

Optimizing IT to meet Business Objectives

The role of Business Analysis, Project
Management and ITIL V3

Role of the IT Function

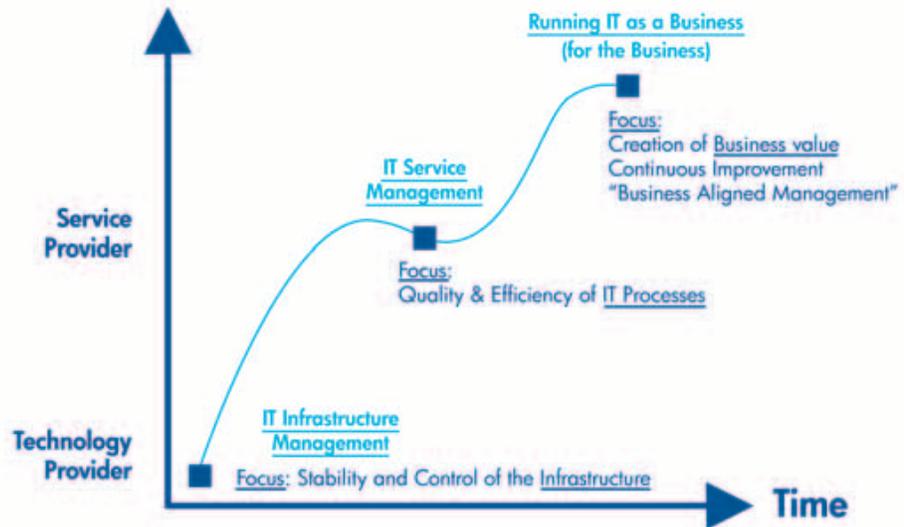


Figure 1

The role of IT in business is changing. Where IT was once a cost — an arcane but necessary collection of expensive boxes and people who spoke a language of their own — now it is increasingly recognized for the value it creates.

Corporate executives and boards of directors no longer view IT merely as a provider of technology, responsible for maintenance and support. IT is now a full-fledged business unit, along with finance, engineering, and marketing, that contributes to the success of the enterprise.

In this new era, information technology is more aptly described as business technology. IT results are measured strictly in terms of the business outcomes they support and/or deliver.

Why the change? Because IT has matured. No longer focusing on isolated, specialized applications, it now works at addressing business needs and helping to drive the business forward to growth and increasing profitability.

At least, that's the position of IT in the best organizations.

Consider the history of IT. (Figure 1) In the distant past, IT was focused internally, on the stability and control of the IT infrastructure. Keep the mainframe running. Minimize downtime. Eventually, that thinking gave way to IT Service Management, where the focus was the quality and efficiency of IT processes. Determine and guarantee service levels. Manage change effectively. In many ways, that is where many organizations and IT departments are today.

The next step — where today's IT leaders are moving — is running IT as a business, for the business. The focus has shifted to creation of IT services that deliver

business value with continuous improvement of IT, combining in Business Aligned Management of IT. It's a natural progression, since industry analysts say 80 percent of business processes are run on IT. Today IT literally powers the business.

Running IT as a business imbues IT executives with business accountability, not just management of an IT budget. It involves IT directly in business initiatives, not merely IT projects. It measures the success of IT in business results, rather than service level agreements. And it requires optimized service assets, such as infrastructure, applications and information, rather than isolated IT silos.

How does an organization move to running IT as a business? Technology and business decision makers need to align their goals and strategies more closely. IT executives need a new way of looking at service management — one that goes beyond just technology, and takes into account everything IT does to drive business outcomes.

I. The HP Service Management Framework

The HP Service Management Framework provides such a view. It provides a service management system for consistent delivery of services that balance performance, quality and cost to produce desired business outcomes.

The HP Service Management Framework is a holistic approach. It organizes resources and capabilities such as people, processes and technology within the service

management system based on service management related international standards and industry best practices. The purpose of the HP Service Management Framework is to help enterprises:

- Correctly position themselves as service providers
- Provide consistent quality services that will achieve desired business outcomes
- Manage IT services across their lifecycle and all the assets they consist of
- Understand how to leverage the many standards and sources of best practice for service management
- Transform themselves into a strategic partner to the business

The HP Service Management Framework reflects changing IT and business environments, and keeps pace with the most recent additions to the IT Infrastructure Library, or ITIL. The term “service management” is used in the name of the framework because it covers more than Information Technology. And like the HP ITSM Reference Model, it functions as an easy-to-use roadmap to service management. Enterprises and public sector organizations that want to transform their IT organization from a traditional, IT-centric technology provider into a reliable, agile, low-cost IT service provider can use the framework to guide their journey. It provides guidance for organizations just beginning a transformation, based on business imperatives; and for organizations anywhere in their transformation, it defines the appropriate steps along the path to service management.

Looking back to the last Service Management revolution, IT Service Management focused internally, on optimizing the quality and efficiency of IT processes. That focus was based largely on the ideas contained in the ITIL V2. Today, the HP Service Management Framework builds on the latest version of ITIL, ITIL V3, as the source of guidance for enterprise IT architecture and optimization. But it also looks beyond ITIL — and outside the IT organization itself — bringing together HP experience and industry standards to create the linkage with overall business objectives and achieve desired business outcomes.

To manage services across their lifecycle, we will examine three key forces: 1) Business Analysis, 2) Project Management, and 3) ITIL V3.

II. The Rising Importance of Business Analysis

In order to run IT as a business, the IT function and the business must fully embrace the role of Business Analysis. Business Analysis isn't new. But the focus on Business Analysis as a critical step supporting the success of IT has increased dramatically. The reason is simple: many business projects — including IT projects — routinely fail because Business Analysis has failed.

Focusing exclusively on IT projects, consider these dismal statistics:

- Nearly 70 percent of IT projects fail to meet defined objectives (Standish)
- 50 percent are rolled back out of production (Gartner)
- 40 percent of problems are found by end users (Gartner)
- 25 to 40 percent of all spending on IT projects is wasted as result of rework (Carnegie-Mellon)

Why does IT have such a dubious track record of success? In large part, the answer is that Business Analysis is not applied, and maintained, throughout application development and implementation.

So what is the role of Business Analysis? The simple answer is that it's about defining and managing Business Requirements throughout the process that leads to a business solution. The entire process is known as the Business Solution Life Cycle. It is the context within which Business Analysis takes place. The steps in the Business Solution Life cycle include:

- Enterprise analysis
- Solution definition
- Requirements elicitation
- Analysis and documentation
- Design
- Build
- Test
- Operate

(Sometimes Verification and Validation are shown as intermediate steps between Test and Operate, but these steps really occur throughout the life cycle.)

Some solutions are technology-based solutions; others are process changes, training programs, new policies, etc. Some are designed to enable and improve internal operations, while others are customer-facing, customer-oriented solutions. So Business Analysis requires a broad view of the possible solutions to meet business requirements. For the purposes of this paper, we will focus exclusively on IT-based solutions. And we will embody the challenges of Business Analysis in a person — the Business Analyst. Business Analysts are commonly positioned within IT as well as outside IT. Even in the latter case, Business Analysts may be responsible for business solutions having significant IT components. In any case, regardless of their organizational position, it is absolutely vital for Business Analysts to understand the relationship between their scope of work and the specific top-level business requirements from which that work is derived.

As a first step in developing a solution, the Business Analyst is responsible for eliciting the requirements in detail from all the stakeholders. Stakeholders are often people who are interested in the function of a particular IT software solution; but they might also include the legal department, finance, investors, government regulators, suppliers, and support staff of various kinds. A good Business Analyst will take into account all of these stakeholders. This part of the analysis includes not just what the IT software/business solution is supposed to do, but other aspects as well — security, availability, regulatory requirements, etc.

Once the Business Analyst has gathered all this input, he or she examines the requirements looking for inconsistencies, holes and ambiguities. The process is typically iterative. The analyst must often go back to stakeholders to answer questions, resolve conflicts between competing interests, and so on.

Having resolved such questions, the analyst moves on to specifications — that is, documenting the business need in detail. Those specifications are expressed in business language, so that the stakeholders can verify that the proposed solution will do what it's supposed to do in business terms. Next the analyst will craft a solution description that can be consumed by the subject matter experts who will implement it. In the case of an IT solution, that means software engineers.

Now comes one of the most critical steps in an IT-based business solution: the project's transition from being driven primarily by the Business Analyst to one driven by the Project Manager.

III. Project Management and IT Project Success

Once the specification is complete, the Business Analyst begins working more with the Project Manager.

Project Management is the foundation for successful integration of IT changes into the operational environment in a way that meets IT Service quality and availability targets.

The first step is translating the business requirements, as defined by the Business Analyst, into IT specifications. Suppose one of the requirements developed by the Business Analyst says that the solution needs to be available 24 x 7 and handle 10,000 transactions per minute. When the Project Manager inherits that description, the project's technical team must translate those requirements into an IT solution architecture that meets the business requirements. So the project's technical team specifies particular servers, an operating system, software design, network requirements and more that meet the

business needs. Now the business requirements have been translated into IT specifications.

It's important to ensure that in this translation, requirements are not compromised. The Business Analyst must ensure that components and features of the solution can be traced back to the initial business requirements. Note that business requirements include a project scope definition with schedule and cost constraints that the Project Manager must work within.

Having turned business requirements into specific IT specifications, the project team then sets out to develop the software, hardware infrastructure, and support services necessary to launch the project into operation.

When Project Management fails

How can things go wrong in Project Management? There may be a mistake in translating business requirements into IT specifications. The Project Manager may not understand the importance of all the business requirements, or reprioritize them based on the IT perspective.

Let's consider some examples. First, let's say that the specifications include multiple servers in multiple locations to meet service level agreements. But the budget won't support the number of servers specified in the original plan. So the Project Manager is forced to arbitrarily assign more processing to a single server, compromising performance for the entire solution.

Or, suppose an application is required to operate in multiple languages. Specifications for the solution are completed, the design is completed, and the software team begins on implementation. Then there's a schedule crunch. The project team elects to release an original version in only the primary language. It plans to follow-up with other releases supporting all other required languages. But other pressing priorities — as dictated by its management team — force them to move on to other projects. So the other languages are never fully implemented.

Both of these scenarios are commonplace in business. There are almost always compromises along the way in development of a major project or IT solution. Often the original Business Analyst is forced to move on to other projects, so he or she loses an end-to-end view of the entire solution. That leads to a loss of traceability — that is, you can't trace the final solution's elements

back to the original requirements as defined by the Business Analyst.

Sometimes, when the Business Analyst moves on to other projects, the Project Manager falls into the role of Business Analyst and has to interface with the stakeholders. But the roles of Business Analyst and Project Manager have very different requirements, and it's often problematic when those two roles are shared by one person.

Business value, and the cost and risk associated with delivering that value, need to be evaluated constantly. That applies in multiple dimensions. Early in the process, the Business Analyst is always considering whether one solution is more valuable than another. Later, the implementation team may be pulled off a project to tackle a new project with higher perceived value. There are never enough resources to do everything management would like.

There is also the inherent gap between Business Analysis and Project Management to consider. The Business Analyst can include a variety of requirements in the solution that seem unnecessary to the Application Developer. The Project Manager, meanwhile, is under pressure to deliver the completed project quickly and inexpensively, so he or she can move on to the growing list of other solutions that users are demanding. So there is pressure for the Project Manager to move new IT solutions into production even when they're not entirely ready.

All of the situations outlined above serve to short circuit the process of putting effective IT services and solutions into practice. Business requirements aren't fully met in the IT solution when it moves into production. That contributes to the nearly 70 percent of IT projects that fail to meet defined objectives, the 50 percent that must be rolled back out of production, and so on.

Repeating old mistakes

There's an analogy for this failure elsewhere in business. It's the supply chain. In the past, it was very common for businesses to have multiple functions — functional silos — that didn't communicate well, didn't share data, and didn't have a common set of objectives. The marketing function had one way of doing things and one set of objectives. Sales had another way of doing things and set of objectives. So did manufacturing and distribution. In the end, the product developed by the company



Figure 2

wasn't exactly what marketing wanted, it didn't come out on time, its quality suffered, shipments were delayed, etc.

So the focus in business changed. It focused on cutting across those multiple silos to the entire enterprise worked toward a common goal.

IT has been repeating those same mistakes. Each part of the IT function has focused on its own tiny piece of the puzzle, without regard to the big picture. The solution is to create an IT Service chain. The core pieces are strategy (based on Business Analysis), Project Management and operations. IT must emphasize the need for integration of those first two steps — particularly Business Analysis — and for projects to be continually measured against the original business requirements for which they were designed and developed.

IV. The Relationship Between Business Analysis, Project Management and ITIL in IT Service Management

So, we have established the importance of Business Analysis and Project Management in effective development of IT solutions. Now let's consider how these two elements relate to processes defined in the IT Infrastructure Library (ITIL), V3.

ITIL is the de facto body of best practice in Service Management. ITIL gives the IT organization a framework for defining its deliverables (IT services) in

business language, evaluating the business impact if IT Services fail, and prioritizing IT activities such as service restoration, root cause analysis, change management, etc., based on their contribution to business objectives.

The essence of ITIL is about IT services and management of those services in a way that aligns what IT does to serve business goals. (Sound familiar? Like "Running IT as a business, for the business".)

ITIL Best Practices give the IT organization a framework within which everything it does is expressed to customers in terms of service. Customers, on the other hand, don't have to understand what IT does, they just need to know there's a service that supports their business process and goals.

The evolution of ITIL

ITIL has evolved over time. ITIL V2 started with two volumes focusing on Service Delivery and Service Support. Service support dealt with running IT services, incident management, problem management, etc. Service delivery dealt with the back office tasks of availability management and service continuity management.

Following the establishment of ITIL V2 based on those two volumes, additional volumes were developed dealing with Application Management, Business Alignment and Infrastructure Management. The last two volumes were on business Perspective — one from IT looking to the Business, the other from the business looking to IT.

ITIL V3 introduces the Lifecycle approach. (See Figure 2) Services have a lifecycle, which hadn't been reflected in the first two versions of ITIL. Topics include Service Strategy (derived from Business Analysis), Service Design, Service Transition, Service Operation, and Continual Service Improvement.

Every service that IT delivers is part of at least one business solution designed to satisfy business stakeholder requirements (the requirements developed previously by the Business Analyst). So when the Business Analyst is considering possible solutions to fulfill the business requirements — and some of those solutions involve IT — the IT organization is going to be a key source of information for developing the solution. It will supply the framework, expertise, and practical insights that inform the Business Analyst as to what solutions are feasible.

In the process of providing this information, the IT organization is going to inform the Business Analyst with regard to costs and risks associated with different solutions. Earlier, we established that the Business Analyst started out by defining requirements in business language in order to communicate with business stakeholders. Similarly, the IT organization needs to explain in business language what the costs and risks of a solution are, and the natural way for IT to do that is by speaking in terms of services delivered by IT.

That's the key link between Business Analysis and ITIL. Neither Business Analysis nor Project Management is discussed greatly in ITIL V3, but both are required for ITIL to succeed.

In the Service Operation book, there are specific references to Business Analysis. Within application management, the group that manages a service needs to have a comprehensive understanding of the business context. This is supplied by the Business Analyst, who is close to the business and responsible for ensuring that business requirements are effectively translated into application specifications.

The Service Strategy book in the ITIL library discusses how a business works, the need to identify a customer and the customer's business needs, and to generate and create the services a business would buy. Service strategy elevates the concerns of IT. In the past, IT service management was focused on service level agreements and services; but in Service Strategy, the

focus shifts to business outcomes. It's the difference between an objective of ensuring server and application availability of 99.9 percent, vs. an objective of an IT solution that saves the company \$100,000 in labor costs compared to the previous year.

V. Taking ITIL to the Next Level with Business Analysis

Throughout this paper, we have discussed the rise of the Business Analyst to a new prominence in developing IT solutions based on very specific, custom business requirements. But one result of the maturity of IT processes is demand for more predefined solutions. So in some cases, the role of the Business Analyst is transitioning to that of the major subject matter expert and change agent in moving the customer towards a standardized way in which to approach IT and conduct business.

The ITIL text talks about the role of Business Analysis and assumes that the IT function will employ some form of Project Management best practice or methodology (typically either the Project Management Body of Knowledge, or PM BOK, from the Project Management Institute (www.pmi.org); or PRINCE2 from the Office of Government Commerce (www.ogc.gov.uk)). But ITIL does not present detailed best practices from a Business Analyst's point of view.

HP believes this is a critical step in effective Service Management based on ITIL. So HP is helping customers to understand and describe from the Business Analyst's point of view how ITIL works. We have discussed the critical role of having well defined business requirements as the basis for developing IT solutions. HP is taking ITIL to the next level by tying it more closely to the Business Solution Life Cycle from the Business Analyst's point of view.

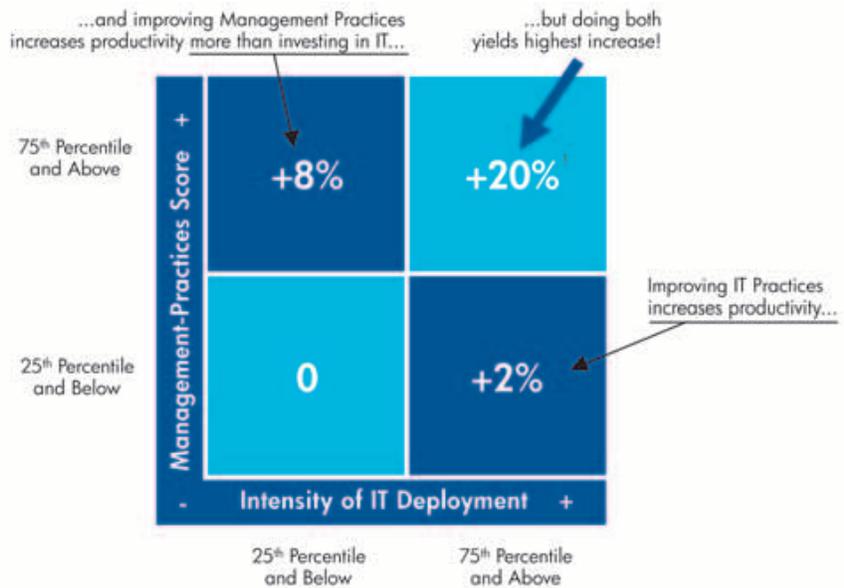


Figure 3

Just how critical is Business Analysis to successful IT? McKinsey and the London School of Economics conducted a study of 100 organizations worldwide, measuring the quality of Management Practices and IT Practices. Each was rated on a scale from 0 to 100 percent. (See Figure 3). High scores in either Management or IT yielded business gains of from 2 to 8 percent. But combined high scores in both Management and IT — leveraging Business Analysis and running IT as a business-oriented enterprise — yielded a gain of 20 percent.

The lesson is simple: well-executed Business Analysis that is integrated into the Project Management process helps to ensure projects will optimally benefit an organization.

Let's consider the contribution of effective Business Analysis and Project Management based on that

analysis in another way. We can look at the value of a business solution as a graph (See Figure 4). The business value is negative on the left side of the graph, as the business incurs project costs for application development and infrastructure. At the point of deployment, the value of the solution crosses the zero-value point, and begins to attain value (on the right side of the chart). Over time, the solution achieves increasing value, until it approaches retirement, at which point the value declines.

Now let's consider how that chart might change over time based on the role of Business Analysis (which we will call Project Definition) and on Project Management and implementation (which we'll call execution). (See Figure 5.) Typical project definition— representing poor analysis — is represented on the left side of this chart by the dark blue line. It leads to either outcome D

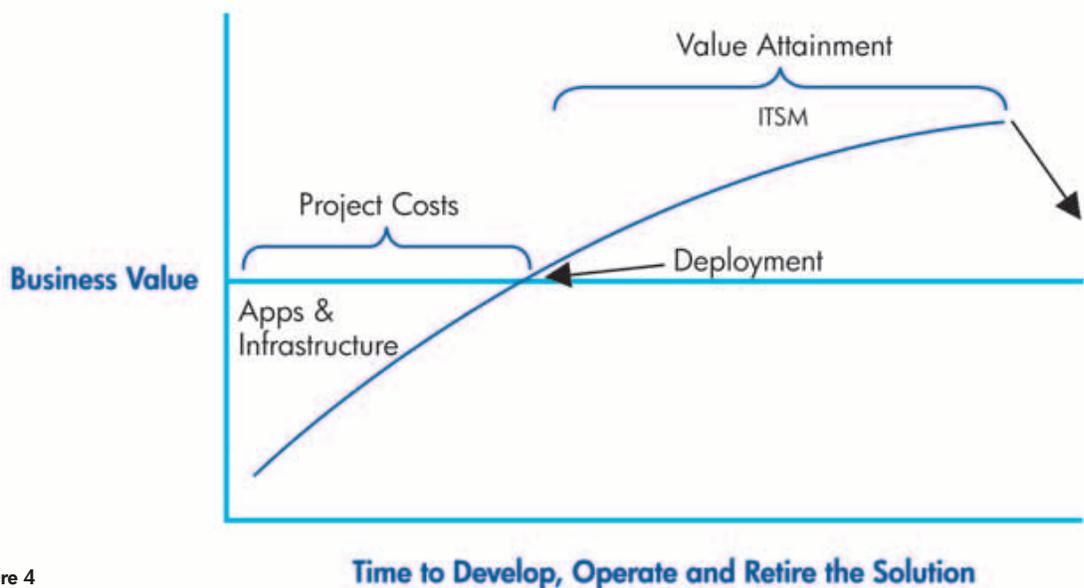


Figure 4

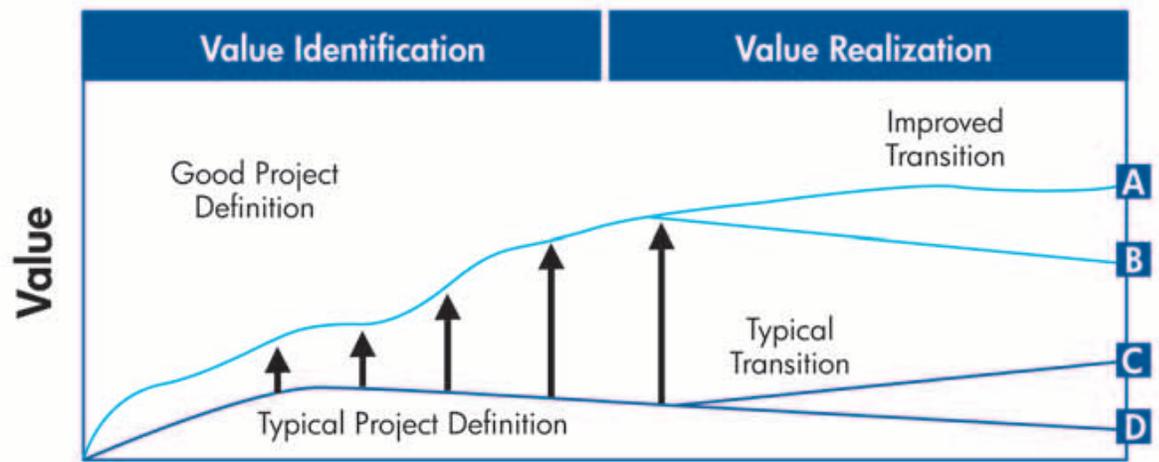


Figure 5

(reflecting poor execution) or outcome C (good execution). Now look at what happens with good project definition based on well-executed Business Analysis, represented on the left side of the chart by the light blue line. It leads to either outcome B (reflecting poor execution) or outcome A (based on good execution).

What’s the lesson here? Good project definition is the most important variable in determining the value of an IT solution. Good project definition will yield superior business value, even if it is followed by poor execution (application development and operations implementation). Poor project definition, on the other hand, will result in lower business value, even if it’s followed by good execution.

VI. The Integrated Approach: Business Technology Optimization and HP Service Management Framework

In order to help customers learn to fully embrace the benefits of integrated Business Analysis/ Project

Management/ ITIL V3-based Service Management, HP has developed an integrated approach called Business Technology Optimization (BTO). With Business Technology Optimization, HP is helping customers use well-defined business requirements to drive IT in ways that achieve desired business outcomes. (See Figure 6.)

Every business has specific, desired outcomes it wants to achieve. The business is starting from an existing state — the “as is” state — and wishes to move toward the desired outcomes — the “to be” state — based on its business strategy. The way to move from “as is” to “to be” is through successful implementation of programs and projects (in this case, IT solutions and services).

The business defines programs and projects based on business requirements. It’s the Business Analyst’s role to (1) define the business requirements, and (2) ensure continuity throughout the project development so that the team doesn’t lose sight of the original business requirements. The BTO framework is meant to keep IT focused on the desired business outcomes.

Outcomes are about more than just revenue growth and profitability. There are other dimensions to business outcomes achievable through IT. BTO is about three important business outcomes:

- Accelerating business growth
- Lowering Cost
- Mitigating risk

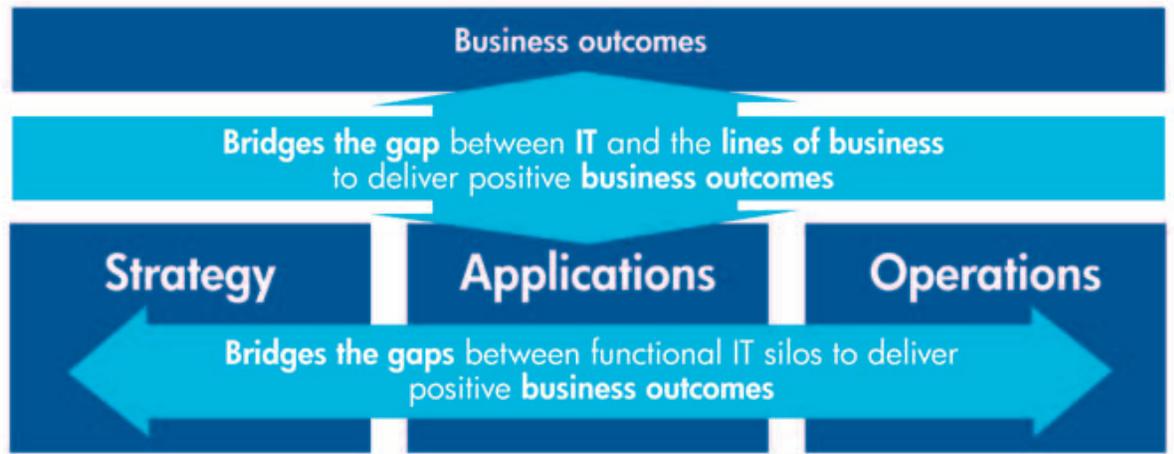


Figure 6

Today, many companies are spending more than 70 percent of their IT budget on maintaining applications and infrastructure, and less than 30 percent on application and infrastructure innovation. It's nearly impossible to respond to change and lead in competitive markets when your resources are spent maintaining the status quo.

Just why are companies spending 70 percent of their IT dollar on existing infrastructure and applications? Because, as outlined earlier, 70 percent of all IT projects fail to meet their defined objectives, 50 percent are rolled back out of production, and up to 40 percent of all IT spending is wasted as a result of rework.

The solution is to align IT objectives with business objectives. And the way to do that is to base IT initiatives on solid Business Analysis, to manage

projects based on the business requirements defined by that Business Analysis, and finally, to measure IT projects continuously against those business requirements and improve them continuously. When a business takes those steps, it frees up IT investment for innovation. (Figure 7.) So instead of spending more than 70 percent of the IT dollar on application and infrastructure maintenance, it spends 45 percent on those things. And instead of spending 28 percent on IT innovation, it virtually doubles that figure, to 55 percent.

Businesses typically have three key IT functional groups: strategy, applications, and operations. By automating and optimizing within and across each of these strategic functions, BTO helps bridge the gap between IT and the lines of business to ensure your initiatives are fully aligned with business goals and priorities.

Freeing IT investment for innovation

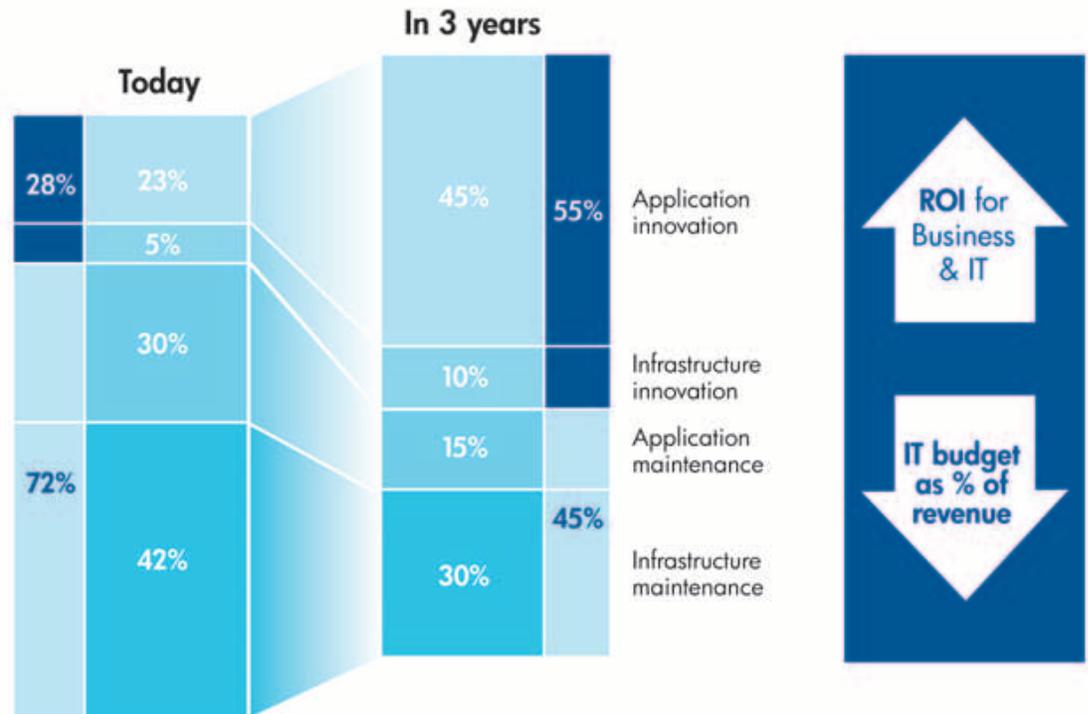


Figure 7

CIO's have two major goals: delivering business value, and driving IT efficiency. Too often, these have been competing goals. So the CIO either tried to drive greater business value through strategic initiatives such as business agility, IT-business alignment, or major business application deployments and upgrades; or, he/she attempted to increase IT efficiency through IT automation or consolidation and centralization. To deliver on both of these goals, IT needs to break down functional IT silos.

Moving forward: the HP Service Management Framework

Business Technology Optimization links strategic functions between technology and business. It enables organizations to better manage the cost, quality and risk of IT services while ensuring business agility and meeting service levels. For that reason, IT must develop and nurture the ability to operate as a business unit, incorporating clear-cut business objectives in order to become a true service provider.

The HP Service Management Framework, which was discussed briefly at the outset of this paper, provides a common language for building and running a service management system to help IT and business executives jointly set expectations and move in the same direction. No enterprise-wide, end-to-end IT service can be complete without the full integration of people, processes and technology. The HP Service

Management Framework provides a means for relating IT people, IT processes and IT management technology to IT services and ultimately, to business value.

For many years, HP has taken a leading role in service management. Now HP has added significant advice and guidance to that contained in the key standards to develop the HP Service Management Framework. In support of IT's expanded role in the enterprise, the framework integrates all the key standards and best practices into a single service management system that allows each enterprise to optimize their approach in achieving the desired business outcomes.

The HP Service Management Framework provides a roadmap to describe and position the capabilities, products, services and solutions required for effective and efficient service management.

Learn more from HP

The first step in implementing the HP Service Management Framework is learning about it and how it applies to your organization. HP Education Services offers training in every aspect of the Framework as described here — from Business Analysis to Project Management and ITIL-based IT Service Management. For more information, contact your HP representative, or visit us online at <http://www.hp.com/learn>.

To learn more, visit www.hp.com

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