



**The integrated application lifecycle:
reducing the costs and risks
associated with change.**

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Introduction: mitigating the cost of innovation

Your CEO is envisioning unprecedented innovation and change. You're envisioning the skyrocketing costs and risks that typically accompany such change. How can you enable the innovation your organization needs to thrive – and still minimize costs and risks?

Since innovation usually involves new applications, the answer may lie in siloed application development and management processes. The fact is that those silos – whether they exist across departments, teams or vendors – are a major reason applications are so costly to manage and maintain. And high application management costs mean less of the IT budget is available for innovation. The silos can also result in slower time to market and a diminished ability to compete because they inhibit the ability to quickly react to change. So breaking down these silos can go a long way toward enabling the innovation and change that is so vital to organizations today.

This paper is about how CIOs and application portfolio managers can enable their organizations to thrive in a permanent state of change by adopting a holistic approach to application development and management.

Embracing unprecedented change

According to the latest IBM Global CEO Study, CEOs foresee an “enterprise of the future” that is characterized by accelerating, pervasive and unrelenting change. Change is coming so fast that organizations are reorganizing themselves on the fly just to survive. They're creating new products and services. Entering new marketplaces with new and more demanding customers. Experimenting with new business models and looking for innovative ways to leverage globalization. And they're seeking to differentiate themselves through corporate social responsibility.

“Increasingly, Global 2000 organizations are looking to service providers to enable development and customization of key software applications, and they rely as well on strong application lifecycle management practices to ensure adaptability and success.”

—IDC

Worldwide Application Life-Cycle Management Services 2007–2011 Forecast, Doc # 210131, December 2007.

But all this change can mean higher IT management costs and performance risks. Already, application maintenance and management often take up 75 to 80 percent of the IT budget, leaving only 20 to 25 percent for new projects. At the same time, IT organizations need the ability to quickly put new applications into production, thereby speeding time to market and increasing business flexibility.

Reducing operating costs, year after year

When a leading provider of mobile services in the United Kingdom needed to improve customer retention, it asked IBM Application Services to design, build and manage a core set of applications for billing, customer care, mediation and provisioning.

By providing both development and management services, IBM is helping the company achieve a year-on-year reduction in operating costs. IBM is not only automating service processes and leveraging offshore support from service centers in India, it is also helping to ensure continuous improvement. As a result, the company has the flexibility it needs to respond to new customer demands and be more innovative in the marketplace.

Taking a closer look at the development/management gap

Most organizations have application development silos that evolved as the companies implemented new product lines and services or integrated mergers and acquisitions. Organizations typically spread application development across multiple groups and departments, which can lead to complex and inflexible application portfolios. Some organizations even outsource application development and management to various vendors, which means there are multiple vendor and partner relationships to manage, as well as siloed efforts that often are not as integrated as they should be.

Highlights

When developers design and build applications without thinking about the operating environment, management costs can go up.

What drives the development/management gap? Has the separation of development and management simply become a common IT management practice? Does the gap exist because the skills involved in each area are so specialized? Or is the gap a result of IT decentralization, especially in larger organizations? The issue is complex, but the result is that developers typically design and build applications without fully envisioning how they will be used and managed on an ongoing basis. This, in turn, can raise application maintenance and management costs and minimize value.

Facilitating the transition to e-procurement

How does a company speed procurement-related processes such as bidding and issuing purchase orders? The answer for a major Asian automaker and marketer was a holistic build and manage approach from IBM. The IBM teams not only built an e-procurement solution for the automaker, but also are providing ongoing management and support.

As a result, the company has improved its procurement processes through e-procurement capabilities that run efficiently and cost-effectively, thanks to ongoing IBM management.

Development silos can cause a lack of integration among applications and a diversity of application architectures, requiring the retention of a broad skill base, which is costly and difficult. The silos also can mean weak governance with inconsistent processes and a lack of strategic alignment with business goals, not to mention a proliferation of overlapping services. In addition, the silos can significantly decrease time to value. Costly and cumbersome management, which is further complicated by access and audit control issues as well as a lack of security, is another common symptom.

“SOA enablement is also expected to influence increased adoption of application lifecycle management services as business processes are more tightly integrated and optimized in support of the application portfolio.”

—IDC

Worldwide Application Life-Cycle Management Services 2007–2011 Forecast, Doc # 210131, December 2007.

Still another result of development/management silos is the inefficiency, time demands and costs of knowledge transfer from development to operations. Developers find it difficult to hand off the knowledge they’ve gained while designing and building an application. Even organizations that implement best practices don’t always document applications well or consistently, so there is often a steep learning curve as applications move to production.

The effect of the development/management gap is even greater on service-oriented architecture (SOA)-based applications and Web services. The linking of application components, IT resources and business processes as a service introduces new requirements for managing performance, manageability, availability and security. In addition, SOA can add software and hardware technologies that need to be managed, such as service registries. So, while SOA promises to provide the agility and flexibility organizations need to quickly react to marketplace changes, this promise isn’t always realized when SOA projects go into production.

Gaining a competitive advantage through a multichannel strategy

A European electronics retailer that wanted to build stronger customer loyalty decided to integrate its store, call center and online commerce operations to create a consolidated, real-time view of its customer relationships. The company chose a Cisco Unified Communications platform to optimize business processes, improve collaboration and support future growth. Working closely with Cisco Customer Advocacy, IBM Application Services completed all stages of planning, design, testing and implementation—from the identification of requirements to design, procedure, service-level definitions and, finally, system integration.

The result? A new competitive advantage through a multichannel retail strategy, plus centralized management that eliminated the expense and complexity of maintaining a legacy private branch exchange system.

Highlights

Using a single vendor for application development and management can dramatically lower costs.

Bridging the gap

Organizations that outsource application development and management have the easiest path to bridging the development/management gap. Simply by using a single vendor for both, companies not only can lower costs and deliver new functionality more quickly, they also can achieve better, more cost-effective results. For example, they can:

- *Help speed the development and improve the quality of new applications with proven application development and testing methodologies*
- *Free up internal IT staff for more strategic projects by off-loading work to global delivery centers around the globe*
- *Modernize their application portfolio, reduce management cost and complexity, and improve alignment with business through a structured best practices approach, which brings current operating structures in line with new business innovation and continuous improvement*
- *Leverage the expertise of highly skilled and experienced vendor staff in a follow-the-sun mode to drive time-to-market and cost improvements*
- *Improve application and service-level alignment through business prioritization, application restructuring and overall approaches to governance*
- *Get more value for less cost while improving flexibility and growth potential.*

The overall result of these gap-bridging efforts is a more efficient process that can speed design and build by as much as 15 percent and lower costs by as much as 30 percent. Outsourcing application development and management can help companies bridge the development/management gap, enabling them to lower the total cost of both implementation and ownership by as much as 20 percent when compared to using internal staff.

Highlights

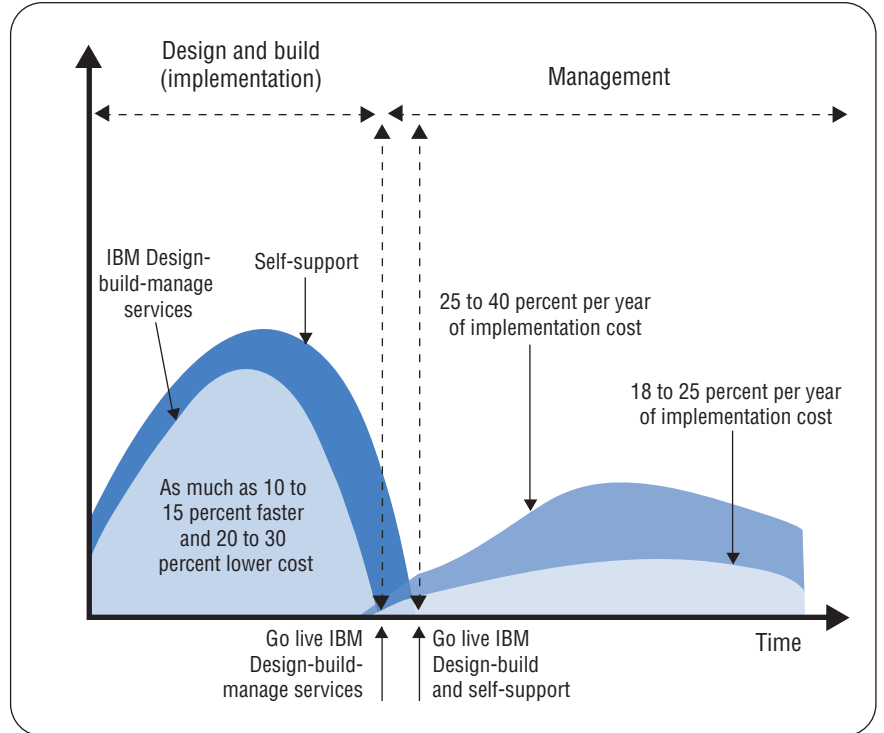
Organizations can also bridge the development/management gap by designing applications that are easier to manage.

But consolidating vendors isn't the only option. Organizations with siloed in-house application development and maintenance teams can help bridge the gap by:

- *Designing applications that are easier to manage and maintain.*
- *Developing an ongoing governance plan during the development phase to make sure they have the right resources and processes in place.*
- *Looking across the organization for points of synergy—for example, testing and maintenance people who support multiple applications and who can be much more efficient than siloed people.*
- *Making sure they have a good understanding of the business value of applications and components so they can apply resources to maximize business value.*
- *Making sure they follow a rigorous testing process, since it's much more cost-effective to fix problems early in the lifecycle. In fact, advanced defect analysis and quality management processes can reduce defects as much as 69 percent.*
- *Developing an effective transition plan early on to minimize knowledge transfer by having some of the development team stay on for maintenance and support.*
- *Making sure they develop effective documentation so staff can have the right tools to support the application.*

Highlights

By consolidating application design and management, organizations can speed development by as much as 10 to 15 percent.



In short, innovative organizations have a lot to gain by closing the development/management gap. They can improve time to market for new initiatives supported and enabled by applications. They can gain more reliable service and responsive support. And they can realize enhanced business value, thanks to the improved alignment of the application portfolio with evolving business strategies and goals.

Highlights

To free up resources for innovation, organizations must first reduce application management expenses.

Meeting 99.9 percent availability goals

When a leading United States–based satellite services provider needed to quickly bring new offers and services to market, it turned to IBM Application Services. The IBM team assumed all functional test execution responsibilities using a combination of offshore and landed resources. The objective was to create an enhanced testing stage that would yield 99.9 percent post-testing production availability, meet business expectations and lower costs.

Working with IBM, the company not only met its 99.9 percent availability goal but also achieved a 39 percent reduction in product quality issues, while also improving production quality and reducing labor costs.

Conclusion: thriving in a state of constant change

The results of the latest IBM Global CEO Study show that rapid, pervasive change will be a fact of life as organizations move forward. Since application management costs typically consume as much as 80 percent of an IT budget, anything CIOs can do to reduce application management expenses can free up the resources necessary to invest in new IT initiatives for adaptability and innovation.

A key way to do this is to break down the silos between application development and management—functions that are typically located in separate departments, on separate teams or even with separate vendors. As discussed earlier, there are a number of ways organizations can address this in-house. But for organizations that are already outsourcing application development and management, an easy way to unify the application lifecycle is to simply consolidate these two functions with a single vendor, such as IBM Application Services.

Highlights

Using its Defect Reduction Method, IBM can help you speed time to market, improve product quality and lower costs.

With our years of industry experience; capabilities such as the IBM Component Business Modeling™ approach; our ability to draw upon more than 90,000 skilled professionals worldwide; and innovative application approaches from the experts in IBM Research, thought leaders in the IBM Institute for Business Value and our centers of excellence around the globe, we are well positioned to help you bridge the application development/management gap.

Leveraging such technologies as the Defect Reduction Method and other best practices and methodologies, IBM can focus on quality assurance, testing and all the other up-front work to help ensure that applications run smoothly once they are in production. IBM offers a holistic and comprehensive approach to application development and management that includes:

- *Industry-specific application development*
- *Ongoing application support, maintenance and enhancement*
- *Best practices, methodologies and tools*
- *Application modernization and testing services.*

IBM Application Services can enhance the management and governance of the entire application portfolio, helping to align investments with business value and putting in place application modernization roadmaps to potentially eliminate critical business constraints. This not only helps reduce risk, it also enables organizations to bring new functionality to customers, partners and employees as quickly and cost-effectively as possible.

Our unique Defect Reduction Method

This proprietary defect assessment and improvement technology developed and used exclusively by IBM helps provide:

- *Timely identification of prioritized actions for defect prevention and removal*
- *Identification of customer usage profiles for improving product validation strategies and customer satisfaction*
- *Consistent terminology and the ability to set the stage for a common set of goals across development, testing and service stages*
- *Efficient methods for evaluating product quality at key decision checkpoints during development and operations.*

The result is an increased ability to meet your organization's need for faster time to market, improved quality and lower costs.

For more information

To learn more about IBM Application Services, contact your IBM sales representative or visit:

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