

The BI Watch
What Do We Do With What We Know?
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The title is the most important question challenging Business Intelligence and Data Warehousing today. The extent to which corporations and governments are able to ‘do’ something with the analytics from the warehouse will determine the future of BI/DW. It is at the heart of achieving actionable BI.

At the TDWI session on BI Strategies in November 2003, Deb Masdea, Director of Business Information and Analysis at the Scotts Company, used this question to highlight her BI solutions for fact-based decision makers. Ever since then, that question has motivated me to probe into the issues of actionable BI.

In an earlier article,¹ a framework for ‘complete’ BI suggested five maturing stages (observe, understand, predict, react, and reorganize), as shown in Figure 1.

>>> Insert Figure 1

As illustrated by the line, there is a gap between the Knowing and Doing stages – a glass ceiling that prevents companies from maturing to actionable BI. What are the factors causing this glass ceiling? Let’s explore a few.

Fire The Chauffeur

The usual situation is that analysts ‘know’ what is happening in the business. BI tools and the data warehouse have been successful in providing insightful information about the business. The challenge is getting the right people to ‘do’ something about it. However, analysts do not ‘do’ anything; they just analyze! They do not have the responsibility and authority to make decisions, kick some butts, and solve the real problems.

There has been a traditional separation of function between the IT staff and line managers. Yes, we have moved analysts into the business units. But, do we compensate them on meeting production goals?

PRINCIPLE: Fire the chauffeur! The people that make your business happen need to drive the car (BI systems) themselves. The theme ‘BI for the Masses’ has some truth within it. BI tools should be designed so that anyone can use them and effectively analyze enterprise data. But, not everyone needs to know everything. Analytics must be tailored specifically to the job responsibilities in the language and culture of that job.

Squash The Pyramid

We need to kill a framework that, since the early days, has helped us understand (and design) enterprise systems but has grown too simplistic. It is the management pyramid, as shown in Figure 2.

¹ R.D. Hackathorn, Making BI Actionable, DM Review, November 2001,
http://www.dmreview.com/editorial/dmreview/print_action.cfm?articleId=4207

>>> Insert Figure 2

The framework states... There are three levels – strategic, tactical, and operational – that neatly divide the responsibilities for managing an enterprise. Top managers make strategic decisions that generate policies. Middle managers make tactical decisions that generate procedures. And, first-line managers make operational decisions that execute those procedures. For each level of management, the information requirements are distinct in terms of usage frequency, granularity, accuracy, time horizon, etc. For instance, top managers only need to see the big picture spanning months and years, and first-line managers should only care about production quota for this week.

However... The world is now very different than the smokestack industries of the 1920's. Business processes are loosely coupled and globally distributed. Things go bump in the night (and during the day). Exceptions dominate many business processes. The best design of corporate policies and procedures often seem inadequate to cope with the complexities of our business.

PRINCIPLE: Squash the pyramid! The person responsible for a business process should view it strategically, tactically, and operationally every moment of every day. Through BI systems, that person should have access to the whole context and nothing but that content. Regardless of the time horizon, granularity, and the like, that person should understand every facet so that the best decision can be made.

Minimize The Action Distance

The action distance (AD) is zero for the people who daily touch customers, products, and other key ingredients of the business.² They are in a position to initiate actions that can change important things. A critical issue is whether they have the skills, support, responsibility, and authority to take that action. Although most is an organizational and staffing issue, BI/DW can have a major impact. Better analytics can reduce the skill level required. Better analytics can focus and bound the situation.

PRINCIPLE: Minimize the action distance! Make the distance between 'knowing' and 'doing' as close to zero as possible. In other words, the people who 'know' should also 'do'. The zero-AD people are your front-line. Allow them to sparkle.

Leverage The Multiplier

We need to intelligently set our priorities. What's really important, and what's not? That is where BI/DW support should be focused.

As BI professionals, we tend to overstress the BIG decisions, which we glorify as being 'strategic'. Yes, there is a lot of money behind BIG decisions. But, they are infrequent and also inefficient in contributing to the bottom line. We take too long to make BIG decisions and then spend an equally long time re-re-evaluating the decisions.

² For more on Action Distance, see R.D. Hackathorn, Minimizing Action Distance, DM Review, September 2002, http://www.dmreview.com/editorial/dmreview/print_action.cfm?articleId=5679

Instead, we need to save a nickel...on each instance of a key business process, thousands of times a day in hundreds of locations. If we use analytics to honestly determine where the real impacts to the business can be made, we will probably be directed to the lowly frequent LITTLE decisions. Every day, Union Pacific calculates the total value of goods (along with penalties for missing shipping deadlines) on thousands of their trains when assigning crews to their 153,272 freight cars. A nickel here; a nickel there.

PRINCIPLE: Leverage the multiplier! It is closer to the money flow and easier to make real impacts. The action is not in the fancy headquarters complex but in the dirty shipping yard, so wear your boots.

Alert, Inform, and Guide

We design our analytics all-wrong! The goal is to deliver information—NOT. The goal should be to support decision-making that results in action. I would suggest that this support must consist of: Alert, Inform, and Guide (AIG). Alerting implies that a person's normal workflow should be interrupted to focus on a more important situation. Informing implies that the entire context is distilled so that the person can quickly understand the situation. And, guiding implies that alternative actions are outlined along with the means to quickly affect those actions.

PRINCIPLE: AIG it! Provide the functions of alerting, informing, and guiding as part of the infrastructure for delivering any report or analytic. Achieving this will require a huge commitment to the BI/DW infrastructure.

This article has explored the barriers to achieving actionable BI. Five principles were offered that might reduce the barriers. Some of the issues are technology-based, but the majority will involve a deep rethinking of organizational design and management styles. Therefore, the continuing success of BI/DW depends on the willingness to move out of our comfort-zone with corporate technology into the agony-zone of corporate politics. Masdea remarked, "Companies will be more successful with BI if they find the right persons who can cut through the politics."

We will stay on the right track if we keep asking... What do we do with what we know?

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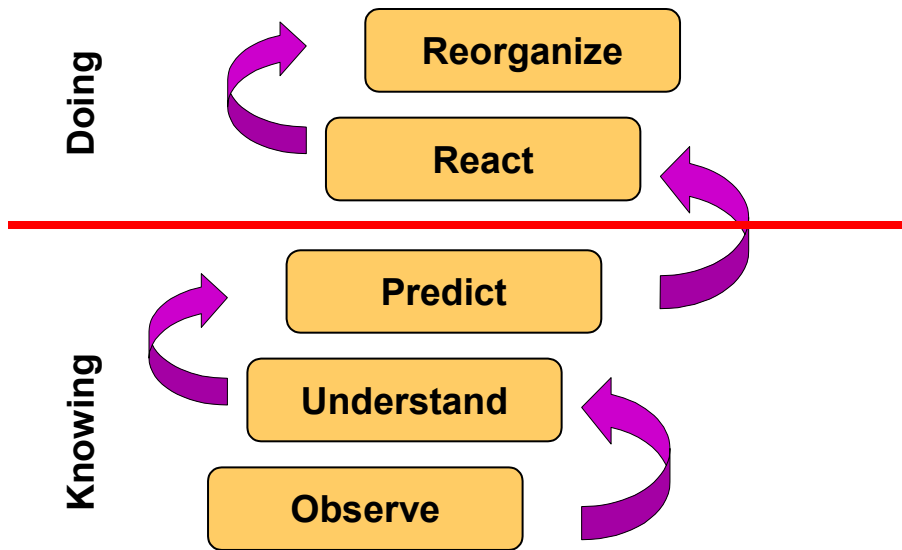


Figure 1 – Stages of Complete BI

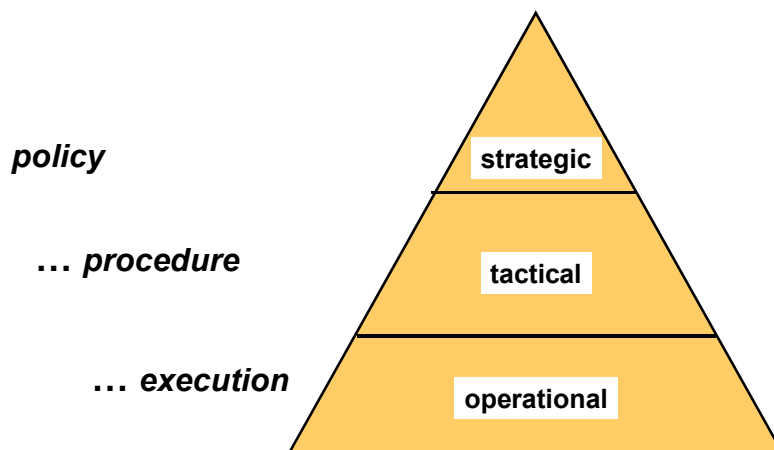


Figure 2 – Management Pyramid