IBM Cognos Content Analytics
Harnessing unstructured information for business-driven decision making

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Overview

IBM Cognos® Content Analytics gives organizations the ability to access and analyze unstructured information that can be found both inside and outside the organization.

Using sophisticated natural language algorithms, this solution can deliver new business insight from virtually any type of content in any format including both text and data. It extracts key information, then sorts, filters and categorizes this information to present the relevant content in context to the business user. This means organizations can now garner insight from massive volumes of text such as documents, insurance adjuster notes, case worker notes, web pages and more.

The result is a more complete and accurate view of business reality, which goes beyond the structured data of internal databases, to deliver a comprehensive foundation for "business-driven decision making."

Business leaders are always seeking more insight to drive the organization forward. They want to look deeper into the root causes of problems, spot opportunities more quickly, and anticipate and exploit future market trends. To gain this insight, they turn to business intelligence solutions to answer the basic questions about the business: "how are we doing," "why," and "what should we be doing."

Typically, they track key metrics in sales, marketing and operations from data stored in operational systems. With data warehouses, they can perform analysis to identify trends and forecast future performance. This insight relies on structured data internal to the organization and is a process called *"data-driven decision making."*

But data-driven decision making is only the beginning. It must be supplemented with a significant amount of instinct and anecdotal information. Much of the anecdotal information about important business issues is in unstructured content such as documents, insurance adjuster notes, case worker notes, web pages and more. Today there is more of this "unstructured content" than ever before. In fact, it's estimated that anywhere from 50 to 80 percent of potentially relevant business information resides in unstructured content both inside and outside the walls of the organization.

What if you could access and analyze your unstructured content to answer questions like: Do call center inquiries signal a risk of customer attrition? Are there early warning signs of fraud in our insurance claims? Are late deliveries costing us sales?

Unstructured content contains a wealth of information about questions like these. Harnessing that information can help an organization work smarter, serve customers better, control costs and plan proactively for the future. So, forward-looking companies are looking beyond internal metrics and data to inform their decision-making with external factors. They are moving from data-driven decision making to "business-driven decision making."

In the past, most companies tended to rely exclusively on the subjective insights of employees and managers to understand the external factors and were unable to capitalize on the

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software

information in the unstructured content they had. But now, organizations can systematically support market-driven decision making by tapping into unstructured content with IBM Cognos Content Analytics.

A new class of analytics

IBM Cognos® Content Analytics is a complete solution that provides organizations with the necessary tools to unlock the business value contained within unstructured content. Working through a dynamic, highly visual interface, this solution discovers important information by identifying and surfacing correlations, enabling organizations to discover hidden trends, augment BI reports, or enhance business processes with unstructured content.

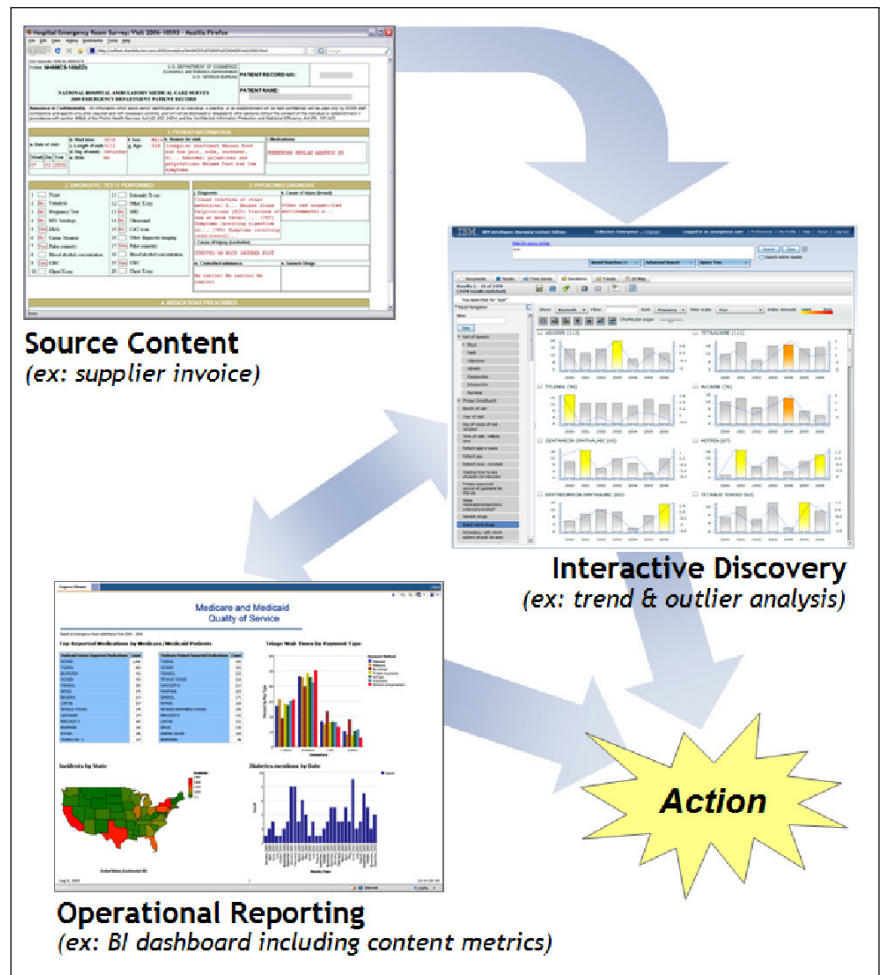IBM Cognos Content Analytics can:

- **Discover:** Automatically identify and tag key attributes and entities within content by crawling almost any content source and identifying key words and phrases
- **Refine:** Empower navigation and drill-down based on identified key attributes, entities and extracted dimensions
- **Visualize:** Use advanced visualization to enable exploratory mining and highlight deviations and anomalies for more informed business decisions and action

- **Deliver:** Facilitate broad delivery of information to other processes and applications – such as ECM (Enterprise Content Management) repositories or CRM (Customer Relationship Management) applications – and integrated with IBM Cognos 8 BI for additional reporting and analysis

IBM Cognos Content Analytics

Discovering insights within the enterprise

In large organizations, problems that are "common knowledge" within the ranks may be unknown to senior managers. A product deficiency could be the topic of numerous e-mail strings or customer service notes, but might not appear in the metrics of any standard report–until the damage is done.

The IBM Cognos Content Analytics platform is optimized to identify those business issues and deliver insight from enterprise content such as documents, insurance adjuster notes, case worker notes, web pages and

Source Content
(ex: supplier invoice)

Interactive Discovery
(ex: trend & outlier analysis)

Operational Reporting
(ex: BI dashboard including content metrics)

Action

Example: Analysis of production records provides insights for business optimization.

more. This solution accesses large volumes of unstructured information, identifies and tags relevant content through pre-built and custom-built annotators and presents it in a form that can be easily analyzed. In effect, IBM Cognos Content Analytics gives structure to unstructured content, helping you convert that content into business insight.

IBM Cognos Content Analytics enables organizations to:

- Access virtually any type of structured, semi-structured or unstructured content found within the enterprise.
- Explore and analyze content with a dynamic, highly visual interface that integrates easily with IBM Cognos 8 BI for additional reporting, analysis and information delivery.
- Spot issues and important trends that may fall outside normal business reporting channels.
- Deliver new insights to business users across the organization, and help them go from insight to action with confidence.

With continuous refinement to provide business context, IBM Cognos Content Analytics gives business users the power to spot important trends and issues that may fall outside of the normal business reporting channels.

Architecture and algorithms

IBM Cognos Content Analytics accomplishes all of this by combining exploratory mining and entity and context extraction with categorization, analysis and operational reporting. Using the Unstructured Information Management Architecture (UIMA) framework, IBM Cognos Content Analytics employs sophisticated natural language algorithms and advanced entity identification capabilities to analyze text and extract key information. It also contains tooling for advanced customizations for a wide range of uses such as threat or fraud identification or sentiment analysis for industry-specific solutions.

Pre-built and customizable extraction and visualization features can detect trends and patterns and highlight anomalies for focused research. Users can analyze unstructured content along with structured data using keyword and faceted navigation, categorization,

trend analysis, delta analysis, topic analysis, 2-D heat maps and automated alerts.

An ETL (extract, transform, load) interface enables the unstructured content to be integrated with applications and systems such as IBM Cognos 8 BI, InfoSphere Warehouse, IBM ECM, WebSphere Portal, and custom-built solutions. Pre-built and customizable extraction and visualization features detect trends and patterns and highlight anomalies for focused research.

Conclusion

With decades of experience in text analytics and advanced search technologies, IBM is an industry leader in turning information into business results. IBM Cognos Content Analytics is a powerful, highly scalable solution that drives new business insight by accessing and analyzing unstructured content.

By extending your business intelligence to include the insights that are to be found in unstructured content, you are enabling business-driven decision making, leading to better business decisions across your organization.

**About IBM Cognos BI
and Performance Management:**

IBM Cognos business intelligence
(BI) and performance management
solutions deliver world-leading
enterprise planning, consolidation
and BI software, support and services
to help companies plan, understand
and manage financial and operational
performance. IBM Cognos solutions
bring together technology, analytical
applications, best practices, and a
broad network of partners to give
customers an open, adaptive and
complete performance solution. Over
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countries around the world choose IBM
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