*Published in DM Direct in October 2005.*
Printed from DMReview.com

# Knowledge Transfer: The Myths and Realities of Supporting a Business Intelligence Initiative

by Chris Silbernagel

***Summary:*** *Knowledge transfer is one of the most challenging aspects of a business intelligence initiative. Check out the different approaches you can take to suit your BI-system design.*

Nearly every business intelligence (BI) initiative has struggled with the issue of preserving the experience gained. Crucial information is uncovered, fundamental decisions made, tradeoffs negotiated, and most of it is lost before the first major enhancement.

If you have to continually revisit design decisions or relearn technology or even the business issues, your ability to sustain continual improvement is severely compromised. Is this more critical in business intelligence?

Absolutely, and the reason is at the heart of the system: the data. For a moment, think about all the data sources, decisions and uses, then couple that with the technology to load, transform, query and present the data. There's a lot to learn and there is no training course. You don't want to do it more than once. You want to gain the knowledge and the experience and preserve it.

## Three Common Approaches and Myths about Knowledge Transfer

There are several common myths when it comes to staffing and supporting BI initiatives. The three most common are:

1. Companies want to learn as they go, building their own knowledge and experience from their efforts.
2. An outside firm is brought in to jump-start the initiative and share the knowledge, while building the experience.
3. An outside hire with the knowledge and experience is brought in to form the core of the BI initiative.

### First Myth: Companies Want to Learn as They Go

For companies that want to implement a BI initiative gradually, balancing the BI initiative with other projects means that progress will come in spurts. This can have two major effects. Users may feel they are taking a back seat and consequently they

will become disenchanted and skeptical. More pertinent to our topic, developers, if not given constant exposure, will have difficulty mastering the technologies.

The result is that even given the best people, the BIinitiative may not reach its full potential. This may manifest itself as constant fighting with the tools. You'll often hear things like: "Our business is unique and no tool is going to fit it." "The tool is not flexible enough to accommodate us." Or, "I could hand code this much quicker."

Users will say, "I don't understand how to make the tools do what I need." There is a lot of frustration. It's not uncommon for people, even with many years of focused experience, to become frustrated when they try to do things that are difficult. This, of course, is not productive for companies.

**Second Myth: Someone Can Teach Us**

This usually happens in one of two ways:

1. A consultant or two will be brought in to advise and guide the company's design and development team. The company will manage the consultant's efforts. Or,
2. An outside firm will be brought in to build the system. Typically, the company will also manage the firm and will assign a person or two to participate in the design and development.

Both scenarios have corporate and human forces working against them at the outset. The following four obstacles are the most prevalent:

1. It is ineffective to have project managers who are not experienced in the specific theory and technologies manage the project. When a complicated design or implementation scenario arises, they have no experience to arbitrate a decision other than to rely on the word of their people or consultants. While this may go against virtually every corporate culture, generic project managers are often a detriment to BI projects.
2. When a company uses outside resources to build their business intelligence system there is a three fold focus: preserving knowledge, gaining experience and getting the job done. While knowledge transfer is one of the top requirements for any BI consulting engagement, it is often in conflict with the desire to deliver results and the availability of employees to receive the necessary training. It is rare that the employees selected to start a BI system have the time to devote to it exclusively. Since the assigned staff members may have other responsibilities or they may have just finished training, the company's staff tends to be given small, focused tasks so that the progress of the project is not impeded. While it does help complete the project, this does not create a productive learning environment. There is always more pressure to get the task done than to understand what was done and why it was done.
3. Another more subtle problem is in the firm or consultants. Typically, consultants are evaluated based on their knowledge and experience. But just because a person can successfully design and build a BI system does not mean he or she is a good educator and communicator. Being able to explain a problem, the solution and the thought process or theory behind it is a rare skill. The typical " tool jockey " is not equipped, or inclined, to do this. And,
4. Lastly, there is turnover. You are really asking for a multi-year commitment

from your employees. Once they take the time to become knowledgeable, you want to reap the benefits of their knowledge. It is rare that people will be willing to stay in the same position for a period of time that is most beneficial for your company.

Therefore, knowledge transfer and training typically takes place more than once. When this occurs, companies should ask themselves the following questions:

1. Is the knowledge transferred to the company's best and brightest? This will have a direct impact on the amount of time it will take for the employee to learn the theory and technology.
2. How long has the employee who is entrusted with the knowledge transfer been employed by the company and working in his or her current position? If it is a new employee, he or she will also be required to learn your business, adding one more burden.
3. What agreement is in place with that employee? How long do you expect him or her to stay with the initiative so that you can benefit from his or her education?
4. What leverage does the company have to retain that employee's services? Are there things that you can offer to keep him or her in the position?
5. What is the average tenure of employees in that position or assignment? Are the odds stacked against you from the start? Are you going to gain from their education?
6. Is the BI initiative viewed as a positive or a negative assignment? Let's be honest. Quite often a BI assignment is looked upon as more risk and trouble than it is worth.

It is very easy to pull a play from the generic project management handbook and say that we need to bring in a firm, assign two people to work with them and learn what they are doing, and then we will be able to take over from there. This will pass any management review. But it also will not typically work. I say this not to be pessimistic, but to question the status quo—and to get you to consider these factors before you start.

**Third Myth: Companies Will Hire Someone to Bring the Knowledge and Experience In House**

In many cases, firms bring a BI professional from the outside to provide the expertise to design, implement or support their initiative. If you look at the job postings for these positions, they focus primarily on the technologies that will be used. They do not take into account the fact that this person will be the primary educator for your BI staff.

On the other hand, you need to teach this person your particular business and company, putting them in the position of being the **"**new guy.**"** This makes it very easy to write off any suggestions with the deadly, **"**But that's not the way we do it.**"** It can be a bad situation. We have seen it take several hires before one stays.

What you are looking for is a resource with three fundamental qualities: experience, knowledge and longevity. If an employee possesses the first two capabilities, he or she most likely is seeking career advancement so you won't have (on-the-job)

longevity. Consequently, the knowledge transfer will need to start anew.

## What Can You Do?

I have painted a fairly bleak picture so far. BI is different. It constantly builds upon itself and is exploitative. I want to jolt your thinking and encourage you to examine the issue with an open mind. Designing, building and supporting a BI system does not start out smoothly and the solutions that follow are derived from some of those challenges.

First, let's take a step back and look at the problem we are trying to solve. You want to build a successful BI system and you want to maintain the institutional knowledge that goes along with it. The trick is, these two goals often are at odds. How well you balance both goals will ultimately determine how successful you are. Keep these goals in the back of your mind as we review the three different approaches to knowledge transfer.

### "You Can Learn as You Go" Approach

BI initiatives often lack consistency, discipline and commitment. They become the top priority only after every other problem, issue and crisis gets solved first. There is a lack of commitment from management, so users lose interest and find their own way. The result? The initiative fails. Developers experience a similar problem. They start, stop and restart. It's not unusual for developers to take one step forward and two steps back.

The underlying technologies of a BI initiative are different in design, function and scale. There is a natural resistance in accepting the different methods and tools. Ironically, some of the best database administrators in an operational systems environment have the most trouble adopting the design principles of a data warehouse.

What you need is discipline.

The developer requires regular focus, with achievable deliverables, management attention and user exposure. Progress will be slow and deliverables will be small, but the frustration level will be minimized as well.

Adopting this approach indicates that the BI initiative is one of many priorities . Sometimes it may be the top priority. BI initiatives that are handled in this manner are likely to achieve technical success, but not business success. When struggling with concepts and technologies, it is a rare and gifted individual who can make the initiative more than simply a flexible reporting system.

To get beyond that, the project manager must be educated in theory and possibilities and intellectually capable of challenging the staff. Also, the project manager must be able to envision an achievable solution, and not only be able to answer questions that are raised but also anticipate questions that should be asked. Simply put, you can't lead when you don't know where you are going.

It all comes down to a commitment to develop BI as a core competency, the

discipline to achieve it, and consistency at the project leader, designer and developer levels to master the theory and technologies. If you are willing to put the same effort into BI that you would into one of your core businesses, then "the learning and mastering as you go" approach will be successful.

**"Someone Can Teach You" Approach**

As I mentioned previously, there are two methods commonly used with this approach. The first (and most commo ) method is for companies to engage a BI consultant or firm to assist them in the design and development of the initiative. Significant focus is given to knowledge transfer during the negotiating phase, and all intentions are well meaning.

For this method to succeed, however, the focus must be maintained during the design and development stages, even if it means missing deadlines or reducing functionality. Once you place deliverables ahead of knowledge, it will be nearly impossible for your staff to catch up. The most critical success factor here is the person, or persons, who are responsible for learning. It is not enough to simply learn the initial design concepts and technologies; you must also keep current on both. If your team is committed, and your company is willing to commit to BI as a core competency, this method can work.

A BI consultant needs to be a professional educator, someone who can explain the theory and technology behind every decision and do it in a way that does not bore your staff to tears. Consultants need to be able to teach the developers how and why to implement. Likewise, they need to be able to teach project leaders and managers how to arbitrate the decision and the factors behind it. You, on the other hand, need to give them the time to do it.

The second method involves hiring a BI firm to design and implement the initiative for you, with a formal knowledge transfer during and after the implementation. Your team will participate, primarily as a source of information, not as the recipient during the design. The critical factor for success is to retain the services of the designer, not the developers or the technologists, for a significant period after the turnover takes place. This will ensure that you adhere to the design principles that the BI firm instituted. In a BI initiative, the design is the system, and only by thoroughly understanding that system can you extend and support it.

There is always the tendency to say, "You can tell me about this later." But you forget to ask, they never tell, and the knowledge is lost. Although the BI firm may be doing all the work, you still need to attend every design meeting and participate in every decision. Ask questions and then take the time to verify that you really understand the answers. Make sure your contract stipulates that this learning is the top priority, even over deliverables. Simply put, make sure you can stop the entire project if you don't understand something. And be willing to do it.

**"You Can Hire Someone" Approach**

Experience is expensive and elusive. Most likely the people you will want to hire will not be looking for a job. You will need to attract them.

Having one data warehouse on your resume is not enough. Each BI initiative brings a different perspective. Sometimes the differences are great; sometimes they are subtle . Without experience, it is easy to think that all BI initiatives are the same.

Even if your new hire has experience in your specific industry, he or she must learn your business and corporate culture. Navigating some corporate cultures can be more difficult than earning a Ph.D.

Don't sabotage your efforts. You can just as easily sidetrack your new hire as you can your current employees. In fact , there is the additional temptation to have a new employee look at other things. Remember why you paid all that money and took so long to hire him or her .

Let's face it; the people with the most experience obtained it as a consultant or by changing jobs. So why are they going to stay with your company? Keep these recruiting guidelines in mind:

1. Recruit carefully. You want employees to stay for a while, so make sure that they are working there for the right reason.

2. Avoid focusing on the technologies at the expense of design. You want your new hire to be the core of your BI competency. Make sure they can guide and teach. Consider hiring them as the project leader or manager instead of the technologist.

3. Know what the market is paying. If you want the best, you have to be willing to pay for the best.

There are no shortcuts - or magic - here. Focus on experience, as well as the ability to lead and teach, and be prepared to pay for it.

## An Alternative Approach

For many companies, the best solution may be to outsource their institutional knowledge. Why not entrust your data warehouse's institutional knowledge to an experienced professional, in a place where it is immediately accessible, where there is a fiduciary responsibility to maintain it, and where it is the sole focus of that professional? Now, I know that this defies conventional wisdom. Yet companies are willing to outsource their legal and auditing services, which are just as important to a company as its corporate data .

Food for thought: you can contractually bind a consultant to provide the knowledge on your terms. This is something that you cannot do with your employees. In other words, you acquire the experience and knowledge, yet you only have to pay for it when you use it. Plus, it is the sole focus of the people serving you.

There are four decision points for selecting a potential outsourcing partner:

1. Find a company that does not have high employee turnover. Check references and length of engagements. If a potential partner cannot produce a client with whom they have worked for more than eight years, move on to the next

candidate .

2. Verify that the company is familiar with the latest technologies and business trends. They should be thought leaders and practitioners, not simply well read. It is difficult to stay technologically up to date, especially if you're juggling other responsibilities within an organization. Look for speaking engagements, white papers and a willingness to challenge ideas.

3. Determine if your outsourcing partner can work the way you want to work. Can you control your budget by planning, or not planning, to utilize their services? Will your outsourcing partner maintain your information if you do not use his or her services for a year? And,

4. To ensure your institutional knowledge is preserved, make sure that you have direct access to their resources. Don't settle for liaisons and contacts.

Remember, if you want your BI-systems designers and developers to think outside the box, you should think outside the box as well.

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