



# The Difference Between Driving Usage and Value From Your Data Warehouse ... And Why It Matters

## Noteworthy



Starting with Teradata in 1987, Rob Armstrong has collaborated with and led cross-functional Teradata

project teams to deliver some of the most successful data warehouses and information systems in existence. Currently, Rob works with companies around the world to lead workshops, better understand challenges and processes, develop and enact best practices, and identify business opportunities. His work can be seen in companies such as Wal\*Mart, Travelocity, Harrah's Entertainment, 3M, British Airways and many other Teradata customers. In addition to white papers, presentations and magazine articles, Armstrong co-authored the book *Secrets of the Best Data Warehouses in the World*, together with Ralph Hanusa, a data warehouse practitioner, and Tom Coffing, a data warehouse consultant with global experience. His second book *Evolving Through Action*, written with his colleague Dan Higgins, is focused on driving significant and measurable return on investment from the data warehouse environment.

*Rob Armstrong, Director, Data Warehouse Support, Teradata, a division of NCR*

## 1. What is your sense of how companies are doing these days in terms of getting the most value from their data warehouses? Are most doing pretty well... or could they do a better job of leveraging?

My view is that a large percentage of companies could be doing a better job of getting value from their data warehouses... in fact, I think the vast majority are not maximizing their data warehouse's value. The problem is that often usage of a data warehouse is equated with getting value from it. But **in reality, usage and value are not the same thing**. If I'm keeping the system busy, that doesn't necessarily mean I'm getting good value from it! And yet, many business people equate generating lots of reports or developing dashboard systems as getting value, when in fact what they should really want to create is actionable value... meaning insight that leads to actions that lead to generating more revenue, building customer value, or increasing efficiencies.

## 2. Well, then, can you elaborate on the real difference between usage and value?

Usage in my mind is simply how much of the system are we keeping busy. Are my people generating information by writing queries, for example? I hear this a lot. In fact, one large company I talked with told me it uses its data warehouse to generate three to four thousand reports a day. Who can evaluate all of that? I asked, well, what do you do with them? And the answer was the reports are kept in case an executive has a question. So here there was usage but not much value.

One of the things we like to look at is not how many reports are you generating, but what type of actions are you taking because of those reports? I like to quote Tracy Austin, formerly of Harrah's Entertainment, who says, **"If you're not making decisions, why are you asking questions?"** I then took that thought and expanded it to **"If you're not taking actions, why are you making decisions?"** And **"if you're not measuring results, then stop taking actions!"**

That captures in a nutshell what I'm getting at. **Companies should look at not what usage they're driving in the data warehousing system, but what usage is the system driving to them?** Is the company using the data warehouse and the insight it can get from those reports to understand the total impact of its decisions?

For example, at a supermarket chain in Europe, a truck showed up at the back of a store with load of salmon, and there was no shelf space in the fresh seafood area for the salmon. Unfortunately, the salmon went bad because there was no space for it. The store manager was held accountable for the problem, but he had no idea that the salmon was going to arrive. The chain management asked me, in this example, what should we have done? I asked, didn't you know that the truck left the distribution center? That the buyer bought the product? It turned out the buyer had gotten a great deal on the salmon, but didn't have the big picture that there was no room at the store for the salmon.

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The truth is that no one had the big picture because they weren't using their data warehouse to generate the big picture... that complete view of the supply chain, of the business needs, of the customer. If they had, what started as someone's good intention to generate revenue wouldn't have turned into a fiasco that cost the company money. Everyone in the process needs to be aware of the desired outcome of that process, and how they affect it.

### **3. So is there any link at all between the two? For example, as usage goes up, does value also?**

Well, if you have no usage, you'll obviously have no value. But just increasing usage doesn't increase value. Are you using the system or are you using the information? In the world of IT, I think too many people focus on the T – technology – and not the I – information. *It's not enough to use a data warehousing system to generate reports. You have to use the information in an actionable way for it to have real value. You want to drive smarter usage – not just raw usage. In other words, am I using the system to drive analytics? To understand current and near future events... not just past events?* People often look at reports to know what they should avoid in the future, but they need to look at what is happening, not what happened, to see what they can drive, or affect, in the future.

### **4. If a company isn't getting the value from its data warehouse that it would like, what are the typical reasons/problems?**

It's really a common problem to mix up the ideas of usage and value. But if a company has tremendous usage of its data warehouse, but not the value it should really get, I hold the executive branch responsible. To refer back to the first question, people are getting tremendous usage but not tremendous value. The reason I say *I hold the executive branch responsible* is that in any company, there's a triad in terms of how data is collected, managed, analyzed and ultimately used – the IT area, business owners of the data queries, and executives. In order to drive higher value, people need to understand what it is they are trying to achieve. That's where the executives set, measure, and report the business metrics they are trying to drive. But often, business metrics are too ambiguous, so people don't understand how their specific actions affect the measurement of those metrics.

For example, one company's metric for deciding how much end-of-quarter bonuses to pay their buyers was based on the amount of product left in their distribution centers. The less inventory, the bigger the bonus. So near the end of the quarter, of course buyers were moving inventory to the stores and buying less at the end of each quarter, whether or not this was best for the overall long-term success of the company. People start managing individual metrics, rather than business outcomes. If metrics aren't aligned with desired outcomes, then once again, that drives usage but not value from a warehouse.

### **5. What are some steps companies could take to drive usage and value from their data warehouses?**

*There needs to be an alignment of metrics and outcomes.* People also need to understand how their actions affect the company downstream, such as in our salmon example. Many people have functional knowledge but lack business knowledge of how my role affects someone else's role. So, metrics must be aligned with outcomes, and metrics must be relevant to employees. When both those things happen, companies will start seeing more value from their data warehouse.

For example, call centers will often have the metrics of number of calls and length of each call, the general idea being the more calls managed the better, and the more quickly they're managed, the better. But that doesn't tell us anything about the quality of those calls – were all those calls made because customers couldn't get an answer with the first call? Did they have to call repeatedly? Were the calls brief because the call center didn't have the information the customer needed?

### **6. So, how can the data warehouse help companies develop better metrics?**

*The data warehouse can highlight the problems that companies aren't solving. By revealing those kinds of issues, you can develop metrics that will lead to the kind of outcomes you really want...* such as fewer call backs from the same customers to the call center to resolve an issue, regardless of how long those fewer calls take. I made up a term – Return on Action, because so many people focus on Return on Investment. ROI is really an IT concern. But ROA, if you will, is more of a business concern.

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When you take an action, here are three things to ask – what made you take this action? Secondly, what action are you taking explicitly? Why are you taking this action? And thirdly, what do you expect to happen and how can you measure it? Now you have a metric that can be measured from data warehouse information. If you can't, then you're missing something. There's a data gap in your data warehouse. If you don't have the data you need to do the analysis, then you've learned that you have a gap in the data you're collecting that you need to fix. *The data warehouse can highlight what you're not seeing, and that in turn can lead your efforts and resources toward getting higher value information from your data warehouse.*

## 7. How does driving data warehousing value impact competitiveness?

The bottom line is that usage of a data warehouse is really an IT concern – do we have enough technical resources to support our company's data warehousing usage. But value is driven by the executives and business users and understanding that the data warehouse's role is to help drive asking the right business questions in order to get at the right solutions. *By getting the right solutions, you are then directing corporate resources to the needs of your customers in a relevant and impactful manner.* That leads to higher customer satisfaction and that can only help your competitiveness in a world where customer service is one of the last real distinctions between companies.

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