

Business Intelligence Without Limits

Decision making in business requires collecting and analyzing the right information, not just a lot of it, and most certainly not just the information someone else thinks you should have. Canned reports provide many answers, but how often do you find yourself wishing there was one more column of data so you could understand your business a little better? There's always a slightly different angle to look at, and that's why the most critical feature of a business intelligence reporting solution is the ability to put as much power and flexibility into the hands of the end user.

The key to power and flexibility in a business intelligence reporting solution is a robust database model. Enterprise-level applications require large databases. These are often incredibly complex, either because they are: a) archaic and/or poorly designed or b) using new-fangled techniques or technologies. In either case it is very difficult for the end user – or even a capable IT person who doesn't have specialized relational database design experience – to penetrate the complexities of a large database and create that robust model.

Despite this, vendors of business intelligence reporting solutions usually have a 3-step process for using their product:

1. Buy the product
2. Connect it to your database
3. Create charts, graphs and reports.

Step 2 is the most difficult part of the whole process. Getting simple data is easy – client lists, maybe some revenue details – but the whole purpose of moving up to the level of business intelligence reporting is to be able to do 'deep dives' into your data looking for less obvious relationships, spotting trends and making predictions to help you run your business. The business intelligence reporting solution vendor knows nothing about your database, and the kind of specialized knowledge and experience necessary to make sense of a complex database doesn't come cheap, even if you go directly to your database system vendor. There is a wealth of business intelligence in your database, but how to get it out in a way that makes sense?

There are 2 basic methodologies for designing a reporting application's connection to its database:

1. Build a database model that is adequate for the known reports, adding to it as necessary in the future.
2. Build as complete a model of the database as possible.

If you're the end user connecting to the reporting application yourself, you probably won't be able to afford anything beyond the first option, but when evaluating a commercial reporting application, look for more.

Obviously the first option is easier and less expensive during the design phase, which is important, especially when developing a new application that may not even be successful. Once the application is

released, having such a minimalistic database model has serious drawbacks when the canned reports just aren't enough and users are crying out for more. Additionally, ad-hoc querying is crippled and it is difficult to impossible to push a meaningful custom reporting capability to the end user. In other words, you get just what everyone else gets and no more. And when you need more, it will cost more. Think of this as the top-down approach – only doing what is absolutely necessary.

On the other end of the spectrum is the bottom-up approach: try to find every meaningful relationship between tables in the database and build each of them into the model during the initial design phase. It is reasonable to expect that this approach will cost much more than the top-down, however in practice all of the extra capability delivered into the hands of the end user, particularly through ad-hoc querying, combined with the relative ease of adding to the (much more extensive) database model for new reports, makes the extra up-front expense more palatable. By initially releasing a richer, far more useful business intelligence reporting solution, the chances it will be successful are greatly increased.

The best measure of a business intelligence reporting solution is in its ad-hoc querying capability, which brings into play both the completeness of its database model and the amount of power and flexibility that it puts in the hands of its end users. After all, no matter how many reports and charts and graphs an application has, sooner or later you will want to know something that's not in any of them, and that's where the ability to get the answer to the question that's never been asked before lies.

So when you're evaluating a business intelligence reporting solution, keep in mind that it's not so much the reports that are included that are important, but the ones that aren't.

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