Assessing the Value of Business Intelligence

A White Paper by Brio Software™

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BRIO SOFTWARE™

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The Challenge

One of the most difficult issues IT groups face is evaluating new technologies such as Business Intelligence (BI) software. Often IT employs a Total Cost of Ownership (TCO) model to evaluate how the technology affects the bottom line. These models, designed initially for PC deployments, are extremely complex and may not take into account your organization's specific BI requirements. Alternatively, IT may engage a consulting firm to recommend a short list of favorite vendors and perhaps even the criteria upon which to evaluate the vendors. Unfortunately, there is no guarantee that the vendors on the short list will provide the best solution for both the IT groups and the business users.

Unless you fully consider both sides of the equation – key costs and end user value – you will deliver an unnecessarily expensive "solution" that users ultimately reject. So how do you effectively evaluate a business intelligence solution? It is critical to identify those areas that constitute the majority of a BI deployment's costs. Questions such as: "How quickly can it be implemented?" and "How many IT resources will be required to maintain it?" help you get to the heart of a BI solution's TCO. Additionally, you must assess the value the BI solution provides the end user community. Is it easy to use? Can users answer their own questions without involving IT? Does the BI solution meet the various needs of each type of end user from the power user to the report consumer?

Critical Cost Factors

Studies on technology deployments identify dozens of cost elements IT should consider when calculating TCO. However, only a handful of variables determine nearly the entire cost of a BI deployment. They can be placed within three major categories:

1. Purchase costs
2. Implementation costs
3. Maintenance costs

By focusing on these critical cost factors, you can confidently understand nearly the entire cost of a BI solution without becoming bogged down in the complex TCO models that are not suited to analyzing BI deployments.

Purchase Cost Factors

Primary Considerations:

- Accurately matching analytic power with user needs – don't over-equip
- The versatility of the BI solution - from ad hoc query and drillable reports to dashboards
- Tight integration between all functions within the solution

Because purchase costs typically consume one third of the total cost of BI, you must carefully evaluate your business users' needs and purchase the solution that best meets those needs – no more, no less. Vendors too often convince customers to buy more BI power than they need, which unnecessarily increases the cost per user and drains budgets. Consequently, IT groups must resist the temptation to provide ad hoc capability to everyone. Although ad hoc querying capability is a potent weapon in the hands of a skilled analyst, it places more demands on clients and servers, which of course adds costs if new servers must be purchased or clients upgraded.

In its own TCO research, Gartner promotes the practice of understanding user requirements. "It is almost as inappropriate to provide a worker with too much functionality as not enough. Functionality adds complexity; complexity adds cost." [1] In the end, carefully segmenting the user community by need enables IT to properly equip – at a reasonable price – each user in the organization who requires BI.

The versatility of the solution is another purchase consideration. Vendors must provide a variety of tools and delivery mechanisms to meet the disparate needs within a business. Offerings should at a minimum include a consistent, easy-to-use interface, powerful ad hoc querying capability, drillable reports, and dashboards. Organizations that require flexible report distribution should seek some sort of adaptive reporting capability. That is, the ability to build and distribute a report once while allowing each user viewing the reports to see only what she is authorized to see.

In fact, a powerful, flexible reporting solution will satisfy the vast majority of business users. META Group concludes, "…as the number of users expands, business intelligence tools are becoming available to people who are not business analysts in any sense, and do not need, or intend to do, complex analysis, but, instead, need to look at reports." [2] In fact, nearly 80% of all business users need to view parameterized reports only. To give them more is to waste money and over-burden resources.

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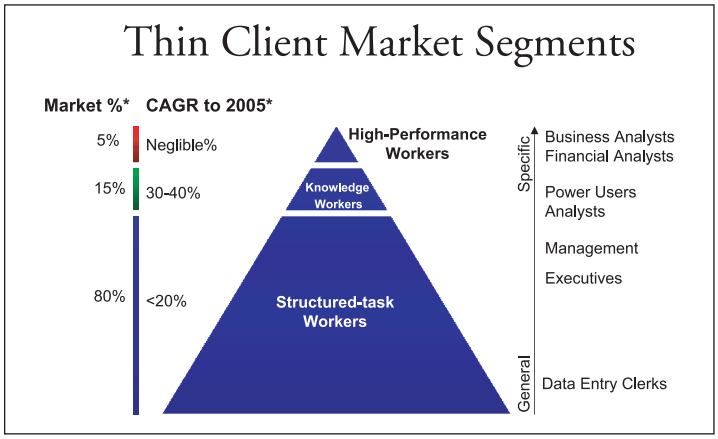

Figure 1 *80% of all business users need to view parameterized reports only. Equipping them with powerful, drillable reports meets their requirements without overburdening IT.*

Any BI solution should enable easy dashboard creation. A rapidly growing trend is the use of dashboards to deliver key performance indicators in a graphical format. The dashboards are highly intuitive because the graphics are drillable, allowing even the least technical users to make discoveries quickly and easily.

A final purchase consideration is the level of integration between the various products as well as the different delivery mechanisms. For instance, does the BI solution enable users to easily distribute reports from within the query tool or must they open a separate tool with a different user interface? Can Web and non-Web users share reports with each other or does the Web product create different file types than the client/server version? These capabilities are critical to successfully rolling out a BI solution. If it cannot perform such basic functions, it is not worth any purchase price, no matter how inexpensive.

Key Questions to Ask about BI Purchasing Costs

Understanding the basic capabilities of a BI solution enables IT to deliver the most cost-effective, applicable analytics to each user group within the organization. With

that in mind, you should ask BI vendors the following key questions to determine whether they will provide the best solution for the cost:

1. How flexible is the reporting solution? Does it provide adaptive reporting?
2. How easy is it to create dashboards?
3. How well integrated are your query and reporting tools?
4. Are the user interfaces identical for each type of tool and for each delivery mechanism? Are they easy to use?

Implementation Cost Factors

Primary Considerations:

- Time to deploy
- Ability to leverage existing environments – no proprietary obstacles
- Minimal training requirements

Although consulting costs and user downtime add significantly to the overall costs of implementation, the lion's share of implementation costs is the time of the IT personnel required to deploy the BI solution. The basic formula is the value of their time multiplied by the length of the implementation. Generally, three types of IT professionals are necessary to deploy (and maintain) a BI solution:

One of the most important issues that affect time to deploy is whether the solution can leverage the existing environment or if IT must create a proprietary semantic layer through which the users will access the data stores.

1. Database Administrators to manage the connection of the BI tools to the data stores.
2. Programmer Analysts to build metrics and develop reports.
3. Systems Administrators to manage user accounts and resolve network issues.

Some BI vendors require more resources, depending on the complexity of their products. Because an IT professional's time is so valuable – anywhere from $60-$100 an hour – it is imperative that the BI solution be quick to implement. One of the most important issues that affect time to deploy is whether the solution can leverage the existing environment or if IT must create a proprietary semantic layer through which the users will access the data stores.

Many of the leading vendors require that customers build these complex, proprietary layers before any business users can begin to use their tools. Implementation costs skyrocket – and time to deploy expands to months – as IT staff struggle to create the semantic layers for each data source. It is essential that IT gain an understanding of the time to deploy of any BI solution under consideration. Several businesses have learned a painful and expensive lesson by not exploring each vendor's time to deploy claims.

Another implementation cost variable is training time. If the solution is simple to learn, with intuitive and consistent interfaces, training costs are minimized. Researching third party sources for ease-of-use metrics will help identify the BI solutions that your users will learn quickly. All vendors claim their tools are easy to use. It pays to seek confirmation from objective sources.

Key Questions to Ask about BI Implementation Costs

Implementation costs can consume a large portion of an IT budget. In order to identify those vendors who will offer the lowest costs and the highest value for BI, ask the following questions:

1. What is your average time to deploy for a company our size?

2. Can your BI solution leverage our existing environment or does it require proprietary semantic layers be established?
3. Is your solution recognized by any objective sources as easy to use?

Maintenance Cost Factors

Primary Considerations:

- Ease of metadata maintenance
- Value to all levels of users
- Simplicity of upgrade process

Since maintenance costs can consume anywhere from one third to over half of all BI costs, the ongoing expenses of BI should be weighted more heavily than implementation costs and must be carefully examined before choosing a BI solution. As with implementation costs, maintenance cost factors are a function of time and IT personnel costs, but are incurred indefinitely. These costs can get out of hand if the wrong BI solution is implemented. Asking the right questions surrounding maintenance will help you quickly assess the major portion of a BI solution's TCO.

The ease or difficulty of metadata maintenance is a critical cost consideration, especially in today's fast-changing climate. Query and reporting needs are dynamic in any business. New data sources are added and users' analytical requirements change constantly. IT resources spend most of their time updating changes in metadata to reflect the most recent modifications. Unfortunately, just as some vendors' proprietary semantic layers add complexity and expense to the implementation process, they also complicate metadata maintenance. Each time metadata changes are necessary, IT must reconfigure the metadata in two places – their own and the vendor's proprietary metadata.

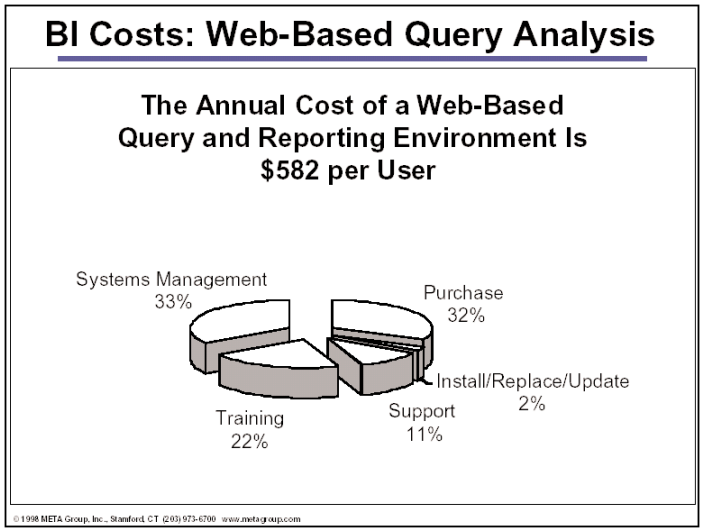

Figure2 *Because maintenance costs consume the largest portion of a BI solution's total cost of ownership, companies must consider the long-term costs of any BI solution.*

It is also important to consider whether a BI solution enables your best analysts to make important discoveries while also allowing other users to gain valuable insights from the data. Vendors selling the complex semantic layers claim the layers simplify the underlying complexities of the data stores so any user can easily analyze the data. Ironically, not only do the semantic layers complicate life for IT, but they also handcuff the power users of an organization who cannot freely access the data as they require. Instead, they are limited to the drill paths created by IT when the semantic layer was built. Consequently, when they cannot drill where they want, they must have IT reconfigure the semantic layer. This is an expensive inconvenience as it unnecessarily burdens the support staff and hampers productivity while users wait for the changes to occur.

A more cost-conscious strategy for IT would be to investigate BI solutions that offer a simple semantic layer for non-technical users, but that also enable power users to drill anywhere within the data. Power users make discoveries

only when they have the freedom to navigate where their questions take them. It is critical to every business that their best analysts remain unrestrained by their tools.

A third major factor to consider when evaluating maintenance costs is the simplicity of the upgrade process. As more organizations demand Web-based delivery of BI to ease maintenance costs, it is important to understand how different vendors enable upgrades. So-called zero administration clients are an effective way to transparently upgrade a user's BI tool via a plug-in or an applet that automatically detects a client's software version. In most cases, it is a simple process. However, some vendors do not permit incremental upgrades and require customers to uninstall the old version before installing the new version. The same concerns apply to server upgrades. Taking servers offline in order to upgrade software is a risky proposition. Clearly, this kind of upgrade requirement is inefficient and time-consuming for IT departments. Wise buyers investigate the upgrade process of every BI vendor they are evaluating.

Key Questions to Ask about BI Maintenance Costs

The above issues should be the main criteria when calculating a vendor's maintenance costs. To take a short term view of a BI tool is an expensive mistake. As a guideline, ask your BI vendors to answer the following questions:

A more cost-conscious strategy for IT would be to investigate BI solutions that offer a simple semantic layer for non-technical users, but that also enable power users to drill anywhere within the data.

1. How is metadata managed with your solution?
2. Do power users have the freedom to make their own discoveries or are IT resources required to respond to their needs each time they change?
3. What is the process for upgrading your software?

Brio Delivers Low Cost and High Value

From its beginnings, Brio Software™ has approached the development of BI tools from two equally important perspectives: the needs of the business user and the demands the tools place on IT. As a result, Brio continues to be universally recognized as the easiest BI solution to use and administer. Applying this evaluation model to Brio reveals its advantages across all three cost factors.

Purchase Cost Factors

Brio provides the versatility that companies need in a BI solution, from ad hoc querying and interactive reports to executive dashboards. Additionally, Brio's integrated solution provides the same look and feel whether in client/server mode or on the Web. Other BI tools demand that users learn up to five different interfaces for various tasks, which not only increases deployment time, but damages productivity as users struggle to learn their tools on the job.

Implementation Cost Factors

Brio has demonstrated fantastically short deployment times in a variety of environments. For example, an energy company faced with federal reporting requirements, had two weeks to implement an automated Web reporting solution as well as an ad hoc querying solution. With a core team of five, Brio was implemented within the two-week window, with only fine-tuning remaining. Moreover, the system requires only one-person day per month of maintenance.

In another instance, Brio met the customer's implementation timeline demands with room to spare. The company, a large chemical manufacturer needing an intuitive and robust analysis and reporting solution for its ERP data, insisted on a solution that could leverage its existing environment quickly. Despite the size of the project, Brio met its targets eight months early. Now reports that executives received monthly are available to them daily. It is so easy to use that a report developer now delivers the same amount of reports in one day that previously took three full days to produce.

Brio's intuitive interface also shortens deployment time significantly because training time is minimized. In one instance, a customer conducted a mass training session in two hours, allowing users to begin analyzing their business immediately.

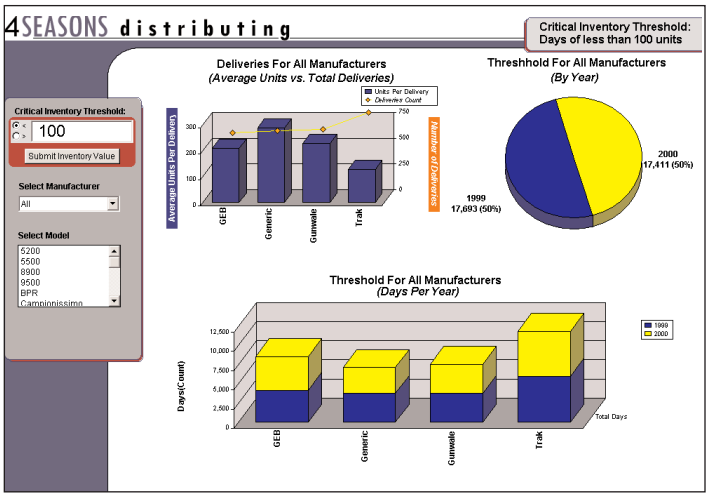

Figure 3 *Easy-to-build dashboards are a hallmark of Brio Software. Dashboards provide an intuitive interface with powerful analytics that provide answers with the click of a mouse.*

Maintenance Cost Factors

Brio demonstrably reduces maintenance costs, which contribute over half of the total cost of ownership for BI. Brio's greatest cost saver is its ability to leverage existing environments, unlike competing products that require customers to maintain a separate proprietary semantic layers that only add complexity for IT and power users.

One of the largest computer makers in the world realizes the full benefits of Brio's solutions. The company had several needs that were going unmet by their current BI vendor. Needing a Web-based analysis and reporting solution, they turned to Brio. The company now puts reporting power into the hands of users, freeing IT to handle more pressing issues. Brio's analytic flexibility, ability to leverage their existing environment, and low maintenance requirements provide them with a cost-effective and valuable solution.

Another company that benefits from Brio's low cost of ownership is a large insurance firm that needed a powerful BI tool with a high business value and low TCO. Using Brio to generate corporate key performance indicators, employees instantly drill down to more specific metrics to measure individual performance. An added benefit is the savings in the IT group. The Manager of Decision Support says, "We have never needed to assign a dedicated IT person to support the Brio implementation, a value statement in itself about how much we're saving in back-end maintenance and support costs."

Another important maintenance cost savings is Brio's simple incremental upgrade process. Through its zero administration Web-based client, Brio transparently upgrades its software without involving the user or IT. Other BI solutions may require a complete removal of the earlier version before the newer version can be installed, resulting in costly delays and downtime.

Meet All Users' Requirements

To make an intelligent, cost-effective purchase decision, IT groups must accurately determine user requirements and properly align those with the BI vendor who best meets those needs. Brio's flexible reporting solution addresses the needs of the roughly 80% of users who require only to view and drill into reports while also providing powerful multidimensional analysis for those who demand complete freedom to answer their own questions. No company can afford to restrict their best analysts with unnecessary features designed to help less sophisticated users.

In the end, total cost of ownership involves the ability of the BI solution to meet the different demands of each user group flexibly and powerfully. Organizations that buy more analytical power than they need are wasting valuable resources and increasing the cost per user unnecessarily. By evaluating the most critical cost components of a BI solution – purchase costs, implementation costs, and maintenance costs – IT groups will save uncounted hours of detailed evaluation and identify the best BI solution for their needs quickly.

It all begins with an assessment of user requirements. META Group emphasizes the importance of understanding user requirements before all else. "Start analyzing what the real requirements are of your user community. What is the value, what is the solution; what is the capability that people are looking to get? Then you can map that back across various architectures and product categories…to identify the cost to address a high-end analytical user, versus the broad user population that needs reporting." [3]

Total cost of ownership evaluations do not have to be time-consuming, detailed calculations to yield the best technology value. This modified TCO model is an easy, efficient method to quickly identify the most cost-effective and valuable BI solution for your organization.

Notes: 1. Gartner, Inc., *TCO: A Critical Tool for Managing IT*, Redman, Kirwin, and Berg, p.30. **2. META Group,** *ROI and Cost of Ownership*, Cearley, Folger, et al., p. 34. **3. ibid**, p.38

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