

# Next generation business intelligence

## Seven steps to improved business intelligence through data discovery

### ABOUT THIS PAPER

Traditional business intelligence (BI) approaches have fallen short in delivering the expected value and return on investment. High costs, lengthy implementations and increasing complexity have led to frustration and disappointment for many enterprises.

However, a new generation of BI tools is emerging. Data discovery tools promise to overcome many of the disadvantages of traditional BI tools, delivering more flexibility, ease of use and productivity at a fraction of the cost and time.

In this paper, learn how two large enterprises optimized their BI performance through data discovery and discover seven steps for effectively pursuing and implementing a data discovery approach to BI.

### Traditional BI tools: Late is useless

Does your enterprise have the right information, at the right time, to make the right business decisions?

Every month, a chief planning officer at an international company with operations in 18 countries faces that question. And every month, his job is on the line as a result.

A security company experiences rising telecom costs among the seven different providers it contracts with, but lacks the means to quickly pinpoint where each cost stems from.

Two different scenarios, yet for many enterprises, each points to one equally common challenge: the need to gather actionable analytics in real time and in a cost-effective manner.

For many enterprises, traditional business intelligence (BI) tools increasingly spell frustration, lost revenue and dwindling competitive advantage—a tough status quo to maintain in the midst of an already shaky economy. Indeed, many enterprises are finding it increasingly difficult to justify the huge systems footprint and IT investment that typically accompany traditional BI approaches.

While traditional BI options, such as query-based BI tools, are adequate in gathering analytics, they come with a sizable caveat—the enterprise must make the right data available exactly when it's needed. More often than not, a time-consuming cat-and-mouse game ensues to determine which of the various data warehouses and dashboards holds the right information.

But there's a silver lining to the BI status quo.

### Breaking the BI status quo: Data discovery tools

As traditional BI tools lose their power to pack a powerful BI punch—due primarily to high costs and lengthy timeframes associated with BI project implementation—a new generation of BI tools is emerging.

Data discovery tools offer a small systems footprint versus a complex stack of modules and layers that accompany traditional BI products. Rather than leveraging a costly stack of BI product modules to solve one given problem, a “mini” data discovery tool offers a single, detailed view into an organization's entire sweep of data, providing flexibility, ease of use and productivity at a fraction of the cost and time.

### Data discovery tools: Essential features

The strength of this new generation of BI tools rests upon the following features:

- **Minimal hardware and software investment.** Data discovery tools do not require the installation of a full technology stack. They also typically come with a significantly lower software investment cost than that of traditional BI products, such as SAS, Business Objects, MicroStrategy and Cognos.
- **Quick development and time to market.** In the absence of OLAP cubes, data discovery tools offer quick development time for evolutionary changes. A developer can execute most functional changes within one business day.

### BI case studies: Lessons for today's enterprise

Two BI case studies offer insight into how an enterprise in any market can seize the benefits of today's data discovery tools.

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#### Case number one

##### **The problem: Multiple vendors, multiple contracts and limited line of sight into costs**

One of the largest security and alarm companies in Spain had contracts with seven different vendors, yet lacked the means to gauge whether each vendor was providing services as contracted. That question became increasingly critical for the company to answer in the midst of a monthly bill close to 1.5 million euros (an amount the company even exceeded during peak periods of operation).

At the time, the company's financial analysis approach was non-automated, raising serious questions about its ability to catch possible billing errors.

Every month, the company received approximately 1,500 bills, which it divided into 200 files of different formats and sizes. Each file contained detailed communications records on 10 million calls/SMSs. With so much information in so many formats, the company faced an uphill battle to determine overall company costs as well as future cost projections.

##### **The solution**

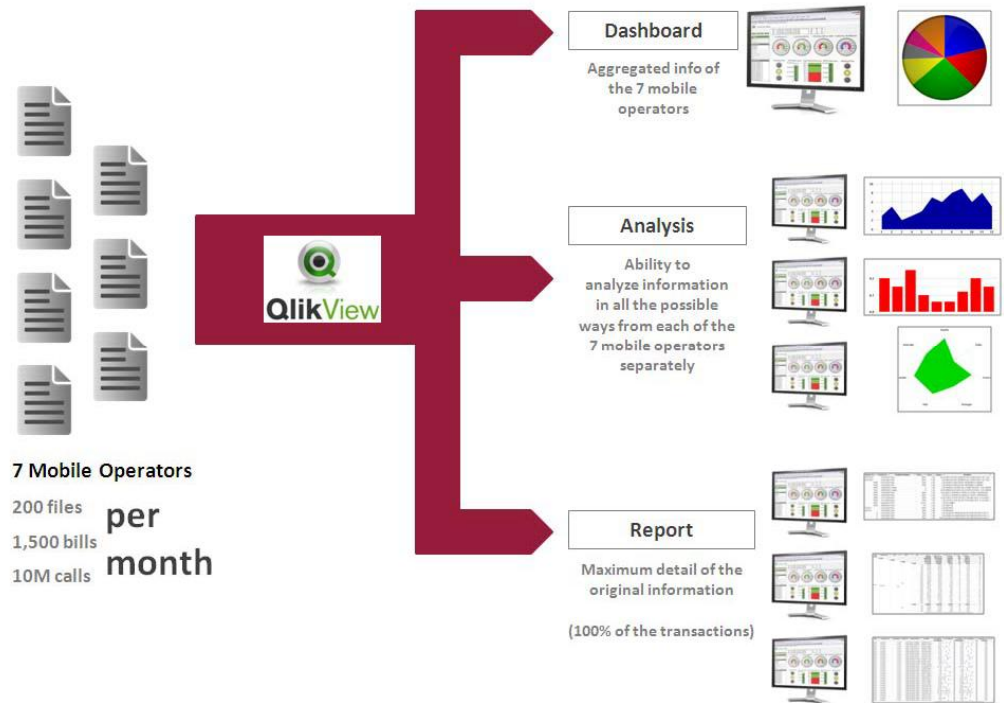
Over a three-month period, CGI and its client developed a QlikView application to process the avalanche of billing files. This streamlined approach occurred with the aid of a simple dashboard and analysis program (see graphic on next page).

The solution that ensued allows the company to quickly tally costs associated with each contracted service on a monthly basis. Information is displayed at different levels of granularity and customized according to user preference. The user can drill down further, assessing individual usage records associated with each line item—a critical step to verify costs in accordance with each provider's contract.

This line-item view allows the company to track the evolution of costs on a monthly and yearly basis. The resulting information serves as a powerful negotiation tool as the company considers additional telecom vendor bids on services.

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*With more than 30 holding companies worldwide, the enterprise faced the daunting task of compiling an accurate monthly financial snapshot of each company's debt structure, investment portfolio and meeting covenants...CGI proposed a financial dashboard based on the discovery tool QlikView.*



### Case number two

#### The problem: Global company, dozens of holding companies and the need for an accurate monthly finance report

Can your finance team quickly generate an accurate monthly finance report? Every month, the finance department of one of the world's largest infrastructure companies was faced with answering that question in advance of a board meeting.

With more than 30 holding companies worldwide, the enterprise had the daunting task of compiling an accurate monthly financial snapshot of each company's debt structure, investment portfolio and meeting covenants.

To tackle the surfeit of financial data across varying national currencies, the finance department manually revised rows of information and reference data across varying sheets. This traditional approach amounted to splicing and dicing data into Microsoft Excel and Access, which consumed more than two weeks of operations time until the final consolidated financial report was generated.

The use of this Excel/Access reporting methodology grew increasingly unsustainable through additional corporate mergers, purchases and sales.

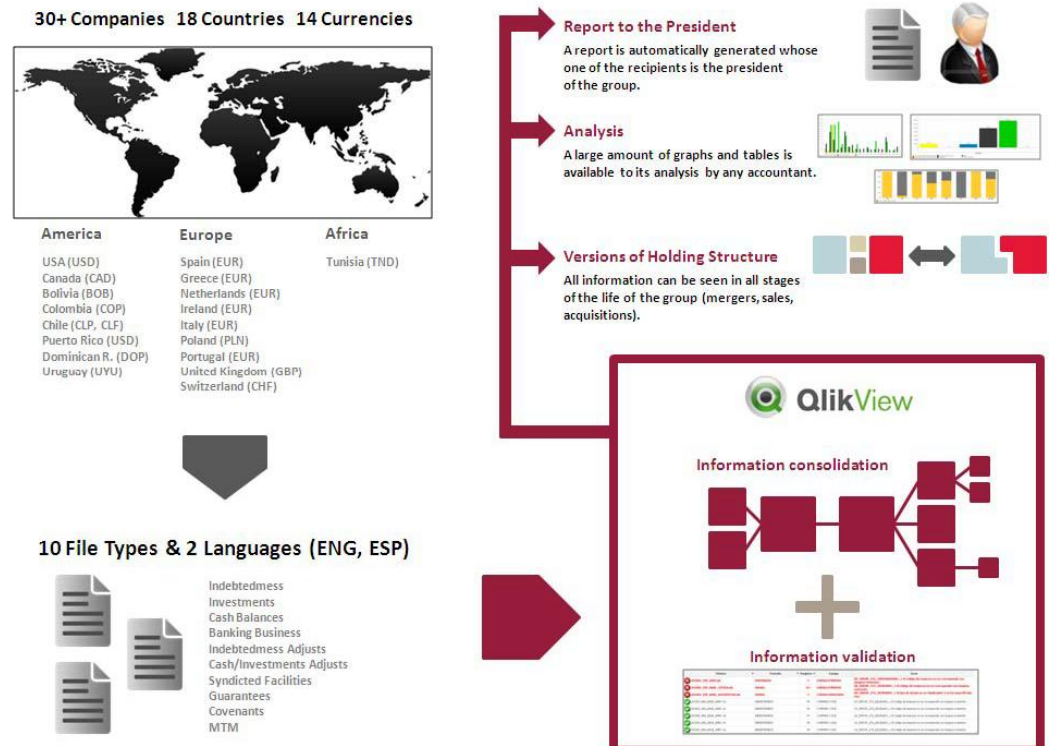
## The solution

CGI proposed a financial dashboard based on the data discovery tool QlikView. The tool included a dashboard with the ability to automatically generate reports and standardize input files from each of the organization's different operating companies.

The resulting financial dashboard now in place automates the reception of expected files. It also validates the file content of each. The application reports any errors, such as invalid data and incorrect data formats within the dashboard on a line-by-line basis. It also manages month-to-month shifts in company structure, such as mergers and acquisitions.

With the push of a button, the financial planning team can now easily load data. The end result is an initial financial report within one to two hours of launching the consolidated report task. The time saved is now dedicated to analyzing the data sent by the operating companies—a level of granularity that was previously unthinkable. The data discovery tool employed also includes the flexibility to implement change requests and modifications at a fraction of the cost of traditional BI tools.

*While data discovery tools hold tremendous promise, no two products on the market are exactly the same. Buyer education is critical to ensure a cost-effective and time-efficient investment.*



### New BI tools: Try before you buy

While data discovery tools hold tremendous promise, no two products on the market are exactly the same. Buyer education is critical to ensure a cost-effective and time-efficient investment. An enterprise can gauge the effectiveness of the new crop of BI tools through seven essential steps:

**1. Do a pilot project.** To assess the efficacy of a data discovery tool, an enterprise has to see it before it can believe it. Seeing requires rolling out a prototype. An effective prototype may put three to four vendors in competition. Through this comparative exercise, an enterprise can determine the following: the cost of each proposed tool; the length of time to implement the BI solution; ease of incorporating the tool into the enterprise's existing IT framework; the level of maintenance complexity of each proposed solution; the interface design (for example, Is it streamlined?); and the tool's flexibility of use (its learning curve, specifically).

**2. Extract, transform and load securely.** This process takes information from a data source, then formats, validates and loads it into a data warehouse or associated database. An effective data discovery tool allows the user to simply load the data into another source. In the end, the user serves as a lone, yet effective catalyst, to transform and validate data—without the aid of a team of technical experts.

**3. Determine if the BI tool has an adequate validation layer.** A dashboard is only as good as the information that it is provided. A validation layer within any BI tool is essential to clean out “bad” data from among the sources used.

**4. Create user buy-in.** Departments don't like change, particularly if that change is perceived as a threat to work scope. In the midst of an understandable reluctance to embrace new ways of gathering business intelligence, an organization must create user buy-in, persuasively showing how a new tool can ultimately improve work performance for all.

**5. Mold the user interface to individual taste.** If a data discovery tool can correspond to a user's individual preferences, half the battle is already won in creating user buy-in. Data discovery tools in general have a large repository of user graphs, tables and interfaces, which can be molded to address a user's visual interface preferences. With QlikView, each data set is accompanied by three different colors—a streamlined presentation that encourages minimal training.

**6. Give the IT department credit.** The typical IT department has likely already made a large investment in a stack-centric solution and may therefore be wary of a “cheap and friendly” tool that seemingly upstages that initial investment. However, if the department is presented throughout the organization as the catalyst for a new, user-friendly and cost-efficient technology, that reluctance may diminish.

**7. Keep expectations realistic.** BI requires a continuous approach, driven by user engagement. While an initial prototype may yield dazzling results within a matter of days, other BI issues may take longer to resolve. For example, final production environment dashboards may vary, along with the duration of time to set-up real data fees and transformations.

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## ABOUT CGI

At CGI, we're in the business of satisfying clients. A leading IT and business process services provider, CGI has 31,000 professionals operating in 125 offices worldwide.

Working in partnership with clients for 35 years, CGI has extensive experience in all aspects of IT management, from consulting and systems integration services to the full management of IT and business functions (outsourcing).

This know-how puts us in a unique position to help clients increase the effectiveness and efficiency of their business intelligence initiatives. We work with organizations of all types to help them select the optimal business intelligence solutions to improve their business performance.

To learn more, visit us at [www.cgi.com](http://www.cgi.com) or contact us at [info@cgi.com](mailto:info@cgi.com).

## The future of BI: Increasing functionality

Just one year ago, the BI market was defined by an "intensified struggle..." as Gartner put it, "...between business users' need for ease of use and flexibility on the one hand, and IT's need for standards and control on the other."

Today, "ease of use" now surpasses "functionality" as the dominant BI platform buying criterion. As Gartner notes, a new generation of influential business users is driving BI purchasing decisions through data discovery tools—not traditional BI platforms—with or without their IT department's consent.

Looking ahead, the market will continue to respond with an increasing tilt toward "easy to use" data discovery tools that offer flexibility years ahead of traditional data-mining products, as well as less prohibitive costs, maintenance requirements and skilled resource demands.

In the meantime, the consumer can expect a buyer's market ahead. The need to maintain market share and the fierce competition in the current climate will force all BI vendors to lower their licensing costs over the next two to three years. Hastening this trend will be continued consolidation within the BI market and the acquisition of BI companies by more generic product vendors.

Naturally, with that competition will come a continued push toward innovation, particularly to meet the demands of an increasingly mobile workforce. In keeping with the evolution of BI tools toward mobile tablets, leading data discovery tool suppliers are now investing in the development of new adapters for mobile devices and tablets. These adapters will allow a mobile workforce to upload new and updated data, visualize it, and make decisions on the run via their mobile tablets and smartphones.

Certain data discovery tool products have already taken a lead with the general release of adapters for mobile devices. In 2012, enterprises can expect a number of announcements and product launches that focus on this functionality.

A virtualized consultative platform is another technological breakthrough, which leading data discovery vendors are helping to shape. An enterprise can now effectively share information in a secure, virtualized format with multiple users accessing and analyzing the same document or dashboard remotely. These advances will help today's enterprise realize that ultimate critical need—to have the right information, at the right time, to make the right business decisions.