



---

Factors to Consider When Evaluating  
Open Source Business Intelligence Solutions

**Author:**

Marc Rueter  
Director, Sales Consulting  
Tableau Software

Dan Jewett  
VP, Product Management  
Tableau Software

**Date:**

05/13/2009



In difficult economic times, IT organizations are often looking for ways to save money on enterprise business intelligence (BI) projects. They wonder if it is the right time to take the leap into open source software. Open source is attractive because there are no new software license costs. Companies often think that by abandoning commercial BI platforms in favor of developer-driven open source software, they are ushering in a new era of low cost business intelligence and will see increased use of BI within their organization.

Unfortunately these expectations seldom come to fruition. There are four reasons for this:

- **Hurdles to Business Adoption:** The focus on building something thought to be “low cost” becomes more important than the essential question: Will anyone use the developed application?
- **Total Cost of Ownership (TCO):** Because measuring the true TCO for projects is difficult, organizations don’t do it and fail to recognize the hidden costs of open source.
- **Time to Production:** Having a solution in production today vs. waiting for an open source solution to be configured and developed is typically overlooked.
- **On-going Change Requests and Feature Improvements:** As users clamor for more reports and dashboards, on-going report writing becomes a dreaded chore for IT.

### It’s Not a Deal if No One Uses It

Ultimately, nothing about a software solution matters if nobody uses it. The stories of organizations that have developed open source BI solutions only to find that a very small number of business people adopt them are legendary. In fact, a recent study indicates that just 14% of BI applications are being used by their primary audience: the business person.

Why? There are two related reasons.

First, as hard as they may try, the IT team can’t think of every report variation that business users might want. It’s just not possible for them to do it: business users change their minds, new needs come up, and information changes. When IT does develop a report and submits it to users, it is typical that the report goes through multiple revisions to get it “just right.” This becomes not only a cumbersome and constant process, but a lengthy one fraught with delays. The dream of rapid-fire intelligence for end-users instead turns into a stream of new IT projects.

The reason for this costly back and forth is that open source approaches to business intelligence are fundamentally developer-driven, not user-driven.

|                                      | OPEN SOURCE   | TABLEAU   |
|--------------------------------------|---|---|
| <b>Hurdles to Business Adoption</b>  | <ul style="list-style-type: none"> <li>Lack of User Adoption</li> <li>Static Reports Only</li> <li>Paid User Training</li> </ul>  | <ul style="list-style-type: none"> <li>Free Training</li> </ul>   |
| <b>Total Cost of Ownership (TCO)</b> | <ul style="list-style-type: none"> <li>Low License Costs</li> <li>Application Development and Roll-out Costs</li> <li>Production Costs, Support Fees</li> <li>Paid IT Training &amp; Support</li> </ul> | <ul style="list-style-type: none"> <li>Named User/Core License Costs</li> <li>Roll-out Costs</li> <li>Maintenance Fees</li> <li>Support Included</li> </ul> |
| <b>Time to Production</b>            | 3 to 6 Months   | Days or Weeks   |
| <b>On-Going Report Writing</b>       | Requires Trained Programmers  | Users Handle  |

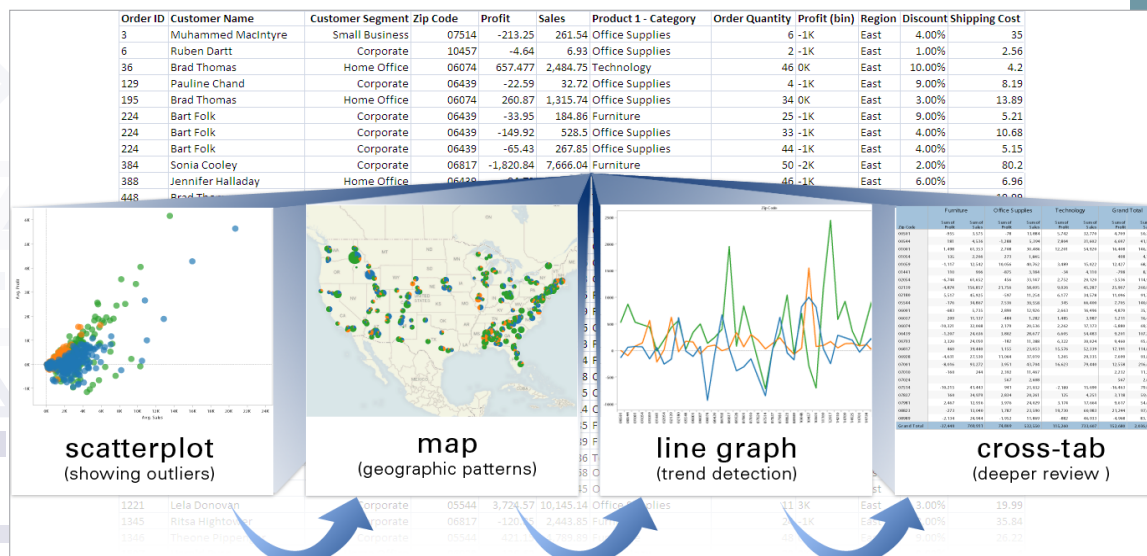


These means that the business intelligence talent in IT departments is responsible not just for deploying the BI infrastructure, but also for producing the dashboards and reports that end-users need. If instead business users had access to simple user interfaces that let them ask their own questions, this problem would disappear.

A second problem is that the dashboards and reports that are produced by open source systems are themselves difficult to locate, navigate and use by end-users. They require days of end-user training or even require the business side to develop its own technical experts. Most end-users abandon the learning process and just download data to Excel where they find it easy to use.

People who understand rapid-fire business intelligence alternatives like Tableau know there's something missing in the shallow report writers, charting wizards and dashboards found in most open source business intelligence applications. While reports, charts and dashboards are indeed useful, they leave out the freedom to ask your own questions. A report, for instance, shows facts and numbers but not the patterns or trends behind them. A chart shows conclusions, but not the thoughts behind it. In open source business intelligence platforms, business users can't use a report or chart to ask questions and think further. The thinking has taken place already and the resulting reports are little more than a show.

Business users need to be able to ask a question, get an answer, and ask follow-up questions—all using easy visual interfaces. A story unfolds from one visual summary to another. They maintain train of thought without taking their eyes off their data. Later, they can retrace the story to rethink, explore further and share. In short, rapid-fire business intelligence allows people to go in any direction with their thoughts.



Rapid fire business intelligence needs to enable users to easily interact with their data, creating new views and answering questions with just a few clicks.

*If an open source project requires an average of six months of development time, what is the opportunity cost of not having BI available to your business users during those six months?*



## **True Total Cost of Ownership (TCO) Is Rarely Recognized**

Total cost of ownership is a financial estimate designed to help companies assess direct and indirect costs related to capital investments such as computer software. Often TCO is not calculated for internal development projects, or when the software is free. However, if you are about cash flow, it is critical to calculate TCO for all projects regardless of the initial capital outlay.

In the case of open source, just because a company does not charge for licenses upfront does not mean there are no direct costs. Open source software companies are commercial ventures backed by investors and seeking to earn profits. Their revenues are captured differently than commercial software typically including support fees, implementation fees, training fees, upgrade fees, and fees for warranty or premium versions. All of these mean real budget in terms of cash expenses, headcount and time.

Open source BI software applications are developer-driven: They are intended to be programmed by specialists. As a result, there are considerable development and implementation costs to installing and maintaining one. Even if you have programmers or developers already on staff, there are significant opportunity costs: if your developers are writing BI reports, what are they not doing?

Indirect costs are somewhat harder to put a price on and include lost productivity and system downtime. These costs, however, are vital to evaluating TCO. Despite the perception that indirect cost savings are a hard sell to executive management, indirect costs can make a significant difference in TCO, especially when TCO is calculated over the life of the application's use. It's a mistake to think that the total cost of a BI solution is merely found in new software licenses.

## **Time to Production Matters**

The time it takes to get any value out of a system or project is often excluded when evaluating BI alternatives. If an open source project requires an average of six months of development time, what is the opportunity cost of not having BI available to your business users during those six months?

This becomes even more significant because this is typically the only factor of the TCO that is perpetual – meaning that if time to value is slow, then it will be slow for every successive iteration, change, and expansion of the project. Likewise, if it is initially fast, then it will continue to be fast in the future. The reality is that in today's economy, people need answers now, not in six months. Tableau is the only solution that can deliver business insight on the first day of the free trial. Does time to value matter to your business intelligence project?

Related to this is the value your users put on a solution they can get quickly. When an IT department gathers requirements and then goes dark for months while the solution is developed, two things happen. One, business needs have often changed, and the solution no longer meets business users' needs. And two, because IT has gone dark for so long, business users lose interest, perceive that the solution is no longer relevant, and therefore are less likely to use it.

## The Dreaded Chores of On-Going Report Writing and Feature Improvements

The initial application development of an open source solution is interesting for members of a development team. They get to learn a new system while building the logical elements, including the user interface. But within weeks of deploying version one, the reality sets in: hard to use applications built for traditional IT buyers force you into years of custom report-writing, change requests and on-going feature improvements.

Most developers hate writing reports. They feel like their skills are better used elsewhere – and they're right. Even users dislike having to specify reports and then make change requests when the report is not exactly what they thought it would be. Enabling business users to easily produce their own reports and dashboards will result in a more flexible and lower cost solution.

### Consider the Tableau Alternative

There is a better way to get the perceived benefits of open source solutions: one that delivers on the promise of a low cost solution that business users love. Tableau Software provides rapid fire business intelligence solutions that are not only a fraction of the TCO of open source solutions, but also deploy in a tenth of the time. It is a revolutionary answer for business intelligence.

Tableau is built to access data in your existing infrastructure or BI stack. There are no requirements to reconstitute your data in a proprietary silo. Because of that, Tableau is a low risk investment. Whether you're an organization with SQL Server, MySQL, Oracle, Essbase, Teradata, Excel, text files, etc. or any combination of those, Tableau can access and present those data sources easily. With Tableau, organizations can simplify the process of integrating diverse data sets into unified dashboards.

At a low license cost per user, Tableau provides cutting-edge analytical capabilities that can have an immediate impact on your users. It's free to trial and easy to set up. Training and support are included. And best of all, it lets your users rapidly answer the questions critical to your business. Tableau represents real software innovation: easily deployed, rapidly embraced by end-users, and requiring virtually no ongoing support costs.

Mike Kraemer, Data Abstrator, Clinical Effectiveness of Overlake Hospital recently pursued two open source BI alternatives. In his words:

*"I wanted to make up a dashboard so I tried Jasper and Pentaho. I never got either to work. Interfaces were okay. Pentaho talks about the dashboard function but I never could get it to work. Neither product could read Excel files which I thought would be very basic. So I converted a large spreadsheet to comma-delimited text format and couldn't read it either. I gave up after spending a couple hours on their forums and such. I remember the first download of Tableau and being into the data in less than a couple of minutes. So much power..."*

*Tableau Software provides rapid fire business intelligence solutions that are not only a fraction of the TCO of open source solutions, but also deploy in a tenth of the time. It is a revolutionary answer for business intelligence.*

*Tableau represents real software innovation: easily deployed, rapidly embraced by end-users, and requiring virtually no ongoing support costs.*

### Example: Dashboards & Analytics for 100 people

Let's imagine a situation where an organization wishes to provide interactive web analytics and dashboards to 100 users.

Task: Create interactive web dashboards for 100 employees

|   | Open Source  | Tableau   |
|---|--|---|
| <b>START UP COSTS</b>   |  |   |
| <b>License cost per application</b>   | \$0<br>(No cost for open source)   | \$84,400  |
| <b>Additional costs for premium/warranty modules</b><br>Open source solutions often charge for premium versions or for versions under warranty.   | 25,000   | 0   |
| <b>Cost of additional hardware</b>  | 10,000<br>(Dell 8 core server)   | 10,000<br>(Depends - can run on existing)   |
| <b>Training admin/ developer staff</b><br>Administrators and developers have to be trained. Often there is a community where some training resources are available for free.  | 14,000<br>(5 developers \$2K per person; 2 administrators \$2K per person) | 0<br>(included)   |
| <b>Subtotal</b>   | <b>\$49,000</b>  | <b>\$94,400</b>   |
| <b>DEVELOPMENT COSTS</b>  |  |   |
| <b>Professional services costs associated with installation, development and roll-out</b>   | \$12,000<br>(\$1500/day, 8 days)   | \$2,000<br>(for KickStart program, which is not required)   |
| <b>Cost of developing initial reports and dashboards</b><br>Open source tools are development platforms. So you will be building your own applications and reports, typically with expensive developer or IT staff. Tableau's model is that business users are able to make any and all modifications to their reports and dashboards through the analytical process. | 100,000<br>(internal staff, 4 people, 12 weeks)                            | 20,000<br>(users develop their own work, but there are opportunities for specialized query development) |
| <b>FTEs to manage user requirements and develop initial roll-out</b><br>With any custom application, someone must manage user requirements and roll-out.  | 25,000<br>(1 project manager, 12 weeks)                                    | 4,167<br>(1 project manager, 2 weeks)   |
| <b>Training end-users</b>   | 9,900<br>(\$99 per person)   | 0<br>(included)   |
| <b>Subtotal</b>   | <b>\$146,900</b>   | <b>\$26,167</b>   |
| <b>PRODUCTION COSTS</b>   |  |   |
| <b>Support fees</b>   | \$37,500<br>(\$375 subscription based per user)                            | \$0<br>(included)   |
| <b>On-going technical support costs</b>   | 7,200<br>(incident support - 24 incidents first year)                      | 0<br>(included)   |

|  | Open Source  | Tableau   |
|--|--|---|
| <b>Ongoing cost of developing new reports and processing change requests on the old ones</b>   | <b>25,000</b><br>(internal staff, 4 people, 3 weeks)                     | <b>10,000</b><br>(users typically develop their own work but there are opportunities for specialized query development) |
| <b>Cost of testing and upgrading open source modules</b><br>Upgrade modules typically require extensive testing before they can be put in production. This includes validating compatibility with hardware, operating systems, etc.  | <b>25,000</b><br>(1 QA tester, 12 weeks)                                 | <b>0</b>  |
| <b>Internal support</b>  | <b>75,000</b><br>(1 mid-level FTE)                                       | <b>7,500</b><br>(10% of 1 mid-level FTE)  |
| <b>On-going user training</b>  | <b>8,333</b><br>(1 project manager to develop custom materials, 4 weeks) | <b>0</b><br>(included)  |
| <b>Subtotal</b>  | <b>\$178,333</b>   | <b>\$17,500</b>   |
| <b>BUSINESS PRODUCTIVITY COSTS</b>   |  |   |
| <b>Productivity losses based on "time to production"</b><br>Developer-oriented applications typically require weeks or months of development time – time lost to your business users waiting for analytical results.   | <b>\$50,000</b><br>(Depends; conservatively assume \$500/per user)       | <b>\$0</b>  |
| <b>Productivity losses based on application's ability to meet user needs</b><br>Initial implementations of reports and dashboards are often first-try, incomplete versions that users react to with deep criticism. Tableau's functionality gives users the opportunities to design reports and dashboards that meet their needs from day one. | <b>50,000</b><br>(Depends; conservatively assume \$500/per user)         | <b>0</b>  |
| <b>Subtotal</b>  | <b>\$100,000</b>   | <b>\$0</b>  |
| <b>GRAND TOTAL</b>   | <b>\$473,933</b>   | <b>\$137,667</b>  |

Because open source solutions require so much internal support, dedication of resources and requirements to purchase services and training, the total cost is well over three times the cost of the Tableau solution.

### But What About My Underutilized Staff?

We often hear organizations rationalize open source decisions by saying "It may take a lot of work to implement, but I have no budget and five people sitting around with nothing to do. So it is effectively free for me to implement the open source solution." But this argument is a fallacy.

With Tableau, those five people can get the solution up and running in a fraction of the time, with better results, and move on to increasing the sophistication and utility of your business intelligence results. This means that your internal customers will be realizing value from their purchase of Tableau in less time than with an open source solution. Additionally, the ROI is continual. Each modification, insight, finding and action that results from Tableau increases the ROI. Do you want your staff spending time configuring software and formatting reports, or finding and delivering insights?

*Because open source solutions require so much internal support, dedication of resources and requirements to purchase services and training, the total cost is well over three times the cost of the Tableau solution.*



In addition, those five people may be underutilized today, but in 12 or 18 months there could be a very different story. If you're locked into maintaining a customized open source product, it can be a significant drag on your resources when business gets busy. Additional headcount will almost certainly be necessary when the other demands on your group increase. This additional staffing will be particularly expensive because it will require specialized development talent.

## Conclusion

While an open source alternative may initially seem more economical or more likely to deliver rapid BI results, the reality is that deploying these solutions often costs much more than expected. User adoption, TCO factors, time to production and even on-going commitment to report-writing all mean the open source solution will require significantly greater budget and resources than Tableau.

In addition to cost, the open source system must be evaluated based on how well it can meet users' needs. How strong is the product's analytics functionality? Can an open source application provide users the ability to explore and visualize data? Does it continuously evolve and add new features based on users' requests? Can people share new insights with others with a few clicks?

Tableau Software is the revolutionary answer for rapid fire business intelligence. At a low license cost per user, Tableau provides cutting-edge analytical capabilities that can have an immediate impact on your business. It's free to trial and easy to set up. Training and support are free. And best of all, it lets your users rapidly answer the questions critical to your business.

## ABOUT TABLEAU SOFTWARE

Tableau Software, a privately held company based in Seattle WA, provides software applications for fast analytics and visualization. Tableau gives you the interactive power to see patterns, find outliers, and coax insights from your data. This exploration process enables you to dive into the data and play a key role in communicating your company's analysis efforts. Easily publish and share your interactive dashboards with others with little to no IT support.

Access a trial copy of Tableau Software at <http://www.tableausoftware.com/products/trial>