

Cognos 8 Business Intelligence Analysis

Discover the Factors Driving Business Performance

Multidimensional analysis is a powerful means of extracting maximum value from your corporate data. It organizes information into dimensions such as time periods, products, customers, and locations; and measures such as revenue, profitability, and customer retention.

By organizing information in this way, multidimensional analysis lets you better understand your business. You can follow trends in customer behavior; spot anomalies across products; compare annual sales in a region by product line or customer type; see performance trends over time; even test a strategic plan.

The best-selling multidimensional analysis solution

Analysis with Cognos 8 Business Intelligence (BI) is based on the industry's acknowledged best-selling OLAP and analysis software, Cognos PowerPlay®. The new analysis capability with Cognos 8 BI expands this functionality to cover a complete range of data sources and to provide seamless movement among reports, queries, and analysis.

You can perform multidimensional analysis quickly and easily with Cognos analysis. Access and analyze large data sets efficiently with fast and predictable response times. View trends over time and isolate and explore issues, drilling down to details and moving from one dimension, or level of information, to another.

Deep comparative analysis

Cognos analysis complements the conventional multidimensional analysis features—drill-down, slice-and-dice, ranking, and sorting—with extensive features and functions that simplify the complex analysis of large data sets.

Sophisticated filtering

Filtering excludes unnecessary data and helps you focus on only the most relevant information. Filtering options include context (showing a particular view of the data), suppression of nulls/zeros, and top/bottom values (top 100 customers or lowest 50 sales performers).

You can also create and combine user-defined filters to show information based on specific criteria, for example, a filter to find those products that are discounted more than 10 percent for the current year.

Asymmetrical analysis

Asymmetrical analysis lets you use different levels of nesting to integrate several rows and columns of data in a single crosstab or report. This provides easier recognition of key performance factors and other business influences. For example, you can quickly build one analysis that shows sales by geography together with sales by product, over a period of time.

Management of large data volumes

Cognos analysis manages large data volumes to improve software performance and limit overwhelming details.

This allows you to perform faster, more focused

analysis. Options for data management include searching the data tree only for required data (intersection values are not retrieved), filtering on crosstabs, and using subtotals to control the presentation of rolled up data.

Revenue		Prior YTD	YTD
Tents		\$16,570,227.26	\$19,860,897.58
Packs		\$5,095,093.26	\$6,273,583.42
Sleeping Bags		\$4,094,981.02	\$4,987,198.60
Lanterns		\$3,742,032.68	\$4,405,527.42
Cooking Gear		\$1,871,272.24	\$2,341,848.56
Top 5 Products Worldwide		\$31,373,606.46	\$37,869,055.58
Americas	Cooking Gear	\$523,891.72	\$699,134.36
	Sleeping Bags	\$1,265,955.08	\$1,694,823.98
	Packs	\$1,681,693.88	\$2,212,748.38
	Tents	\$7,136,383.14	\$8,931,122.62
	Lanterns	\$1,168,830.68	\$1,499,253.72
Local top 5		\$11,776,754.50	\$15,037,083.06
Asia Pacific	Irons	\$768,843.74	\$1,092,360.24
	Putters	\$301,264.10	\$452,720.82
	Woods	\$1,183,376.74	\$1,691,958.52
	Golf Accessories	\$83,166.32	\$114,057.44
	Binoculars	\$308,959.18	\$492,231.90
Local top 5		\$2,645,610.08	\$3,843,328.92
Central Europe	Cooking Gear	\$660,303.06	\$794,323.36
	Sleeping Bags	\$1,349,470.92	\$1,539,017.58

Asymmetrical analysis

Business-oriented calculations

You can perform calculations that exclude unimportant information (e.g., average performers) and provide comparisons or ratios that don't exist in the data source. This provides deeper insight into trends, changes, and other issues that can affect your business.

Calculations include ranking, arithmetic (sum, difference, round up or down), percentage (% difference, % of total), analytic (minimum, maximum, average, rollup), and statistical functions (standard deviation, percentile, quartile).

Flexible data modeling

Transformer, the Cognos data modeling and cube generation tool with Cognos 8 BI, extracts data from multiple data sources and transforms it into Cognos PowerCubes®. These dimensionally modeled data sets can contain hundreds of millions of consolidated rows of data and millions of categories.

The Cognos data modeling environment lets you design your PowerCubes by visually defining dimensions, levels, categories (members), measures, and other multidimensional data structures. You can also build business rules and calculations into your cubes. Transformer detects and suggests hierarchical structures automatically, and verifies the integrity of data elements that are specified as unique identifiers.

Revenue	2005	2006	Rank (2005)	Rank (2006)	Change in Rank	Total
Tents	\$16,570,227.26	\$19,860,897.58	1	1	0	\$36,431,124.84
Packs	\$5,095,093.26	\$6,273,593.42	2	2	0	\$11,368,676.68
Woods	\$5,140,278.52	\$5,811,129.12	2	3	-1	\$10,951,407.64
Rope	\$4,843,338.62	\$5,638,465.80	4	4	0	\$10,481,804.42
Sleeping Bags	\$4,094,981.02	\$4,987,198.60	5	5	0	\$9,082,179.62
Lanterns	\$3,742,032.68	\$4,405,527.42	6	6	0	\$8,147,560.10
Irons	\$3,259,908.04	\$3,630,962.32	7	8	-1	\$6,890,871.26
Watches	\$3,065,768.98	\$3,750,424.80	8	7	1	\$6,816,213.78
Knives	\$2,403,362.68	\$2,999,448.92	9	9	0	\$5,402,811.60
Tools	\$2,384,252.88	\$2,806,973.34	10	10	0	\$5,191,226.22

Analysis showing product ranking

Subsets

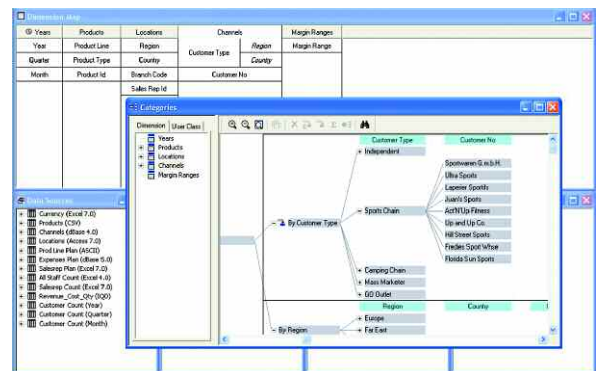
Subsets let you create logical groupings of information, based on criteria you choose. Examples include pattern matches and value thresholds (e.g., specific products or customers of interest). This provides faster access to relevant information and quicker response to business demands.

Scenario dimensions

Scenario dimensions help you analyze financial data. Instead of calculating just one set of figures, you can include several sets of figures or scenarios. Each scenario is based on different assumptions, such as planned, budget, and actual values; or best case and worst case. With this feature, comparative analysis between scenarios is much easier.

Drill-through to the underlying data

Cognos analysis lets you drill through to the underlying information to isolate and understand business performance or operational details. To get to the most relevant information quickly, you can control target destinations by the level in the dimensional hierarchy. Limiting a query in this way also reduces the impact on the database, since only the most relevant information is retrieved.



Data modeling is done in the Transformer design environment

Advanced multidimensional modeling

Transformer provides advanced modeling capabilities, and leverages the star and snowflake schemas that dominate today's warehouse landscape. Here are some examples:

- **Time-dependent processing** that augments straight year/quarter/month reporting with relative time data, such as month-to-month and year-over-year, QTD, YTD, and custom time periods (e.g., 13-month years).
- **Alternate drill paths** in a single dimension that provide different perspectives on the same data—view HR data by region, then by job function, for example.
- **Distinct category counts** that handle market basket and survey requirements. For example, see how many unique customers made purchases within a series of transactions.

Manageability

With Transformer, you can build PowerCubes quickly from any source. Automatic partitioning optimizes the way data is written to PowerCubes, and platform independence lets you leverage your existing environment.

Comprehensive logging and checkpoints

Designers can define the level of logging that occurs during PowerCube builds and easily monitor cube build status. PowerCube administrators can also configure checkpoints so that cube builds are efficiently restarted in case of hardware problems or query failures.

Automated cube builds

Using Transformer's Model Definition Language, designers are able to automate cube updates with a fully documented, open API.

Security

Based on user classes, administrators can restrict access to measures, whole or partial dimensions, or NewsBoxes in the Cognos portal. In large installations, user and user class security definitions can be managed in batch mode.

Adaptable to any data source

To take full advantage of the complete business view provided by multidimensional analysis, you need access to different types of sources including OLAP and dimensionally aware relational data. Transformer reads and handles source data from all major databases and in all major file formats.

OLAP data

In addition to PowerCubes, Cognos analysis leverages third-party cubes from IBM OLAP for DB2, Microsoft SQL Server Analysis Services (MSAS), SAP BW, and Hyperion Essbase, without additional development.

This includes extended support for MSAS security, member properties, name sets, and actions; as well as support for Essbase and DB2 substitution variables and member properties.

Relational data

By leveraging relational database modeling systems (RDBMS), Cognos provides analysis of relational databases, including dimensionally aware sources such as IBM DB2 Cube Views, Oracle Materialized Views, and Teradata Aggregate Join Indexes.

Modern data

Cognos analysis also uses XML, JDBC, LDAP, and WSDL data, as well as sources such as Excel and flat files.

Faster query response times

Cognos 8 BI optimizes network efficiency to give you fast query response times. The BI server processes and summarizes data in the application layer and only returns summarized results, conserving bandwidth and optimizing network performance. Users start with the highest-level information, and then perform trend and top-down analyses, so data access is minimized.

The server also processes queries and stores the results in the server cache. New queries are served from this cache when possible, speeding up query time and increasing throughput.

Web-based deployment

Analysis with Cognos 8 BI uses a zero-footprint, Web-based deployment model. This helps reduce the administrative burden on IT while improving user adoption. With centralized deployment and administration, IT does not have to install and manage client desktop software, minimizing deployment and maintenance costs.

The open, Web standards-based environment is built on the proven Cognos ReportNet architecture. This design allows organizations to take full advantage of their existing IT infrastructure and skill investments. The reach of the Web means users can easily access and distribute their BI data from anywhere in the organization with continuous availability.

Cognos 8 BI is built on a single, native Web services architecture for maximum flexibility. It works with your existing application and Web servers, portals, browsers, enterprise applications, platforms, databases, and security models. It supports Windows, UNIX, and Linux operating systems in uniform and mixed platform deployments. A single, fully documented API allows developers and IT users to customize, integrate, and rebrand the reporting interface to suit the organization.

Designed for enterprise-level deployment, Cognos 8 BI offers proven scalability to hundreds of thousands of users through an N-tiered, multi-server, multi-threaded architecture. This design provides full failover recovery and dynamic load balancing.

Intuitive search capabilities

Providing fast, effective search capabilities within your BI infrastructure reduces workload for IT by giving users access to the reports, analysis, and BI information that already exists in an organization. Search functionality helps IT increased user self-service, reduce report creation backlog, and reduce the workload associated with creating and maintaining drill paths between related reports. For users it provides faster access to the most relevant BI and unifies knowledge assets with performance information to provide better quality decisions-making.

Better performance management

Analysis is a key capability within Cognos 8 Business Intelligence. Cognos 8 BI is the only solution that provides complete BI functionality in one product, on a single, proven architecture. It delivers seamless reporting, analysis, scorecarding, dashboards, and event management. This simplifies your IT environment and the way everyone works with information. A variety of access modes let users interact with BI content using familiar applications or devices, such as a BlackBerry®, search

engine, or Microsoft® Office application. The result is high user adoption, better decisions, and greater agility across the organization. Cognos 8 BI is the clear choice for BI standardization and a cornerstone of better performance management.

About Cognos

Cognos is the world leader in business intelligence (BI) and performance planning software for the enterprise. Our solutions let companies improve and direct corporate performance by enabling all of the key steps in the management cycle—from planning and budgeting, to measuring and monitoring performance, to reporting and analysis. Cognos is the only company to support all of these key management activities with a complete solution that spans all of the essential components of CPM—enterprise planning, scorecarding, and business intelligence.

Founded in 1969, Cognos employs over 3,600 people and serves more than 23,000 customers in over 135 countries. For more information on Cognos please visit www.cognos.com

