



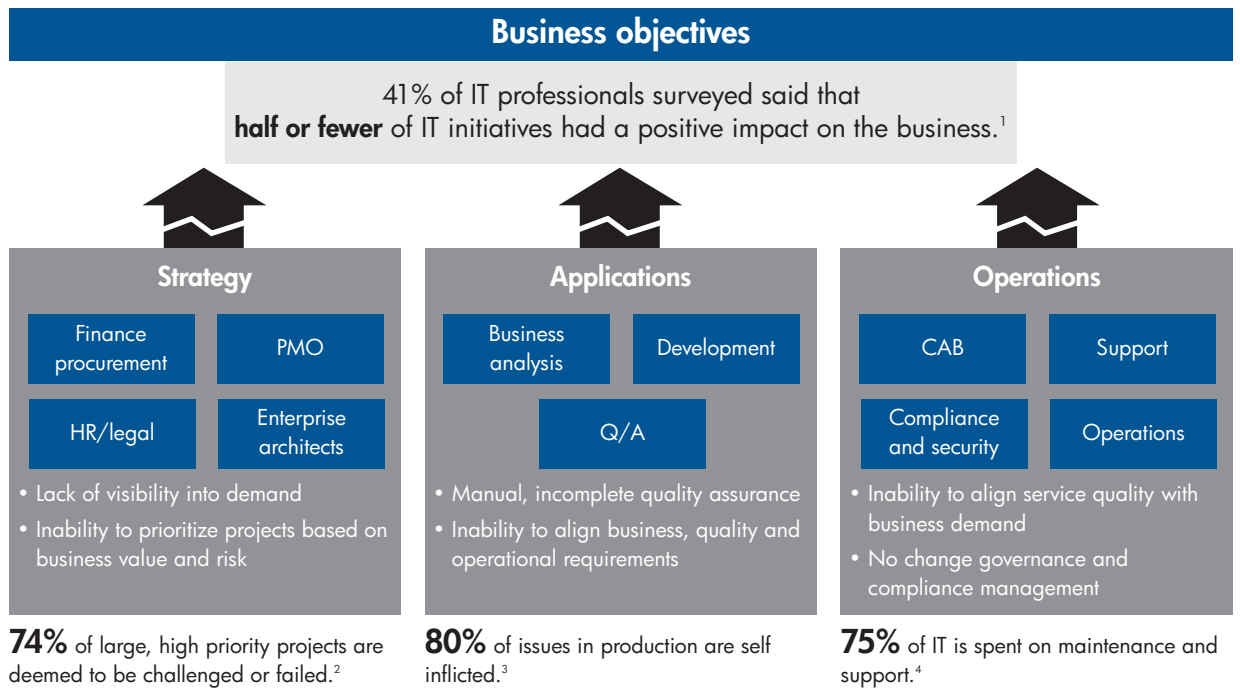
Business technology optimization (BTO): how to fix the broken IT value chain

White paper



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¹Survey by the Economist Intelligence Unit of 1,125 IT professionals based in the Americas, Europe, the Middle East and Asia-Pacific June 2008
(Q: Approximately what percentage of IT initiatives undertaken in your company over the past three years has had a positive impact on the business?)
²Standish Group, *Chaos Chronicles Online: 2.0: Executive Support*, 2007.
³Gartner, *From Concept to Production, Software Changes and Configuration Management*, April 2008
⁴Forrester, *Data Center Automation Defined*, February 2008

Today's reality— growing complexity and a broken value chain

IT has permeated every critical business process, and business success depends on it. It goes without saying that business leaders expect IT to keep the business running, consistently and reliably. But today they also expect the IT organization to make a difference in business outcomes such as improving business processes, getting and keeping customers, and creating new products and services.

This sudden and dramatic elevation in the role of technology has created explosive growth in the number and types of applications businesses need, the physical and virtual infrastructures that support them, and the cost of the labor required to maintain and manage them.

In light of these realities, outmoded processes have to change. Typically, IT departments are divided into three domains: strategy, applications and operations. These three form a value chain that delivers the benefits of IT to the business. But historically they are separate domains, each with its own processes, workflows and data. In less complex times, there was little need for sharing and communication as projects passed from planning through development to production. Not so today.

Today, the IT value chain is broken. Strategists have no way to prioritize projects because they can't see all the demand placed on IT and consistently assess the value or the risk of individual projects. Application developers and quality assurance (QA) organizations are struggling with manual processes that lack collaboration and aren't aligned with business goals or operational requirements. And operations staff can't align services with business demand or implement reliable change or compliance programs.

Consider the demonstrated results of all this. According to a 2008 survey by the Economist Intelligence Unit, conducted among 1,125 IT professionals in the Americas, EMEA, and Asia Pacific/Japan, 57 percent of respondents said that one fourth—or more—of their new business services over the past three years were delivered late. Almost a third said half or more were late. Three out of four respondents see IT risk as directly related to business risk, and more than a third believe that the current economic climate will require them to increase their focus on risk mitigation.

One thing is clear: the challenges IT faces have never been greater. For IT organizations to succeed, they need to find a way to integrate the key components of this complex new world—the teams that manage IT, the processes they employ and the data that guide their efforts—across the domains of strategy, applications and operations. If they don't, they—and the businesses they support—will continue to be at risk.

“HP offers a set of solutions that are modular yet integrated, and which offered the functionality we need to manage our applications environment. These solutions have enabled us to be more productive and responsive, making it easier to deliver the level of IT service our business users require.”

Chris Briley, Assistant Vice President, Project Management Office,
Legg Mason Technology Services

An IT approach built for today's business demands

The way to successfully manage IT today is to replace traditional methods with a new approach that sets IT goals in the context of business outcomes and focuses on value delivered to the business. In doing so, this new approach must foster collaboration both within and across the IT domains of strategy, applications and operations through integrated processes and workflows and the sharing of data and best practices. Only such an approach can help IT organizations consistently deliver the outcomes the business expects and demands.

This new approach is called business technology optimization (BTO).

BTO applies three key principles to mend the IT value chain:

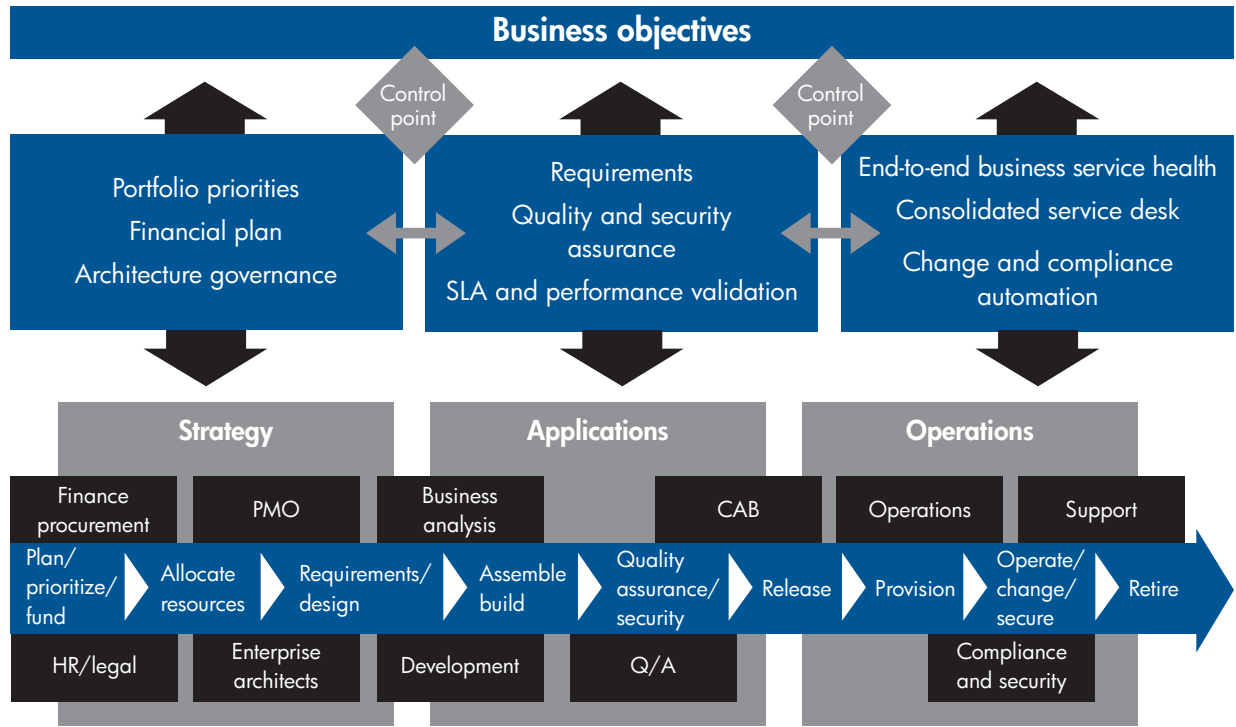
- **Alignment**—First and foremost, IT has to be in synch with business needs at every point along the value chain. IT and the business have to use a common language for communicating expectations and results to make sure that the business understands what IT can deliver and IT understands what the business needs. Alignment between the business and IT creates accountability for financial controls, governance and service level compliance.
- **Automation within domains**—To drive repeatability and cost savings within all three domains, IT organizations need to automate functions and integrate key tasks and processes.

- **Integration across domains**—By extending automation across functional areas and integrating IT domains, businesses can make sure that IT as a whole is coordinated and efficient—and is consistently delivering predictable business outcomes.

Unifying the value chain

To fix the broken IT value chain, businesses need an approach that not only integrates strategy, applications and operations, but also provides control points at each link in the chain that tie activities to the outcomes the business desires. BTO accomplishes this by enabling IT leaders to understand business demands and translate them into an executable portfolio of services. It enables them to give application and service developers requirements to work to and then test results against expectations. It makes it possible to release applications and services into production in close cooperation with operations departments and to synchronize production monitoring, incident and problem management, and the known-problem database. This process is not strictly linear—strategy can link directly to operations as well as to applications.

Alignment, communication and cooperation result in clear requirements and policies for application and service development and delivery; explicit, agreed-to service level agreements (SLAs) consistent with demand; and consistently managed change—which in turn enable IT to deliver projects on time and on budget, reduce incident rates, increase service-level compliance, and make sure that applications and services meet business expectations.



Integration across domains is essential.

Truly unifying the value chain depends on integrating processes and data across domains using a combination of best-practice blueprints, automation and service-oriented architecture (SOA). It also requires a common context for service definitions and a central source of consolidated management information, to give managers insight across the value chain for consistent reporting, analytics and decision support.

During the development of new applications and services, integration enhances every step in the life-cycle, from requirements to planning to execution and reporting to financial management. And during change management, it gives managers visibility into all types of change—strategic, application, infrastructure, and self-service—and enables IT to manage them across the change lifecycle.

While end-to-end automation and integration across the entire IT value chain are essential to delivering optimized business outcomes, BTO does not require that this be accomplished all at once through a comprehensive and potentially disruptive transformation of the IT organization. Nor does it require that a unified solution be purchased from a single IT management

vendor. Rather, BTO’s flexible approach allows IT organizations to begin by automating and integrating one or more specific tasks within a domain, leveraging and increasing the value of existing technology investments, and then building on their success across the other domains. Of course, should an IT organization choose a more accelerated path to unifying its IT value chain, BTO can equally help achieve that goal.

Adding value within domains

Within the value chain, every IT domain faces its own severe challenges, and any failure to meet them can jeopardize business outcomes and business success. BTO addresses specific challenges within IT strategy, applications and operations, optimizing the business outcomes of team efforts.

Strategy

In today’s complex IT environments, it is possible—even likely—that major IT projects will go wrong before they ever start. If business and IT leaders don’t have detailed knowledge of what resources are available, how those resources are engaged and what the business value is of the projects they’re applied to, money will be misspent, key strategic initiatives will be under-supported while staff expend effort on non-critical activity, and projects will fail to produce the most effective results—or even have negative impacts.

Project and portfolio management

“HP Project and Portfolio Management Center software and HP Quality Center software were instrumental in helping us consolidate 13 legacy financial systems into one.”

Jeff Johnson, Vice President Corporate Applications, Constellation Energy

The IT value chain starts with strategy definition, typically in the CIO office, which manages relationships with the business. Here planners optimize the budget, creating a prioritized portfolio of projects and services with a focus on solid top-down development requirements and architectural and process standards that help promote repeatability and re-use and reduce costly re-engineering. BTO supports strategists in three primary ways:

- **Project and portfolio management** focuses on demand aggregation, portfolio prioritization, resource allocation and tracking of the projects and services portfolio.
- **Financial management and analytics** consolidate assets and resources, related planning, and execution data across projects and services to optimize decision-support.
- **Enterprise architecture** (more specifically SOA governance) assists in understanding, defining and tracking policies for SOA-based solutions, and in supporting service compliance.

By giving managers visibility into the people, assets, allocated budget and actual spending across the entire value chain, BTO makes it possible to align resource investments to business priorities and to make projects accountable for what they spend. It also shows how resources across the value chain relate to one another, helping managers utilize them efficiently and avoid overburdening them. By providing a single view of the demand placed on those resources, it gives stakeholders across the chain a shared perspective of changes and a structured context for communication. And by automating tasks and processes, it dramatically increases efficiency and effectiveness, saves manpower, drives down cost and improves quality of service.

At the same time, business requirements, portfolio priorities, resource allocation, financial planning, and architecture governance provide key control points to help keep operational reality in line with business expectations. And businesses can manage projects and programs to optimize the value of their discretionary spending by avoiding non-strategic projects, reducing audit costs and increasing compliance for new services.

Applications

Just as poor strategy planning can cause problems downstream, inadequate testing for functionality, performance and security in the quality management phase of the application lifecycle can result in huge costs in production.

Requirements are the first step to get right. If they aren't clearly defined and communicated at the start of the quality management process, then the time and money spent on testing applications is wasted. Effective testing is next. Poor application quality results in business downtime, customer dissatisfaction and higher operational costs as the operations staff struggles to identify root causes and fix problems. And finally, quality assurance can't just declare its job done and throw applications over the wall into production. Performance and security testing have to span both the quality management and production phases.

BTO prevents downstream difficulties by helping applications teams answer three fundamental questions with accuracy and certainty: When the application goes live, will it work as intended? Will it perform and scale to support the business? Will it be secure enough to protect critical business processes and data? BTO addresses these questions by supporting key functions within the applications organization:

Quality management

“We had situations—before we had an automated load test tool—where we’d have to pay 50-100 employees to simulate application loads. With HP LoadRunner, we can automate it. We’re not asking staff to stay late. We’re not paying them for extra hours...It’s a critical component of our team’s success.”

Henri Mulder, Team Lead Performance, Competence Center, Rabobank

IT service management

“HP’s IT Service Management solution helps KBC resolve more than 90 percent of incidents before specified deadlines. The benefit to our customers is optimal availability of banking services.”

Lieven Schouwaerts, KBC Business Analyst, KBC

- **Requirements management** automates requirements structuring and coordinates the efforts of the project management office (PMO) and testing teams.
- **Quality management** governs quality processes and enables QA teams to look at the application from the business perspective and validate the end-user experience before deployment, test based on business risk, and manage quality and performance across the application lifecycle.
- **Security validation** provides application security testing and vulnerability assessment at each step of the lifecycle, spanning pre-production and operations.

With the BTO approach, these processes are not performed in a vacuum. BTO is an integrated process that focuses on connecting key stakeholders across the application lifecycle—from business analysts and portfolio decision-makers who decide what goes into the application to developers and QA teams who build and test it to the application operations management teams responsible for its availability and performance in production. Linked by a platform that connects their working environments, these stakeholders—local or global, in-house or outsourced—share a single version of the truth and a single view of quality status.

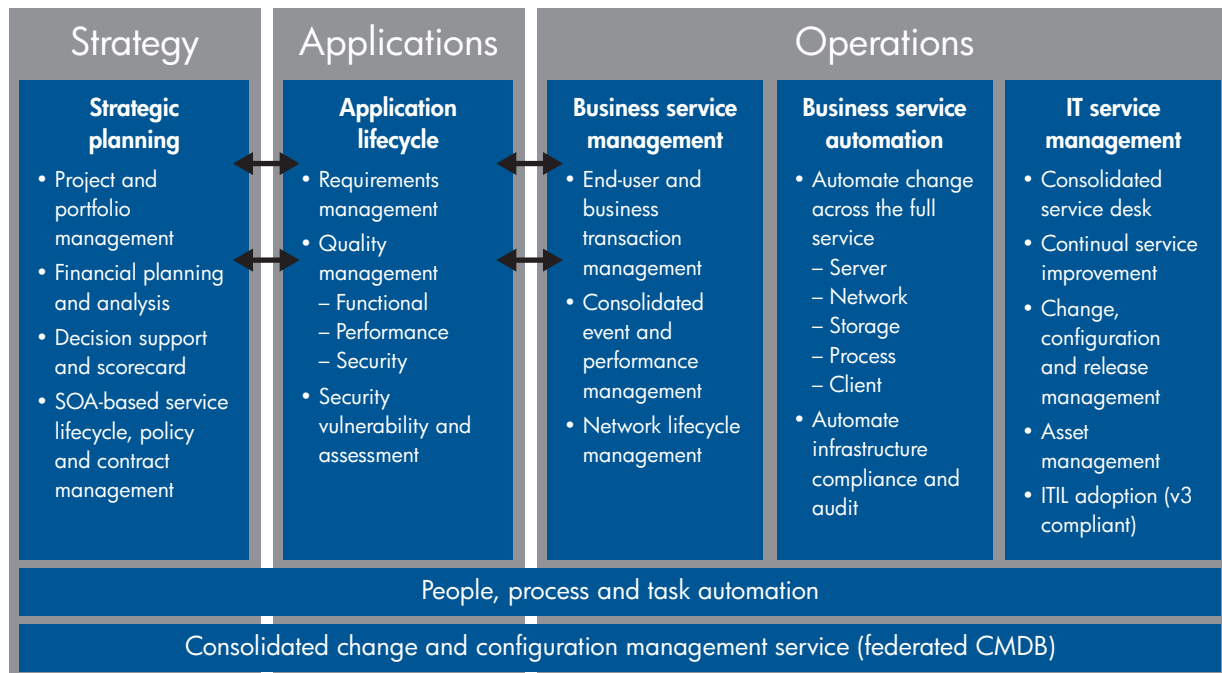
Operations

Even with good strategy planning and effective quality management, when applications go into production, new risks to the business surface. In particular, in today’s climate of rapid technology evolution and volatile business processes, application change presents a threat. In the EIU survey cited earlier in this paper, nearly half of 1,125 respondents said that 25 percent or more of the business outages their companies experienced last year stemmed from changes and upgrades. In effect, with every application change, the lifecycle starts over and goes through strategy planning and quality management again.

Operations bears the burden of making sure everything works in production, fixing it if it doesn’t, and changing it when it needs to be changed—without disrupting the business. All the realities of IT management today—application and infrastructure growth, spiraling management costs and the demand for agility—make these critical tasks particularly difficult. So the BTO approach offers a combination of ways to help operations meet the challenge:

- **Business service management (BSM)** monitors business services from the end-user, application or infrastructure perspective to identify potential service problems before they can cause business outages.
- **Business service automation (BSA)** automates updates and compliance across all elements of a business service including clients, networks, servers, storage and processes.
- **IT service management (ITSM)** provides service integrity by orchestrating the entire service lifecycle from planning to production, including services transition, incident and problem management, and end-to-end change management that spans the application lifecycle, the application/service stack from infrastructure to service, and all the organizations involved.

These essential strategic activities are supported by a federated configuration management system (CMS) as a common repository of integrated data and by run-book automation solutions to automate tasks within and across IT silos. Links to the business are maintained at the control points of end-to-end business service health, a consolidated service desk, change control and impact management, release management and change execution, and compliance and security audits. For the business, this means higher change success rates, more incidents resolved in less time, increased productivity and reduced cost.



A portfolio built to drive success across key CIO and IT initiatives

Taking a successful BTO approach depends on best-in-class solutions for every function in the value chain. Those solutions need to automate processes horizontally, across the organizations that make up the value chain, and vertically across technology stacks, including servers, storage, clients, applications and the network. They also need to integrate with one another and with other industry solutions so that businesses aren't locked into a single vendor or solution suite.

As the originator of the BTO approach and one of the leading BTO solution provider, HP Software offers a comprehensive suite of IT management solutions that span the IT value chain, break down the walls between traditional organizational silos, and provide the control points necessary for alignment and accountability at every link in the chain.

This integrated set of modular solutions makes it possible to start at any point in the chain and then build on that starting point to incrementally construct an overall workflow. It provides task-level automation to improve staff productivity and scalability, process-level automation to improve efficiency, and end-to-end connection to business requirements to deliver IT services that drive business success.

In response to the pressing demands placed on IT by the business, CIOs and IT managers have created structured initiatives aimed at improving business outcomes. The BTO approach is ideally suited to making IT initiatives successful, tying them to CIO initiatives and making sure CIO initiatives produce the required business outcomes. And as a leader recognized by Gartner, IDC, Forrester, AMR and other analysts in virtually every category of IT management software, HP has created dedicated strategies that map our portfolio and approach to these initiatives.

“To support Avaya’s business objectives, our IT Operations Support organizations are expected to do much more with much less. Today, we have an HP management solution in place that enables us to maintain consistently high service quality with reduced effort.”

Mark Whatman, Principal IT Architect, Avaya

A vendor you can count on, for business outcomes you can count on

Businesses ask a lot from IT organizations. They’re expected to carry on day-to-day operations efficiently and cost-effectively, drive strategic initiatives for agility and competitive advantage, and respond to external risks and opportunities. And today, the business asks one more thing from IT—be a source of certainty in uncertain times.

IT executives today know that this is no time for a misstep. They still need to help the business pursue new revenue and extend market reach. But as they do, their focus has shifted—subtly yet significantly—to predictability, repeatability and accountability. In short, IT needs to be able to deliver outcomes the business can count on.

That’s why today’s IT leaders need solutions they can count on. And HP Software delivers, with the industry’s most comprehensive, integrated portfolio of IT and information management solutions. We help customers achieve predictability with on-time, on-budget delivery of applications that do what they’re supposed to do. Repeatability of IT results through greater automation of core IT processes. And accountability through prompt and comprehensive compliance with regulatory audit and e-discovery requests.

In the end, the market leadership of HP Software means safer technology and services choices for our customers. The fact that so many customers have chosen HP Software to serve their IT management needs is a testament to the quality of the solutions we provide and the business outcomes that our customers derive from them. If you’d like to read more about HP Software BTO solutions, visit our website at hp.com/go/btosoftware.

To learn more, visit hp.com/go/btosoftware

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Technology for better business outcomes