

ITScore for Business Intelligence and Performance Management

Gartner IT Leaders Research Note G00205369, Bill Hostmann, John Hagerty, 17 September 2010

Any business intelligence (BI) and performance management (PM) initiative must achieve the level of maturity appropriate for supporting the enterprise's strategic goals. BI leaders should use Gartner's updated maturity model to assess where their BI, PM and analytics program is today, where it needs to go, and what steps they must take to get it there.

Key Findings

- A BI program includes people, skills, processes, metrics and other components, as well as technologies.
- As the BI program matures, the architecture will evolve, along with the processes and skills needed to support it.
- At Level 1 maturity, the use of spreadsheets to gather and analyze data is expensive, provides inconsistent and inaccurate information, and carries a high risk of error or fraud.
- At Level 3 maturity, many enterprises implement a BI competency center consisting of business users, IT professionals and analysts to share expertise and improve consistency for specific applications or uses of information.

Recommendations to BI Leaders

- Use this maturity model to talk to business managers about the value of increasing the maturity of your BI, PM and analytics program.
- Undertake the specific projects that are required to move from one level of maturity to the next. For example, creating a BI competency center is needed to move from the Tactical level of maturity to the higher Standards and Enterprise levels.
- Always seek sponsorship from business or corporate managers for any effort to increase the maturity of your program.
- Conduct a maturity assessment using Gartner's ITScore for Business Intelligence and Performance Management diagnostic tool.

ANALYSIS

1.0 Introduction

Many enterprises have started to take a strategic approach to BI and PM because the individual projects that prevailed in the past have created silos of information without giving managers the wider insight they need to make good decisions. However, enterprises cannot enact a strategic approach in one simple step; it takes time to build all the skills needed for the right BI and PM program. BI leaders should consult Gartner's maturity model to understand the five levels of BI and PM maturity, to identify the enterprise's current level of maturity, and to determine what steps the enterprise must take to move to the next level. This document describes the maturity model itself. A companion Toolkit enables clients to diagnose the maturity of various aspects of their BI program.

Figure 1 shows the rising levels of maturity for a BI program that includes people, skills, processes, technologies and other components listed on Gartner's enlarged BI framework. Accounting for the added elements on the framework represents the biggest change from the previous version of the maturity model. The maturity model assumes a portfolio that includes traditional BI applications (such as ad hoc query, reporting, dashboards, online analytical processing [OLAP], data integration and data warehouse), analytic applications (for example, customer service analytics) and PM applications (such as for sales). As the program matures, the technical architecture will evolve, along with the processes and skills needed to support it:

- *Spreadsheets:* Before the enterprise has a BI program, people gather and analyze data on spreadsheets.
- *Applications:* This architecture consists of siloed applications, each of which focuses on a narrow business objective, typically a business process. The applications have different combinations of metrics and processes associated with them, and many tools, technologies and users overlap.
- *Shared Infrastructure:* This architecture shares multiple components of the framework and spans multiple processes and user types. A BI competency center, which combines business, IT and analytic skills, manages the program.
- *Enterprise Services:* This architecture spans a large majority of business processes, geographies and users. Service orientation allows the enterprise to address new business needs routinely.

2.0 Level 1: Unaware

2.1 Characteristics

At this level, BI and analytics occur ad hoc. People follow no formal decision-making process and practices. Typically executives and managers ask for information, and users scramble to provide it with any operational application that is available. These users range from skilled analysts to self-appointed "spreadsheet jockeys." They deliver results in spreadsheets designed for one use and stored on someone's PC. Any analytics are embedded in the spreadsheets. The enterprise has no information infrastructure, except perhaps Open Database Connectivity (ODBC) connections. No one has defined processes for analytics or decision-making, or performance metrics. This approach prevails because it costs little to get started. Unfortunately, these efforts:

- Are labor-intensive and duplicative, and therefore expensive overall.
- Do not provide consistent and accurate information.
- Are not audited and carry a high risk of errors and even fraud.

2.2 Recommended Actions for Improvement

To move to the next level:

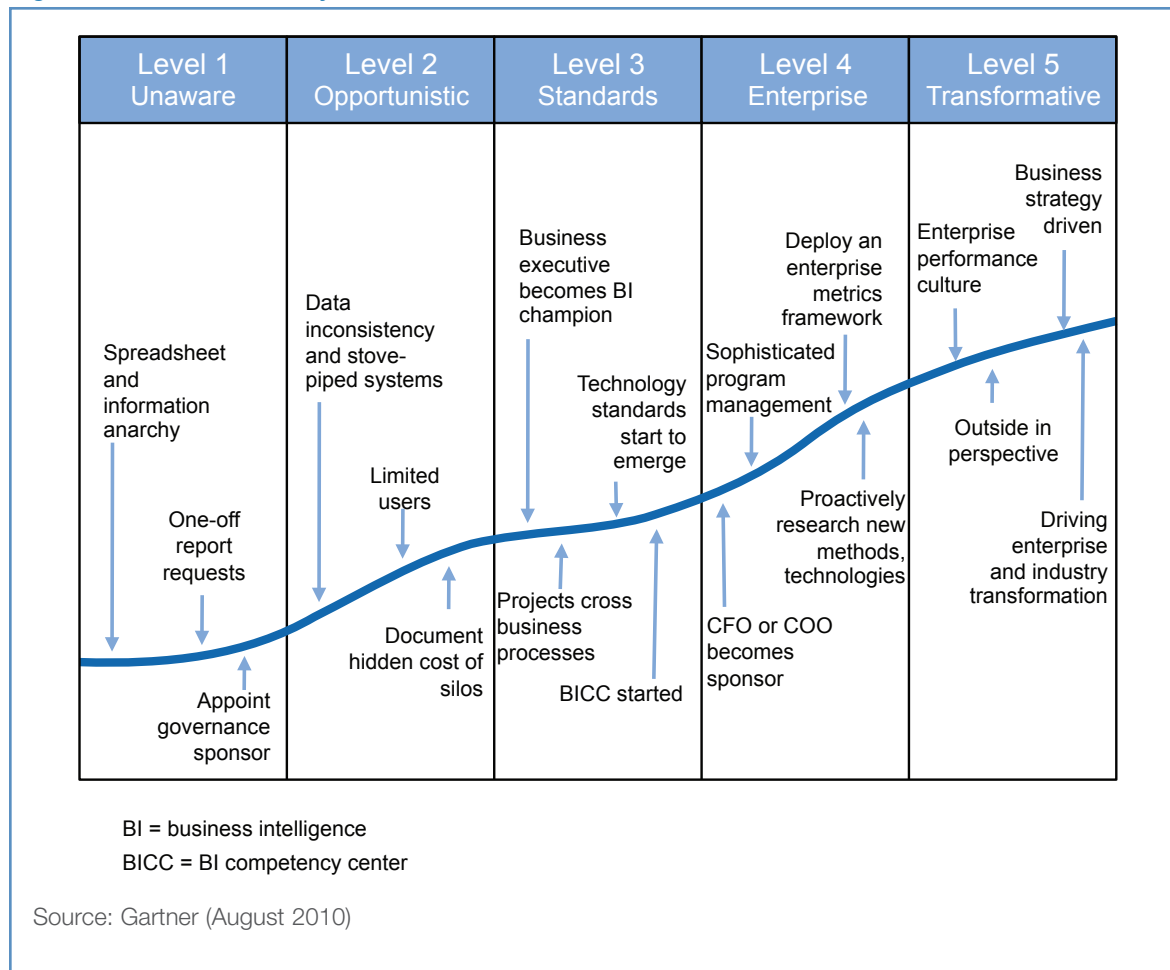
- Implement a server-based spreadsheet control or management technology.
- Recruit executive sponsors for a governance function to combat information anarchy and start to provide more consistent data.
- Pick a well-defined business process and implement a BI, PM or analytics application to provide insight and demonstrate the value of an organized effort.

3.0 Level 2: Opportunistic

3.1 Characteristics

At this level, business units undertake every BI, PM or analytics project individually to optimize a process or to help make tactical decisions, and each project or domain has its own information infrastructure, tools, applications and performance measures. Therefore, different applications proliferate across the organization, each one guided by its own team of IT workers, business application users and operational managers. These people do little or no process modeling. They use data integration tools, analytic capabilities, databases and BI platform capabilities –

Figure 1. BI and PM Maturity Model



maybe acquired in one packaged application. They deliver results via reports, ad hoc query and dashboards. To feed these applications, they create single-subject data marts with simple aggregates of information and data models, hand-coded SQL extracts, and perhaps some data quality technology. Any packaged analytic applications have domain-specific business content. The enterprise has multiple, fragmented pools of metadata stored in various places, including the BI platform, dashboards and data integration tools.

This approach delivers value to users quickly, with relevant information and analysis. BI teams have freedom to innovate, yet they don't require a high level of skills. However, these skills become siloed along with the applications and information, so that the wider organization cannot benefit from any expertise. The various systems for individual projects cannot readily expand to address other uses, so the enterprise still suffers from low economies of scale. In addition, managers at higher levels continue to receive inconsistent or conflicting data from the various systems and metrics employed by different departments.

3.2 Recommended Actions for Improvement

To move to the next level:

- Inventory and document technology and skill overlaps.
- Create enterprise information management and master data management programs to provide consistent metadata across the organization.
- Form a group of analysts, business users and IT professionals to share techniques, best practices and definitions.
- Document the hidden costs of the siloed approach to BI, PM and analytics.

4.0 Level 3: Standards

4.1 Characteristics

At this level, people, processes and technologies start to become coordinated across the enterprise. A senior executive, usually from the business side, becomes the enterprise champion for BI, PM and analytics. Process managers and IT leaders oversee projects across multiple business processes that need to share analysis and decisions (for example, financial or marketing processes). Users make decisions based on multiple streams of data to determine tradeoffs. Most enterprises implement a BI competency center consisting of business users, IT professionals and analysts to share expertise and improve consistency for specific applications or uses of information. Technology standards start to emerge, including for information infrastructure, data warehouses, and BI or corporate PM platforms, but they are not mandated. Nevertheless, the enterprise's projects do not share data or analytic models. At most, one or two processes share a common master data model, and metadata becomes federated for each technology (for example, data integration tools share a particular metadata schema, while BI platforms share a different one). Little sharing of analytic and decision processes, components and resources occurs. Some sharing of performance measures occurs across processes, mostly to help individual business units, but they do not link to enterprise goals. An "inside out" perspective dominates.

For the first time, the enterprise starts to lower the overall cost of its BI, PM and analytics efforts through improved coordination and the standardization of technologies. However, the adaptability of BI, PM and analytic systems remains low, so the enterprise has not yet reached strong economies of scale. Managers' insight into other processes remains low, and information and analysis remains siloed.

4.2 Recommended Actions for Improvement

To move to the next level:

- Federate metadata across technologies.
- Deploy hardware accelerators to improve the performance of BI, PM and analytic applications for users and to help scale systems beyond a single process.
- Implement new search capabilities on BI platforms to help users find information more quickly.
- Consolidate information infrastructure across projects and processes.
- Start a data quality program along with enterprise information management (EIM) and master data management (MDM) initiatives.
- Extend PM initiatives across processes.
- Create a BI competency center if you haven't done so already.

5.0 Level 4: Enterprise

5.1 Characteristics

At this level, top executives such as the CFO or COO become the program's sponsors. The enterprise has defined a framework of performance metrics that links multiple processes to enterprise goals. These metrics guide enterprise strategy. BI applications support cross-functional or enterprisewide decision processes. Corporate and operational executives can see cause/effect relationships with key activities. People from analysts to business managers and senior executives use the same BI, PM and analytic systems — sometimes even partners, suppliers and customers use them. An enterprise information architecture guides the design of new systems. EIM and information sharing mature and receive significant funding. The enterprise exhibits a high degree of discipline around BI, PM and analytic projects, with release-oriented program management. Teams pursue projects with sophisticated processes and skills for requirements definition, modeling and program management. They are committed to data quality and data integration to improve the accuracy and availability of information across the enterprise. Common data models, rules, and analytics minimize the number of versions of a given lot of information. The enterprise integrates applications and information infrastructure components, typically in a hub-and-spoke architecture. The IT department provides scalable support.

Although BI, PM and analytic efforts have become more efficient, usage grows and therefore costs remain high. The enterprise must maintain people with a high level of skill in many different areas, such as program and change management.

5.2 Recommended Actions for Improvement

To move to the next level:

- Find ways to serve more users, perhaps with new types of application and BI capability. Work on educating and supporting users.
- Continue to improve the performance of systems so that users do not become frustrated and try to implement projects outside your BI program to serve their own particular needs.
- Integrate competency centers, such as BI and program management, to improve the efficiency and coordination of related efforts.
- Market successes to the rest of the organization to increase support for what you are doing.
- Proactively research new methods and technologies that anticipate the needs of the business so that you can deliver solutions faster.
- Implement a strategy management method such as the balanced scorecard.

6.0 Level 5: Transformative

6.1 Characteristics

At this level, BI, PM and analytics have become a strategic initiative, jointly run by the business and IT organization, and supported and governed at the highest levels of the organization. The CEO sponsors the program. The enterprise thinks about information as a strategic asset and uses BI and PM to generate revenue. The enterprise has completed its performance metrics framework and even extended it to include partners and customers (for example, to measure the performance of the supply chain). An “outside in” perspective now permeates the measurement system. All of these stakeholders use the information from BI, PM and analytics systems to coordinate a response to changing business conditions across the whole value chain and to make transformational decisions. Users come from multiple levels within the organization, multiple business units and multiple geographies, as well as from customers and partners. They all trust the information and analysis that systems generate as the basis for making decisions in pursuit of the enterprise’s strategic goals. EIM and information sharing have become sophisticated. All projects use standard processes and models, with some customization for the needs of particular projects or regions. Decision processes include decision simulations that incorporate decision-making best practices and optimization technologies.

The enterprise has turned legacy applications into services to promote fast, easy integration and reuse. One set of master data and data integration services applies across the organization. The performance of those involved with data on both the business and IT sides is measured in part on the quality of the data and adheres to governance policies. The whole program has become agile enough to adjust to changing business needs as a routine — that is, without painful reorganization or retooling.

The enterprise has optimized costs by sharing systems, processes and skills across the organization. Users can see the enterprise’s performance and the factors that contribute to it. Service orientation gives users more control over BI, PM and analytic activities; for example, users can design their own reports and dashboards. However, determining the proper granularity of services presents an ongoing challenge across an organization with different needs. This program requires continual investment and attention from senior management. Mergers or acquisitions can reintroduce many of the problems that the enterprise has overcome.

6.2 Recommended Actions for Improvement

To optimize your BI, PM and analytics initiative:

- Approach service-oriented architecture projects incrementally. Gain experience before tackling an ambitious goal.
- Create a realistic road map to guide the development of your portfolio of services.
- Choose the right level of governance for various aspects of your BI, PM and analytics initiative. Seek a balance between control and freedom. For example, mandate general principles from the top, but allow governance bodies closer to actual projects to make decisions about specific protocols or technologies to standardize on.

7.0 Diagnostic Tool Overview

Gartner’s diagnostic tool can help clients assess the maturity of their BI, PM and analytics programs. The tool consists of about 20 questions that focus on five aspects of these programs:

- Business drivers.
- People.
- Program management.
- Processes.
- Tools.

Each question offers five possible answers (corresponding to the five levels of the maturity model). The answers describe conditions that are typical of a BI, PM and analytics program. Clients should choose the answer that best describes the current state of the enterprise’s program. When the client has answered all the questions, the tool will calculate a score from 1 to 5 for each of the five dimensions, and the results will display in a spider diagram.

Clients should use the results to determine the next steps they need to take to increase the maturity of their programs. The ratings on the five aspects will show where the enterprise lags. Maturity will vary between aspects for most enterprises. For example, an enterprise that is relatively strong in business drivers and tools may be weak in processes and program management. To raise the maturity of the overall program, therefore, BI leaders should focus more on the latter two aspects. This document contains recommendations for actions around the five aspects that are appropriate for advancing the enterprise from one level of maturity to the next.

Go to ITScore Diagnostic Tool

ITScore