



The Hidden Costs of Business Intelligence Revealed, and How to Fight Back

CHARTIO

Introduction: How Much Does Business Intelligence Cost?

It can be surprisingly difficult to estimate the long-term costs of a business intelligence project. BI pricing isn't transparent and even when you know the numbers, it's difficult to estimate which options you're going to need. This can be an even bigger problem two or three years down the road when you realize you want to roll out BI much more widely in your organization.

You have a right to know exactly what your startup costs will be and how to reliably estimate your future costs, regardless of the scenario.

Sometimes, it seems that the more time you spend talking to vendors about your BI project, the less you know about the total cost of getting it done.

We can't do all your homework for you, but this white paper will introduce you to the unanticipated costs of implementing business intelligence, how to ask about them, estimate them, and mitigate their risks.



1. Buy Software that Scales Smoothly with Your Needs

You know you're going to need software to run your BI system, but it's surprisingly difficult to know in advance how much and which kind of software you'll need. Also, in many cases, you're also going to need dedicated hardware to run the software.

Users

Virtually any BI vendor will charge by the number of users (people who can perform analyses) and readers (people who can view dashboards and reports without creating them). In legacy "perpetual license" models, the initial cost per user is higher than the maintenance fee for subsequent years. This means your initial investment will be high relative to your total cost.

There are many reasons for this. Legacy BI vendors incur more costs early in the relationship. In addition to the cost of sales, they have to do significant work to get you up and running. However, by front-loading the cost of the system, [they can also increase vendor lock-in](#), making it unattractive to switch vendors in the future.

The annual cost per user for modern SaaS (Software-as-a-Service) business intelligence systems should remain steady, or even decline, as you add users. You should know exactly how much it will cost to add more users. The cost of SaaS also scales smoothly. There are no additional charges for server hardware and software as usage increases.

Once you've decided to implement a BI system, the per-user cost (plus the cost of additional training) can make it prohibitive to give more than a handful of analysts access to the platform. If your BI project is successful – and you want to roll it out to more users in your organization – you may find the additional cost outweighs the value created by increasing the number of users.

Be certain that your BI system doesn't charge prohibitively for adding users, and that it scales smoothly as the number of users increases.

BI Server Hardware

Unless you're running a pure cloud BI system, you'll need hardware to run your BI server software. In some cases, your BI vendor may require you to buy proprietary hardware from them. And you may need additional servers for more users. Be sure this is included in your estimated cost per additional user.

Server Software

Some BI software requires an internal server with its own software to serve your internal users. Additional server (or per-CPU) licenses can make it expensive to scale your system internally. Be sure to determine how the server software cost scales as the number of users scale.

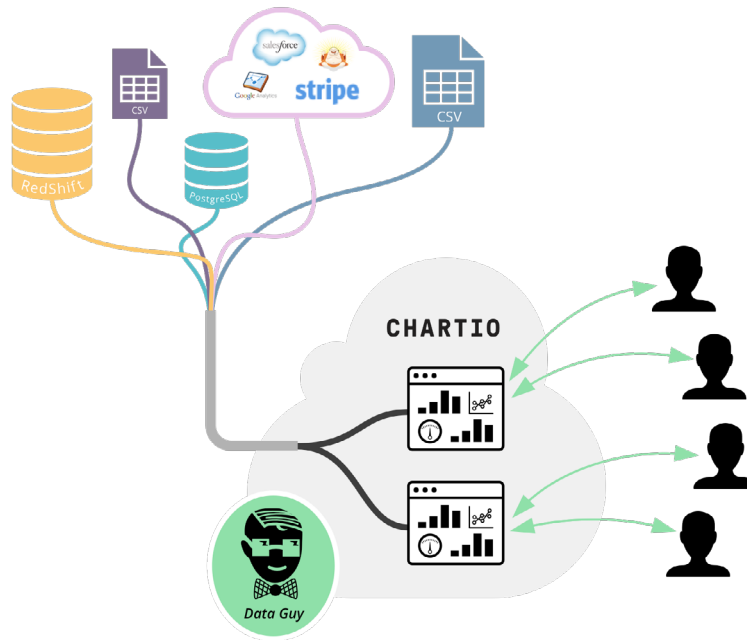
Installing and maintaining additional application servers could lead to more professional services expenses – especially if you don't have the necessary expertise in-house. We'll talk more about the cost of professional services in [Section 5, Avoid the Professional Services Trap](#).

Sources and Connectors

Some BI vendors charge by the number and type of data sources you plan to use. You may also have to pay for connectors to proprietary data sources inside your organization.

Projects/Customers

If you have separate databases or workflows for each project or customer, your BI vendor may charge for each one for which you're analyzing data.



2. Build, Buy, or Fake Your Own Data Warehouse

In addition to the server for your BI software, your vendor may require you to purchase their proprietary data warehouse. Many vendors consider their proprietary data warehouse to be a key part of their value proposition.

It's important to understand how each vendor expects you to store your data, what software they require, and what it's going to cost you to house and maintain that storage.

Even some cloud BI vendors may require you to use their proprietary data warehouse, so be sure to ask.

If you're using an on-premises data warehouse, be sure to estimate the cost of your own hardware, software, and engineering resources to set up and maintain your warehouse.

Ideally, your BI system should flexibly connect to whatever data warehouse you choose. It should work equally well with a copy or summary of your operational database served from your existing systems, a dedicated data

warehouse, or a cloud warehouse such as Amazon Redshift. For more information, see Chartio's white paper, ["Read this Before You Make a Data Warehouse Decision"](#).

It's important to understand how a vendor expects you to store your data, what software they require, and what it's going to cost you to house and maintain that storage.

3. Understand How You'll Prepare Your Data

Regardless of whether you build or buy an data warehouse, you'll need to decide how you're going prepare your data to make it available to your BI system. Many BI systems require an ETL (Extract, Transform, and Load) process, which extracts the data from your operational database, transforms it by calculating or combining data, and loads it into another database where it can be analyzed.

ETL can be a critical part of the setup for BI systems that require that their data be pre-processed and represented in a particular way before it can be made available for analysis.

It's often possible to work with a duplicate of your operational data, avoiding ETL altogether.

Most BI Vendors will be happy to help you set up your ETL – for a price. You might not be able to avoid all ETL, but you should look for systems that take an agile approach to business intelligence implementation. See Section 6, [Planning for BI Shouldn't be Expensive](#).



4. Watch Your Hidden Internal Costs

If you decide to build your own business intelligence system, you know you'll be on the hook for engineering, consulting, maintenance, and training expenses. Even if you buy your software fully configured from a

vendor, you may have to apply significant internal or consulting resources to set the system up and keep it running.

Consider opportunity costs. If your organization is typical, your engineering team has more than enough work to do. If so, what projects will they have to delay or eliminate in order to set up your BI system?

SaaS BI software eliminates costs of maintaining the BI software itself, including the engineering resources required to set up and maintain the software, servers, connections; and the additional consulting services required to get the system up and running when your internal resources are unable to do the work.

Consulting and Planning

If you're looking at a months-long planning and implementation process, plan to hire consultants or devote project managers to getting your BI system up and running. See Section 6, [Planning for BI Shouldn't be Expensive](#).

Engineering

How many engineers will you need to build or implement your system, including setting up and managing your ETL?

If you're planning on building your own system, you will need to consider the cost of developing, integrating, or purchasing additional software for analytics, graphics, data connectors, or other libraries. But the greatest cost of developing your own BI system will be maintaining and improving your systems to meet the growing demands of your internal users.

Maintenance

How many engineering resources will you need to maintain your system in the future? What is the cost of maintaining your servers, data warehouse,

and ETL? If you're building your own BI system, what resources do you need to keep your software up to date and implement new features? Are you certain that your future requirements be met speedily?

Analysts

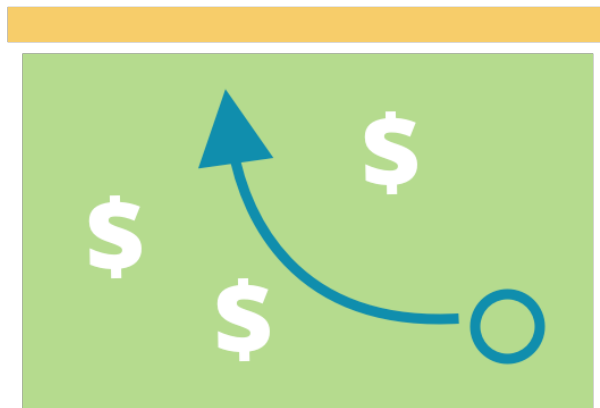
Is your BI tool designed for skilled analysts and data scientists? Is the per-user cost too high to roll out to non-expert users? If so, you are committing yourself to adding highly-paid employees to your workflow and to limiting access to your expensive new BI system. The alternative is to accept the availability of skilled analysts as a constraint on your BI system.

Training

What does it cost to train new users and administrators to use your new business intelligence system? Your BI vendor will provide you with an estimate, but easier-to-use systems will be less expensive to train for and will also have higher adoption by employees.

5. Avoid the Professional Services Trap

Professional services, maintenance, and training are huge profit centers for many business intelligence vendors.



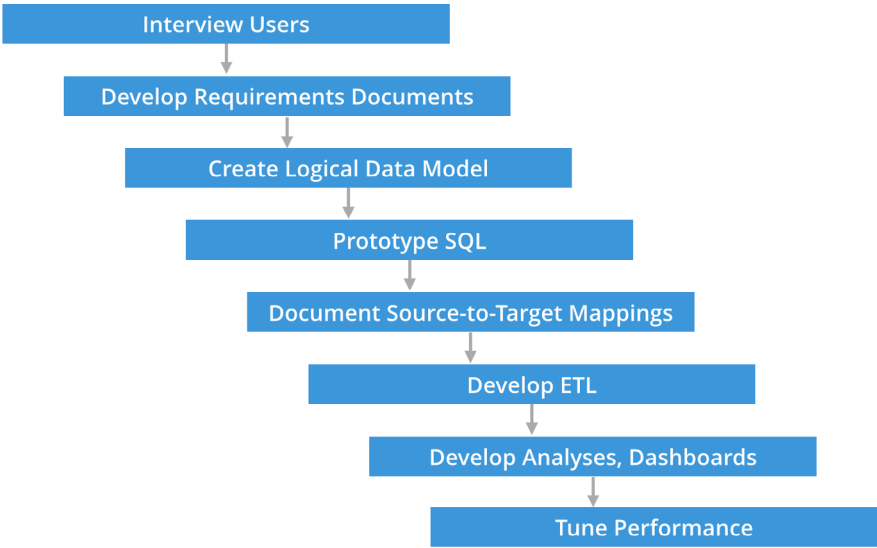
By looking at the revenue information for public BI vendors and cost calculators provided by some vendors, we've seen that professional services add 50% to 120% to the cost of software licenses from legacy BI vendors.

Professional services do not include the substantial consulting, engineering, and professional services costs incurred by their customers, but which do not show up on their books.

The best SaaS BI systems are designed to incur minimal – ideally, zero – professional services expense.

6. Planning for BI Shouldn't be Expensive

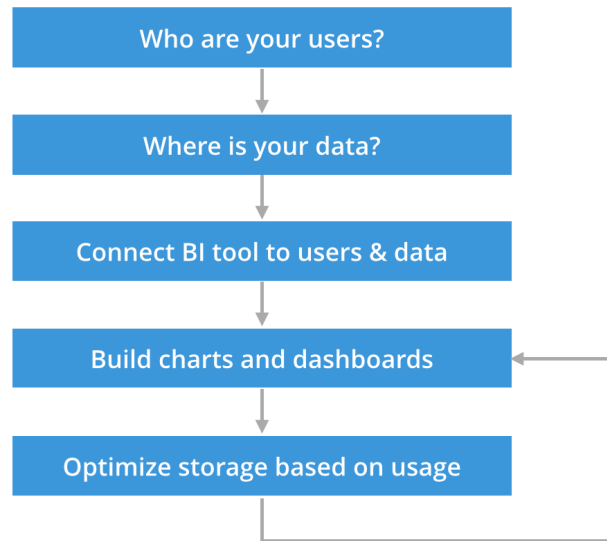
Traditionally, business intelligence systems have been implemented using a so-called waterfall process. In this model, each step must be completed before the next step is completed. Users are shown mockups of reports, but no actual data is delivered until the next-to-last step.



Each step in the waterfall process must be completed before the next.

Modern business intelligence systems can be implemented using an Agile process. In Agile BI, the planning and development process is

structured and the data is optimized after business users have had a chance to develop actual charts and dashboards. At that point, developers know which data is being used and how it's being used. In waterfall processes, each step must be completed before the next. And all must be completed before delivery.



Agile BI implementation is fast, and adapts quickly to changing needs

Using Agile BI processes, the time and expense of planning is greatly reduced, users have more say in the planning process, users can work with real data far sooner, and data is optimized based on real world conditions.

For more information on Agile Business Intelligence and what it can do for you, see our white paper ["The Nine Principles of Agile Business Intelligence"](#)

Conclusion: Exercise Your Right to be Informed

With a little planning, and asking the right questions, you can get the BI system your organization needs, without suffering the headaches of unexpected and unnecessary expenses.

- Find a system that scales smoothly with your organization, rather than front-loading costs or ratcheting up expenses as your expertise and needs grow.

- Understand everything you'll need to buy to have a working system, so you don't wind up buying unnecessary hardware and software
- Minimize the cost of data preparation until you understand your needs. This will speed delivery of your system, lower your costs, and give you a more adaptable BI system.
- Watch out for unanticipated internal costs burdening tech resources you need for other projects.
- Avoid the professional services trap by implementing a system that is simple to set up and easy to learn.
- Use Agile BI planning to reduce the time and expense before implementation, while building a more responsive system.

Appendix: Chartio's approach to Business Intelligence Pricing

Scales with Your Needs

Chartio is based in the cloud, so it's not necessary to add servers or server software licenses to give your growing organization access to their data. Chartio is designed to be used throughout the organization without adding complexity or overhead.

Works with Your Data Warehouse, or With None at All

Chartio doesn't require a proprietary data warehouse. You can use a copy of your live data on your operational servers, an on-premises data warehouse that you built or bought, or a cloud service, such as Amazon Redshift.

Flexible Data Modeling

Chartio's Data Stores and Custom Schemas make it possible to summarize and exclude data, modify columns, and transform your data before it's made available to your BI users. Even if you ultimately decide you need ETL, this gives you the ability to work with data faster and add ETL to your systems when you understand your needs better.

Easy of Use, Easy to Train for

Chartio is designed with business users in mind. No BI system is easier to use, meaning that you can avoid days of training for each end user.

Simple Setup

Chartio can be connected to your data in minutes. This makes it possible

to avoid the professional services and expense traditionally associated with setting up a business intelligence system.

Designed to be Agile

Chartio makes it possible to begin analyzing your data, and then adapt your storage when you understand your needs better. No arduous advance planning is required to implement Chartio.

About Chartio

Chartio's vision is to make business intelligence as accessible and widely used in the enterprise as the common spreadsheet.

Chartio accomplishes this by making business intelligence tools available to organizations that have been poorly served by legacy BI vendors, simplifying setup and maintenance, streamlining storage decisions, and enabling business users to perform their own analyses of complex data.

Finally, Chartio enables Agile Business Intelligence. Rather than requiring a monolithic waterfall implementation of Planning, ETL, Governance, Data Warehousing, and Deployment, Chartio make it possible to start small and roll out business intelligence as your organization's needs increase.

CHARTIO

Learn how to quickly understand your business data at chartio.com.

CHARTIO

445 Bryant Street | San Francisco, California 94107 | United States

+1 855 232 0320 | hello@chartio.com

Copyright ©2014 - All Rights Reserved