

Infrastructure Transformation

The foundation of a high performance business

>
accenture

High performance. Delivered.

• Consulting • Technology • Outsourcing

Accenture views high performance organizations as those that effectively balance today's needs and tomorrow's opportunities. They consistently outperform their peers in revenue, profit growth and total return to shareholders. And they do so over a sustained time frame, across business cycles, industry disruptions and changes in leadership.

The high performance business



Infrastructure

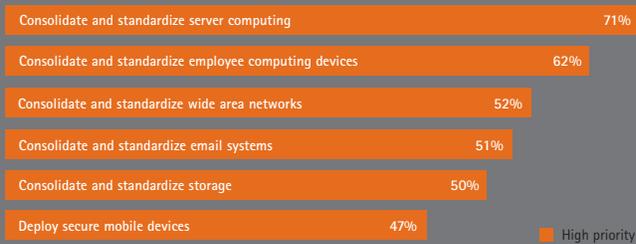


Fig. 1: Consolidation and standardization findings from Accenture's global High Performance IT research. Interviews were conducted with 300 CIOs in eight countries.

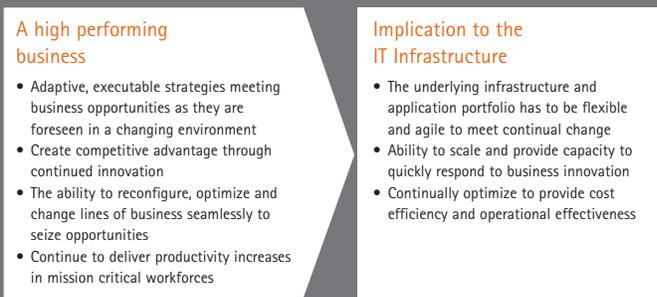


Fig. 2: IT needs to be seen as the enabler rather than an inhibitor to business.

Accenture has identified industry, capability and business function characteristics that are key ingredients of a high performance organization. One of the critical 'first steps' identified is how you can create business value through information technology and how a flexible and agile infrastructure, built on a master plan, can optimize existing resources as well as accommodate new waves of technology that can quickly respond to the business.

In the wake of years of cost cutting and mergers and acquisitions, organizations are now considering strategic investments in IT infrastructure that will help them improve business performance. In a recent High Performance IT global research project¹ Accenture has found that many organizations are planning to spend more money on enhancing their infrastructures. We asked CIOs to indicate priorities from a list of 14 activities that fall into the larger infrastructure categories of workplace and devices, network, data center, operations, and security. Five of the

top six infrastructure activities focused on consolidation and standardization – 71% identified server computing as a high priority, 62% focused on employee computing devices, 52% were looking at wide area networks, 51% email systems and 50% were focusing on storage. (See fig. 1.)

In a risk averse IT climate such as the current one, this is not surprising as few organizations have the opportunity to make a real impact on their income statement and balance sheet. Infrastructure rationalization requires no new customers, no new products, no additional revenue streams, and in fact no contingency for circumstances outside the enterprise wall. It is low risk and potentially high return.

With all these changes as a backdrop the challenge is to deliver new capabilities without adding to the complexity and cost of existing infrastructure. Accenture believes that challenge can be met. (See fig. 2.)

Accenture has identified industry, capability and business function characteristics that are key ingredients of a high performance organization.

¹ Accenture's global High Performance IT research, 2005.

The challenge of a high performance infrastructure

In reality, most organizations' existing IT infrastructures are not up to the task of supporting a high performance business.

Most IT systems have evolved and grown in a piecemeal fashion—either through mergers and acquisitions, or to meet the needs of a specific business unit—rather than through the careful execution of a comprehensive technical strategy. The resulting infrastructures are complex and tend to be under-utilized, poorly integrated, inflexible and costly to maintain.

In addition, because many applications have historically been developed by individual business units, companies have increased their number of servers and have created a 'one application-to-one-server' model. This has increased data center footprints and the number of staff needed to manage them.

Over the last few years CIOs have needed to cut costs and infrastructure has often been a prime target. Rather than introducing new technologies that could have accelerated productivity, many companies were forced to maintain their existing infrastructures through a series of quick fixes with many spending too little on new systems. Today these organizations are looking towards optimized, integrated and cost effective IT infrastructures to drive high performance with cost, security and complexity being the key near term drivers of infrastructure investments.²

² Accenture's 'Building a High Performance IT Infrastructure' research conducted in Australia and Singapore, 2005.



The path to infrastructure transformation...

Our vision

At Accenture, we believe the companies that will achieve the greatest benefits from an integrated infrastructure are those that establish and follow a long-range transformation plan. The ultimate objectives are to enable a company to quickly take control of its IT costs, enhance its system security, improve its ability to support the business strategy, and self-fund longer-term, IT-enabled improvements that will drive additional value. Consideration of sourcing strategies—whether to co-source or outsource—should also form part of the overall plan.

Accenture foresees a three-phased approach to infrastructure transformation that is manageable, cost-effective and minimally disruptive to ongoing business operations.

Phase one: Start with a comprehensive consolidation and standardization program to reduce complexity, expense and operations and management challenges.

Phase two: Extend the benefits of phase one activities by superimposing a virtual layer on the newly standardized IT environment.

Phase three: Allow the organization to fully exploit utility-style computing capabilities as they are realized. In this scenario, organizations will be able to tap into IT capacity from third-party vendors and pay for only the capacity or type of service or resources that they use. It will be the early adopters who will be the leaders and help shape how this 'external' model will work.

Phase one – IT consolidation and standardization

Accenture's High Performance IT research indicated that consolidation and standardization is the most pressing infrastructure-related issue for CIOs today and is the focus of the first phase of the transformation journey. A number of critical IT components are consolidated, standardized and integrated to provide a holistic view of the IT environment, including the workplace, networks, data centers and applications.

- **Data centers** – By rationalizing and consolidating the number of data centers, servers and moving to storage area networks, companies are able to reduce the size and complexity of their data center, storage and server footprint, save money and create a more easily managed and efficient server and storage capability.
- **Networks** – One of the critical areas for organizations to rationalize is their data and voice networks.

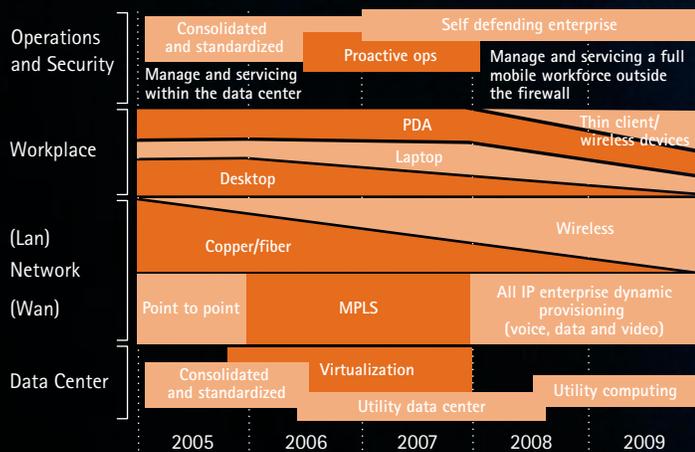


Fig. 3: A transformation plan establishes a high performing infrastructure. This graph represents Accenture's current thinking and is based on extensive project experience with CIOs.

Current technologies will allow these two services to converge (along with video) onto a single more cost effective network infrastructure. These technologies also provide a solid base for building in new technologies (like wireless, mobile, and broadband to the home), in a cost effective network infrastructure that provides both flexibility and performance to all users regardless of location. These new technologies and those currently in development will be adopted by successful organizations as they are proven to be cost effective.

- Workplace – Traditionally, workplaces comprise a mixture of many operating systems, hardware and software standards. By rationalizing and standardizing the desktop and printer environments, implementing thin-client architectures and enabling Web access, companies can achieve cost savings and more efficient working environments.
- Operations – Organizations can achieve even more benefits by improving IT asset management and

utilization, standardizing operational processes and the software that enables these processes, as well as increasing the level of automation used to perform these processes.

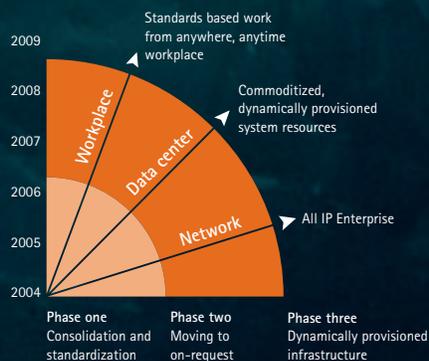
- Security – This discipline runs through the lifecycle of the program, whether it is through the construct of a security architecture which incorporates the latest in identity and access management, secure networking and operating system implementation, or whether this is in operations, through embedding business continuity and operating controls, such as ISO17799.

In short, phase one consolidation and standardization activities—which typically take 18 months to complete—deliver infrastructure cost savings of 25 to 50 percent, depending on complexity and level of consolidation. These savings are attributed to cost reductions in licenses, workstations, central operations, local support, servers, mainframes and networks.

Phase two – Infrastructure virtualization

The cornerstone of phase two activities involves superimposing a virtual layer onto the newly consolidated and standardized infrastructure environments. This layer—which lies between an IT organization's applications and its hardware—captures a uniform snapshot of the infrastructure environment and pools and connects IT resources that have been historically separated. On top of this virtualized platform, organizations can install software products to help manage and provision hardware resources and continuously balance and consolidate workloads. An organization will be able to:

- Move applications among various processing resources within their data centers to optimize performance across the enterprise.
- Allocate capacity and resources—such as utility-based next generation data centers, mobile work scenarios, workload management



Phase one – Consolidation and standardization

To reduce the inherent complexity, expense and difficulties in managing the current IT Infrastructures, consolidation and standardization needs to be undertaken. This is seen to be the initial step to facilitate vendor 'capacity on request' models and prepare 'on-request' Infrastructure data centers.

Phase two – Moving to on-request (internal focus)

With a standardized environment, enterprises are in a position to leverage utility based data centers, full mobility and IP (voice and data) services.

Phase three – Dynamically provisioned infrastructure (external)

The final transformation phase to fully exploit commoditized, dynamically provisioned system resources, enabled by an all IP Enterprise which facilitates the standards based work from an anywhere, anytime workplace.

Fig. 4: The three phases of Infrastructure Transformation.

and IP (voice and data) services—dynamically and automatically.

- Reduce the complexity of managing hardware from multiple vendors and eliminate maintenance "downtime."
- Implement a simplified interface between IT resources and business processes.
- Measure provisioning time for new applications in minutes or days (not weeks) and response times for change requests in similar time frames.

To achieve these types of benefits, organizations should focus on several distinct but overlapping activities:

- **Virtualizing the computing pool** to integrate vast amounts of data, legacy systems and business applications to enable real-time transaction processing capabilities and, ultimately, utility computing.
- **Virtualizing the storage pool** to ensure that data is managed in an efficient, secure and integrated way. Moving to networked storage allows organizations to make the most

of their unused capacity. These solutions significantly reduce the total cost of ownership.

- **Virtualizing the network** to ensure the user feels he has secure access to everything that is important to his enterprise from any access method available to him. The first step is moving to the IP protocol in every network and the second is bringing under control all the access methods to the enterprise whilst still allowing for their inherent flexibilities.

Securing virtualized infrastructures

Securing the virtual infrastructure starts with user identification and subsequent access control around systems, applications and data. Recent Accenture research found that 85% of organizations are committed to identity and access management (IAM) to reduce security and administration costs.² Apart from the security benefits there are business benefits with the reduction of costs such as help desk

Accenture has identified industry, capability and business function characteristics that are key ingredients of a high performance organization.

“We believe the worst of the proliferation has passed, there's a fall in the number of layers, and an increasing ability to implement standardization. There has been a shakeout in the market. But the last ten years have created complexity, and keeping up with innovation meant having a little bit of everything.”

Quote from a CIO who participated in Accenture's Infrastructure research project in Asia Pacific, 2005

calls and user/system administration, it also provides access for a mobile workforce and business partners. In addition to I&AM, it is important to embed risk analysis, mitigation techniques, business continuity planning and emergency response programs into the fabric of the organization. Implementation of security processes and technology protect the perimeter, network, hosts, applications and data.

Phase three- Taking advantage of dynamically provisioned infrastructures

Phase three activities extend the virtualization activity in phase two beyond organizational walls to third-party IT resource providers. Dynamic provisioning of IT resources will occur automatically and be driven by powerful applications that respond immediately to an organization's business needs. For this vision to become a reality, technology providers must continue developing the innovative solutions that enable utility computing provisioning.

The greatest challenge will fall to application providers, who must engineer applications to interact with the virtualized infrastructure in a commoditized way. In short, phase three activities are those that will enable clients to tap into IT capacity from third-party vendors anywhere in the world and pay for only the capacity or type of service that they use—from computing to storage to networking. Provisioning will be streamlined, adaptive, policy-based and enabled by applications. All this will allow an IT organization and IT personnel to focus on more strategic activities, as opposed to service provisioning. A successful move to utility computing will involve fundamental organizational change, including a realignment of the structural and governance aspects of the business. If the change program extends beyond IT to encompass people and business processes, then utility computing can deliver significant business benefits and savings.

High performance delivered

Accenture helped a large financial services company transform its IT infrastructure. Over a 24-month period, this large-scale transformation effort generated \$150 million in cost savings and improved support satisfaction scores from “below average” to “best of breed.”

Accenture's approach to infrastructure transformation offerings and capabilities

Based on extensive client experience Accenture has recognized that infrastructure transformation is a critical and continuous initiative from consolidation and standardization through to the virtualization and dynamic provisioning of infrastructure to meet changing business demands.

The Accenture Infrastructure Transformation offering is a set of assets, integrated across all infrastructure areas including data center, network, security, desktop and operations. Accenture's holistic approach begins with the development of an infrastructure strategy and roadmap which provides a multi-year blueprint for transforming the current environment to a virtualized computing infrastructure. As part of this strategy Accenture works within an organization's current investments to increase asset utilization, automate management and provisioning processes and enhance current levels of service.

Building the business case

At the core of this approach is Accenture's commitment to increase levels of service while at the same time reducing the IT expenditures. A business case is developed to focus on rationalization and consolidation of the existing environment to identify quick wins and deliver cost savings which can fund aspects of the design, build and deployment of the end-state environment. All these initiatives are planned around a detailed technical architecture blueprint that identifies the technologies required to meet an organization's goals.

Together, these activities set the stage for the detailed transformation, which involves consolidating the entire infrastructure and applying a virtualization layer to enable utility-centric computing capabilities. A comprehensive review of the business processes and application portfolio throughout the transformation is critical. In addition we

apply deep program management skills which help to drive the transformation, monitor service throughout the transition and measure real and tangible results.

Infrastructure assessment: An integrated assessment for a broad set of infrastructure capabilities. The assessment is based on key templates and question sets that can be executed in two levels of detail—a high-level 2-week version and a more detailed 2-month version. The intent of the assessment is to assess maturity levels, highlight trouble spots and opportunity areas and provide high-level cost-saving and benefit estimates.

Infrastructure strategy, roadmap, and plan: Leverages a collection of assets that enable the creation of a client-specific infrastructure strategy, with a roadmap and work plans to enable seamless execution. The strategy will be developed with a client using the assessment results and Accenture's infrastructure transformation experience and vision to produce a client-specific plan for change.

Accenture's holistic approach begins with the development of an infrastructure strategy and roadmap which provides a multi-year blueprint.

Infrastructure value realization:

Management services to support the execution of an infrastructure transformation program, ensuring that the benefits outlined in the business case are achieved. This execution and delivery component of Infrastructure Transformation consists of a program management office directing specific infrastructure projects focused on for example security, networks and IT rationalization as well as leveraging Accenture's domain specific offerings.

Based on our extensive client experience, we also know what is required to successfully transform an IT environment. We have identified the following key success factors:

- Adopt the premise that "technology is the business." We work with our clients to ensure they align technology and business priorities.
- "Know the numbers." Those organizations that understand their initial financial baseline, as well as an ability to track the benefits as they are realized, are much more likely to achieve high performance.

We collaborate with our clients to develop, and work towards, tangible metrics.

- Appreciate the importance of change management. While many of the initiatives will be technology-based, a transformation program like this will fundamentally change the way IT operates and interacts with the rest of the business. Accenture helps its clients with stakeholder management and in developing the communications and change management capabilities that are critical to keeping transformation efforts aligned and on track.
- Maintain program stability. Infrastructure Transformation is a long-term commitment. While organizations will achieve significant benefits along the way, they must be careful not to be swayed by early successes. Accenture works with clients to keep them focused on the end-goal: a high performance IT capability.

Accenture's infrastructure services

To keep an infrastructure program on track, some organizations may consider turning to partners who provide highly skilled hardware/software independent infrastructure services.

Accenture provides a comprehensive roadmap that enables organizations to carry out their IT infrastructure transformation via multiple streams of parallel work.

Accenture's infrastructure offerings

Data center rationalization:

This solution provides a holistic and fresh approach to optimizing and consolidating technologies in a data center operation. It addresses consolidation as well as the potential wholesale migration of existing facilities. Accenture has successfully implemented data center rationalization solutions for a number of clients focusing on server consolidation, operating system migration, storage rationalization, database optimization and data center relocation. Data center rationalization can

also help prepare a business for the onset of a utility-style computing model. By rationalizing its data center and reducing costs, an organization can start thinking about funding virtualization initiatives that can optimize the usage of an organization's server, storage and database operations.

Predictive operations: This solution helps organizations monitor their infrastructure and anticipate usage patterns so they can predict and measure the impact of IT demands without disruption. The result is maximized business performance and reduced infrastructure management costs. The Predictive Operations offering enables high performance by aligning business processes to IT infrastructure from the top down and enabling prediction through pre-production performance and fault analysis processes. It also delivers information on critical processes and applications through a central point of business availability 'dashboard'.

Infrastructure security: These solutions focus on the critical issues of security, trust, privacy and compliance. Accenture works with its clients to design innovative, tested security solutions that become part of each client's core business processes and infrastructure. Securing the Extended Enterprise offering provides technical solutions and accelerators for all areas in an integrated security architecture, including Identity and Access Management solutions which address authentication, authorization and entitlement. Alongside the technical solutions, Accenture provides service offerings related to risk management covering assessments and business continuity and services to drive operational excellence e.g. security strategy/metrics and organization and services that can transform a security function in an outsourced or managed arrangement.

Networks: These solutions provide innovative networking services to help clients build high performance businesses. After a full assessment Accenture can offer a range of offerings including Telecom Expense Management which can reduce costs and improve performance by reviewing

contracts, optimizing infrastructure and automating process and design. The Enterprise Network Transformation offering leverages new network technologies to improve service levels and provide greater functionality for future business requirements. Accenture's Network Convergence offering helps organizations integrate IP communications into their underlying network infrastructure. Accenture's Network Management offering provides secure and optimized network management through an integrated outsourcing arrangement. Accenture's IP Everywhere offering helps businesses drive value through the proliferation of IP throughout all network technologies including wireless and mobile environments.

Workplace: These solutions help clients across all industries assess, plan, design and deploy end-user offerings that provide a stable and secure environment that reduce costs and minimize deployment impact for the end user. Accenture's Desktop Transformation solutions range from an assessment and total cost of ownership analysis through zero-touch desktop deployments. Migration Accelerators reduce the time required to migrate desktops so that benefits and savings are realized sooner. The Enterprise Messaging Transformation offering features the tools and methodologies to migrate from a legacy messaging or groupware platform to a new Enterprise standard system such as Microsoft Exchange. Specific testing methodologies help mitigate risks and ensure a seamless experience for the end-user.

High performance delivered

Business success means different things to different people. For some, it means maintaining a leadership position by expanding into new markets. For others, it means generating optimal value while reducing costs. For others it simply means survival.

We believe that the most successful organizations recognize the need to optimize and transform their IT infrastructures. We can help you understand the importance of a consolidated IT environment. We can help you streamline your IT operations and significantly reduce your costs, while improving your IT utilization and performance. We can help you create an infrastructure capability to support your evolving business goals. In short, we can help you create an infrastructure that will serve as the foundation of a high-performance business.

If you would like to discuss Infrastructure Transformation please contact:

Global Infrastructure Consulting Lead
John Kaltenmark +1 312 693 0141
john.k.kaltenmark@accenture.com

Global Infrastructure Transformation Lead
D. Neil Gissler +1 312 693 5532
d.neil.gissler@accenture.com

European Infrastructure Consulting Lead
Tim Murfet +44 20 7 844 3118
tim.murfet@accenture.com

Asia Pacific Infrastructure Consulting Lead
Trent Mayberry +61 3983 7976
trent.a.mayberry@accenture.com

North America Infrastructure Consulting Lead
James Bowler +1 312 693 9161
james.t.bowler@accenture.com

About Accenture

Accenture is a global management consulting, technology services and outsourcing company. Committed to delivering innovation, Accenture collaborates with its clients to help them become high-performance businesses and governments. With deep industry and business process expertise, broad global resources and a proven track record, Accenture can mobilize the right people, skills, and technologies to help clients improve their performance. With more than 115,000 people in 48 countries, the company generated net revenues of US\$13.67 billion for the fiscal year ended Aug. 31, 2004. Its home page is www.accenture.com.

Copyright © 2005 Accenture
All rights reserved.

Accenture, its logo, and
High Performance Delivered
are trademarks of Accenture.

