

Improving Business Intelligence: The Power of Metrics, Part 2

Improving BI: The Six Sigma Way

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- DM Review Online, September 10, 2008

In this month's column, I will again focus on the organization as one of the X factors which influence business intelligence (BI) quality. One of the characteristics of the organization which may influence BI quality is the level of integration of BI into operations and management. In order to use this integration characteristic as a metric in a program to improve BI quality, it is necessary to describe exactly what is meant by integration and to define a rating scale for assessing effectiveness. Basically, we must measure the extent (i.e., level of integration) to which BI is available and integrated into the normal business of the organization.

The Attributes

The attributes are the unique descriptors that illustrate what we mean by the term, integration. In other words, how do we describe how BI is integrated into the organization?

Availability of the Business Information

Is the business information library and BI product base available to everyone in the organization? Can we access and view all the available BI information from any workstation? Can we access the full range of BI functionality, such as reports, query and analytical programs? Any limitations should be security related only.

Analytical Applications, Online Help and Other Support

Are the BI products in the form of analytical applications? Is there online help to walk users through business processes, functions and information gathering? A question for the audit team here concerns the extent to which the BI product conforms to the patterns of the business operations?

Common Business Language

Is a business language library of common business terms available to all? This should include, for example, common terms, alias names,

abbreviations, locations and availability of data and reports. There should also be a closed loop for update of terms by anyone in the organization. This common repository should be available to people and systems across the organization. There should also be interfaces with automatic updates from BI and other systems.

A Six Sigma BI Initiative

Is there a BI improvement program? If so, how well integrated into the organization are the elements of the initiative?

The Pervasive Use and Incorporation of BI Goals and Applications

BI should be used to change and optimize the operations of the organization. BI should not merely be used by the current operations, as is. There are many ways that the current operations can be made better by the incorporation of BI. Some of the other questions to ask here are: Are the BI efforts limited to departmental use? Does management use BI to drive organization goals? Is the BI cross organizational and an integrating factor for operations?

Measuring the Integration Characteristic

An organization needs to be able to describe how it will judge the effectiveness of the identified attribute. That is, if the availability of business information is to be rated at a level 5, or excellent, what does that mean? We will use those attributes and effectiveness ratings in developing an overall rating for the organization as an impacting X factor for BI quality. (See last month's column for a description and definition of the factors.) For each attribute, we will define the levels of effectiveness. Level 1 is the least effective and level 5 represents the most effective. The rating scales are used in the Six Sigma BI Continuing Improvement Model (BI-CIM) to assess the effectiveness of the organization in the integration of BI. The results of the assessment are used to develop an action response plan for improving BI quality. The rating scales are defined below.

Availability of the Business Information

- Level 1: Any BI is limited to departmental or small group availability.
- Level 2: There is some business information available across departments or functions for limited applications.

- Level 3: Most business information is available to most people across the organization.
- Level 4: Business information is available and is widely used.
- Level 5: There are documented and mandated standards for cross-organization accessibility.

Analytical Applications, Online Help and Other Support

- Level 1: The creating department knows the information and how to use it.
- Level 2: There are limited online help facilities.
- Level 3: Much of the BI is easily understood and usable by those with little expertise as well as the most experienced power user.
- Level 4: There are analytical applications that will walk the user through specific operations.
- Level 5: BI is used to tie the operations of the organization into a coherent whole. There are analytical applications and an integrated flow of information, which can guide the user through and across business operations.

Common Business Language

- Level 1: There is no common repository or accessibility to a common library of business terms.
- Level 2: There are pockets of information available within functional groups and perhaps limited access to some of the tools within the data warehouse that house metadata.
- Level 3: There is a common repository of meta data which may be accessed by most users within the organization.
- Level 4: There is a common repository that is accessible across the organization. The repository may be updated by the users, so we see an evolving business language.
- Level 5: Level 4 plus the repository is tied to the systems and data stores. Updates, communication of changes and triggers for management are automated and incorporated into the workflow of the organization.

Is there is a Six Sigma BI Initiative?

- Level 1: No Six Sigma initiative. Also no recognition or communication of BI common goals.
- Level 2: Limited standards and documented processes to increase the quality levels for BI.
- Level 3: There are documented methodologies, standards and processes for BI.
- Level 4: This includes level 3 plus strong management support for quality BI.
- Level 5: A working program is in place to manage the quality of BI. There is strong management support for the initiative.

Pervasive Use and Incorporation of BI Goals and Applications

- Level 1: BI is limited to departmental utility.
- Level 2: Some cross-departmental and operational-level BI.
- Level 3: BI is used effectively in cross-organizational operations (e.g., customer service).
- Level 4: BI is integrated into the operations of the organization.
- Level 5: There is a closed loop of executive-level strategic and tactical goals tied to management and operations of the organization. BI is a key ingredient that management uses and stresses to get the job done. BI is integrated into operations and is aggressively aligned with strategic, tactical and operational goals and activities.

Overall Rating - the Integration Metric

We can combine the assessments for all the attributes into a single metric for integration for the organization. An example of such a rating is shown in Figure 1. You may choose to present the assessment and rating in whatever terms are relevant for your organization's needs. The definitions of the levels may reflect those attribute assessments specific to your audit and assessment. The objective to keep in mind is that you will need to be able to use this metric to plan and define any actions that are necessary to improve BI quality.

[IMGCAP(1)]

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