# Defining the Business Intelligence Asset Base

## Mesuring BI


- Dorothy Miller


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In my book, *Measuring Business Intelligence Success*, I created the TBIA Business Intelligence Capability Maturity Model (BI-CMM), which defines a comprehensive business intelligence (BI) audit program. The BI-CMM provides a blueprint for audits and includes:

1. **What is to be audited**? Definitions and descriptions of the BI assets.
2. **Measurement factors/ key performance indicators (KPIs)**. Business drivers and integral aspects of the assets have been identified which are used to rate the BI assets.
3. **A scale to be used for measurement**. Industry guidelines and best practices have been identified and grouped into categories as a scale against which an organization may be measured.
4. **An audit methodology**. Each of the steps or processes in the audit, along with audit guidelines and available tools are defined.
5. **How to use the results**. The audit methodology in the TBIA BI-CMM includes a well-defined program for using the results of the BI audit. This is an action response program directed at improving the BI asset base for the organization.

In my first series of columns, I described measurement factors, i.e., KPIs, to be used in auditing the assets. In this series, I will define and describe all the parts of the BI asset base. There are currently some ambiguities within the industry related to these BI assets. However, for the first time, every BI component will be identified and described in sufficient detail to ensure a clear understanding of the place of that component in the BI asset structure.

### The Business Intelligence Asset Base

In order to review and assess BI assets, it is necessary first to define those assets. We need to understand the exact nature of the spider web of data, infrastructures, constructs and software called BI. In first column of the series, I will define all the primary components of the BI asset base. I will also describe some of the graphics and tools that have been used within the TBIA BI-CMM to assist in driving, i.e., directing, the audit of these BI assets.

### The BI-CMM

The TBIA BI-CMM includes graphics and tools that may be used to direct and document the audit process. The tools created to assist in the definition of the BI assets are the audit

wheels. These audit wheels define each component of the BI asset base. There are three levels of audit wheels included in the TBIA BI-CMM. The summary level includes all the audit wheels (this will be presented in the later articles). The first level (Figure 1) outlines all the parts of the BI asset base. And, the double wheels, which include a second level audit wheel (Figure 2). The second level audit wheels for each component define each of the key assessment features for that component. The primary targets of the audit of the BI Assets are the key assessment features, which are depicted in the second level audit wheels.

Together, these BI-CMM audit wheels define the whole of the BI asset base and drive the audit process.

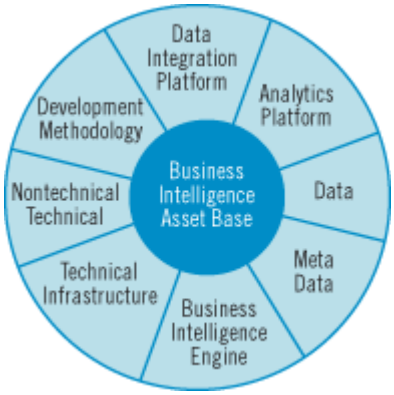


*Figure 1: Outline of the BI Asset Base*

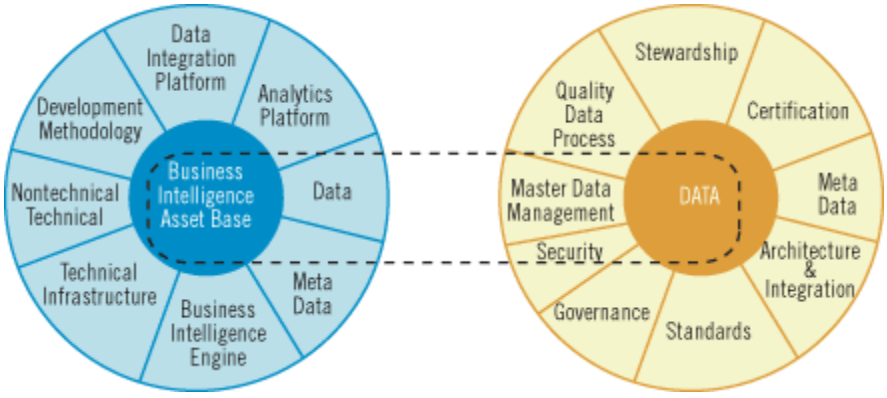


*Figure 2: BI Asset Base Including Second Level Data Audit Wheel*

**The BI Assets**

Each of the primary components of the BI asset base is depicted in the audit wheel in Figure 1. I have defined three primary constructs for BI Assets – the data integration platform, analytics platform and the driver or bi engine, which powers the movement, integration and delivery of the BI product. The business information product has been decomposed into the data and metadata components. The infrastructures and "guts" of the platforms have been

extracted and presented separately as the technical infrastructure and the nontechnical infrastructure so that we may carefully assess each of the parts, as entities apart from the architectures and presentation modes of the primary platforms. The development methodology is the set of processes and constructs which are used to create and manage the BI assets.

Following is a brief description of each of these components. Each will be described in more detail in the next few articles in this series.

- **Analytics Platform.** The BI analytics platform supports all user interface for the information in the data integration library. All of the query, analysis, reporting and online analytical processing that make up BI applications for an organization are included in this component of the BI asset base.
- **Business Intelligence Engine.** This BI Engine is the powerhouse and driver for BI. It collects data from multiple source systems, transforms and melds that data into a single, integrated library of information, which is accurate, integrated, cleansed, reconciled and easily accessible.
- **Data.** Quality data is the first, second, third and final ingredient of most importance in the BI asset base. Data is a primary ingredient in the BI product. The BI product is a complex asset that begins with the source data, includes and incorporates a comprehensive set of metadata, moves through a series of transition states and, finally, is included in a library of information, which can be considered as a single *source of truth* for the organization.
- **Data Integration Platform.** The data integration platform supports the collection and integration of data from operational and other sources. Data is cleansed, reformatted, translated and integrated into a unified central library of information for the organization. This information is expected to be accurate, timely and easily accessible.
- **Development Methodology.** The direction and way that the information is collected, transformed and integrated, plus the development strategies and processes used in creating the analytical applications are critical to the success of BI within an organization. There should be well documented and communicated methods and processes. The development methodology and everything associated with the creation of the BI assets are clear and necessary targets for assessment during any BI audit.
- **Metadata.** Metadata is information about data. Metadata may be combined with raw data to transform it into an information product. The more information we have about the data, the more value there is in the final product. The metadata must also be accurate, accessible and closely tied to the data.
- **Nontechnical Infrastructure.** The nontechnical Infrastructure is composed of all those constructs and features that are not so tangible (unlike hardware), but which provide a framework for consistency, integration and seamless, efficient operations within and across the BI asset base. This framework must cover all the BI assets and ensure a comprehensive cross organization infrastructure. This nontechnical infrastructure includes, for example, all the

standards, guidelines, governance, service level agreements, and special initiatives for data quality, as well training and communications.

- **Technical Infrastructure.** The Technical Infrastructure provides the framework, foundation and transportation systems for the BI product. These components must be in place or nothing works. This technical infrastructure is the first layer of the BI architecture. It is the underlying technical environment on which the remainder of BI is built. The technical infrastructure includes the hardware, middleware, operating systems, networks, database management systems, the meta data management systems, as well as all installed vendor product software.

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