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IDC TECHNOLOGY SPOTLIGHT

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Financial services organizations (FSOs) are inundated with data, and when that data is stored in silos or otherwise inaccessible, it can't readily provide insights. As a result, FSOs can benefit from implementing artificial intelligence (AI)–powered platforms.

Financial Services Organizations: Extracting Powerful Insights with AI-Powered Platforms

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Introduction

Financial services organizations (FSOs) today collect and maintain an abundance of data, both structured and unstructured. For most of these organizations, data can be a double-edged sword. Collecting and maintaining increased amounts of data related to customers and portfolios can provide tremendous opportunities to increase revenue and reduce risk, yet at the same time, too much data can be a cognitive drain on analysts and knowledge workers. Increasing stores of data require FSO stakeholders to organize and search their data in ways that allow analysts to extract meaningful insights. Artificial intelligence (AI) can help FSOs mature from being data driven to being information driven. Enabling knowledge workers to efficiently derive meaningful information and insights from big data is what transforms FSOs into information-driven organizations.

AT A GLANCE

WHAT'S IMPORTANT

FSOs continue to deal with regulatory pressures around data management.

First-generation content search and analytics have not relieved the cognitive burden on FSO knowledge workers.

KEY TAKEAWAYS

AI-powered platforms extract insights from data, even unstructured data.

FSOs must improve their capabilities to derive insights from the data they possess.

Current Situation

Declining costs for long-term data storage, increased availability of digital content (e.g., documents, publications, email, voice recordings, and images), and regulatory demands have contributed to the explosion of data at FSOs over recent years. From a regulatory perspective, FSOs are required to be more transparent. Regulations such as Dodd-Frank in the United States and MiFID II and the GDPR in the European Union as well as the proposed California Consumer Privacy Act are examples of major regulatory changes that place increased pressure on FSOs to organize and secure their data as well as make it accessible.

As a result of such regulations, FSOs are storing vast amounts of structured and unstructured data. IDC estimates that up to 88% of the content that organizations possess is unstructured. Many FSOs do not have methods by which they can efficiently access and analyze unstructured data.

In response to regulations and other factors, many FSOs have invested in data management solutions, either purchased from vendors or created in-house. A natural result of this, in many instances, is the creation of data silos from which analytical insights are difficult to achieve. These situations create cognitive burdens on analysts or knowledge workers to decipher meaning from the vast amount of data that they have at their disposal. Given the amount of data generated and the value that can be derived from that data, FSOs are increasingly looking at ways to become information driven. Every day, personnel who are overloaded with data make less-than-optimal decisions as they are pressed to make the right connections and weigh the relative importance of data elements. Furthermore, these employees often must access several systems and repositories to gather the data they need for their specific task.

Information-Driven Organizations

To overcome problems of cognitive burden caused by data silos and unstructured data, FSOs must move to the next generation of AI-powered platforms that employ a full suite of artificial intelligence tools such as natural language processing (NLP), machine learning algorithms, and deep learning neural networks. These platforms, through a unified access interface, enable FSOs to index a vast quantity of diverse data sources as well as enrich and provide context to those data sources. First-generation content analytics tools have been effective at surfacing data to help organizations know "what" is happening related to their objectives. AI-powered search and analytics platforms can help not only answer "what" is happening but also provide the full context of "why, when, and how" it is happening. This comprehensive approach provides a fast and easy way to deliver information and insights to knowledge workers, resulting in tremendous value for the organization as a whole.

FSO business line managers are increasingly seeking solutions that put the power of advanced search and analytics in the hands of their staffs. Several vendors provide AI-powered platforms that don't require data scientists to write code to develop a search query and run analytics. These platforms enable business line analysts to ask questions of the data to initiate AI-powered analysis, often through simple drag-and-drop interfaces. This permits knowledge workers to improve their productivity — essentially doing more in less time.

Implementing an AI-powered search and analytics platform allows an institution to deliver relevant information to business functions across an FSO. This can create holistic, dynamic views, for example, of customers, portfolios, third-party contracts, and investment targets. The ability to extract insights from data is a core capability of AI-powered platforms.

The capabilities of AI-powered platforms have been fueled by the advancements in AI, machine learning, and NLP technologies in particular. FSOs have been challenged to build a solid business case for internal development of cognitive search and analytics capabilities. The difficulties FSOs face in generating an acceptable ROI include:

- Employing the right data science talent to build the platforms
- Building applications at a pace that is consistent with that of their peers
- Managing costs associated with building, testing, and maintaining an internal application

As AI technologies including machine learning and NLP converge, vendors are offering cognitive platforms that can provide the advanced search and analytics capabilities to overcome the ROI issues of trying to build these platforms in-house.

AI-Powered Platforms Versus AI Component Applications

IDC has observed an increase in the number of FSOs that use third-party vendors to provide specialized expertise in cognitive computing. Many vendors provide individual component cognitive search and analytics tools. Few vendors offer platforms enabling cognitive applications for AI-powered information discovery and analytics that are easily integrated into an FSO's technology ecosystem. Comprehensive AI-powered platforms include:

- Artificial intelligence/machine learning
- Natural language processing/text analytics
- Media analytics for voice, video, and images
- Tagging
- Searching
- Categorizing
- Clustering
- Visualization tools

Using these capabilities in an intelligently combined way, these platforms identify and connect data and information about related topics and provide relevant answers to questions and queries based on this information. With the broad stores of structured and unstructured data across functional silos indexed in an enterprise today, the platforms help discover new information, identify hidden relationships and insights, and analyze user behavior and preferences to learn about work context. Cognitive capabilities and machine learning provide real-time, relevant results from unstructured and structured internal and external data.

Business Benefits

The benefits of implementing an AI-powered platform are numerous across an FSO. The implementation of the platform can yield positive results in various areas, such as risk management, compliance, asset management, portfolio management, marketing, and customer experience.

Transforming a data-driven organization into an organization that can extract meaningful insights from its data essentially upskills its workers by consistently connecting them with the information and insights needed to perform effectively and efficiently in their jobs. Legacy content search applications do not provide adequate capability to enable these workers to make optimally informed decisions quickly. By upskilling their workers, FSOs will maximize revenue, improve customer experience and loyalty, manage costs through increased productivity, reduce risk, and enhance compliance, potentially helping avoid punitive compliance violation fines.

Cognitive/AI Platform Use Cases for FSOs

360-Degree Customer View

Perhaps the most basic and core use case cognitive/AI platforms is establishing a holistic view of the customer relationship. FSOs can have dozens of systems that hold important customer information. Establishing a single access point to the entire customer relationship history can drive many opportunities for process enhancements across the FSO enterprise. Numerous use cases, some of which are highlighted in the following sections, can be developed from the ability to identify the customer's entire relationship.

An FSO can not only aggregate its customers' data but also enrich that data with other external content to improve the operations of many functions such as risk management, marketing, and sales. The ability to run AI algorithms across an enriched set of customer data provides the opportunity for impressive ROI.

Asset Management

Analysts can be presented with critical market-moving information automatically; as a result, they can focus their time on the most meaningful content to draw conclusions and make better decisions more quickly. Portfolio managers will be equipped to make faster and better trading decisions based on real-time market data. In addition, asset management firms may use AI-powered platforms to enhance risk and other asset management models.

Risk Management

Risk managers depend on multiple internal data sources as well as external content to perform their jobs. Whether managers of operating risk, credit risk, or financial risk, they are using cognitive/AI technology to provide a single point of access to all the required information and insights. Credit risk managers can use cognitive tools to synthesize borrower data and archived data from credit bureaus to help refine their credit risk models. The new Current Expected Credit Loss (CECL) regulatory changes, due for implementation in December 2019, require FSOs to obtain more and better data to analyze and segment credit portfolios to accurately predict credit losses over the life of a loan. AI-powered platforms enable FSOs to synthesize data from external sources to complement their own portfolio data to help meet CECL requirements.

Governance and Compliance

New and stricter consumer and employee privacy regulations such as the GDPR and the California Consumer Privacy Act have placed increased data management burdens on FSOs to know where and how all customer information is being used. Establishing a comprehensive and unified view of customer relationship history allows compliance teams to more easily manage consumer privacy regulation requirements.

In addition, regulations such as Dodd-Frank and MiFID II increase transparency requirements; FSOs must maintain all records pertaining to certain trades, including recorded voice calls, emails, and instant messages. Trade reconstruction, including calls and messages leading up to the trade, can be complex. A cognitive analytics solution that properly tags, categorizes, and synthesizes data across multiple data sources is a necessity to appropriately manage trade reconstruction.

Compliance functions classify, tag, and categorize documents. Even in this digital age, many functions throughout an FSO still depend on and use physical documents. Procedures around the processing of these documents are often manual. Cognitive/AI platforms have helped large financial organizations digitize documents and apply intelligent tagging and classification to them. Trade finance processing is a classic example of a function that often involves large volumes of physical documents that must be digitized and analyzed to identify irregularities and potential trade-based money laundering activity.

Wealth Management

Investment advisors can use cognitive/AI platforms with their machine learning algorithms to greatly enhance their businesses. Today, many investors like to communicate with their advisors not only by telephone but also via email and text message. Electronic communications eliminate elements of human interaction. Client relationship management can be improved by cognitive platforms using NLP to enable semantic analyses to identify unhappy clients.

Wealth managers and investment advisory firms have fiduciary responsibilities for which the technology facilitates enhanced performance. In February 2018, FINRA implemented new rules aimed at helping member firms prevent and detect financial exploitation of elders and other vulnerable adults. AI-powered analytics capabilities are well suited to help firms aggregate data and identify patterns of behavior that are indicative of the financial exploitation of elder and other vulnerable adults. In addition, these platforms enable firms to deploy AI analytics to enhance client investment suitability compliance. Suitability compliance is particularly important as more firms implement robo-advisors. The Securities and Exchange Commission has noted robo-advisors as an area of focus for suitability and disclosure compliance. AI-powered platforms enable investment advisory firms to better manage evolving fiduciary requirements and industry digital transformation.

Marketing and Customer Experience

With a 360-degree view of each customer, marketing enables call center and branch office staff to provide intelligent next best offers to increase customer wallet share, in effect facilitating the cross-selling of products or services. In addition, using NLP, FSOs can run semantic analyses on voice and digital communications to gauge customer sentiment and identify unhappy customers to proactively approach them with resolutions to their issues.

Market Trends

The demand for AI technologies that enable intelligent analytics will continue to grow. IDC estimates that spending on AI technologies will grow to over $8 billion by 2022, up from $2 billion in 2017.

FSOs will continue to transform their ability to analyze the data they possess to meet regulatory demands, customer experience expectations, and senior management mandates to improve productivity. In addition, FSOs will be further pressured by competitors that may be transforming their analytical capabilities at a faster pace.

Competitive pressures will likely include delivering personalized customer experiences derived from insights produced from customer data. Investment firms will apply cognitive search and analytics to their investment portfolios to gain potential trading advantages over their competitors, enabling better returns for their clients.

While many FSOs use some level of cognitive tools to manage and analyze data, the approach has been fragmented. Financial organizations are beginning to see the value in adopting a platform approach to cognitive search and analytics. The benefits of these platforms can be multiplied globally across the organization rather than benefit just a single business line or function.

Considering Sinequa

Sinequa is a global provider of AI-powered platforms. The company's technology is built on an extensive foundation of unstructured information access technologies that include content analytics capabilities in 21 different languages. While Sinequa has offered a flexible information collection, access, and analysis architecture for many years, it has now built capabilities around cognitive technologies, such as machine learning, natural language processing, improved relevance, and better decision support while offering strong user and data interaction capabilities.

The company's cognitive search and analytics platform is used by Forbes Global 2000 companies, leading financial services organizations, and government agencies to create highly scalable solutions that provide knowledge workers with insights, recommendations, and assistance. Using advanced NLP and machine learning algorithms in combination, Sinequa's solution offers insights extracted from structured and unstructured data. Broad connectivity to on-premise, cloud, and Hadoop data sources facilitates enterprisewide projects.

Key attributes of the company's technology platform include the ability to:

- Connect to enterprise applications as well as Hadoop and cloud environments through 200+ ready-to-use connectors
- Use machine learning algorithms for deep analytics of big data and user behavior to deliver better insights and more relevant information
- Provide intuitive information access and search to end users and intelligent tuning capabilities to administrators requiring minimal user efforts
- Support on-premise and cloud-based deployments
- Support images and videos using Google Vision, Microsoft Azure Media, and IBM Watson Services for image recognition and retrieval
- Provide out-of-the-box integration with Thomson Reuters Intelligent Tagging (TRIT) to enable global organizations to recognize specific financial terms and abbreviations (e.g., ticker symbols) as well as other entities and relationships in vast amounts of structured and unstructured data

To overcome problems of cognitive burden caused by data silos and unstructured data, FSOs must move to the next generation of AI-powered platforms.

Sinequa offers a broad-based AI-powered platform including search, content analytics, semantic understanding, and auto-categorization technologies. Its platform provides relevant insights about information to users in their work environments. The platform supports a range of machine learning algorithms and capabilities to improve findability and relevance.

According to the company, its approach to information-driven businesses has helped many leading financial and insurance organizations achieve their goals, including customers such as Crédit Agricole, DZ Bank, Groupama, LCL, Navy Federal Credit Union, Société Générale, Franklin Templeton, and U.S. Bank.

Challenges

Sinequa is a well-established company and has a proven track record of helping organizations in life sciences and manufacturing verticals develop insights from their data. The company faces the challenge of continuing its momentum within the financial services industry after achieving early wins with notable FSOs. To further establish its presence in the financial services industry, Sinequa needs to continue to educate the market about its successful implementations among FSOs.

Conclusion

AI-powered platforms are a critical enabler in an FSO's quest to extract better insights from data and support fact-based decision making.

These platforms use machine learning, NLP, and other AI technologies to gain valuable insights from structured and unstructured data. Such capabilities allow FSOs to make connections, identify patterns, and surface information in ways that were previously not possible.

Throughout the industry, financial services organizations are under pressure to organize, control, and improve analysis of their data. The pressure stems from regulations, competition, and internal executive expectations to improve productivity. First-generation content search and analytics do not adequately meet the needs of FSOs, particularly in dealing with unstructured data. IDC believes the market will continue to grow for cognitively enabled search and analytics platforms within financial services. To the extent that Sinequa can address the challenges described in this paper, the company has a significant opportunity to expand on its current success.

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