QUEST SOFTWARE®

Pragmatic Business Service Management

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White Paper

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INTRODUCTION

In a recent survey, more CIOs ranked "IT alignment with business goals" in their top five IT management priorities for 2007 than any other initiative – including business continuity, cost control, and regulatory compliance.[i] This is not a new trend. CIOs have understood for some time that one of the keys to running a successful IT organization is to ensure that investments in IT technology, staff, and initiatives advance the objectives of the businesses they serve. Though many IT organizations have seen improvement in responsiveness and accountability to the business, most CIOs believe that much more progress is needed. **Only one in five CIOs believe that their own IT goals are currently aligned with the strategic goals of the business.[ii]** While CIOs fully understand the importance of business alignment with IT objectives, they continue to find it challenging.

This white paper explores current efforts to align IT with the business, how Business Service Management (BSM) can support these efforts and a pragmatic approach for implementing BSM.

ALIGNING IT AND THE BUSINESS: WHY EFFORTS FALL SHORT

Business alignment begins with the conversation between IT and business management concerning the strategic objectives of the business. These objectives must then influence everything from the highest-level IT strategic planning activities to the day-to-day operation of the IT infrastructure and applications. At the operational level, IT organizations must be able to:

- Analyze and report on the overall IT health of key business functions and services.

- Measure, report, and improve compliance to service level agreements (SLAs).

- Understand the impact of an incident or change request on business processes and objectives.

- Quickly return critical business-focused IT services to acceptable service levels by fully understanding IT operational events that impact the objectives of the business.

- Collaborate across IT and business silos to ensure that organizational structures do not become a barrier to realizing the goals of the business.

To accomplish these goals, many IT organizations have undertaken changes in organizational structures, processes, and technologies. Some organizations have attempted to implement IT organizational structures that break out of the traditional technology-focused silos to better align with the company's business units. Others have adopted new process frameworks such as ITIL to ensure that the organization is responsive and accountable to the needs of the business. Most large IT organizations have implemented processes around closed-loop incident and problem management as well as formal service level management.

IT organizations that have undertaken such organizational and process improvement initiatives have become more efficient and accountable but still have not achieved goals related to understanding when or where business processes are being impacted by IT service levels. Many IT organizations still measure their success in IT terms such as *server uptime*, *application response time*, and *database transactions per minute*. Before IT becomes fully aligned with the business, these metrics must be connected to the business processes supported by IT services, and success must be reported to the business in terms that relate to those processes. Business service management (BSM) helps establish this connection.

WHAT IS BSM AND IS IT EASY?

Here's how Forrester Research defines BSM:

Business service management (BSM) dynamically links business-focused IT services to the underlying IT infrastructure. A business-focused IT service may be a specific IT service or part of a business process, but it must support a significant, visible business metric for a business owner.[iii]

BSM represents the linkage between a business process and the underlying hardware and software infrastructure used to implement it. BSM establishes a continuously monitored, bi-directional communication channel between business owners and IT. For business owners, BSM enables reporting on the health of all or part of a business process. For IT, BSM reports on how infrastructure availability and performance is affecting the business process and how incident and problem management activities should be prioritized based on the importance to the business. In particular, BSM solutions:

- Align business processes to their underlying IT components via an entity such as a business service; the goal is to enable communication of infrastructure/business process health issues that are meaningful to both IT and business owners.

- Discover the IT components that are used to support services of interest to the business.

- Dynamically link business services to the infrastructure to roll up relevant IT component performance, event, and status data; this enables monitoring of business service health and an understanding of the consequences of IT infrastructure failures on those services.

- Provide end-to-end application and infrastructure performance and availability management and service level management, coupled with root-cause analysis and the ability to determine the business impact of infrastructure resource failures.

Implementing such a solution can be difficult. A single service often depends on a large number of IT components, such as web servers, application servers, database servers, network infrastructure components, operating systems and so on. Moreover, any one of these IT components may support several applications, thereby blurring the technical boundaries between applications. In many cases, IT staffers are hard pressed to identify all of the components on which a particular business service depends.

Organizations that attempt to implement BSM across the whole enterprise find it's a daunting task. Forrester Research notes that implementing the unified repository of IT component information, CMDB, required by BSM across a whole enterprise may take years by itself. A Forrester study declares:

"We don't need to be reminded that new applications are structurally complex, with a large number of moving parts. Often, a firm's infrastructure has grown organically and includes many pockets of knowledge that need to be brought together to provide a single truth. A central CMDB repository project is therefore a process that is both complex and time-consuming – a full implementation may take years to completely aggregate all data sources." [iv]

Implementing the CMDB is just one – albeit critical – component of implementing BSM. The project becomes larger and more complex when you add the other components such as the implementation or integration of component monitors or service modeling. Such an initiative will require a large investment of money and time, while postponing the solution for critical problems and other potential benefits to the business until the implementation is complete.

This initiative can also be difficult to sell to the business. IDC notes that "value justification to the business" is one of the top challenges in implementing BSM solutions.[v] Even in those cases where the initial justification is successful, such projects represent a huge risk to the project sponsors and implementation teams.

PRAGMATIC BSM

Quest advocates a pragmatic approach to implementing business service management that allows companies to **realize benefits quickly** and **avoid much of the risk** associated with large, comprehensive BSM implementations. The key elements of such an approach are:

1. Achieve quick benefits by focusing the initial implementation on just those services that are most critical to the business.

2. Implement only those BSM capabilities that are appropriate for the IT organization's maturity level, while ensuring an easy path to more advanced capabilities when needed.

3. Leverage existing investments in CMDB and monitoring technology.

4. Use automation and best practices to reduce implementation time.

5. Use adaptive BSM technology to reduce the burden and cost of maintaining the BSM solution in light of rapid and ubiquitous business and IT change.

What follows are explanations of each key element.

1. Achieve quick benefits by limiting the initial implementation to only those services that are most critical to the business.

One way to reduce the cost and risk associated with a comprehensive, enterprise-wide deployment of BSM technology is to start with a focused approach. Instead of implementing CMDB and monitoring technology across the enterprise, IT organizations should implement BSM for an initial set of essential business processes. An organization, for instance, could implement BSM for order entry or claim processing without deploying or integrating monitoring technologies across the enterprise and without deploying a comprehensive, centralized CMDB. Note, moreover, that such an approach is in line with ITIL v3, which recognizes that IT component information may be stored in multiple CMDBs, each of which provides information for a specific application or domain. ITIL practitioners are not expected to implement a single, comprehensive, centralized database of IT component information.

With careful planning, this approach will minimize the cost and time required for the initial implementation, while providing a clear path for quickly expanding BSM to additional business services. IT organizations can gain experience with BSM on a smaller scale and realize BSM benefits more quickly without making a large, risky investment in an enterprise-wide deployment.

2. Implement only those BSM capabilities that are appropriate for the IT organization's maturity level, while ensuring an easy path to more advanced capabilities when they are needed.

Not all IT organizations are well prepared to implement full BSM capabilities in their organizations. Consider the following Gartner IT process maturity model diagram that shows the stages that IT organizations go through in learning to manage their environment. According to this model, IT organizations typically move from chaotic, *ad hoc*, and undocumented IT activity - through reactive and proactive technical management - to managing IT as a service and a strategic partner to the business. Full BSM capabilities only become relevant at level 4, though some BSM subsets may be extremely helpful at lower levels. For instance, application monitoring, event correlation, and diagnostic capabilities are very important at all levels while service level management, service chain mapping, and business impact analysis become critical at levels 3 and 4.
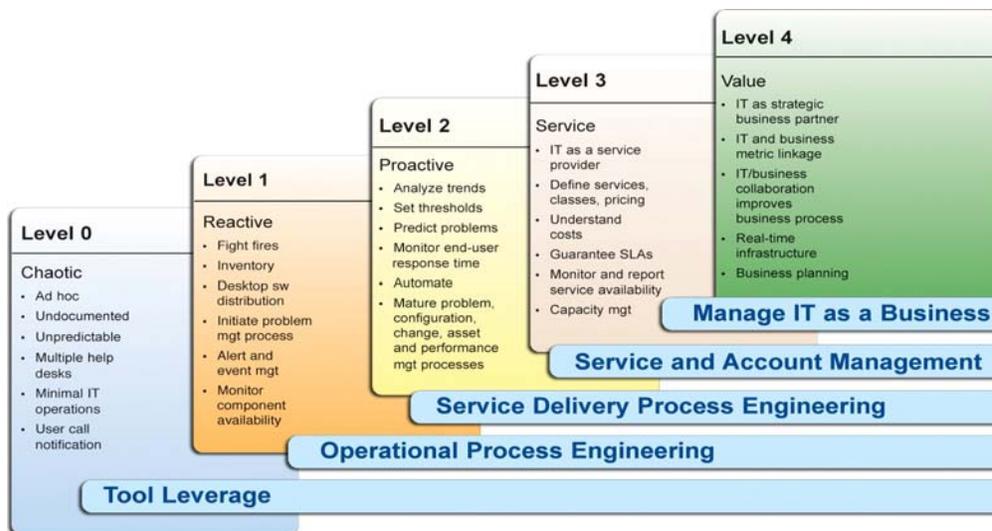
Gartner IT Process Maturity Model[vi]

An IT organization that is operating at level 1 will not want to undertake a full BSM implementation when that cost and effort is better spent on improving basic processes. On the other hand, organizations need to avoid costly technology re-implementations as they mature. It is important to adopt application and service management technologies that provide significant value immediately and can provide the more advanced BSM capabilities when they are needed.

Quest's **Foglight** delivers a rapid ROI at all levels of the maturity model. It provides quick value for companies at levels 0 – 2 with its monitoring, diagnostic and end-user management capabilities, while maintaining an easy path to more advanced business service management functions at levels 3 and 4. Over time, this helps IT organizations lower cost and reduce risk by enhancing application and services management capabilities as IT maturity levels increase - without buying new licenses or implementing new products.

3. Leverage existing investments in CMDB and monitoring technology.

Many organizations have large investments in infrastructure and application monitoring technology. They have implemented system and database monitors as well as some isolated application monitors. Unfortunately, these technologies usually exist in organizational and technological silos. Consequently, they do not, by themselves, support BSM capabilities. However, they may be collecting all or part of the infrastructure configuration and status data needed by a robust BSM solution.

Just as organizations that are beginning to implement monitoring technologies that can easily grow into full BSM capabilities, those organizations that have already implemented monitoring technologies should choose BSM technology that will fully leverage their existing investments. In both cases, organizations should strive to eliminate costly and risky technology re-implementations.

Similar considerations apply to configuration management and CMDB technologies. If an organization already has robust configuration management capabilities supporting a CMDB that contains all of the relevant IT components and their relationships, they should choose BSM technology that can utilize the existing CMDB.

Even though **Foglight** offers a broad range of technologies that collect the appropriate information from a host of IT components, it also supports the integration of data from third-party monitors and CMDBs through an open and standards-based architecture. Components can be identified and added dynamically through an XML-based messaging stream. Quest provides transformers to ease the integration with numerous third-party systems. This enables IT organizations to leverage their existing investment in monitoring and configuration management, while creating a more holistic and accurate view of service level compliance and business impact.

4. Use automation to reduce implementation time.

IT organizations can reduce the cost and risk of their initial BSM implementation projects, not only by reducing the scope of the project, but also by using automation to reduce the implementation time. Advanced technology can be especially helpful in creating the mappings between business services and their underlying applications and infrastructure components. Creating such a mapping typically requires two steps. First, all of the relevant IT components must be identified. Second, the relationships between these components and between the components and the service in question must be established. Without automation, these are difficult tasks. A typical service may depend on thousands of individual IT components with complex inter-relationships.

In some cases, this information will already be available in an organization's CMDB, however, many CMDBs are part of an overall process improvement program that contains extensive asset and relationship management information. This information is invaluable to an organization but typically not optimized to support near real-time updates to the configuration items stored within it. A more appropriate approach in this situation would be to use an operational CMDB that is optimized to discover and update relationships between components and the business services they support, as changes occur in the IT environment. Advanced BSM technology can ensure data consistency between the core CMDB and the operational CMDB. Using this hybrid approach can dramatically decrease implementation time.

> **Foglight** automatically creates dependency mappings for IT components that participate as part of a service chain. These components include all end-user, network, and server components that contribute to the delivery of an application. Foglight also creates transaction mappings that identify the IT components that participate as part of a transaction. Foglight's mapping capabilities can be customized, allowing organizations to create the service mappings and roll-ups that are most important for their business. All of this information is stored in an operational CMDB that can be used by itself or linked to a federated CMDB.

5. Use adaptive BSM technology to reduce the burden and cost of maintaining the BSM solution in light of rapid and ubiquitous business and IT change.

IT environments are constantly changing, and configuration data is often out of date as soon as it is collected. Whether adding a new server, network device, or application -- or updating the maintenance on an existing system -- there are hundreds of changes occurring on a daily basis within an IT environment. Maintaining meaningful and usable service mappings in such an environment is challenging.

This constant change is problematic for traditional monitoring systems which may require costly manual intervention to keep their configurations current with the IT environment. The requirement for manual configuration also increases the risk of introducing monitoring "blind spots." If the monitoring system configuration is not constantly synchronized with the changing environment, there is a greater likelihood that some components will not be monitored at all.

These problems are best addressed with technology that automatically recognizes change in the environment and configures itself to properly monitor the new environment. Such technology can decrease the cost and time required to maintain the BSM solution, while ensuring that the BSM configuration is always current with the IT environment.

As new data and events are processed, **Foglight** can identify upon request the servers and devices in the IT environment as well as the deep property values of applications and database systems, request types, and transactions.

When a component is added, removed, or changed, Foglight will automatically recognize the change and take appropriate action based on the device type, the service models in which it participates, and previously defined monitoring policies. This capability reduces the cost of maintaining the BSM solution and reduces the likelihood of monitoring "blind spots" that are often created when manual configurations are not properly updated.

SUMMARY

BSM solutions help IT organizations align with business objectives by establishing the relationship between business services and the underlying IT infrastructure and application components that support them. Comprehensive, enterprise-wide BSM implementations, however, are costly and risky due to the time and effort required to deploy them. IT organizations can reduce this cost and time to deployment by taking a pragmatic, incremental approach to BSM implementation that reduces scope, leverages existing technologies, and uses advanced BSM technologies to speed implementations. By using such an approach, IT organizations can reduce the risk of their BSM implementation, while realizing the benefits of BSM more quickly.

Foglight is the only adaptive application and services management solution unifying IT and the business. It connects business services to infrastructure, end user to database, and production to development.

Foglight provides deep insight into the service relationships existing between end users, business services, IT services, and infrastructure components such as applications and databases. Intuitive and flexible dashboards can be customized to provide multiple models and views of the managed environment based on the needs of each role in the organization. Foglight spans production and development environments, helping take current incident, problem, and release management processes to the next level of efficiency.

Foglight Application and Services Management

ABOUT QUEST SOFTWARE, INC.

Quest Software, Inc. delivers innovative products that help organizations get more performance and productivity from their applications, databases and Windows infrastructure. Through a deep expertise in IT operations and a continued focus on what works best, Quest helps more than 50,000 customers worldwide meet higher expectations for enterprise IT. Quest's Windows Management solutions simplify, automate and secure Active Directory, Exchange and Windows, as well as integrate Unix and Linux into the managed environment. Quest Software can be found in offices around the globe and at www.quest.com.

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• Seek help from a Support engineer.

• Log and update your case, and check its status.

View the **Global Support Guide** for a detailed explanation of support programs, online services, contact information, and policy and procedures. The guide is available at: http://support.quest.com/pdfs/Global Support Guide.pdf.

[i]State of the CIO Survey, (CIO, 2007)

[ii]"The ROI of Alignment", CIO, January 2007.

[iii]Peter O'Neill et al., BSM Is Coming Of Age: Time To Define What It Is (Forrester Research, 1 February 2006) 2.

[iv]Thomas Mendel, Ph.D. and Jean-Pierre Garbani, The "Just Enough" CMDB: Implementing A CMDB Is Not A Five-Year Project (Forrester Research, 12 April 2006), 2.

[v]Stephen Elliot, Business Service Management: Survey Shows Rising Customer Adoption and Increasing Maturity, (IDC, October 2007) 11.

[vi]Application Management: "It's Not Just a Production Problem," (Gartner, November 2005).