

Data Mining Can Help You Strike It Rich

Do you own a gold mine? Sure you do! It's your information system, your financial system (even if it's QuickBooks), your operations system and all the other systems that hold a wealth of detailed information.

While the term business intelligence (BI) has many definitions, its main premise is to value information based on its relevance. BI's objective is to improve the timeliness and quality of information available to an organization. Business analytics (BA) is the function of gathering information in order to make decisions that achieve strategic goals.



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Every organization collects volumes of information, but few invest in mining the data and looking for the gold. Most organizations believe that a simple analysis of the obvious, such as days' sales outstanding or inventory turns, is sufficient. Really successful organizations, in any field, will mine their data — looking for the relationships, incongruities and missing pieces of data that reveal paths to success. Let's examine some of the different types of software tools and where they fit in:

Risk Analysis Tools

Risk analysis tools focus on the probability of a given outcome. There are some relatively inexpensive Microsoft Excel add-in programs available.

Inquiry Tools

Inquiry tools allow users to search for specific types of information and then

summarize them in useable formats. Report writers, like Business Object's Crystal Reports, do just that. They present the user with data collected from a database in an easily readable form. There are lookup functions within every financial package, many of which are also inquiry tools.

Analysis Tools

Analysis tools, such as report writers and spreadsheets, gather and present data.

Alert Tools

This unique family of products operates by sending an email to one or more recipients when an event occurs or by generating a report and sending it to a predetermined list of recipients, either via email or some other electronic means. A simple example of this is to send an email acknowledgement when an order is received or a travel itinerary for an online reservation is made.

Presentation Tools

Digital dashboards usually consist of a combination of charts, graphs, gauges and short reports or other pictorial representations. Think of them like your car's dashboard where, at a glance, you can see the current status of many different operations or financial conditions. Most enterprise resource packages today include dashboards that are sometimes very customizable and extensive in the breadth of data covered.

Data Warehousing

A data warehouse is usually one or more databases that hold copies of transaction data that have been collected, copied and structured for query and analysis. A great deal of planning must be done to properly design a data warehouse, including constructing the tools that gather the raw data from its original sources and transfer it to the data warehouse. Because this is a complex process involving multiple technologies, it is usually costly, inhibiting smaller organizations from maximizing its benefits.

Glossary

One of the prime objectives in BI/BA is to get the data you need and transform it from its raw form into valued information. This is the process of extracting data to discover hidden facts contained in the database. The BI/BA process includes many different terms, some of the more important ones being: *ETL* — Extract, Transform and Load is how data gets from its source database to the data warehouse.

Balanced Scorecard — usually a single-page report that has between 15 and 25 performance metrics that cover four business areas: learning and growth, business process, customers and finances. It is basically designed to tie the organization's operating plan to its strategic plan. This operation, too, requires significant planning and an excellent grasp of the data available to the organization. Measurements must also consist of qualitative items such as customer service metrics.

EVA — Economic Value Added is a financial performance measure developed by Stern Stewart and Company to capture the true economic profit of an enterprise. EVA measures the creation or destruction of shareholder wealth over time. This standard is being adopted by some of the largest BI/BA products as one additional vehicle for analyzing performance.

ODBC — Open Database Connectivity is a software standard that allows different software products to share a common means of extracting data from one source and using it in another. An example of this is to populate a spreadsheet with information gathered



from an ERP program.

OLAP — Online Analytical Processing is a technology that gathers data into “cubes” and then joins multiple cubes together into “dimensions.” OLAP defines the relationship between the dimensions and calculates all possible combinations, crunching huge amounts of data as a result. OLAP programs generally require extensive development costs and ongoing maintenance. Since an organization's needs change over time, these products are generally expensive to acquire, maintain and use.

PivotTable — Microsoft uses this unique capability in its Excel spreadsheet program to gather sets of data and essentially do the same thing as OLAP cubes. One difference is Excel's limitation of rows and columns. While the latest version of Excel 2007 has dramatically expanded the number of rows and columns, it still falls short for many organizations that have large volumes of data.

Make It Happen

Now that you know what BI/BA is all about, what's your next move? There are software products for every budget, from Excel to Qliktech to Cognos to Hyperion. Members of the New Jersey Society of CPAs Technology Resource Group can pose a question and someone in the group will try to provide some direction. Join the group at www.njscpa.org/committees. Let's not forget, each organization owes it to itself to maximize profits and efficiency by understanding all of the information it possesses. ■■

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