

Business Intelligence Management

As relational database technology became mainstream in the early 1990's, data warehouses have exploded throughout large and small organizations alike. Today, data warehouses and their complimentary technologies and tools are consuming more resources than in the past and many IT organizations are struggling to manage the supply and demand of Business Intelligence applications. Business Intelligence has profoundly changed the way IT organizations function to such a degree that a new set of management practices is required.

AmberLeaf has been an active participant in extensive Business Intelligence initiatives throughout the past 12 years and has promoted the adoption of Business Intelligence throughout many organizations. To support today's complex and demanding Business Intelligence environments, there are several key best practices that can help maximize IT resources while delivering quality analytical applications to end users in a timely fashion. These best practices, called Business Intelligence Management, include:

- BI IT Management Practices
- Center of Excellence Principles
- Program Management Execution
- Strategic BI Alignment

BI IT Management Practices

In today's complex Business Intelligence (BI) landscape, it is becoming ever more difficult to strike a balance between the analytical requests from the business and IT's ability to deliver quality applications. According to Gartner, by 2006 the demand for BI skills and staff will outweigh supply by 2-to-1. Advances in data warehouses and other supporting tools have greatly increased the ability to leverage existing investments and rapidly deploy applications, but often at the cost of supportability or quality. The foundation of Business Intelligence Management includes IT Management best practices that address the processes, organizational structures, and technology to help organizations manage the development, testing, and deployment of analytical applications.

Depending on the size of an organization, the following IT management functions are implemented to one degree or another. Formalizing these processes and functions to become more systematic will increase the probability of success of each project while decreasing the long term support costs. Starting with the Lifecycle Development through measuring the short term ROI and long term success, organizations can use IT Management processes to increase the value of their Business Intelligence initiatives.

Life Cycle Development

The development of large scale Business Intelligence Applications requires a formal but flexible methodology in order to meet the requirements demanded by end users. Gone are the days when the creation of a detailed project plan and assignment of adequate resources were half the battle towards project success. The formal process of going through requirements and analysis, followed by design, development, deployment and maintenance is still valid and must be done. The speed with which each phase must occur and the overlap between phases is what has changed and why BI Application development requires a balancing act different than standard software development.

Many IT organizations have responded to this need with varying degrees of completeness. Some methodologies include strict divisions of labor between resources (i.e. Security Administrators, Data modelers, DBAs, programmers, etc;) which can impede the development of applications and unnecessarily increase the implementation timeline. Other more simplistic methodologies consist of a set of required documents and can underestimate the effort and lead to increased project risks or delays in project completion. A quality methodology strikes the right balance for an organization; the right methodology clearly defines the skill sets and resources required to deliver BI applications on-time and on-budget. Pitfalls can be minimized or avoided altogether, more accurate timelines can be established, and resources can be more productive, with a useful Methodology.

Quality Control

Quality control and production support are necessary components to all mature Business Intelligence environments. However, many software companies have opted to focus on matching their competitor's functionality rather than building quality and version control capabilities in their tools to facilitate rapid development. This is an issue with almost all of the software technology sectors including Reporting, Analytics, ETL and Modeling. The basic functionality that is included with other standard Software Development Lifecycle tools is generally not available for BI tools and the stakes are being increased as tools become enterprise standards and centrally managed.

Recently, several software vendors have begun to look at the niche market of Business Intelligence Management and fill the gaps. For example, new products like NOAD, are including the ability to clearly identify and document the changes from one release of a report to another. For larger applications, true impact analysis capabilities have been introduced into the tool sets to show the potential of a change to a production element and how it may impact the user interface, the reports, and the ETL. This functionality is vital to building any mission critical Business Intelligence application. Realistically, companies demand documentation and change control from most outside software vendors, shouldn't the same rigor apply to mission critical BI applications? Even new compliance regulations like Sarbanes-Oxley are forcing the need for version control and stricter adherence to quality assurance processes for BI applications.

Workflows and Business Acceptance

In addition to the simple version handling and documentation capabilities, the need for business approval is quickly becoming a critical component to user acceptance testing and deployment. In response to this need, some software vendors are supplying online alerting and approval systems. These systems are designed to manage large deployments and automate the business approval workflow.

This functionality has long been in place with other ERP systems, but for some reason BI tools have not included this functionality. As with any other document automation application, there is a short term investment into configuring these applications; however, the long term benefits greatly outweigh these costs. Requests for BI are not going away, in fact they are increasing at a faster rate than other applications, so adding business approval functionality should be considered more of a "must have" than a "nice to have". In fact, Gartner estimates that by 2006, large enterprises will need three times as many BI personnel as they did in 2002.

Monitoring and Usage Statistics

As large companies standardize on BI tools, the need to centrally monitor, manage and scale deployments to meet the user demands is as important as the technology. Often, IT management estimates the number of licenses and hardware based on suspect information from the user community or vendor sizing estimates. In order to accurately monitor software usage and hardware resources, empirical evidence is critical and can save up to

40% on total cost of ownership of any given tool. More than any of the other aspects of Business Intelligence management, usage statistics has the potential to help save money in a very short time period.

Business Intelligence usage statistics can also be used to help measure project success, business adoption and prioritize new requests. Some of the more automated tools track the activities of each of the users to measure the success of the project. While this is a critical component, tracking a user's activity is also critical for gathering exemplary sets of data for understanding users' behavior, what applications add value, and tuning and optimizing the system. If an enterprise license was not purchased, these statistics can also be used to help maximize tool licensing by allocating the licenses to users who actually need them or commuting particular licenses to more inexpensive like web users.

BI Management and Success Metrics

In the daily grind of simply trying to keep up with business requests for applications and data, many IT departments lose sight of the improvements that result from their Business Intelligence investments. The ever increasing demand for cleansed, standardized and centralized data is enabling the business to answer questions that were nearly impossible in the past. Each of these requests needs to be tracked and managed to determine how the data warehouse and supporting Business Intelligence applications are being used and how they are generating value.

Regardless if this is a self-service "data dump" from the reporting environment or a formal request to IT, each request for information must be tracked. Tracking these regularly occurring tasks can help IT manage their people and the business requests. For example, the volume of tasks and prior delivery timelines need to be considered in staffing projects and resource allocation. Over time, processing these requests should become more efficient and performance metrics can be developed for managing IT reviews. From the business side, the metrics will help determine which departments require the most IT resources and budgets can be adjusted accordingly. The benefits of having this type of empirical information when negotiating projects and maintenance agreements with the business and creating project plans should not be under-estimated.