

A CIO's Guide: Building Business Trust with Application Performance Monitoring

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Introduction

ENTERPRISE MANAGEMENT ASSOCIATES® (EMA™) analysts are in constant dialogue with CIOs and other high-level business executives about their top challenges and concerns. Although their specific challenges change with the times—clearly changing business and economic factors drive priorities—they can almost always be grouped around three key factors: personnel/skills, business enablement, and budgets.

In the most recent discussions, EMA finds that Cloud and mobile are today's "hot buttons." As one IT executive notes, "Supporting these applications requires skills we don't have." Another observes that, "Everything is connected to everything, and this is impacting our ability to effectively support the business."

To complicate the role of the CIO, EMA is also finding that management solutions available to the typical IT organization often lack support for modern technologies. Mobile and application performance management, for example, are the top two domains which IT executives believe are "most poorly addressed by current market solutions."

This EMA white paper highlights key steps that CIOs can take to ensure business relevance in this age of disruptive technologies and evolving "best practices." Taking into account the high stakes and complexities surrounding the delivery of modern applications, EMA sees leading-edge management solutions as being a key to harnessing disruption to deliver business value.

Application Performance Monitoring (APM) solutions provide a fundamental foundation for delivering high quality modern applications. They enable IT organizations to capitalize on disruptive technologies by delivering innovative, business-differentiating services.

Getting it Right

When it comes to delivering quality applications, there are innumerable opportunities for failure— but limited ways to "get it right." Technology and human factors are interacting in new and unforeseen ways, creating a wealth of new business opportunities. However, from the CIO perspective, taking advantage of these opportunities entails significant risk. CIOs put their reputations on the line for each new application rollout, and credibility is a difficult commodity to build and maintain in today's fast-paced technology environment.

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The challenges are complicated and diverse. Stakeholders can—and do—purchase Cloud services with a credit card. End users are accustomed to WAN-optimized, accelerated consumer sites, creating high expectations for performance and availability. Applications and business services are increasingly distributed and complex, requiring cadres of IT specialists to deploy, administer, and maintain. At the same time, there is always an emphasis on staffing efficiency, cost cutting, and "doing more with less."

Admittedly, the role of today's CIO is exceptionally demanding. Nevertheless, opportunities for delivering extraordinary business value have never been more abundant. As a bridge between technology and business, and as a technology expert who understands business drivers, the CIO has the skills necessary to identify new technology-enabled revenue streams and cost efficiencies.

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However, it is difficult to earn trust without a track record of success, and the CIO's most visible achievement lies in the quality of the services delivered to the business. In the end, it is these services that are the “face of IT,” the clear link between IT and the business. For CIOs to take their rightful place at the executive table, usability, performance, and availability must meet the expectations of other executives, customers, and end users.

Transform Disruptive Technology into Business Opportunity

Given the confusion introduced into the business by “hype cycles” and industry news sources, it is up to the CIO to decide which new technologies to adopt and which to ignore. Without judicious evaluation by an expert, it is far too easy to jump on the next bandwagon, indulging in “change for the sake of change.”

At the same time, taking advantage of transformative technology can be tremendously valuable. Cloud and Big Data, for example, are literally changing the face of the business. Cloud has enabled IT to become more responsive by delivering new applications in days versus months. Big Data is enabling both business and IT leadership to make better, more timely, and more business relevant decisions.

However, while evolving technologies drive opportunity, they also have the potential to create fallout that ultimately lands on the CIO. One travel-related business, for example, experienced “lost” transactions. Customers insisted they had made a reservation, but when they showed up at the counter there was no record that they had done so. A healthcare-related claims processing company reported “lost” claims. Although the claims had been electronically sent for processing, they simply “disappeared.” In both cases, the issues were related to application architecture and could have been detected with adequate toolsets. And in both cases, CIOs ultimately took the blame for customer dissatisfaction.

In short, while embracing leading-edge technology can yield significant business value, it also engenders risk. CIOs walk a tight rope, balanced between delivering innovative services and assuring service quality. IT organizations that are adept at striking this balance are said to be “agile,” and in today's economy “agility” can mean the difference between success and failure.

Maximizing Innovation while Minimizing Risk

Automated management solutions are a very powerful factor—perhaps the most powerful factor—in ensuring that this balancing act has a positive outcome. In fact, the frequency of change combined with the overall complexity of today's application environments leaves very few alternatives. Even with the best people and the most rock-solid processes in place, people and process alone are simply no longer “agile” enough to ensure high levels of service quality.

And while traditional monitoring systems may deliver component level visibility, infrastructure monitoring alone is inadequate for tracking end-to-end performance, availability, and user experience for modern applications. Leading-edge technology requires leading-edge management tools, and modern APM solutions can reduce administrative spend while ensuring application quality.

They also provide a way to quantify application delivery in ways that business stakeholders can relate to. Key Performance Indicators (KPIs),

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for example, can be related to factors impacting automated business processes. Mean Time To Repair (MTTR) reporting can quantify continuous service improvements as defined by the IT Infrastructure Library (ITIL). Decreases in shopping cart abandonment rates can be related to sales figures and quantifying response time delivered to end users can provide “proof” of Quality of Service (QoS). By demonstrating that he or she is in control of the application delivery cycle, the CIO earns credibility.

These tools also supplement the skills available within the IT organization. Virtually every IT Maturity Model stresses judicious use of automation to supplement IT skills and processes. The *Control Objectives for Information and related Technology* (COBIT®), for example, provide guidelines for IT auditors. They define the highest level of operational maturity (Level 5) in part as follows: “Internal control and risk management are integrated with enterprise practices, supported with *automated real-time monitoring*.....”¹ In other words, within maturity frameworks, automated, real-time management solutions are a prerequisite for reducing risk and, ultimately, for achieving operational excellence.

Modern Applications and Risk

Due to the complexity of modern applications and the risk factors this complexity engenders, the “right” management tools are more important than ever before. While many IT organizations are still trying to manage applications by monitoring infrastructure, modern, integrated applications have far more potential failure points than legacy applications.

A consolidated “top down,” “bottom up,” and integration-aware view of application performance is the hallmark of APM solutions. Correlation across infrastructure metrics (“bottom up”), integration points, and transaction metrics (“top down”) delivers a “real world” view of the application as it relates to supporting infrastructure. Leading APM solutions (see Figure 1) ensure that information about all of these elements is captured, correlated, and analyzed. They perform these actions in near real-time (a requirement noted in the COBIT definition above), a feat that can’t be duplicated by human operators no matter how skilled they are.

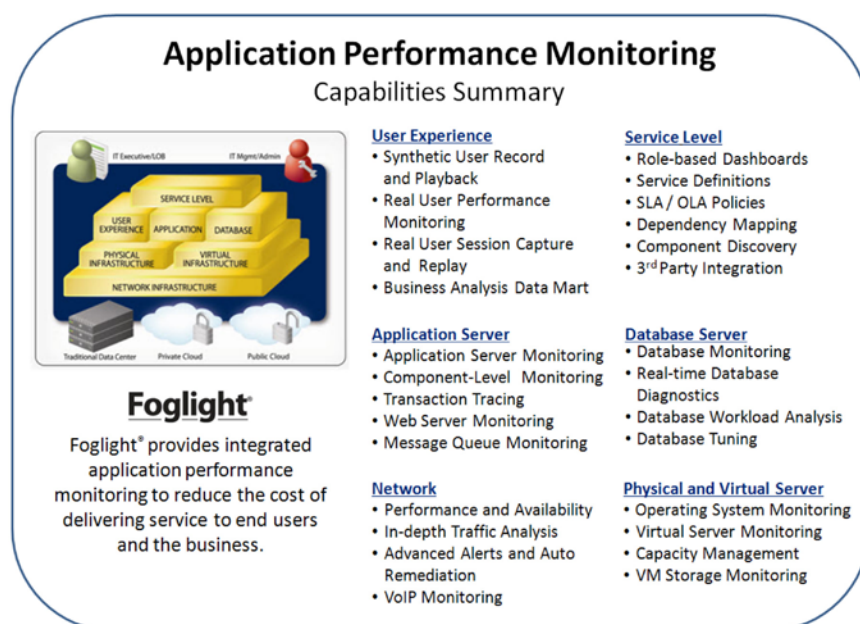


Figure 1: Multiple Capabilities Support Full-Featured APM Toolsets

¹ COBIT 4.1, IT Governance Institute, available at: <https://www.isaca.org> (parentheses are by the author)

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Additional benefits of APM solutions include:

- They quantify the quality of the application delivered to the user.
- They encapsulate world-class APM expertise which supplements skill sets already in place within IT.
- They maximize the utilization of personnel by reducing time spent in “all hands on deck” troubleshooting exercises.
- They help bridge operational silos, another industry best practice that enables cross-functional teams to work together more efficiently to solve application-related problems.
- They help optimize facilities costs and mitigate environmental factors by identifying opportunities for virtualization and “right-sizing.”
- Since less manpower is required for day-to-day support, CIOs can re-focus the efforts of IT personnel from support to innovation.

Quality Roadmap

The ability to earn the trust of the business is an essential skill for every executive, but particularly for the CIO. The CIO's skill set spans business, technology, and politics and his or her success has a strong correlation with the value of the services delivered by the IT organization. And while best practice frameworks such as ITIL and COBIT embody the collective “lessons learned” of the industry over time, the ability to inspire trust goes beyond traditional “roadmaps.” It also requires the technical expertise, experience, and adaptability that enable the executive to build a vision that inspires his/her staff to deliver to that vision.

Factors that contribute to trust building and operational excellence can be grouped at a high level into four key capabilities:

- *People:* High performing IT organizations are adept at selecting personnel who combine a high degree of technical acumen with good people skills. Delivering applications is a team sport, not an individual one. Supporting end-to-end services requires that IT specialists transcend silos to view the “service” they deliver as the same “service” that is experienced by the end user. Working cross-functionally is a key requirement, as is embracing a common, customer-centric vision.
- *Process:* Processes should be formalized and documented, but as lightweight as possible. They should support the organizational vision and promote business alignment and repeatable, predictable outcomes. Processes, along with supporting technology, should also serve as a unifying factor across silos.
- *Technology:* Leading-edge APM solutions provide the basis for improving cross-functional collaboration between development and operations (“DevOps”) teams AND between silo technology teams. Tools should be selected with this outcome in mind.
- *Leadership:* Operational excellence doesn't happen in a vacuum, and the CIO's leadership pays off with a wide variety of benefits. They include cost and staff optimization, protection of tangible and intangible business assets (i.e., brand, customer satisfaction, supplier/partner satisfaction, etc.), competitive differentiation, and the ability to apply the “right” technology to the “right” business/technology problem.

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Summary

In summary, APM investments are fundamental to building trust. They promote the delivery of quality services and help the IT organization to build a track record of operational excellence. They provide a basis for positive outcomes because they encapsulate world-class expertise. They also bring together the people, process, and technology aspects of operational maturity with an end-to-end perspective on critical services and applications. EMA analysts see Application Performance Monitoring as increasingly business critical, particularly as the pace of change intensifies and the reliance on IT services continues to escalate.

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About Foglight® APM

With their strong grasp of an organization's end-to-end processes, CIOs are uniquely positioned to profoundly alter the value a business offers to its customers. Transformational IT leaders possess the ability to influence their organization's use of technology in ways that help business customers continuously adapt to changing market needs. Foglight, our industry-leading application performance monitoring solution, has helped thousands of companies simplify APM, eliminate business-impacting performance issues, and provide the metrics to forecast changes needed to support shifts in the market. Leading organizations all over the globe use Foglight to manage business-critical application performance and end user experience across the entire application stack. For more information, visit www.quest.com/simplifyAPM.

About Enterprise Management Associates, Inc.

Founded in 1996, Enterprise Management Associates (EMA) is a leading industry analyst firm that provides deep insight across the full spectrum of IT and data management technologies. EMA analysts leverage a unique combination of practical experience, insight into industry best practices, and in-depth knowledge of current and planned vendor solutions to help its clients achieve their goals. Learn more about EMA research, analysis, and consulting services for enterprise line of business users, IT professionals and IT vendors at www.enterprisemanagement.com or blogs.enterprisemanagement.com. You can also follow EMA on [Twitter](#) or [Facebook](#).

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