Pacific, EMEA, Latin America and North America. Dassault Systèmes provides an array of products — within its 3DEXPERIENCE platform — to model the real world in support of product life cycles, including the development and manufacturing stages. Its EXALEAD and Netvibes products enable a broad range of content types to be indexed and subsequently queried using text or rich media, with insights being returned to the digital workspaces and tools used by (principally) technical users.

Dassault Systèmes' customer base — which, in this market, is in the hundreds of thousands — includes customers in the transportation and mobility, aerospace and defense, and industrial equipment sectors, among others. The company's customers, who are likely to be existing users of other Dassault Systèmes products, seek its support to improve internal operational efficiency and decision making. Query input flexibility and display of results through customized interfaces are key reasons why they select Dassault Systèmes' products.

Dassault Systèmes' position in the Challengers quadrant reflects a competent vision supported by its product offerings and marketing strategy, together with robust execution founded on its product, operations and sales execution. Its platform is suited to complex data environments where multiple systems are integrated — or interoperate — as part of a wider digital platform.

Strengths

- Dassault Systèmes' reference customers scored it particularly highly for delivery of search results to other applications for consumption and analysis. This, furthermore, is a category in which other vendors' reference customers were often dissatisfied with the performance of their vendor.

- Responses from Dassault Systèmes' reference customers indicate that fewer workers are needed to install and maintain its products than those of many other vendors, partly due to the vendor's professional services. This is despite the complexity and sophistication of this company's products.

- Organizations with requirements in areas on which Dassault Systèmes focuses, such as the manufacturing of complex machinery, will find that, with them in mind, the company has developed exceptional capabilities in interface and application functionality. Query input models, for example, were a major reason why all its reference customers selected it.

Cautions

▪ Organizations whose use cases do not require Dassault Systèmes' unique facilities for engineers and product designers are likely to find its products lacking in functionality.

▪ Reference customers for Dassault Systèmes reported that implementation times were particularly long, and that it was hard to find experts skilled in the company's configurations. Dassault Systèmes' reference customers were more likely to find it challenging to integrate products with other systems than were those of many other vendors. (They did, however, find the company's technical support highly satisfactory.)

▪ Dassault Systèmes bundles fewer connectors with its products than do many other vendors. This can frustrate clients who have multiple repositories to connect. Comparatively few of the company's reference customers reported that they connect its products to common office and data repositories, partly due to their application to niche, rather than general, insight use cases.

Expert System

Expert System is a publicly traded company that was founded in 1989. It headquarters are in Modena, Italy, and a further 16 offices are in EMEA, Latin America and North America. Its Cogito Intelligence Platform (CIP) uses semantic analysis and machine learning to enhance its natural-language processing capabilities.

Expert System's customer base — which, in this market, is in the hundreds — includes customers in regulated industries, such as financial services and government, among other sectors. Its product roadmap and general vision of the future, and strong services expertise are particularly appealing to customers, who select it to improve compliance and risk management and enhance decision making. A key reason why customers buy Expert System's product is its ability to analyze result sets.

Expert System's position in the Niche Players quadrant reflects a competent vision supported by its product offering and marketing strategy, combined with robust execution founded on its product, operations, sales execution and pricing. Its product is used to address a variety of niche use cases as part of a broader process, such as claims management in the insurance sector.

Strengths

▪ Expert System provides rich and sophisticated capabilities for processing natural language in multiple languages. Customers choose this vendor mainly for its product's functionality and performance in this respect.

▪ Expert System is well-placed in terms of research and development, with one of the lowest customer-to-staff ratios. Reference customers identified the vendor's product roadmap and general vision as key reasons for selecting it.

▪ The CIP's ability to inform users proactively received high scores from Expert System's reference customers.

Cautions

- Reference customers for Expert System scored the majority of the CIP's critical capabilities below the average for products in this Magic Quadrant.

- Connectors to data sources are limited in number, with the majority being purchasable separately, either from Expert System or a third party. Beyond these, the vendor's approach is to offer custom-made connectors.

- Expert System prefers to work with customers directly or via select partners. Its partner network is limited in size, especially outside EMEA. However, it includes global partners, and reference customers express strong satisfaction with the vendor's capabilities.

Funnelback

Funnelback, a subsidiary of its privately held owner Squiz, was founded in 2005. Its headquarters are in Canberra, Australia. A further 11 offices are located in Asia/Pacific, EMEA and North America. Its product — also called Funnelback — uses click analysis and profiling to deliver targeted results and recommendations in support of improved web and intranet experiences.

Funnelback's customer base — which, in this market, is in the hundreds — includes customers in the higher education, government and finance sectors, among others. The product's overall cost is particularly appealing to customers, who select it to create internal operational efficiencies. Autosuggestion and autocompletion functionality and ease of use for administrators are key reasons for selecting this product.

Funnelback's position in the Challengers quadrant reflects a competent vision supported by its innovation and sales strategy, combined with strong execution founded on its product, operations and customer experience. Its product is used for a broad range of purposes, especially relating to the improvement of user experiences on websites and intranets.

Strengths

- Funnelback is easy to deploy and integrate — it received high satisfaction scores from reference customers in this regard. Additionally, their responses indicate that Funnelback has the shortest deployment time of any product assessed in this Magic Quadrant. Furthermore, there are options for cloud, on-premises and hybrid deployment.

- Funnelback's excellent "concierge" services, including autocompletion and autosuggestion, together with query input flexibility, help enterprises guide users to the information they need.

- Funnelback can deliver results through customized interfaces and other applications.

Cautions

- Funnelback's ability to support analysis of the results of queries is weaker than that of its competitors. It does, however, offer comprehensive back-end auditing capabilities for accessibility, search engine optimization and content management.

- Funnelback has a relatively small number of staff, both compared with competitors and in relation to its customer base. Nevertheless, as its partner network, although expanding, also remains small, many customers have to work with Funnelback directly — a situation that results in varied satisfaction with its service and support.

- Funnelback does not use graph technology to support improved contextualization and analytical use cases. At the time of writing, this capability is under development, with a launch scheduled for 2018.

IBM

IBM is a publicly traded company that was founded in 1911. Its headquarters are in Armonk, New York, U.S., and it has over 200 other offices in Asia/Pacific, EMEA, Latin America and North America. IBM's Watson Explorer and Watson Discovery products — the former for deployment on-premises, the latter for the IBM Cloud — offer business users rich analyses of both structured and unstructured content.

IBM's customer base — which, in this market, is in the hundreds — includes customers in the financial services, manufacturing and healthcare sectors, among others. Customers, who are likely to be existing users of other IBM products, select IBM to enhance decision making and drive innovation. IBM's abilities to analyze result sets and deliver results to other applications are reasons why customers choose its products.

IBM's position in the Challengers quadrant reflects a competent vision supported by its sales strategy, combined with robust execution in terms of sales execution and pricing. Its products are used for purposes that involve advanced analysis of content, such as extracting customer feedback, provision of "360-degree" information, regulatory compliance and enterprise search.

Strengths

- IBM offers exceptionally rich and comprehensive text analytics, which can be enhanced using the associated Watson Knowledge Studio service. Extensive options for integration, and the capacity to index high volumes of content, enable IBM to deliver insights throughout the digital workplace. IBM's ability to analyze result sets was highly praised by its reference customers.

- IBM is good at marketing its products in this market. It was shortlisted by one in three of the reference customers of other vendors surveyed for this Magic Quadrant.

- A significant proportion of IBM's reference customers indicated that implementation was particularly swift.

Cautions

- IBM Watson Explorer and Watson Discovery are limited to indexing text-based content and data. Indexing of rich-media content, such as video, audio and images, requires the use of additional services from the Watson suite.

- Watson Explorer is a complete and mature product, but a substantial proportion of projects require significant effort to get up and running. Reference customers expressed some dissatisfaction with the availability of training on how to employ the product.

- IBM's reference customers expressed below-average satisfaction, with ease of use for administrators and autosuggestion and autocompletion capabilities being key concerns.

IHS Markit

IHS Markit is a publicly traded company that was founded in 1959. Its headquarters are in London, U.K. A further 120 offices are located in Asia/Pacific, EMEA, Latin America and North America. Its Engineering Workbench product uses natural-language processing and machine learning to index both internal and external sources of content. These include technical publications (accessed via subscription) — a legacy of the company's background as a provider of technical literature — and customer-defined sources.

IHS Markit's customer base — which, in this market, is in the thousands — includes customers in the aerospace and defense, energy (oil and gas), industrial manufacturing, medical technology and chemical sectors, among others. Its strong consulting partnerships and good references appeal to customers, who select it to drive innovation and create internal operational efficiencies. Query input flexibility and security features are key reasons why customers select its product.

IHS Markit's position in the Niche Players quadrant reflects a competent vision supported by its marketing strategy, combined with robust execution in terms of customer experience and operations. As its name suggests, IHS Markit's product is tailored for specific roles in technical enterprises. The vendor continuously explores new industries and prepackaged solutions for technical enterprises. Within this niche it excels, based on direct relationships with customers who are highly satisfied both with it and its product.

Strengths

- IHS Markit is able to connect to a range of data sources both within and outside an enterprise using connectors included in the product and provided solely by IHS Markit. Of the vendors in this Magic Quadrant, IHS Markit has the highest proportion of reference customers connecting to 25 or more data sources. Internal connectors support a variety of document-management-centric content services. IHS Markit also offers custom-made connectors.

- Query input flexibility is one of the key reasons why customers select IHS Markit. Its product has a rich and sophisticated natural-language question-and-answer capability, with the ability to return insight in many ways. It offers rich contextualization, for both user and content, to improve relevance, which reference customers scored highly. Relevancy metrics are delivered in combination with results, and this feature can be tuned (although options to do so are limited and tuning is discouraged).

- IHS Markit works with customers directly. It focuses on the customer from the beginning of the acquisition process through to the deployment and maintenance phases.

Cautions

- IHS Markit's average deployment duration is among the longest of the vendors in this Magic Quadrant. Its deployment times range from less than three months to 12 months or more.

- Reference customers reported integration as one of the few challenging aspects of IHS Markit's product. Insight is delivered through a central location — the Workbench — for employees. Enterprises wanting to integrate the product into their digital platform, perhaps to deliver insight through custom-made or third-party applications, will find it capable of, but not optimized for, this approach.

- Although IHS Markit has a large number of partners (over 60 worldwide), its partner network is sales-oriented. For the most part, support and professional services are provided directly by the vendor.

Lucidworks

Lucidworks is a privately held company that was founded in 2007. Its headquarters are in San Francisco, California, U.S. A further two offices are in Asia/Pacific and EMEA. Lucidworks' Fusion product suite is built on a foundation of Apache Solr open-source technology. Lucidworks is well-regarded for integrating diverse content types and sources (structured and unstructured) in interesting ways, for building content enrichment pipelines, and for enabling conventional search.

Lucidworks' customer base — which, in this market, is in the hundreds — includes customers in the financial services, telecommunications and retail sectors, among others. Its overall cost and strong consulting partnerships are particularly appealing to customers, who select it to create internal operational efficiencies and improve customer service. Lucidworks' abilities to evaluate and tune the relevance of results, and to include key data sources, are key selling points.

Lucidworks' position in the Leaders quadrant reflects a comprehensive vision, as demonstrated by its product offering, innovation and sales strategy, combined with robust execution in terms of product, sales execution and pricing, and customer experience. Its product suite is used for a broad range of purposes, including fraud detection, public-facing search and provision of 360-degree information, as well as enterprise search.

Strengths

- Lucidworks offers a simple, explicable pricing model that attracts enterprises. Its customers generally consider its license costs reasonable. Lucidworks' product suite is available from a large, robust and globally distributed set of installation partners. Customers can also download and use the product before buying, to ensure it is right for them.

- Reference customers indicated that Lucidworks' product suite is particularly easy for administrators to employ. They also find it easy to improve the results it delivers.

- Lucidworks performs very well at a very large scale. Three of its five reference customers indicated that they were able to perform fast searches on over 200 million items in their datasets.

Cautions

- Lucidworks projects tend to be more complex and challenging than those of some other vendors. Reference customers' responses indicated that, in general, more than an average number of staff are required to implement and maintain Lucidworks installations.

- As a search and analysis specialist, Lucidworks does not sell a suite of products that would enable it to penetrate enterprises via existing customers that have bought other content-centric products.

- Although not dissatisfied, reference customers for Lucidworks expressed an overall level of satisfaction with its service and support that was below average for vendors in this market.

Micro Focus

Micro Focus is a publicly traded company that was founded in 1976. Its two regional headquarters are in Newbury, U.K. and Rockville, Maryland, U.S. A further 146 offices are in Asia/Pacific, EMEA, Latin America and North America. Its IDOL product — obtained as part of a merger with Hewlett Packard Enterprise's (HPE's) spun-off software business in 2017, and originally called Autonomy IDOL — provides rich analytical capabilities across the full range of content types.

Micro Focus' customer base — which, in this market, is in the hundreds — includes customers in the government, financial services and healthcare sectors, among others. Customers, who are likely to be existing users of other Micro Focus products, aim to drive innovation and create internal operational efficiencies. The product's autosuggestion and autocompletion functionality and security features are key reasons for choosing it.

Micro Focus' position in the Challengers quadrant reflects its strong execution in terms of product, operations and customer experience, and a competent vision supported by its product offering and innovation. Its product is used for a broad range of purposes, including virtual assistance, surveillance and enterprise search.

Strengths

- Reference customers for Micro Focus expressed more satisfaction with IDOL's functionality than did those for other vendors' competing products. IDOL scored exceptionally well in all such categories, including some operational focus areas where previously it had not excelled, such as ease of use for administrators. IDOL's scores for contextualization — a key aspect of insight engines — were higher than any other product assessed for this Magic Quadrant.

- A significant number of Micro Focus' reference customers indicated that its advanced security features were especially valuable. Investment in IDOL's security flexibility has been particularly high.

- IDOL has always been exceptional in terms of allowing organizations to incorporate a variety of data sources. Micro Focus' investment in its connectors continues to improve its ability in this regard.

Cautions

- The technology at the heart of IDOL is resource-intensive and demands higher skill levels of those who implement and maintain it than do the products of many competitors. Micro Focus continues to require more resources than many other vendors to implement and operate its software.

- IDOL's technology has undergone multiple changes of corporate ownership and strategy during the past decade, which have confused its messaging. Micro Focus' professed intention is to make the technology strategic across its product range. Organizations should assess the progress of IDOL's development, positioning and messaging over time.

- Through a series of ownership transitions — from Autonomy to HPE and now Micro Focus — IDOL has lost prominence in the market. Other vendors' offerings are substantially more likely to appear on the shortlists of prospective customers seen by Gartner. (Sales of IDOL do, however, continue to most sizes of organizations and to more regions than is the case with many other vendors in this Magic Quadrant.)

Microsoft

Microsoft is a publicly traded company that was founded in 1975. Its headquarters are in Redmond, Washington, U.S. Microsoft has offices in over 200 countries across Asia/Pacific, EMEA, Latin America and North America. Its insight engine products — Microsoft Graph and SharePoint Enterprise Search — are integral to Office 365 and SharePoint (Office 365 and on-premises) respectively, with an emphasis on support for sharing and collaboration.

Microsoft's customer base — which, in this market, is in the hundreds of thousands — includes customers in all major industries. Its product roadmap and general vision of the future are particularly appealing to its (often long-standing) customers, who select (and reselect) it to enhance decision making, improve business process outcomes, and strengthen compliance and risk management. Additionally, its ease of use for administrators and security features are key reasons why customers choose Microsoft in preference to other vendors.

Microsoft's position in the Leaders quadrant reflects a comprehensive vision, as demonstrated by its sales strategy and product offerings, combined with robust execution in terms of sales execution and pricing. Microsoft's products are used for collaboration and sharing, primarily but not exclusively in the context of its own productivity tools.

Strengths

- Within Office 365, Microsoft Graph delivers insight as an integrated part of the underlying productivity platform. This enables delivery of insight as a seamless aspect of the applications used for collaboration and sharing, with Delve being one example of this approach.

- Microsoft's products are available at no extra cost to organizations that have Office 365 and SharePoint at the center of their digital workplace. SharePoint Enterprise Search's default availability for both on-premises and online (Office 365) deployment makes it especially attractive to organizations that have, or plan to migrate to, Office 365.

- Microsoft's security features are comprehensive and robust. Reference customers singled them out as a key attraction.

Cautions

- Connectors to data sources are limited, with only a handful of default connectors available from Microsoft — for file shares, SharePoint, the web (http/https), Lotus Notes and Documentum. For other connectors, customers must either use third-party providers or develop their own (on-premises only). In addition, the full benefits of Microsoft Graph — one of the vendor's key strengths — are limited to Office 365.

- Shortcomings to Microsoft's offering, such as limits on graph support and the likely need to work with third-party providers, represent opportunities for other vendors. Additionally, Microsoft's offer of multiple search solutions (Azure Search, Bing Custom Search and others), in addition to SharePoint Enterprise Search and Microsoft Graph, adds complexity to selection and implementation, thereby threatening its position in this market.

- Deployment requires customers to find and work with their own third-party service provider, or to do the work themselves. This contrasts with the norm for this market, whereby customers work with the vendor or the vendor plus one of the vendor's partners.

Mindbreeze

Mindbreeze, a subsidiary of its publicly traded owner Fabasoft, was founded in 2005. Its headquarters are in Linz, Austria, and a further two offices are in North America. Its InSpire product combines search and content analytics in the form of an appliance, which positions it to attract customers abandoning the Google Search Appliance. There is also a cloud deployment option.

Mindbreeze's customer base — which, in this market, is in the thousands — includes customers in the government, telecommunications, transportation and aerospace sectors, among others. Its product roadmap and vision of the future, in combination with its overall cost and customer focus, are particularly appealing to customers, who select it to create internal operational efficiencies and drive innovation. The display of results through customized interfaces and the ability to include key data sources are key selling points.

Mindbreeze's position in the Leaders quadrant reflects a comprehensive vision, as demonstrated by its product offering and sales strategy, combined with strong execution in terms of its product, sales

execution, pricing and customer experience. Its product is used for a wide range of purposes, including analysis and structuring of content and data, provision of 360-degree information and enterprise search.

Strengths

- Mindbreeze offers a high-value insight engine at a fair and predictable price. It is quick to install, requiring fewer people to implement than the average, and fewer people to maintain after implementation.

- The ability to connect to key data sources is the primary product-related driver of selection. Over half of Mindbreeze's reference customers indicated that they had acquired the product for this reason, and they gave it the joint highest score for this ability. Provision of connectors as integrated parts of a product is popular with organizations seeking to incorporate multiple data resources.

- All of Mindbreeze's reference customers indicated that they were completely satisfied with the vendor's ability to understand their business challenges.

Cautions

- Although Mindbreeze has substantially improved the breadth of its customer base and its penetration of markets outside German-speaking countries, its marketing and sales propositions do not differentiate it adequately from other vendors.

- Mindbreeze InSpire has succeeded as a viable alternative or successor to the Google Search Appliance, and continues to compete mainly against Google and others for comparatively simple installations (although its deal size is increasing). Mindbreeze will have to work hard to attract fresh business as former Google customers diminish in number.

- Despite the merits of its product and its strong customer satisfaction score, Mindbreeze has yet to attain recognition for the broader capabilities of its insight engine. Almost none of the reference customers surveyed for this Magic Quadrant who selected other vendors had considered Mindbreeze, although users of Gartner's client inquiry service often ask about it.

Sinequa

Sinequa is a privately held company that was founded in 2002. Its headquarters are in Paris, France. A further three offices are in EMEA and North America. Its Sinequa ES product provides rich analytical capabilities across the full spectrum of content types, with a focus on delivering through custom-made touchpoints.

Sinequa's customer base — which, in this market, is in the hundreds — includes customers in the pharmaceuticals, financial services, manufacturing, government and utilities sectors, among others. Its product roadmap and vision of the future are particularly appealing to its (often long-standing) customers, who select (and reselect) it to create operational efficiencies and drive innovation. Its security features and ability to include key data sources are also key selling points.

Sinequa's position in the Leaders quadrant reflects a comprehensive vision, supported by its product offering and market understanding, combined with strong execution in terms of product, customer experience and operations. Its product serves large, complex organizations that can utilize a common platform for the extraction and delivery of insight in support of multiple use cases, including finding experts, providing 360-degree information about subjects, preventing fraud and extracting data for analytics.

Strengths

- Four-fifths of Sinequa's reference customers indicated that a major reason they acquired its product was to search key data sources. Sinequa is particularly good at incorporating a variety of data resources; its average repository variety was higher than that of most other vendors, as was its median diversity. Provision of connectors as integrated parts of products is popular with organizations seeking to incorporate multiple data resources.

- A significant number of Sinequa's reference customers indicated that its roadmap and general vision were strong attractions, which is reflected in client inquiries about this vendor. Sinequa's value proposition is based on the use of AI, machine learning and the ability to analyze results.

- Sinequa supports advanced security features, which make it attractive to organizations with considerable demands in this regard. Security is a key challenge for search and insight installations, as they combine data resources from multiple locations and provide visibility into those resources, with unique transparency, to a diverse group of users.

Cautions

- Sinequa's focus is on a platform that enables custom-made applications for a broad range of use cases. Although capable of web or intranet search, the vendor is less concerned with these generic use cases.

- A consequence of applying its platform to a broad range of use cases through custom-made applications is that Sinequa's projects tend to be more complex and challenging than those of some other vendors. Responses from Sinequa's reference customers indicated that more staff are required, on average, to implement and maintain its installations.

- Sinequa's geographical reach is more modest than that of many vendors. Its offices are concentrated in Europe and North America, and it has few partners able to provide professional services and support, especially outside Europe.

Smartlogic

Smartlogic is a privately held company that was founded in 2006. Its headquarters are in San Jose, California, U.S. A further three offices are in EMEA and North America. Smartlogic's Semaphore product uses semantic analysis to model relationships between entities and concepts in its graph-based index. This helps harmonize data sources to aid discovery in the context of high volumes of content and data, where differentiation is nuanced.

Smartlogic's customer base — which, in this market, is in the hundreds — includes customers in the life sciences, media and publishing, financial services, healthcare and high-tech manufacturing sectors, among others. Its product roadmap and vision of the future are particularly appealing to its (often long-standing) customers, who select (and reselect) it to create operational efficiencies, drive innovation and enhance decision making. Its architecture and deployment model, and its delivery of results to other applications, are also key attractions.

Smartlogic's position in the Niche Players quadrant reflects its unique vision focused on the contextualization of information assets for multiple uses, supported by its market understanding and marketing strategy, and robust execution in terms of customer experience and operations. Its product provides "semantic middleware" — search enablement — through contextualization of content and data by integrating with, rather than merely connecting to, data sources. Semaphore supports complex use cases such as information governance, advanced analytics and decision support in the context of a customer's digital ecosystem.

Strengths

- Despite the comparative complexity of Smartlogic's projects, its reference customers' responses indicate that satisfactory completion requires no more time or resources than for other vendors.

- Architectural flexibility attracted a significant proportion of reference customers to Smartlogic. Its reference customers were significantly more likely than general respondents to select it for delivering results to other applications and for its architectural deployment model.

- Smartlogic focuses on meaning as manifest in relationships between concepts and large blocks of information, such as documents and datasets. This gives it unique power for autosuggestion during query formulation and for ontology or classification development.

Cautions

- Smartlogic's dependence on third-party vendors for the deployment of solutions that fully utilize its capabilities raises the challenge of coordinating work across several projects and vendors in parallel.

- Smartlogic is not a general-purpose search vendor, and does not pursue "classical" intranet search projects. It is used, as it intends, for strategic projects of significant impact.

- Given its componentized architecture, Smartlogic provides its integrations separately and at extra cost, which is a less popular approach with customers expecting to incorporate multiple data sources. Customers who wish to connect to multiple data sources should assess the cost of any additional integrations that will be required.

Vendors Added and Dropped

We review and adjust our inclusion criteria for Magic Quadrants as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant may change over time. A vendor's

appearance in a Magic Quadrant one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. It may be a reflection of a change in the market and, therefore, changed evaluation criteria, or of a change of focus by that vendor.

Added

- Micro Focus, following its merger with the spun-off software business of Hewlett Packard Enterprise.

Dropped

- Hewlett Packard Enterprise, following the merger of its spun-off software business with Micro Focus.

Inclusion and Exclusion Criteria

To be included in this Magic Quadrant, each vendor had to:

- Sell a product that fits this definition: The product applies relevancy methods to describe, discover, organize and analyze data. This allows existing or synthesized information to be delivered proactively or interactively, and in the context of digital workers, customers or constituents at timely business moments.

- Have sold, in 2017, licenses, subscriptions and services for the product amounting to more than $9 million in total.

- Make its product available either independently of all others or as part of a generalist software platform intended to support knowledge workers in all roles.

In addition, each vendor's product had to:

- Use connectors or federation to crawl and index content and data from multiple repositories other than those sold by the same vendor.

Evaluation Criteria

Ability to Execute

Vendors' Ability to Execute in this market depends on a combination of general resources and particular product capabilities that are necessary to capture the interest of prospective customers and maintain the loyalty of existing ones. Financial viability, as measured by the Gartner Financial Viability Model, is also a significant factor. Additionally, we consider the pricing model, especially its transparency and workability for the target market.

Vendors' marketing success is another factor. We measure this by vendors' presence in reference customers' shortlists for projects involving insight engines (the more frequent the inclusion, the greater the marketing success).

We also consider each vendor's value proposition, and whether it resonates in the market targeted.

Additionally, we measure each vendor's success in delivering what customers expect, and its ability to support customers internationally.

Finally, for each vendor's offering, we considered the vendor's ability to address a very broad range of product functionality, which is necessary for insight engines.

Table 1. Ability to Execute Evaluation Criteria

Evaluation Criteria	Weighting
Product or Service	High
Overall Viability	Medium
Sales Execution/Pricing	Medium
Market Responsiveness/Record	Not Rated
Marketing Execution	Low
Customer Experience	Medium
Operations	Medium

Source: Gartner (July 2018)

Completeness of Vision

Key to vendors' Completeness of Vision in this market is the delivery of capabilities in ways that lead the market, and that offer architectures and applications that organizations may not even know to ask for. We factor in strategic product elements such as contextualization, results display and proactive notification without the necessity to use a search box.

Other significant factors are vendors' vision for competing in this sector and their plans for marketing that vision.

Table 2. Completeness of Vision Evaluation Criteria

Evaluation Criteria	Weighting
Market Understanding	High
Marketing Strategy	Low
Sales Strategy	Low
Offering (Product) Strategy	High
Business Model	Not Rated
Vertical/Industry Strategy	Not Rated
Innovation	High
Geographic Strategy	Not Rated

Source: Gartner (July 2018)

Quadrant Descriptions

Leaders

Leaders demonstrate strong financial viability and have solid products that offer broad architectural choices. They are well-positioned to enable users to incorporate data from multiple sources. Their marketing is effective. They are innovators and they understand how to prepare for the market's directional shifts.

Challengers

Challengers are financially stable and can deliver their products effectively. They provide meaningful assurances of long-term viability. However, they do not have as strong a vision of the market's future as Leaders do, and their innovation strategy is not as robust. Their products are secure, have a broad range of features, and are effective.

Visionaries

Visionaries have innovated effectively to prepare for the next generation of expectations. They may not have the same financial resources as Leaders and Challengers, and their marketing efforts are not necessarily at a level that guarantees attention from their target customers. They typically have some ability to address the market's increasingly important requirements for heterogeneity, natural language query models and proactivity.

Niche Players

Niche Players offer solid search capability. They may target particular markets, with a horizontal or vertical specialty, or they may address particular architectural use cases. In some cases, these vendors have exceptional perspectives on how to deliver insight engine capability. They do so in ways that not all prospective customers will recognize as valuable, but that some will value highly.

Context

This Magic Quadrant for Insight Engines is intended to help application leaders make vendor and product selection decisions. In this market, organizations will find providers offering products and services to create solutions that provide access to information — data and content — in context.

Insight engines can never be treated as discrete, insular applications. Rather, they tap into, enhance and extend a wide variety of other data types, sources and systems. Thus, they are integral to an organization's digital ecosystem, which is complex, extensive and interconnected.

In this market, vendors and their insight engines share the following characteristics:

- They use AI technologies — natural-language processing, graphs and machine learning — to augment indexing and querying.

- They take a platform-oriented approach on which multiple custom-made applications can be built and tailored to an organization's specific use cases and constraints.

- They offer a choice of interfaces to information, with options reaching far beyond search query boxes to, for example, conversations with chatbots, rendering of data as graphs, and in-application widgets.

- They connect to a range of data sources and content types to facilitate crawling and indexing of content.

They also vary in the following respects:

- Although all vendors claim cloud, on-premises and hybrid deployment options, the functionality of some offerings is constrained when deployed on-premises, due to the use of multiple products or workarounds to extend the reach of cloud-centric products.

- Products differ in their ability to index rich-media content, including images (using optical character recognition or other image-processing techniques), video and audio. Separate products or services — from the same vendor or a third party — may be required.

- Pricing models differ, with document count, level of functionality (including connectors to data sources), users and query levels being common dimensions.

- Products differ in their ability to connect to, crawl and index content types across multiple data sources. The number and type of connectors available, who provides them, and their cost vary significantly from vendor to vendor.

Key findings:

- Although there are many reasons for purchasing and deploying an insight engine, foremost among them is the desire to drive innovation and improve the efficiency and outcomes of business processes.

- It takes approximately twice as many people to deploy an insight engine as to maintain it. However, the customer and vendor/partner staff time required, and the cohort required to deploy solutions and maintain them after deployment, vary widely. For some vendors, the number of people required to deploy can be greater than 20 and more than 10 to maintain. But five for deployment and three for maintenance is more typical.

- On-premises remains the dominant deployment architecture, but cloud deployment has grown in popularity.

- Insight engines take time to deploy, with configuration and customization being essential to success. The time required varies significantly from vendor to vendor, and from project to project. The customers we consulted for this research indicated that, although most had deployed within three months, the average was five months, and one in six took 12 months or longer.

- Very few customers deploy insight engines without the involvement of the vendor. Most deploy with the help of the vendor or of the vendor plus a partner.

Recommendations

Application leaders in charge of search and insight should:

- Identify desired business outcomes and measures of success before undertaking an insight engine selection process. They should then relate these desired outcomes and measures to their current situation in order to establish a baseline for comparison.

- Gather requirements in light of their business goals, users (end users, administrators, architects, developers) and the condition of their content (variety, type, language and so on).

- Decide their organization's aspirations for the delivery of insight, now and in the next five years. Does it want an application (a point solution similar to an enterprise search tool) or a platform (for custom-made applications or widgets within other applications)?

- Evaluate insight engine offerings after examining their organization's critical use cases and related functional needs.

- Use this Magic Quadrant as one tool to help them select an insight engine vendor, but avoid relying on it exclusively. Their final selection criteria must reflect their organization's particular functional and technical requirements and business objectives. They should not, for example, select a Leader or reject a Niche Player simply on the basis of those labels. A vendor in any one of the four quadrants could be the best choice for particular needs.

Market Overview

The market for insight engines — which Gartner formerly called the "enterprise search" market — continues to be impacted by several key factors.

Google and Microsoft Don't Offer Search and Insight Products Separately From Their Cloud-Based Collaboration and Productivity Suites

The vendors most often shortlisted by the reference customers we surveyed were Google, Microsoft and IBM. Of those that chose a different vendor, around one in two had considered Google, and around two in five had considered Microsoft. Because the distribution of reference customers across vendors was nearly even, this does not indicate that these vendors failed more often — rather that they made it to the list of vendors to consider before making a final choice.

The Google Search Appliance is nearing the end of its life as Google shifts its efforts to Google Cloud Search, which is less a replacement for the appliance and more a new chapter for G Suite's collaboration and productivity software.

Similarly, Microsoft's product (FAST Search Server and its successor, SharePoint Enterprise Search) is now subsumed into SharePoint. With Microsoft's emphasis being on the shift to Office 365, customers gain access — through Delve or, implicitly, other applications — to Microsoft Graph, which provides an alternative to search for delivering insight.

These changes position both vendors' delivery of insight as an integral part of their cloud office environments, and of the digital workplaces that organizations ultimately create with them.

In this landscape, organizations that need insight beyond, or other than, that available from G Suite and Office 365, or that want to develop their own solutions, find themselves in need of alternative choices. Some organizations are looking for applications as simple, direct replacements. Others are looking for platforms to rethink how insight fits into their digital workplace.

Open Source Is Prominent

One in three of the reference customers surveyed for this Magic Quadrant considered Elastic, and one in five Apache. Neither Elasticsearch nor Apache Solr is considered an insight engine: extensive development would be required for them to match the capabilities of products from vendors in this market. However, they do provide highly effective search engines for those seeking only search capability or wishing to undertake development, and they are available from service providers with custom-made additions. Furthermore, they form a foundational layer in the stacks of some commercial insight engines.

Lucidworks is the only vendor in the Magic Quadrant with an open-source engine (Apache Solr) at the core of its product (Lucidworks Fusion). However, Gartner is aware of numerous vendors, currently below the threshold for inclusion in this Magic Quadrant, that provide capable insight engines built on Apache Solr or Elasticsearch. We expect these solutions — commercial products built on open-source search engines — to continue to gain prominence.

Machine Learning Is Prevalent

Machine learning owes its recent progress and hype to new capabilities for processing content — text, speech, audio and video. Naturally, insight engines, for which content is essential, are at the forefront of developments in machine learning for classification, relevance tuning and recommendations. All insight engine vendors have sophisticated natural-language processing and natural-language understanding capabilities. Some vendors offer advanced features, such as conversational AI, deep neural nets, hyperparameter optimization and development frameworks for machine learning. Several products have data-labeling capabilities that are still rare, but we expect demand for labeled and annotated data to grow, along with the machine learning market's maturity. Machine learning and AI have a prominent place on the roadmaps of all the vendors in this Magic Quadrant.

Customers seeking machine learning capabilities can find them not only in machine learning platforms and packaged AI applications, but also in insight engines, which could prove more suitable for use cases centered on information retrieval, computer vision or text analytics.

The Volume of Content and Data Is Still Growing

The more content and data that organizations create and collect, the harder it is to find the information their constituents need. Part of the problem is that content and data come from disparate sources. In response, demand for content, data and metadata repositories is growing. This is apparent from our findings that, from 2015 to 2016, the analytics and business intelligence market grew by 4.5%, and the content services market by 15.9% (see "Market Share: All Software Markets, Worldwide, 2016").

Related to this point, an important but nascent trend is the convergence of structured and unstructured data. The same tool can now analyze and process both. Search-based technologies, including insight engines, provide a more natural way of interacting with data for a growing population of information consumers. As data suitable for processing by machine learning is contained in both structured and unstructured data stores, insight engines are well-positioned to be at the forefront of the convergence of structured and unstructured data.

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"How Markets and Vendors Are Evaluated in Gartner Magic Quadrants"

"'Insight Engines' Will Power Enterprise Search That Is Natural, Total and Proactive"

"Improve Search to Deliver Insight"

"Transform Enterprise Search by Introducing Touchpoints to Insight"

"Use Content Services to Boost Digital Dexterity by Continuously Informing Employees"

Evidence

We requested that the vendors included in this Magic Quadrant provide us with explanations of their technologies and business strategies via a questionnaire.

Additionally, we surveyed reference customers identified by the vendors to compare vendors and improve our understanding of the state of the market.

Evaluation Criteria Definitions

Ability to Execute

Product/Service: Core goods and services offered by the vendor for the defined market. This includes current product/service capabilities, quality, feature sets, skills and so on, whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

Overall Viability: Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood that the individual business unit will continue investing in the product, will continue offering the product and will advance the state of the art within the organization's portfolio of products.

Sales Execution/Pricing: The vendor's capabilities in all presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support, and the overall effectiveness of the sales channel.

Market Responsiveness/Record: Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness.

Marketing Execution: The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This "mind share" can be driven by a combination of publicity, promotional initiatives, thought leadership, word of mouth and sales activities.

Customer Experience: Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, service-level agreements and so on.

Operations: The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences,

programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

Completeness of Vision

Market Understanding: Ability of the vendor to understand buyers' wants and needs and to translate those into products and services. Vendors that show the highest degree of vision listen to and understand buyers' wants and needs, and can shape or enhance those with their added vision.

Marketing Strategy: A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the website, advertising, customer programs and positioning statements.

Sales Strategy: The strategy for selling products that uses the appropriate network of direct and indirect sales, marketing, service, and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

Offering (Product) Strategy: The vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature sets as they map to current and future requirements.

Business Model: The soundness and logic of the vendor's underlying business proposition.

Vertical/Industry Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including vertical markets.

Innovation: Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

Geographic Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, either directly or through partners, channels and subsidiaries as appropriate for that geography and market.

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