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Making IT Work:

The true meaning of "Getting The Highest Value" from your information technology investment

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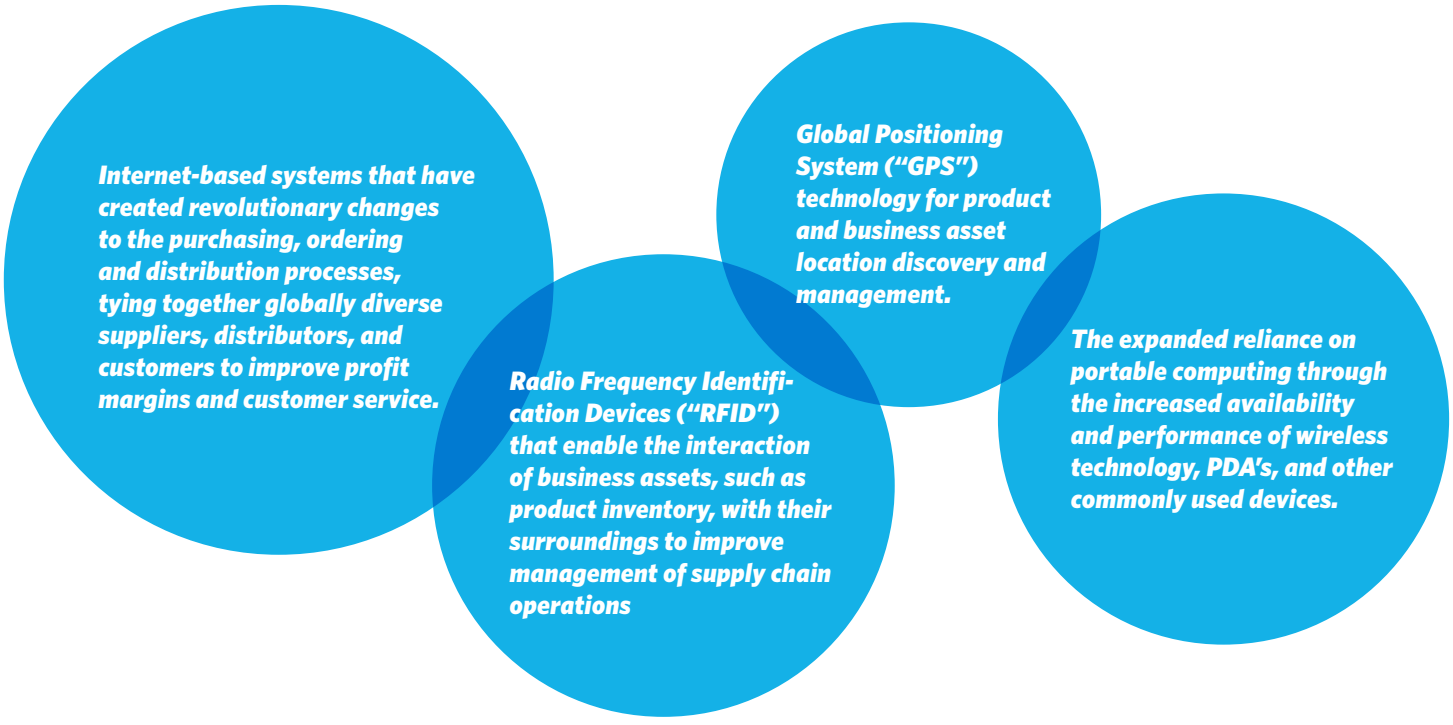
Introduction

If you ask most business executives what their expectations are for their information technology assets, the answer is pretty basic: they are supposed to do what they're expected to do when they're meant to do it. In other words, their information technology ("IT") is supposed to WORK!

But the definition of "IT's supposed to work" varies from organization to organization, and more realistically, from budget to budget. Many business executives, particularly those in the small-to-mid market ("SMB") believe that their IT infrastructure is simple, and managing it should be equally simple.

In today's business environment, the management of IT assets and processes often involves the integration of multiple layers of technologies across disparate locations and business functions. And new technologies are always emerging to improve and enable business capabilities that expand the limits of IT knowledge and capacity.

Consider the following current and "emerging" technologies that are becoming increasingly common in today's business landscape:



Business technology has evolved from simple, localized technology to complex. Also, globalized systems that enable improved visibility, management, and control have developed over physical assets, information, and cash.

As technology continues to drive competitive advantages, the image of IT being a simple process involving only a website, email and a local area network is as old fashioned like that of a Norman Rockwell painting. The thoughts of **"simple IT"** may evoke feelings of nostalgia and well-being, but they are not going to help you buy and sell products and services more efficiently. Not in today's business environment.

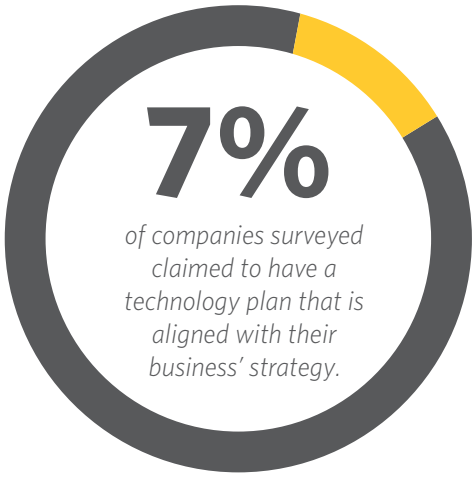
So what does, "Making IT Work" really mean?
Most business executives would agree with the following basic tenets:

- ***IT should enable business performance***
- ***IT systems should be available when needed***
- ***IT performance should be visible, measurable and assessable***
- ***IT should protect key business information and assets***

Business Effective Technology ("BET") is the key to getting the highest value from your IT investment. Perhaps the real question to ask is, "Would you BET on your current IT services to 'Make IT Work'"?

IT Should Enable Business Performance

A recent study by a leading UK-based analyst firm, CSC found that only 7% of companies surveyed claimed to have a technology plan that is aligned with their business' strategy.



What is the cost of this lack of alignment? All of us have heard the horror stories of companies that invested in costly new technologies, such as sales force automation, only to see sales performance decrease after the implementation of this new technology

But more often, the cost of Business Ineffective Technology is not that "black and white". It can be difficult to quantify for many businesses, as the cost factors can range from business performance degradation to the inability to scale to support growth, to even dangerous technology investments.

And the reason for inadequate or failed technologies is not that clear, either. Was the system at fault, or the process of evaluating, selecting and implementing it? Often, the root of the problem is poor communication and alignment between IT and the business.

Today, most IT managers find themselves in a constant "fire-fighting" mode, forcing them to dedicate key IT resources to managing and maintaining the current state of operations. In this world, "Enabling business performance" is more about "keeping the lights on" than it is about supporting business growth and strategy.

As IT infrastructures grow more complex, involving multiple technology platforms, operating systems, and vendors; IT managers become more like one of my favorite acts from the variety shows of my youth, "the man spinning plates," trying to keep everything going without it crashing to the floor.

Instead, IT managers should be more like another of my favorite performers, the magician, reading the mind of his audience to guess which card they selected.

However, enabling business performance is not an "act", it is a process. It involves understanding the needs of the business, today and in the future, based on the business goals and strategies that are defined by the firm. It involves translating these goals and strategies into actionable plans, including identifying business appropriate technologies and budgets.

It includes aligning and integrating business processes with technologies to understand the impact of technology on business performance, and appropriately prioritize services, support, and investments. It involves effectively communicating between business and IT to ensure that strategy, service and support requirements are understood and well managed. And it includes realizing the limitations of ITs capabilities, so as to know how and when it can efficiently perform, and when to bring in help.

Apparently, the day of the IT Manager being the thickly spectacled, pocket protected "nerd" is over. "Business Effective Technology" means that IT must communicate to the firm manager without the use of a "universal decoder". Technology jargon must be replaced by the common language of business.

Technology solutions must be articulated concerning business performance that is measurable, with clearly defined ROI's. And IT leaders must learn to view their success in terms that are aligned with the success of the business and its customers.

Conversely, business executives must expect, even demand more from IT, and expect a clearly defined process when managing issues that impact business performance. They must plan proactive management and support, rather than reactive "fire-fighting."

As well as an effective communication between IT and the business that it serves, and define how it wants this discussion to take place. They must expect that IT actively and effectively participates in the business planning process, and bridge the gap between business needs and technology solutions. Above all, they must demand that IT manages itself to these objectives.

But first, the business must clearly articulate its expectations of IT in terms that are practical for the business and its cost structure. As we have stated, **"Making IT Work"** is more than **"keeping the lights on."** Business Effective Technology involves investment, planning, and processes.

IT Systems Should Be Available When Needed

If most business executives state that "IT's supposed to work," they are talking about availability and performance. But what does that truly mean? Are we talking about 100% availability and performance? If so, then IT expectations are doomed to fail, since they are based on a premise that is not achievable, regardless of the investment in IT and its capabilities.

So, does moving that expectation slightly, to 99.9% availability and performance change the paradigm? Possibly, but that depends on the level of investment that the business is willing to make in IT. And the investment goes beyond hardware. How many of us have invested in the "biggest, badest" servers available, only to find that a small peripheral device failure resulted in significant system downtime?

"Business Effective Technology" means that IT must communicate to the firm management without the use of a "universal decoder."

With current technologies and solutions, achieving the 99.9% target is achievable. However, it requires significant investment in such infrastructure tools and resources as proactive monitoring and management solutions, technology and bandwidth redundancies, disaster recovery and business continuity strategies, data security and risk mitigation platforms, strongly disciplined IT processes, and highly experienced and available IT resources. Is it worth the investment? For most SMB businesses, the cost to achieve this objective is typically out of reach.

A recent discussion with a customer regarding its system availability and disaster recovery strategy resulted in a different perspective. The business, a distributor that relied extensively on the Internet for sales and distribution of its products, was based in an area prone to hurricanes. When asked about their disaster recovery plan in the event of an event that resulted in a prolonged power outage, the business executive replied that he was "not concerned" about this situation. When asked why he answered that their experience with previous events resulted in their power grid coming back online quickly. He was convinced that he was on a unique power grid that was always going to be available when they needed it. He viewed this as a competitive advantage, and resisted relocating the business to another facility because he didn't want to lose the "magic grid".

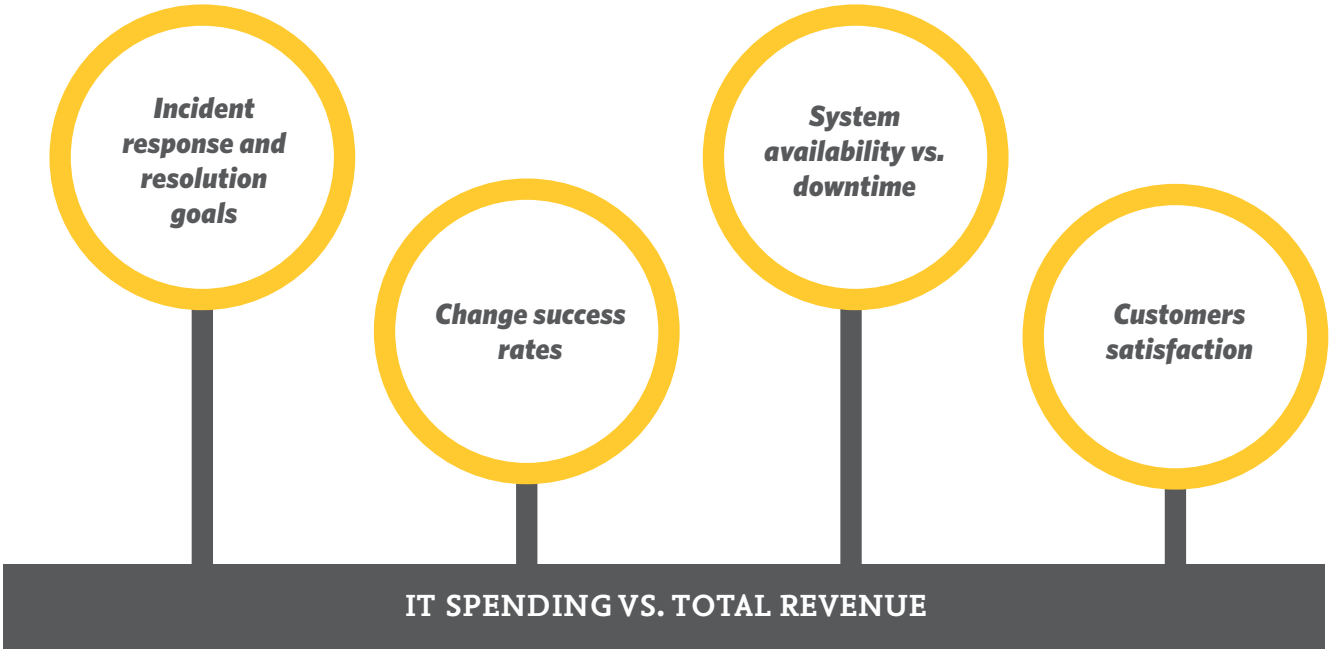
This is an example of the "other end of the spectrum", a business that limits its IT investment because it doesn't see the need or value in ensuring its availability and performance. But how many of us want to rely on the "magic grid" to maintain their business?

To determine the proper balance between investment and IT availability/performance, it needs to be measured regarding business performance, revenue lost, customer service impact, and other business-centric metrics. Is there such a thing as "too much availability"? Can IT be "too responsive"? The answer is yes. The investment required achieving high levels of IT service and performance is significant, and may not produce adequate returns on that investment. Clearly this decision goes beyond the scope of an ITonly perspective.

Beyond availability and performance, the investment in IT must include alignment with the future direction of the businesses. Lack of awareness or understanding of new technologies available to facilitate or enable new business operations is unacceptable. A business vision must include a technology plan, or it will be limited, or worse, not competitive.

The premise that "IT must enable business performance" is not simplistic, and it requires that IT and the business understand and support each other in ways that often do not happen. Further, the activities and cost of running and operating IT must be understood by the business. IT performance is typically unclear or undefined, and the actual costs of running IT are often lost in a "black hole."

Many industry standards define processes and metrics to measure IT performance and investment. Some of these include:



IT performance should be visible, measurable, assessable and accountable.

Business performance is measured in many ways, and the management of the company relies on these performance measurements to define strategies and investments. Yet IT, which requires significant recurring investment, typically has no clear service levels. IT performance can and should be defined, monitored and measured, just like the rest of your business.

Service level requirements must be established to ensure that the business goals, and the underlying IT service that support these goals, are being met. These goals are poorly defined and understood, they are generally not well documented and measured. The result is inconsistent IT performance, and the inability to identify root causes to issues and implement corrective actions.

In addition, the IT organization needs to be accountable to defined and established service levels and IT performance expectations. The individuals in IT, including IT management and staff, should have specific performance targets that are aligned with the organization's overall IT performance objectives. They should be measured, incented and managed accordingly, and be held to a standard of return. Too often, IT accountability is lost in a "fog" of IT jargon and miscommunicarion. IT performance and accountability need to be clearly communicated to the business and IT, and the people who are responsible for meeting and maintaining IT service and performance levels must know who they are, and where to find them.

According to Forrester Research:
"Technology is now your business and business is your technology."
May 2007

There is no single metric to define efficient IT performance. Nor is there a standard to measure the appropriate business investment in IT. Benchmarks can vary, based on the type and size of the business, as well as its established value proposition. A company that is very customer-facing requires a different kind of investment and metric than one that is back office-centric. Benchmarks are guidelines to help determine performance and investment, but should not be treated as prescriptive solutions.

Business executives often struggle with understanding IT performance and its impact on the company. But the establishment of service levels allows IT performance to be expressed in terms that are directly relevant to the company's business performance and business strategy. Enabling IT performance measurement ensures that business decisions that are made reflect empirical evidence rather than a **"gut reaction."**

So measuring system availability, or the time it takes to resolve a critical technology issue should not be stand alone, but instead tied to factors that are relevant to the overall business performance. And the performance measurements should have real financial relevance so that the proper return on investment can be understood.

They may vary somewhat from business to business, but typically will include:

IT services and service level requirements should be documented in a service catalog that defines what IT's services are to the company, and how it will be measured. Through this mechanism, the appropriate expectations are established between the business and IT, and the means of communicating IT performance is developed.

Service level agreements (SLA'S) should be negotiated and agreed upon by both IT and the business it serves, and realistic, achievable service levels must be defined. This should be done in a positive, enabling manner, rather than one that restricts or limits the business from performing needed activities. Establishing IT discipline and processes, and measuring IT's performance against these processes also should not create unnecessary complexity to business operations. Often, the argument is made that building strong IT controls and processes makes it harder on business executives.

But the same argument could be made for how the company manages its finances. No company would run efficiently without some level of financial control and performance expectations. It's hard to understand how establishing appropriate performance expectations and discipline, improving visibility over performance, increasing communication and measuring results can have a negative impact on a business, regardless of the department.

Defining service levels is not the last step in the process of establishing Business Effective Technology. Monitoring and reporting on IT performance, as well as individual accountability are equally as important.

Monitoring allows IT to react more efficiently when issues that impact the business occur. Active control does more than tell us that something is "broken". It aligns with the strategy to identify the key assets that will affect business performance, and establish performance thresholds to notify proactively IT of changes in the environment that may impact performance or availability before an outage takes place, enabling resolution before they impact the business user. This changes the IT support paradigm from "reactive fire fighting" to proactive performance and analysis.

Reporting on IT performance, based on defined service level metrics, will enable improved communication between the business and IT. By combining specified services and service levels to establish effective IT performance and system expectations, with regular reporting on It services based on these measures, IT performance and IT investment can be judged in a context that is meaningful to all parties. IT events can be evaluated in the context of business performance, and appropriate response, remediation and investment strategies can be established and maintained.

Communication between the business and IT can take many forms, ranging from timely and well documented performance reporting, incident evaluation and problem resolution, issue prioritization and escalation, business impact analysis and reporting, and customer service surveys. The key is establishing an efficient two-way communication process that informs all

"Often, the argument is made that establishing strong IT controls and processes makes it harder on business executives..."

The business can now establish a dialog between IT and business key users that focus on business performance and its relationship to IT services. The "fog" of IT jargon will have been lifted!

IT Should Protect Key Business Information & Assets

Recent surveys of business and IT executives showed that 36% of respondents considered their biggest IT problem to be not knowing if they were backing up all of the company's critical data.

Another **24% responded that their biggest concern was whether or not they would be able to recover critical data if needed** *(see figure below)*. That means that more than half of the executives surveyed were concerned about the safety and availability of critical business data.

The same survey showed that this concern is extremely valid. The Enterprise Storage Group, an IT industry association, stated that as much as **60% of all backups performed in today's business are not successfully completed** *(see figure below).*

One of the fundamental roles of IT within the business is the protection and availability of vital business information and assets. Clearly, there is a concern on the part of business executives about the effectiveness of this function. Why should business executives live with this fear?

In the face of tremendous data growth and availability, increased multi-platform and inter-business data sharing and integration requirements, tighter regulatory scrutiny and compliance demands, enhanced technology solutions at lower costs, and more competition for data access and control, too many executives "cross their fingers" and suppress their fears.

The issue goes back to the alignment between business and IT. Does IT truly understand what the critical data elements of the business are? Has the business properly defined this? Is the impact of lack of data availability understood? Are system outages preventable, and if so, at what cost? How secure is the business, and is the business even aware of security threats and implications? Is IT aware of current industry solutions that are available, assessed their applicability and is it capable of implementing them?

Answering these and many other similar questions are critical in determining how effective IT is in protecting business information and assets. And this issue is clearly tied to defining IT performance and service levels, investments and efficient IT management. The process starts with "the basics": increased communication, strong discipline, effective controls and improved oversight and management.

IT must actually understand the key data elements of the business and the impact of data availability issues. The company must understand the options available to it for protection its information assets, and the appropriate costs associated with these options. Both parties must maintain high discipline and controls to ensure that all measures are being taken to maintain, manage and protect critical information assets.

IT must enable technologies to provide proper oversight over these key assets and realistic measures to it can control the effectiveness of this process. Finally, these processes must be tested, validated and communicated to ensure that the measures in place are effective in the make of an IT "event".

Further, system events and failures must be planned for and their impact understood. Both the business and IT must **"game plan"** these events to define appropriate risk mitigation strategies. As previously stated, IT performance issues and outages, cannot be entirely prevented. But Business Effective Technology involves understanding the risks and their impact on the business, planning for their mitigation and establishing strategies and investments for quick resolution should an event occur.

Making IT Work: Establishing a business efficient technology organization

Many industry standards exist to define an effective IT performance model, including ITIL (Information Technology Infrastructure Library)3, MOF (Microsoft Operations Framework)4 and CobiT (Control Objectives for Information and Related Technologies). 5 CobiT defines an overall IT control framework while ITIL and MOF define specific practices and standards to provide IT services.

They share much of the same components in identifying the key processes of the IT performance model, including, but not limited to:

Effectively defining these processes to your amazing organization's requirements, and consistently managing and controlling them, are the primary elements in achieving Business Effective Technology.

The Software Engineering Institute of Carnegie Mellon University has established the Capability Maturity Model ® ("CMM") and Capability Maturity Model® Integration ("CMMi") as a process improvement approach that provides organizations with the essential elements of effective IT processes. Embedded within CMMi is a maturity model that describes the levels of maturity that an organization can attain.

Capabilities Maturity Matrix

Maturity Level	Description
1	***Non Existent:*** *Unmanaged, management processes are not applied at all*
2	***Initial:*** *Reactive, management processes are ad-hoc and disorganized*
3	***Repeatable:*** *Management processes follow a regular pattern*
4	***Defined:*** *Proactive management processes are defined and documented*
5	***Managed:*** *Management processes are monitored and measured*
6	***Optimized:*** *Best practices are followed and automated, IT activities linked to objectives*

At the lowest levels, IT organizations tend to be more reactive and incorporate little formalized processes or documentation in their activities.

As the organization progresses through the maturity model to higher levels, more structured and proactive behavior is evident. At the highest maturity level, operational best practices are followed, much of the processes are automated, and IT is effectively linked to the business.

According to the Software Engineering Institute, most SMB companies fall into maturity levels **0-2, and few achieve levels 4 or 56.** The characteristics of companies with maturity levels of **0-1 are high percentages of IT failures**, continuous IT and system performance issues, entirely reactive IT activities and no alignment with business strategy or goals.

As organizations progress to levels **2-4, they become more aware of system and IT performance** and begin to take proactive measures in managing IT operations.

IT policies and procedures are defined and documented, and baseline performance objectives are identified and measured. **By level 5, a substantial alignment between the business and IT exists**, and operations are well managed, often through automated processes.

Where does your business stand today?

Making IT Work: A Game Plan

So how can you Make IT Work? You must first understand where you are today, and then define where you are today, and then define where you want to be. This four-step process can help you establish your current state resolve ongoing issues, and build a foundation for Business Effective Technology. By following these steps, you can successfully transform your IT organization from an unaligned, reactive "black hole" to a proactive, integrated value-added business unit.

Step 1: ASSESS

Regardless of your goals and objectives, you must first understand the current state of your IT operations. No IT organization is completely manual and undocumented, but they exist. Time must be spent inventorying the IT organization to determine the services, technologies, processes and key individuals supporting the business today. Further, all IT spending must be captured and analyzed. Too often, its pending is misunderstood, or undocumented, and monies spent on technology and IT services must be clearly defined and accounted for.

This step is critical in providing visibility and clarity to the specifics of how your IT organization is truly executing on all the process and activities it undertakes. While this process sounds simple, experience has show that the course of identifying, collecting and analyzing this data is difficult to achieve. Just agreeing on what data to collect is a complicated task, and then finding it and validating it is a chore. But time must be spent on this process actually to capture the business requirements and define baseline IT services, performance standards, and budgets.

Step 2: DEFINE

During this phase, IT and business executives discuss and agree on the key criteria that need to be established to define the IT service and performance required by the organization. Beyond the "as is", you begin to look at the future state, identifying those services, activities, and measures that will be needed to support the business.

These services and service levels should be captured in a single document called the IT Services Catalog. By defining and collecting a list of IT services, the business will have a better understanding of the scope and level of services to be provided by the IT organization, a definition of specific service levels for service item, and an effective way to measure IT performance.

Key guidelines and standards are established, with appropriate input from both the business and IT organizations. IT services, performance, investments, and budgets are established based on a real understanding of business needs. This is the critical step in achieving an effective business/technology alignment.

Step 3: IMPROVE

Once you have assessed where you are, and where you want to be, the next step is to determine the gaps between current and future IT state of performance. This This step involves incorporating IT service levels and performance with the current IT budget, and determining if services are being provided in a cost efficient manner.

Optimizing current service delivery and investment is the fastest and most effective way to gaining quick improvements in IT performance and maximizing IT investment. Gaining a real understanding of the current level of IT spending will be a critical part of this process.

Further, gaps in service and capability must continue to be assessed against business value. Investing in improving current IT capabilities or delivering new services must be measured against the value that it brings to the firm, or the risks that it helps the business mitigate. The service definitions and measures defined earlier are critical to this process.

Once performance and investment criteria are established, prioritizing and improving, service delivery capabilities must be performed. Prioritization is necessary, since IT resources are limited, and organizations typically can only absorb so much change at one time. Remediating issues and improving service delivery must be performed in the context of business strategies, service requirements, and investments.

Understanding the capabilities of your IT organization is necessary for the success of this process. If the definition of insanity is "expecting different results from identical actions", then it is not realistic to think that IT can effect change without assistance. This type of transition involves technological and cultural improvements, as IT organizations that have lived in Reaction are sometimes forcibly relocated to Pro-action. Upgrade your internal IT capabilities as needed, and enlist the help of independent, experienced service organizations to facilitate these changes and improvements.

At the conclusion of this step, your IT organization should have more formalized and structured services, capabilities, and processes that are aligned with business objectives that are measurable based on standards that both the business and IT understand and agree to.

Step 4: MEASURE

Validating IT performance means providing the business with regular, detailed reports that determine if IT has succeeded in achieving the agreed upon service levels. This communication is critical in ensuring that a Business Effective Technology environment is established and maintained.

Returns on IT investment will be clearly understood, based on the established service level agreements. Any deficiencies in performance can be identified and corrective action determined and executed before the business is impacted further. Gains in performance or improved operating costs will be identified and promoted. IT will be able to focus on more strategic, business valued activities and minimize its reactive activities. The result of this step is to establish a closely aligned, high performing IT organization that is capable of responding to the needs of the business, today and in the future.

"Can you afford not to invest in improving IT performance."

But the real benefit of this approach is not to "pat each other on the back" for a job well done, but instead to establish an iterative process that continues to assess, define, improve and measure IT performance.

Business performance does not stand still, and neither should IT. To be properly aligned with the business, IT should continue to seek ways to continue improving service delivery, better manage key information assets and deliver greater returns from IT investments should continue to explore ways to continue improving service delivery, better manage key information assets and deliver higher returns from IT investments.

Conclusion

Making IT Work involves effective communication, performance, discipline, management, and capability. As technology evolves and becomes more integral to successfully competing in today's business world, poor IT performance can be devastating to a business. A key question to business executives today is not, "Can you afford to invest in improving your IT performance?" but instead is "Can you afford not to invest in IT improving IT performance?"

Just understanding the impact of poor IT performance is a great first step. But understanding the impact of an efficient IT operation in improving business performance is a better step.

When evaluating the state of your IT organization, keep in mind that you cannot transform your organization alone. IT Managed Services is a valuable mechanism for achieving business transformation, enhancing business agility and managing IT operational costs.

The definition of "IT Managed Services" is a critical part of the equation. If IT needs to be more than "putting out fires", then IT Managed Services needs to be more than "break and fix". It should include the following key elements:

- Defining appropriate IT performance expectations and service levels

- Implementing effective IT standards, processes and systems to monitor operations and performance

- Understanding the impact of IT failures and mitigating the risks

IT services, and define specific performance objectives that are measurable, and understand and plan for the impact to the business from IT outages. The results will be improved productivity, satisfied business users and customers, effective IT cost management, and an IT operation that is focused on the needs of the business, today and in the future.

NOTES:

1. Source, "Utility Computing: Just because you can, should you?" by Andrew Donaghue, ZDNet
2. Source, "IT's Dirty Little Secret?" by Heidi Biggar, InfoStor Magazine
3. Source, "Software Engineering Institute" website, Carnegie Mellon University
4. Source, Microsoft Operations Framework (MOF), Microsoft Corporation
5. Source, Information Technology Infrastructure Library (ITIL), United Kingdom's Office of Government Commerce
6. Source, Control Objectives for Information and Related Technology (CobiT) Information Systems Audit and Control Association (ISACA), and the IT Governance Institute (ITGI)

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