

Taking the Lead: Gaining a Competitive Advantage Through Infrastructure and Platform Optimization

“Business agility is becoming a strategic necessity.”
(Ross et al., p. 12)

Introduction

In an ever-changing global marketplace, companies are looking for every opportunity to gain a competitive advantage and simultaneously grow revenue, profits, and customer loyalty. Meanwhile, new regulatory requirements, competitive pressures brought on by an increasingly connected global economy, and technologies that “level the playing field” for companies of all sizes are making it more difficult for companies to stay ahead.

Massachusetts Institute of Technology (MIT) researchers Jeanne W. Ross and Peter Weill, along with David C. Robertson, a professor at IMD International, note in *Enterprise Architecture as Strategy: Creating a Foundation for Business Execution*, “Business agility is becoming a strategic necessity. Greater globalization, increasing regulation, and faster cycle times all demand an ability to quickly change organizational processes” (Ross et al., p. 12).¹ Similarly, Gartner’s Thomas J. Bittman observes, “as the world becomes more connected...the ability to react with speed and flexibility is growing in importance” (Bittman, p. 1).

In this environment, the role of information technology (IT) is rapidly becoming a key strategic asset to support and *drive* innovation, profitability, and customer satisfaction. The importance that IT plays in the modern corporate world is highlighted by the escalating IT investment companies are making. In the early 1980s, 15 percent of the capital expenditures of American companies went to information technology; by the end of the 1990s, it had hit nearly 50 percent (Carr, p. 5).

Though corporate IT budgets decreased early in the twenty-first century, IT spending has now rebounded, driven primarily by competing needs. On one hand, increasing IT complexity has made it more difficult—and costly—to manage a company’s infrastructure and platform.

¹ All citations indicate the author(s) of a source and the page number in the source where the citation can be found. In instances where multiple sources by the same author(s) are cited, an abbreviated title of the source is provided in the citation. Full references are listed alphabetically by author(s) at the end of this paper.

“By 2012, IT contribution will be cited in the top three success factors by at least half of top-performing businesses.”
(Mahoney, Berg, p. 4)

On the other hand, the promise of the strategic advantage a company can achieve through technology is driving new waves of IT investment.

The Evolving—and Expanding—Role of IT

Once viewed as a back-office discipline, IT has evolved. As Gartner’s John Mahoney and Tom Berg describe, “CEOs [now] view IT as a critical part of growing a business” (Mahoney, Berg, p. 4).

Not only is IT already being seen as a key strategic asset, but IT’s importance to a company’s success is expected to increase. Mahoney and Berg predict that “by 2012, IT contribution will be cited in the top three success factors by at least half of top-performing businesses; and IT barriers will be cited in the top three failure factors by at least half of the lowest performers” (Mahoney, Berg, p. 4).

One reason that the role of IT is expanding is that IT can automate routine processes. This has positive impacts at all levels of the business. For line-of-business workers and support staff, increased productivity can enable greater profitability for the company. Meanwhile, senior executives can increase their focus on initiatives that will drive innovation and growth. “To focus management attention on higher-order processes, such as serving customers, responding to new business opportunities, and developing new products, managers need to limit the time they spend on what should be routine activities” (Ross et al., p. 3). This is just one of the benefits that effective technology solutions provide.

IT’s ability to affect the success and viability of a company goes well beyond the automation of routine tasks. IT also has the ability to streamline critical line-of-business processes that are at the core of a company’s business. For example, retailers can now track inventory levels of specific products at the store level and automate ordering and shipping of additional units when inventory levels reach pre-determined triggers.

IT also has the ability to facilitate “role-based productivity,” which is a concept that focuses on productivity enhancements tailored to specific employee roles. Microsoft Chairman and Chief Software Architect, Bill Gates, notes that by putting people “at the center,” IT solutions can empower people to “gain insight and collaborate to make decisions and take actions that drive the business forward” (Microsoft, “New Generation”).

Harvard Business Review editor-at-large Nicholas G. Carr notes, “Chief executives now routinely talk about the strategic value of information

Some IT issues have evolved into issues of greater importance (and risk) because IT itself has become central to business.

“Legacy systems cobbled together to respond to each new business initiative create rigidity and excessive costs.”
(Ross et al., p. 11)

technology, about how they can use IT to gain a competitive edge” (Carr, p. 6).

Even as IT expands to become central to a company’s success, however, a number of critical IT issues pose risks for business executives and IT professionals alike.

IT Today—A Minefield of Risks

Certain issues, such as IT complexity, have been developing for years. Others, such as new regulatory requirements, become IT challenges seemingly overnight as governments draft new legislation to address past or potential concerns. And some, like business–IT alignment, security, and business-disruption caused by IT systems failure, have evolved into issues of greater importance (and risk) as IT itself has become more central to business.

IT Complexity

Having invested in legacy solutions that meet a business need, companies are frequently hesitant to replace an existing solution when new technologies are introduced. Understandably, companies seek to gain the maximum (or at least an acceptable) return on investment on the initial solution. As the original solution ages and additional technologies are added to the infrastructure and platform, IT time is invested in integrating legacy and new solutions. Companies become so dependent on the legacy solution (and the associated middleware that is created to integrate the old with the new) that the adoption of new solutions becomes increasingly more difficult.

Touching on this scenario, the former Chief Information Officer of Delta Air Lines and Burlington Northern, Charlie Feld, along with Donna B. Stoddard, Chair of the Information Technology Management Division at Babson College, write, “Companies have created and populated dozens of legacy information systems... As the data from discrete functions collect in separate databases, more and more resources are required merely to keep the systems functioning properly” (Feld, Stoddard, p. 4).

The result is an infrastructure and platform that lacks responsiveness and agility. “Legacy systems cobbled together to respond to each new business initiative create rigidity and excessive costs” (Ross et al., p. 11).

Regulatory Compliance

New *general* business regulations, as well as *industry-specific* regulations, impose an additional burden on IT. The United States, European Union (EU), and many other key locations throughout the world,

In a 2005 survey of 782 US business executives responsible for IT, “50% of the respondents admitted that ‘aligning business and IT strategy’ was a major problem.”
(McAfee, p. 1)

“Disclosed vulnerabilities for 2006 rose 41 percent over the previous year.”
(Microsoft, “Security Intelligence Report”, p. 5)

impose strict information regulatory laws and privacy laws—not to mention a number of industry-specific regulations—just to name a few. At a minimum, the capabilities to meet reporting requirements take time to develop and manage. In more complex cases, companies often do not have the ability to track, store, and report on activities without implementing new solutions.

Aligning IT with Business Strategy

Due to the increased importance of IT, certain issues now have the risk of becoming larger potential roadblocks to a company. One of these is business–IT alignment. While disconnects between lines of business and IT have always been a source of annoyance, misalignment now has a more direct impact on the success of the business.

Unfortunately, many organizations struggle with business–IT alignment. For example, in a 2005 survey of 782 US business executives responsible for IT, “50% of the respondents admitted that ‘aligning business and IT strategy’ was a major problem” (McAfee, p. 1).

Ross and Weill have observed a similar disconnect between lines of business and IT. Based on the comments and feedback of more than 1,000 business executives who have taken an “IT for the Non-IT Executive” seminar at the MIT Center for Information Systems Research, Ross and Weill paraphrase the concerns of non-IT business executives as follows: “I don’t understand IT well enough to manage it in detail. And my IT people—although they work hard—don’t seem to understand the very real business problems I face” (Ross, Weill, “Six IT Decisions,” p. 2).

The lack of a common language, understanding, and background inhibit the ability of otherwise talented IT and non-IT business executives to establish a level of synergy necessary to maximize the value of IT for the business.

Security

Security has also increased in importance, not because security wasn’t previously a concern for businesses, but rather because of elevated risks. In a pervasively connected business environment, everything from confidential customer information to business critical intellectual property is stored on company servers, amplifying the risks associated with security breaches.

According to analysis conducted by Microsoft, “disclosed vulnerabilities for 2006 rose 41 percent over the previous year, continuing an upward trend in new vulnerability disclosures. More vulnerabilities were disclosed in the second half of 2006 than in any single year from 2000 to 2004” (Microsoft, “Security Intelligence

“Today, an IT disruption can paralyze a company’s ability to make its products, deliver its services, and connect with its customers.”
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Report,” p. 5). Additionally, “more than 38 million pieces of potentially unwanted software [adware, remote control and monitoring software, etc.] were detected by Windows Defender between July 1, 2006, and December 31, 2006” (Microsoft, “Security Intelligence Report,” p. 7). Recognizing that Windows Defender is just one of many commercially available malware detection and removal programs, the actual number of potentially unwanted software installations is likely many times greater.

Business Disruption Caused by IT Systems Failures

Another issue of increased importance is business disruptions caused by IT systems failures. In the early 1990s, many line-of-business processes were still manual and paper-based (or at least not exclusively reliant on server-based line-of-business applications). As a result, network outages caused issues but often did not cause a business’s operations to grind to a halt. Today, however, systems failures are much more likely to jeopardize a company’s profitability.

Unfortunately, the IT complexity noted previously, along with sometimes unstable platforms or applications, creates an environment where IT systems failure is a real threat. “The operational risks associated with IT are many... Today, an IT disruption can paralyze a company’s ability to make its products, deliver its services, and connect with its customers” (Carr, p. 11).

The Impact on IT and the Business

One obvious result of these issues is the impact on IT budgets and company profitability. Between 1987 and 2004, the amount of US corporate investment in IT per employee “more than tripled to \$5,100 per employee. In fact, American companies spend as much on IT each year as they do on offices, warehouses, and factories put together” (McAfee, p 1).

Beyond cost, there’s an even greater impact on innovation and agility. A company that is unable to respond to the latest competitive threat, or take advantage of a strategic business opportunity, risks not only suboptimal financial performance in the current fiscal quarter, but also future irrelevance in the marketplace as other more nimble competitors are able to innovate and capitalize on opportunities.

The Journey toward an Optimized Infrastructure and Platform

Fortunately, resources are available to help companies assess the strengths and weaknesses of their existing infrastructure and platform and develop a long-term strategy, with an associated short-term roadmap, to improve their level of IT Optimization. These Optimization resources

include three key components: people, processes, and technologies.

People

Even though many of today's tasks are automated—and the number of automated tasks and business processes will increase in the future—people remain the heart of any business. People develop relationships, close deals, make insights and improve products. People work together to make the thousands of small decisions that collectively add up to success.

People are also a critical component in a company's efforts to optimize its infrastructure and platform. Important decisions on business and IT strategy are made by people, not software. While technology solutions can be implemented, many fail if employees don't make the necessary changes in workflow and process.

A discussion of "people" also extends beyond any individual company. Even the largest companies are hard pressed to find, hire, and retain specialists in all areas affecting the infrastructure and platform. As a result, being able to take advantage of a community of partners that is familiar with Optimization is essential.

Processes

Processes and best practices are another critical component in a company's journey toward a more optimized infrastructure and platform. While each company is unique, many of the IT challenges they face are similar, including integration of proprietary systems, data transfer, secure access, and more. By learning and taking advantage of processes that others have found to be successful (such as ITIL, COBIT, and Microsoft Operations Framework), companies can accelerate the Optimization of their own IT resources to avoid costly mistakes.

Technologies

A third critical component is the supporting technologies that have been developed to help businesses optimize and manage their infrastructure and platform. Bronna Shapiro, the head of Infrastructure and Application Management Solutions Marketing at BMC Software, notes, "IT professionals can't manage the complexity of today's IT landscape using only traditional manual system management processes. In fact, the use of system management processes that rely on manual procedures is one of the major sources of human error. Manual processes can cause increased reaction times to changes in the IT environment. Such processes are also difficult to audit, which makes them a risk in today's highly regulated environment" (Shapiro).

Dynamic systems are a strategic asset to a company because they increase the capability of a business and the people in it to meet dynamic demands with a quick and effective response.

A Dynamic System and Supporting Infrastructure

A dynamic system is Microsoft's vision for what an agile business looks like—where IT works closely with business leaders in order to meet the demands of a rapidly changing and adaptable business environment. Dynamic IT is Microsoft's technology strategy for products and solutions that help businesses enhance the dynamic capability of their people, process, and infrastructure and platform using technology. Dynamic systems are a strategic asset to a company because they increase the capability of a business and its people to meet ever-changing demands with a quick and effective response.

A dynamic IT shop provides the following capabilities to a business:

- **People are empowered with access to information when they need it.** Integration between users and data, desktops and servers, and collaboration between users and departments is pervasive. Mobile users have nearly on-site levels of service and capabilities regardless of location.
- **Processes are automated and aligned to business goals.** People work smoothly with processes that are automated, often incorporated into the technology itself, allowing IT to be aligned and managed according to business needs. Additional investments in technology yield specific, rapid, and measurable benefits to the company.
- **The business can control and manage security compliance issues.** Self-provisioning software and other technologies important for data retention and auditing enable improved reliability, lowered costs, and increased service levels.
- **IT services can easily be adapted to changing business needs.** Service management is implemented for all critical issues with service level agreements and operational reviews established. The business is more aware of the strategic value of its dynamic systems infrastructure in running its operations efficiently and staying ahead of its competitors. The business can adopt more technology faster and with less risk. Costs are more controlled.

An Optimized Infrastructure and Platform

Microsoft has processes and best practices, technology solutions, and training available to help businesses start the journey toward a dynamic system. Microsoft's Bob Muglia, Senior Vice President of the

Server and Tools Division, notes that infrastructure and platform Optimization is the "roadmap to solving the business problems [customers] have today [including] Optimization models to get better business results" (Jennings). By capitalizing on this roadmap, businesses can identify where they are at on the path toward a more dynamic systems capability.

Central to the Microsoft Optimization efforts are three Optimization models. These models include the Core Infrastructure Optimization, Business Productivity Infrastructure Optimization, and Application Platform Optimization model.

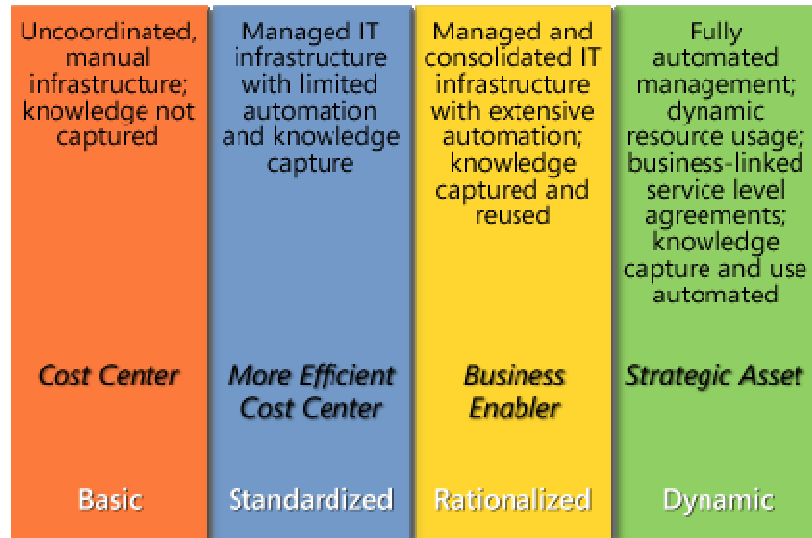
The Core Infrastructure Optimization model helps drive demand for a more secure, well-managed, and dynamic infrastructure to enable organizations to help reduce their overall IT costs, make better use of IT resources, and make IT a strategic asset for the business. The Business Productivity Infrastructure Optimization model is a complete set of technologies that helps streamline the management and control of content, data, and processes. It helps simplify how people work together, makes processes and content management more efficient, and improves the quality of business insight. The Application Platform Optimization model provides IT organizations with a tool that can help them understand and adopt a more flexible and agile application platform.

Key elements of each of these models include Optimization levels, capabilities, and Optimization-level transition projects.

Optimization Levels

Within each model, there are four Optimization levels: basic, standardized, rationalized/advanced, and dynamic. Brief descriptions of each are as follows:

- **Basic.** At the basic level, the infrastructure and platform required constant manual monitoring and repairs.
- **Standardized.** At the standardized level, the infrastructure and platform includes some automated systems-management capabilities and some automated identity and access management.
- **Rationalized/Advanced.** At the rationalized/advanced level, the infrastructure and platform includes some virtualization capabilities and proactive security and configuration policies that enable self-provisioning.
- **Dynamic.** At the dynamic level, the infrastructure and platform achieves its full potential as a strategic asset for the business and enables people throughout the enterprise to do more to advance the business.

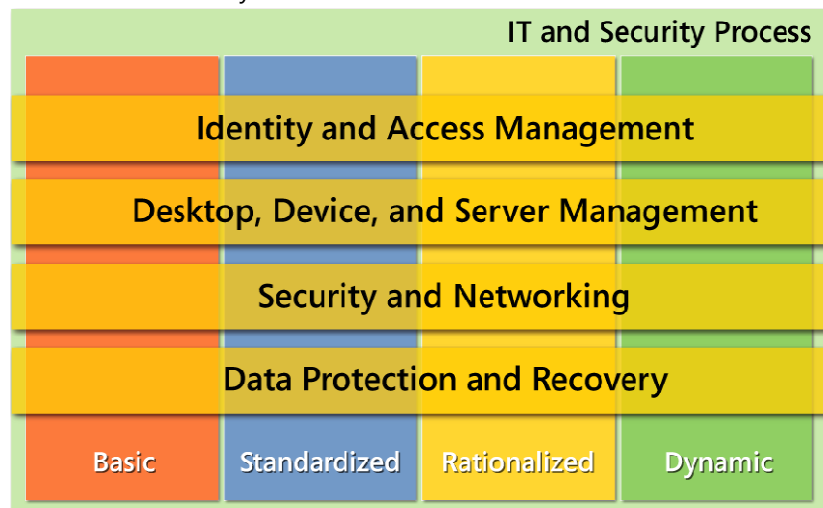


Capabilities

Each infrastructure or platform Optimization model also segmented by general attributes that are typically seen in this type of IT environment. These are referred to as model-specific capabilities.

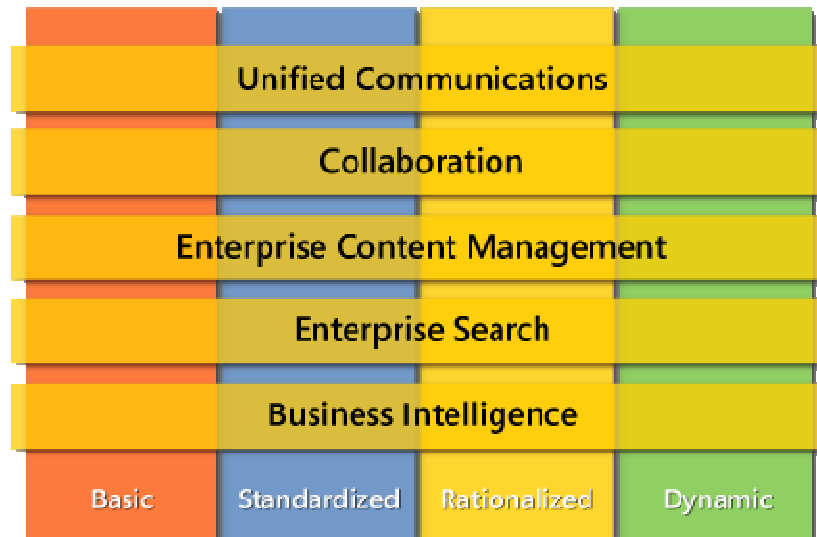
Core Infrastructure Optimization

- Identity and Access Management
- Desktop, Device, and Server Management
- Security and Networking
- Data Protection and Recovery
- IT and Security Process



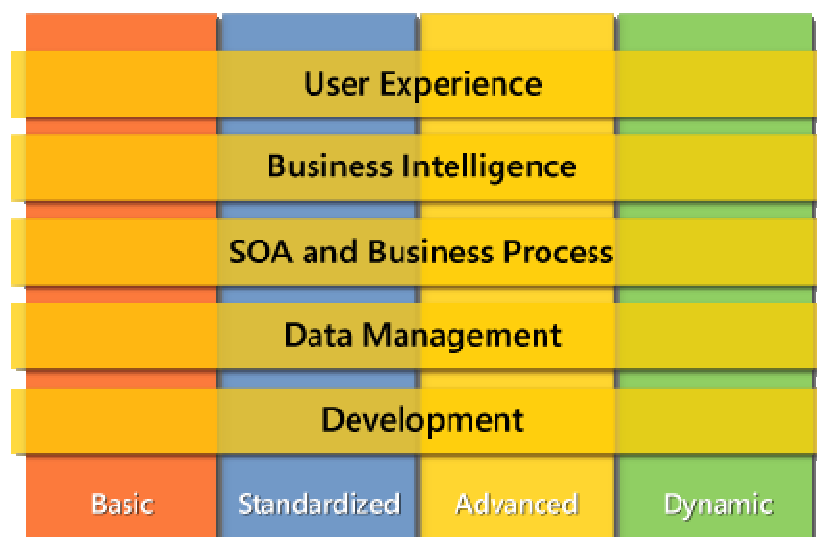
Business Productivity Infrastructure Optimization Capabilities

- Unified Communications
- Collaboration
- Enterprise Content Management
- Enterprise Search
- Business Intelligence



Application Platform Optimization Capabilities

- User Experience
- Business Intelligence
- Service-Oriented Architecture (SOA) and Business Process
- Data Management
- Development



The Optimization models from Microsoft also provide an actionable roadmap to help an organization transition from one Optimization level to the next.

Optimization-level Transition Projects

Finally, each model has a series of Optimization-level transition projects. These projects help organizations progress from a basic level of Optimization (IT is seen as a cost-center), to standardized, rationalized/advanced, and dynamic (IT is seen as a strategic asset). For example, transition projects exist to assist an organization in moving from a basic to a standardized level of Optimization for the Desktop, Device, and Server Management capability within the Core Infrastructure Optimization model.

Benefits of the Optimization Models

A benefit of the Optimization models is that they provide companies with a methodology for understanding their IT Optimization for each of the IT capabilities. The models also provide an actionable roadmap to help an organization transition from one Optimization level to the next. The Optimization models also provide customers, technology partners, and Microsoft with a common terminology to coordinate efforts to help customers improve their level of IT Optimization.

Though not detailed here, Ross, Weill, and Robertson describe a similar IT Optimization model in *Enterprise Architecture as Strategy: Creating a Foundation for Business Execution*. As with the Optimization models developed by Microsoft, their model includes four stages of IT Optimization that help an organization turn IT into a strategic asset for the business. Many of the benefits that organizations gain by progressing through the stages of their model are similar to the benefits that customers gain by optimizing their infrastructure using the Optimization models that Microsoft has developed.

Optimization Recommendations

A number of industry experts have recommended approaches that companies can take to improve their level of IT Optimization. These include the following:

Conscious Decisions about the Strategic Role of IT

Top performing companies don't just let IT decisions "happen." They proactively decide what role IT will play in the organization, and then they optimize resources to support those decisions.

A key element is deciding what business processes to automate. According to Ross, Weill, and Robertson, top performing companies embed "technology in their processes so that they can efficiently and reliably execute the core operations of the company... These actions have made IT an asset rather than a liability and have created a foundation for business agility" (Ross et al., p. 2).

“IT benefits most from a long-term, disciplined, strategic view.”

(Feld, Stoddard, p. 5)

“The companies most successful in harnessing IT’s power typically proceed in waves of relatively short-term... operating initiatives.”

Long-term View

Top performing companies also take a long-term view. Optimizing the infrastructure and platform generally takes years. In the moment, as threats emerge and new opportunities present themselves, it is tempting to abandon the long-term strategy to pursue IT initiatives that appear, on the surface, to have the greatest short-term benefit. While this may be appropriate if the short-term initiatives are in alignment with the long-term strategy, such short-term projects run the risk of distracting IT and non-IT staff alike from the long-term goal and may even introduce new complexity into the infrastructure that may affect the ability of the organization to pursue the long-term strategy. Notes Feld and Stoddard, “Because the winds of change buffet IT more than any other area of the organization, IT benefits most from a long-term, disciplined, strategic view, and a square focus on achieving the company’s most fundamental goals” (Feld, Stoddard, p. 5).

Sequential Approach

Having identified opportunities to optimize their infrastructure and platform, and catching a glimpse of what is possible through tools like the Optimization models, companies are sometimes tempted to bypass transition projects with the thought of achieving a higher level of IT Optimization more quickly. However, before an organization can achieve a rationalized level for one capability in a model, it is necessary to first reach the standardized level. Some of the capabilities at the rationalized level cannot be achieved without the supporting capabilities at the standardized level.

Of equal importance is the learning and organizational change that needs to take place during the journey. At times, it might be possible to implement a technology that would enable a capability at a higher level—effectively leap-frogging one of the levels—but for a level of IT Optimization to be achieved, the company’s people and processes must also be developed. It is counter to human nature to change behavior overnight. Employees must have time to adapt to the changes that new processes require and gain knowledge on how to best maintain this level of Optimization. Simply stated, Ross, Weill, and Robertson note, “Because of the major organizational changes encountered at each new stage, we have found that companies cannot skip stages... It can be difficult to work through the stages one by one. But it is our experience that there is no other way” (Ross et al., pp. 81, 87).

The easiest way to discipline the organization to stick to a sequential approach is to identify short-term projects or initiatives that help the company improve its Optimization. “The companies most successful in harnessing IT’s power typically proceed in waves of relatively short-term (often six to 12 months) operating initiatives” (Brown, Hagel, p. 3).

(Brown, Hagel, p. 3)

IDC has identified 10 Optimization best practices that are consistently used by top-performing IT departments.

Focusing on a few transition projects is an ideal way to make progress in the short term, which both enables the organization to see some immediate benefits (especially in terms of IT costs savings during the early stages) and gain confidence that future gains are achievable.

“The foundation for execution can be implemented one project at a time... Companies can use ongoing projects to steadily build their foundation for execution. And as the foundation gets built, IT costs decrease and business efficiencies increase, paying dividends on the original investment” (Ross et al., p. 13).

Adopt Industry Best Practices

In addition to transition projects (of which Microsoft has identified and developed more than 100), companies are encouraged to learn and adopt industry best practices.

Microsoft commissioned IDC to work with enterprise accounts to identify real-world best practices that companies could follow to improve their Optimization. IDC conducted its research during the first half of 2006 with 141 for-profit organizations in the United States that had between 1,000 and 20,000 PCs. Each organization was interviewed about its IT assets, IT staffing levels, and management practices.

Of the 141 organizations, 59 were interviewed about their desktop environment. Those organizations had to have deployed some Microsoft® Windows® XP or Windows XP Service Pack 2 (SP2) desktops to be included in the research. Fifty-seven were interviewed about their identity and access management procedures using Microsoft Active Directory® directory service. Fifty-seven were interviewed about their systems-management environment.

In total, more than 50 practices were identified and evaluated in the research. From among these practices, IDC selected 10 that were consistently used by top-performing IT departments.

Note: Details on each of the Optimization best practices and the research methodology that IDC used in the Optimization white papers can be found at <http://www.microsoft.com/optimization>.

Following is a brief summary of the best practices that IDC identified:

Standard Desktop Strategy

This best practice involves deploying a standardized desktop by minimizing hardware and software configurations and implementing a three- to four-year PC lifecycle strategy. It helps organizations move from a basic to a standardized level of Optimization for Desktop, Device, and Server Management in the Core Infrastructure Optimization model.

Centrally Managed PC Settings and Configuration

This best practice involves keeping deployed PCs standardized by preventing users from making changes that compromise security, reliability, and the application portfolio. It helps organizations move from a standardized to a rationalized level of Optimization for Desktop, Device, and Server Management in the Core Infrastructure Optimization model.

Comprehensive PC Security

This best practice involves proactively addressing security with antivirus software, anti-spyware software, patching, and quarantine. It helps organizations move from a basic to a standardized, and then from a standardized to a rationalized, level of Optimization for Security and Networking in the Core Infrastructure Optimization model.

Comprehensive Directory Solution

This best practice requires a single directory for authentication, single sign-on capability for all computing resources, and automated password reset. It helps organizations move from a basic to a standardized level of Optimization for Identity and Access Management in the Core Infrastructure Optimization model.

PCs Managed by Group Policy Objects (GPOs)

This best practice requires PCs to authenticate into Active Directory and individual PCs to receive configuration, software installation, and desktop configuration through GPOs. It helps organizations move from a standardized to a rationalized level of Optimization for Identity and Access Management in the Core Infrastructure Optimization model.

Reduction of Third-Party Application Directories

This best practice requires the use of a single directory service for both operating system management and application directory services. It helps organizations move from a standardized to a rationalized level of Optimization for Identity and Access Management and Desktop, Device, and Server Management in the Core Infrastructure Optimization model.

Organizations can realize benefits early on instead of having to wait until the organization reaches a rationalized or dynamic level of Optimization.

Automated User Provisioning

This best practice requires a single directory or synchronized directories with a metadirectory service and IT processes for automated user provisioning. Users are provisioned (including adds, removes, and changes) only once in a primary directory, and the changes are propagated to all related directories. It helps organizations move from a standardized to a rationalized level of Optimization for Identity and Access Management in the Core Infrastructure Optimization model.

Automated Packaging Tools and Software Distribution

This best practice involves the use of tools to maintain software inventories, automate software packaging, and automate software distribution. It helps organizations move from a basic to a standardized level of Optimization for Security and Networking in the Core Infrastructure Optimization model.

Single Systems Management Tool

This best practice involves the use of a single software tool for managing software inventory, hardware inventory, and automated software distribution. It helps organizations move from a basic to a standardized level of IT Optimization for Security and Networking in the Core Infrastructure Optimization model.

Centrally Managed PC Applications

This best practice involves keeping deployed PC applications standardized by generating software inventory reports for auditing versus standards and de-installing non-compliant software. It helps organizations move from a standardized to a rationalized level of IT Optimization for Security and Networking in the Core Infrastructure Optimization model.

Benefits of an Optimized Infrastructure and Platform

Companies can realize a number of quantitative and qualitative benefits by improving their level of Optimization. And what is generally very appealing to company leaders is knowing that the organization can realize benefits early on—after the completion of just one or two transition projects—instead of having to wait until the organization reaches a rationalized or dynamic level of Optimization.

“Companies with more-mature architectures reported greater success in achieving strategic goals.”

(Ross et al., p. 89)

From research conducted by IDC, MIT, and Alinean, the following benefits have been observed:

- Better business–IT alignment
- Enhanced agility
- Reduced IT costs
- Better profitability
- Reduced regulatory and security risks
- Improved satisfaction with IT

Better Business–IT Alignment

Earlier, it was noted that one of the issues facing companies today is effective alignment between lines of business and IT. Fortunately, efforts to improve a company’s Optimization level help the company improve business–IT alignment. Ross, Weill, and Robertson note, “Companies with more-mature architectures reported greater success in achieving strategic goals” (Ross et al., p. 89). This included better operational excellence, more customer intimacy, and greater product leadership (Ross et al., p. 100).

Additionally, by optimizing the infrastructure and platform based on an established framework (like the Optimization models), business and IT leaders gain a common methodology to plan, implement, *and evaluate* IT’s success in supporting the business.

Enhanced Agility

Gartner’s Thomas J. Bittman defines agility as “the ability of an organization to sense environmental change and respond efficiently and effectively to that change” (Bittman, p. 2). One metric that Ross, Weill, and Robertson used to measure agility was the percentage of a company’s revenue generated from new products. They found that one-third of companies they researched achieved 50 percent of sales from new products introduced in the prior three years (compared with an average of only 24 percent of revenue for all companies researched). “These more-agile companies also had a high percentage of their core business processes digitized” (Ross et al., p. 12).

Similarly, IDC concludes that companies that improve their level of Optimization experience greater agility. As a proxy for business agility, IDC chose the time it takes to deploy a new application to 90 percent of the organization. IDC found that rationalized organizations had business agility that is 17 percent faster than standardized organizations and 20 percent faster than basic organizations.

In its research, IDC found that a number of factors contribute to agility, including the overall level of Optimization, the consistency of desktop operating system selection, and the management practices and tools in place to both support and update desktop systems with patches, fixes, and new software deployments.

IDC found that companies at a rationalized level of Optimization had an IT cost structure (per PC, per year) that was 60 percent lower than companies at a standardized level and 83 percent lower than companies at a basic level.

One example of the enhanced agility that businesses can achieve by optimizing their infrastructure is HSBC Mexico, which has more than 22,400 employees and 1,400 branches throughout Mexico. HSBC Mexico serves six million customers with a range of corporate and personal finance services. HSBC Mexico wanted a solution that would help standardize IT operations and support business growth through automated application deployment and improved asset management. The financial services company chose a management solution based on Microsoft technologies to improve control of its IT environment. Notes Gabriel Pepe, the Distributed Systems Director for HSBC Mexico, "Before, it took us two months to deploy new products. Now, in two days we can deploy whatever we need to the branches or the ATMs. So from a business perspective, IT is no longer a bottleneck" (Microsoft, "HSBC Mexico").

Another example of the agility benefits companies can gain by optimizing their infrastructure is Alamance Regional Medical Center (ARMC). ARMC has more than 2,200 end-users including nurses, physicians, and administrators. By implementing application virtualization, ARMC was able to reduce the time its IT spent on deployment each year by 94 percent and cut the time spent on upgrades by 96 percent (Microsoft, "ARMC"). As a result, ARMC is able to implement new solutions more quickly to meet business needs.

Similarly, AUSTAR, a leading Australian subscription TV provider, was able to dramatically reduce the amount of time it took to deploy a standard operating environment to the PCs in its organization. Eliminating manual processes means that AUSTAR is also more flexible and adaptable in responding to business requirements (Microsoft, "AUSTAR").

Reduced IT Costs

Another benefit of improving the level of Optimization is quantifiable results based on reduced IT costs. IDC found that as a company adopts best practices to improve its Optimization level, IT labor costs generally decrease dramatically. On average, companies in the research that were at a standardized level of core infrastructure Optimization had an IT cost structure (per PC, per year) that was 56 percent lower than companies at a basic level. Companies at a rationalized level had an IT cost structure (per PC, per year) that was 60 percent lower than companies at a standardized level and 83 percent lower than companies at a basic level. Average annual IT labor costs per PC, per year by level were as follows:

- Basic: \$1,320
- Standardized: \$580
- Rationalized: \$230

“Companies that manage their IT investments most successfully generate returns that are as much as 40% higher than those of their competitors.”

(Ross, Weill, “Six IT Decisions,” p. 2)

Alinean took IDC’s research and incorporated it with research from GCR and Wipro. It then developed predictive models and tools to estimate the costs and benefits of migrations. Alinean similarly found that companies could achieve IT cost savings, though its estimates were more conservative (Pisello).

Ross, Weill, and Robertson also concluded that companies can decrease their IT costs by improving their level of Optimization. They found that companies could reduce IT costs by 15 percent by moving from stage 1 to stage 2 of Optimization (Ross et al., p. 94) and another 10 percent when moving from stage 2 to stage 3 (Ross et al., p. 95).

One example of the cost savings that organizations can achieve through one aspect of Optimization—specifically application virtualization—is ARMC. ARMC was able to reduce the three-year total cost of ownership (TCO) for PCs in the organization by 69 percent per user and reduce annual server operating costs by 30 percent (Microsoft, “ARMC”).

Better Profitability

If a company is able to enhance alignment between lines of business and IT, improve business responsiveness (agility), and reduce IT costs (which are a significant portion of an organization’s operating budget), then a company should expect that improved Optimization will result in better profitability. Based on the results of one study, Ross and Weill found that “companies that *manage their IT investments most successfully* generate returns that are as much as 40% higher than those of their competitors” (Ross, Weill, “Six IT Decisions,” p. 2; emphasis added). Based on the results of another study, Ross and Weill note, “Companies with *effective IT governance* have profits that are 20% higher than other companies pursuing similar strategies” (Ross, Weill, “IT Governance,” p. 1; emphasis added).

Reduced Regulatory and Security Risks

Another less quantifiable but no less important benefit is reduced risks from regulatory noncompliance and security breaches.

In terms of regulatory compliance, Ross, Weill, and Robertson comment, “Companies with a solid foundation for execution have more transparent information and the ability to access data more quickly...[increasing] the likelihood that needed data is readily available or can easily be accumulated” (Ross et al., p. 13). Ross et al. also found that companies with more optimized infrastructures were better equipped to avoid computer viruses and inappropriate access to private or confidential data (Ross et al., pp. 96-97).

Alinean corroborated their findings with regards to security risks. “With almost 3 percent of total PCs falling victim to security incidents per

year in average environments, security risk mitigation and management is important—a potential \$18 opportunity per PC per year in reducing mitigation labor alone” (Pisello, p. 3).

Improved Satisfaction with IT

Finally, the researchers found that the satisfaction level with IT among non-IT executives increased. “Satisfaction is...important for generating enterprisewide commitment to architectural improvements” (Ross et al., p. 98).

One reason that Optimization creates an environment that facilitates improved satisfaction with IT is that the Optimization resources from Microsoft include assessment resources that can help organizations effectively evaluate and prioritize IT investments. As a result, organizations are more likely to select projects and initiatives that will generate a real return on investment for the company, which generally leads to satisfaction.

Other factors that likely contribute to improved satisfaction with IT are the benefits already noted—specifically enhanced business–IT alignment, improved agility, and increased profitability. Another factor observed by IDC may also play a role. IDC found that improvements to IT service levels are generally achieved when an organization improves its level of Optimization. IDC used the number of service desk calls per PC per year as a proxy for service levels within the organizations they analyzed and found that rationalized organizations had service levels that were 9 percent better than the service levels at standardized organizations.

One example of the increased satisfaction with the IT department that can be gained by optimizing the infrastructure, and associated improvements in service levels, is Mexico’s Comisión Nacional del Agua (National Water Commission). The commission monitors water availability and manages a range of other water-related projects. In late 2005, the commission tested and ultimately deployed a centralized IT environment based on Microsoft technologies. One benefit that Omar Vazquez, Manager of IT Infrastructure at Comisión Nacional del Agua, notes is “increased positive perceptions about IT services among our employees,” in part because its IT efforts have allowed the commission “to focus... resources on the creation of IT services, rather than maintenance” (Microsoft, “Comisión”).

Another example of improved services levels is ARMC. ARMC expects its volume of calls to decrease by 30 percent, to enable its help desk to handle more calls without escalation (reducing the average cost per call), and to resolve help desk calls in half the time previously required (Microsoft, “ARMC”).

For companies that are able to optimize their infrastructure, IT will become an important asset in a company's arsenal to gain an advantage relative to its competitors.

Recognition for Microsoft Optimization Efforts

Due to the structured approach and the benefits that customers are starting to realize based on their Optimization efforts, Microsoft has started to receive recognition from customers, partners, and analysts.

Doug McClure, a consultant with IBM, writes, "Microsoft has done a good job linking in each level to customer and business benefits and IT cost, security risk, and operational agility benefits. IT organizations and staff can actually see what it takes to move from one level to another, what key steps and technologies are required and actual solutions and guides on how to implement their products" (McClure).

Paul Russell, head of Consulting with Servo Computer Services Limited, writes, "The [Microsoft Infrastructure Optimization] model helps [customers] reduce the risk of undertaking new solutions... They also get something they can measure themselves against, to show that they have moved up the IT maturity cycle." (Russell)

Doug Barney, Redmond Channel Partner Magazine's editor-in-chief, writes, "Microsoft's Infrastructure Optimization push gives partners a way to help customers get a handle on their IT investments." (Barney)

Conclusion

Increasingly, IT success is a significant contributor to a company's business success. However, IT issues like infrastructure and platform complexity, complying with new regulations, aligning IT with business strategy, and providing a secure environment all represent obstacles for companies to overcome in their efforts to create and maintain an infrastructure and platform that's agile and supports business objectives.

Achieving a dynamic IT requires a combination of people with the right skills, proven processes, and enabling technologies. Dynamic IT provides a vision of what companies can accomplish through Optimization.

There are highly compelling benefits for those that progress through the levels of Optimization. Some examples include better alignment between LOB and IT, enhanced agility, reduced costs, improved security, business relevance, and increased satisfaction with IT throughout the organization.

Microsoft has developed an Optimization self-assessment that provides you with an overall Optimization score, peer comparison, and a detailed report that can serve as an actionable roadmap and incentive for optimizing your IT infrastructure and platform. Learn more about Optimization and take the self-assessment at <http://www.microsoft.com/optimization>.

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