



accenture

High performance. Delivered.

The Cloud-Enabled Business

Harnessing the power of the cloud to
drive high performance

One day, all businesses will be built this way

- Consulting • Technology • Outsourcing

Harnessing the power of the cloud to drive high performance

Table 1. Cloud computing's transformational impact

From the physically-constrained past...	to the cloud-liberated future
Fixed costs	Pay as you go
Cumbersome	Agile
Capital intensive	Capital light
High maintenance and run costs	40%+ lower maintenance and run costs
Security issues	Managed security
Business-lagging	Business-leading
Outdated	New technologies

Today, most executives are aware of the benefits that cloud computing can bring—ranging from lower costs to higher speed, agility and scalability, all enabled by flexible access to applications and processing power on a pay-per-use basis.

These advantages mean cloud services provide a quicker and more cost-effective way to meet emerging business requirements, such as ever-increasing workforce mobility and the need for smarter, speedier decision making. They also enable the business to unleash its full potential for growth—including faster, cheaper and lower-risk expansion into new geographies, product areas and supply chain relationships.

As Table 1 shows, cloud-based provisioning enables a truly transformational shift in the flexibility and efficiency of IT—and thereby of the business as a whole—by addressing key embedded issues in the way technology has traditionally been delivered.

To achieve these transformational changes, IT itself must change. Instead of acting as a monolithic and monopolistic supplier of technology services to the business, IT must operate like a business in its own right. This means partnering closely with business customers across the organization to understand and meet their needs in a responsive and cost-effective way, while also helping to manage and integrate a wide array of cloud-based services (both private and public) alongside existing core business technology.

The emergence of this next-generation IT function will be a critical enabler for businesses to reap cloud's full potential. In this paper, we examine how IT can seize the opportunities presented by cloud computing to redefine its role as a driver and facilitator of business growth.



Taking a mission-critical application to the cloud for Origin Digital

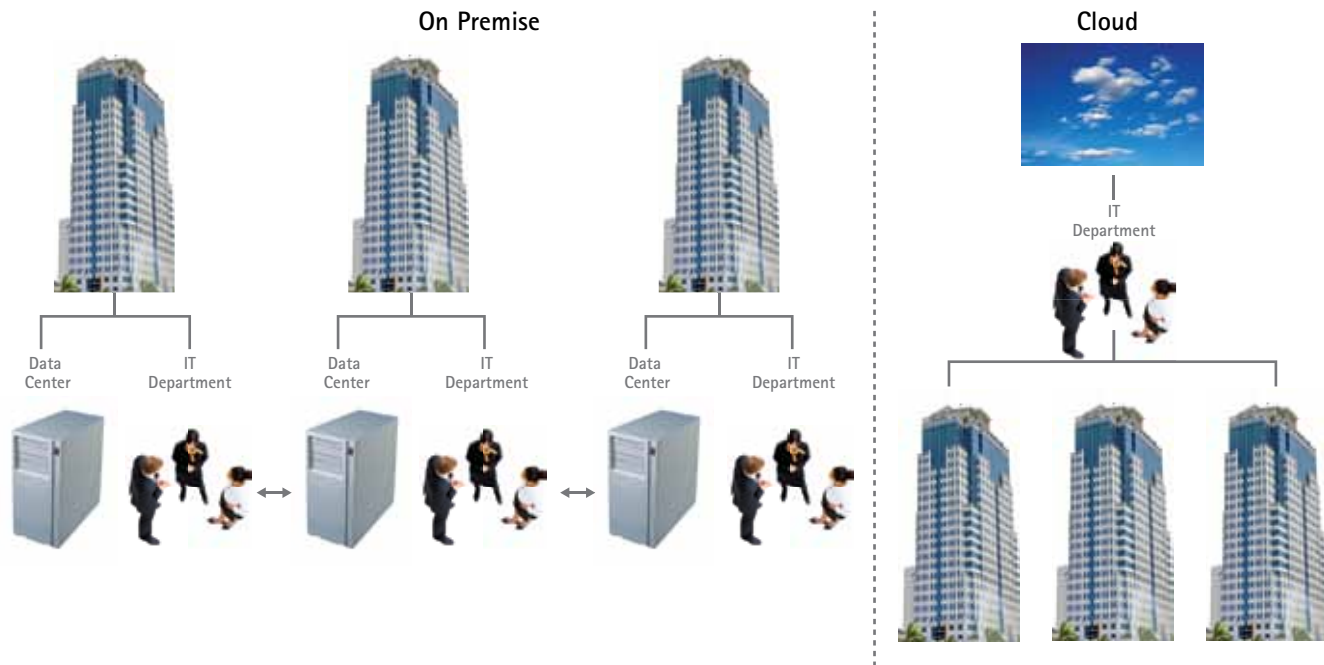
Origin Digital is a global IP broadcasting company with solutions that make it easy for organizations to manage delivery of video content to any device, in any format. The company wanted to create a more scalable transcoding workflow environment that delivered the same high performance that its customers enjoy, but with lower operating expense, easier management, and without requiring additional capital expenditures for underutilized resources.

Working with Accenture and Avanade, Origin Digital built its Cloudcoder application, using the Microsoft Visual Studio® 2008 development system, in about two months. The Cloudcoder integrates into the Origin Digital central management platform while offloading much of the processing to the cloud. Customers upload digital files to the Origin Digital network, and the Odaptor calls the Cloudcoder service, which transcodes the file. As a result, Origin Digital has gained real-time scalability, and reduced administration, time-to-market, and costs.

Curt Kendall, Vice President of Products, Origin Digital, comments: "We're seeing significant reductions (in some cases by half) in computing resource cost for comparable workflows by using the Cloudcoder running on Windows Azure."

Growing the business – How can cloud enable business growth?

Figure 1. From "on premise" to "cloud"



Moving to the cloud involves the migration illustrated in Figure 1 – from the traditional on-premise architecture made up of various data centers and IT departments, to a future where computing power, services and applications are increasingly sourced from the cloud.

Business agility is key...

In today's world, business agility is an important ingredient to foster growth, innovation and high performance. This agility applies to growth in multiple dimensions—including expanding the operations and/or franchise into new geographic markets, on-boarding new talent, adapting to industry change, building relationships with new customers, and launching new products, services and businesses more quickly and responsively than the competition.

...and cloud lays the foundations for an agile business

Cloud computing provides the foundations for an agile business, by supporting five key dimensions of agility that will be key to future growth for all organizations.

The first dimension is connectivity and integration everywhere across every device—smartphones, tablets, laptops, monitoring devices, control devices, and more. This connectivity is something that the next generation of consumers and employees demand and expect, and it can be costly and complex to deliver through internal projects. However, cloud service providers invest continually to ensure that, as new devices come onto the market, their services accommodate the necessary protocols to connect with them. This means the cloud providers' customers automatically get the advantage of connectivity with new devices, rather than having to build it themselves.

This in turn helps to contribute to the revenue growth of companies using cloud services. Consumers are increasingly looking for service providers to be easy to work with, and are demanding the ability to connect to their chosen services whenever and wherever they want, via any device. So the ability to connect services to new devices automatically can bring a significant competitive edge in the marketplace.

This enhanced connectivity—supported by cloud-based collaboration software—in turn underpins the second dimension of agility: quick, seamless and real-time collaboration between and among stakeholders, vastly enhancing the experience and value they each gain from every interaction with and through the cloud-enabled business. Customers, service providers, employees, supply chain partners, consumers—all these stakeholders can join the business's cloud-enabled ecosystem, collaborating for mutual benefit and helping to sustain and escalate growth.



Helping social entrepreneurs leverage an international network

Ashoka is a social entrepreneurship association whose vision is to create an "Everyone a Changemaker" world. This vision is embodied in its global citizen network of 2,000 Ashoka Fellows in 70 countries, all working toward groundbreaking solutions that address a multitude of social needs.

The leadership of Ashoka decided that its existing IT infrastructure would need to change significantly to support the organization's desire for cross-initiative and cross-boundary synergies. So Accenture helped Ashoka design a flexible customer relationship management (CRM) software-as-a-service solution using Salesforce CRM.

The solution delivers the following benefits:

- Up-to-date information: A holistic, global platform for inter- and intra-program constituent information, helps provide an up-to-date snapshot and history of interactions and processes.
- Greater employee effectiveness: Ashoka staff have embraced the new technology and can now, track events, manage a larger set of contact information, search for and share information, and send mass communications.
- Reduced IT effort: No server purchases or software installation on machines are required to run Ashoka's SaaS-based sales solution.

An Ashoka board member described the work as "transformational."

The third dimension of agility springs from the improved speed enabled by cloud. With cloud, companies and their IT functions can respond in hours, not months or years. For example, experience shows that cloud-based Web development engines can enable sophisticated websites to be developed and launched within as little as three weeks. Speed is also enhanced by the ability to scale technology infrastructure, capacity and applications up and down in the cloud. And real-time processes—supported by a wide range of collaborative stakeholders, social media and remote sensor equipment integrated into the cloud's effectively infinite processing power—enable the business to react immediately to changing events, requirements and opportunities.

Again, there are many examples of the resulting benefits in action. Businesses such as utilities can monitor remote installations and facilities in real-time with cameras that use motion-sensing software, and which flash up

an alert for the maintenance team if anything goes wrong or the equipment is damaged. And consumer goods manufacturers are now using cloud-based visual technology to collect and analyze images of their products' position on supermarket shelves, and to identify any variances from the positioning required under their contract with the retailer. This then enables them to demand that their goods be moved to the more prominent positioning agreed in the contract.

The fourth dimension of cloud-enabled agility is the ability to drive greater value from data and knowledge, using advanced, real-time analytics to drive business decisions. Using cloud's massive storage and processing power, data can be analyzed automatically and instantaneously, and events, trigger-points and patterns identified and highlighted. (See information panel on the Accenture Analytics Subscription Environment). Another advantage of speedy analytics is the ability to automatically identify

buying patterns and quickly return very targeted offers or purchasing suggestions to consumers at their point of need.

Last but not least, cloud contributes to a fifth dimension of agility that is especially prominent in today's cost-constrained world: driving down costs—and doing more with less. By making the cost base lower and more flexible, and shifting the balance away from up-front capital investment and toward ongoing operating expenditure, cloud services can simultaneously drive business advantage and cost reduction. Dialing IT capacity up and down according to demand can greatly increase utilization and reduce wasted excess IT capacity that is often sitting idle today. However, as we highlighted earlier, achieving this demands that the IT function undergoes major change. We'll now look at what these changes involve.

Optimizing analytics in the cloud: AASE

The Accenture Analytics Subscription Environment (AASE) provides sophisticated analytics as a service on a cloud-based, pay-per-use basis to support better and faster decision-making in day-to-day operations and management. AASE is comprised of four layers of functionality—consumption, methods, data management, and data sourcing. Each layer breaks down into discrete capabilities and activities to support analytical processes, each of which is enabled by a distinctive toolset or suite of tools.

AASE is founded on a world-class high performance architecture, and we continue to collaborate with all the major third-party players—including IBM, Microsoft, SAP, and Oracle—to build premium assets that can reside on this "core" platform. The AASE stack includes leveraging SAP BusinessObjects, IBM/Cognos, Microstrategy and SAS Business Intelligence (BI) for clients who also want to deliver descriptive analytics as a service. SAS is the main partner for predictive analytics solutions.

The IT function – How significantly does IT need to change?

The move to cloud requires much more than just "plugging in" to a cloud service provider. In Accenture's view, the degree of agility we have discussed so far simply cannot be delivered with the traditional organizational model based on internally owned, provisioned and maintained physical IT infrastructure.

For a business to become truly cloud-enabled requires a fundamental reshaping of the IT operating model and the whole relationship between IT and the business. This transformation enables IT to escape the restrictions of its physically constrained past, which we highlighted in the introduction to this paper.

An expanded "multi-sourcing" role for IT...

Specifically, the IT function must develop the skills to manage a complex ecosystem of service partners that together make up the cloud services for the business. In the future, organizations will increasingly consume IT services from a number of different cloud service providers, alongside—and integrated with—existing core business systems. So the move to cloud takes the needs for a service integrator in a multi-sourced environment to a new level, while also transforming the IT function's relationship with the business.

...supported by new skills and capabilities

To fulfill this role as a multi-source service integrator, and manage and sustain its new relationship with the business, the IT function will require new skills and capabilities. It will need people who are close enough to the business to fully understand the business issues, but who also know how and where data is stored and managed and how cloud computing can help to meet enterprise needs quickly and cost-effectively.

To achieve this change successfully, IT will also need to be run more like a business itself, with a clear service catalog and pricing, and the ability to collaborate with customers in the business to reach the right decisions around the technologies that will best meet their needs.

In many cases, this change is urgently needed. Some major corporations have found that their business units are already choosing third-party cloud vendors and bypassing the in-house IT function, which they find to be too slow, bureaucratic and difficult to work with. This behaviour could lead to major problems such as infringement of data regulations, lack of systems integration and over-paying for services. IT needs to make itself more attractive than its external competitors, by becoming more deeply embedded into the business, and harnessing the capabilities of cloud to become more responsive to business needs.

The assets and capabilities IT will need to develop and apply to achieve this include:

- Tools and methods enabling rapid development of applications
- Processes enabling the business to adapt smoothly and accurately to new regulatory requirements
- Infrastructure and applications that are ready and available when the business needs them
- App stores that are created and maintained specifically for the business, with explicit terms and costs
- A focus on service rather than software, with changes being executed through reconfiguration rather than programming
- Automatic implementation of connectivity with new devices.

Cloud supports and enables all these assets and capabilities.

Accenture helps eBay deploy and scale apps more rapidly and efficiently

eBay is the world's largest online marketplace and a mobile commerce leader, connecting 93 million buyers and sellers who can shop for and sell practically anything. Maintaining the massive technical infrastructure that enables its level of sales means eBay is always looking for ways to drive IT efficiencies and service improvements.

In 2010, eBay and Microsoft entered discussions about how Microsoft's cloud-based Windows Azure Platform might offer an alternative approach for eBay to deploy and scale applications more quickly and cost effectively. Accenture and Avanade were enlisted to demonstrate how Windows Azure might work in eBay's highly customized, Java-based environment.

The project focused on migrating eBay's Apple iPad marketplace site to the Windows Azure platform. Its successful completion confirmed that eBay could provision application development services and host marketplace applications on the public cloud. The project also provided valuable insights into how cloud computing could be incorporated into eBay's long-term infrastructure vision. That vision, enabled by Azure's powerful capabilities, sets the stage for significant cost savings, and will enable eBay to launch new types of landing pages and customer experiences more quickly and more efficiently than ever before.

Making it happen – What are the actions needed to create the cloud-enabled business?

By analyzing the needs and drivers of the future cloud enabled business, we have drawn up a roadmap highlighting the practical steps that businesses—and their IT departments—need to undertake to become truly cloud-enabled.

All organizations are starting their cloud journey at different entry points and with various initiatives. However, if they are to realize the full potential of cloud, they will need to complete all six of the following actions:

- Revisit the IT strategy to incorporate cloud.
- Design and implement new governance, IT organization, IT architecture and service catalog. Select strategic ecosystem partners.
- Establish the cloud integration services capability.
- Select and implement chosen SaaS solutions.
- Replace/replatform existing applications, and build new applications.
- Design and implement a hybrid cloud-based infrastructure.

While all these actions are necessary, the order in which they are carried out may vary. We will now examine each of the actions in detail.

Develop the IT strategy including cloud

The first step—revising IT strategy to incorporate cloud and the new services it will enable—is critically important. We believe that cloud is having such a profound impact on business and IT that it is essential that organizations have a clear view of what it means for them. The IT strategy will shape all the other phases of a move to a

cloud-enabled business and ultimately determine the success or failure of the entire program. If the strategy is flawed, then the migration to cloud is critically undermined.

The strategy development phase involves three key initiatives to help optimize the business value derived from the program: first, create new cloud-enabled business model(s); second, optimize the current business processes and model using cloud; and third, optimize the existing IT.

By executing these initiatives, the IT organization can enable the CEO to explore previously undreamt-of business models that were not feasible under the traditional IT model. These changes also provide the basis on which to develop a roadmap showing how the organization can leverage IT capabilities more effectively, and use the elasticity of cloud service to transform business processes and unleash business opportunities.

Design and implement the new IT organization, service catalog, governance and IT architecture, supported by selected strategic cloud platform partners

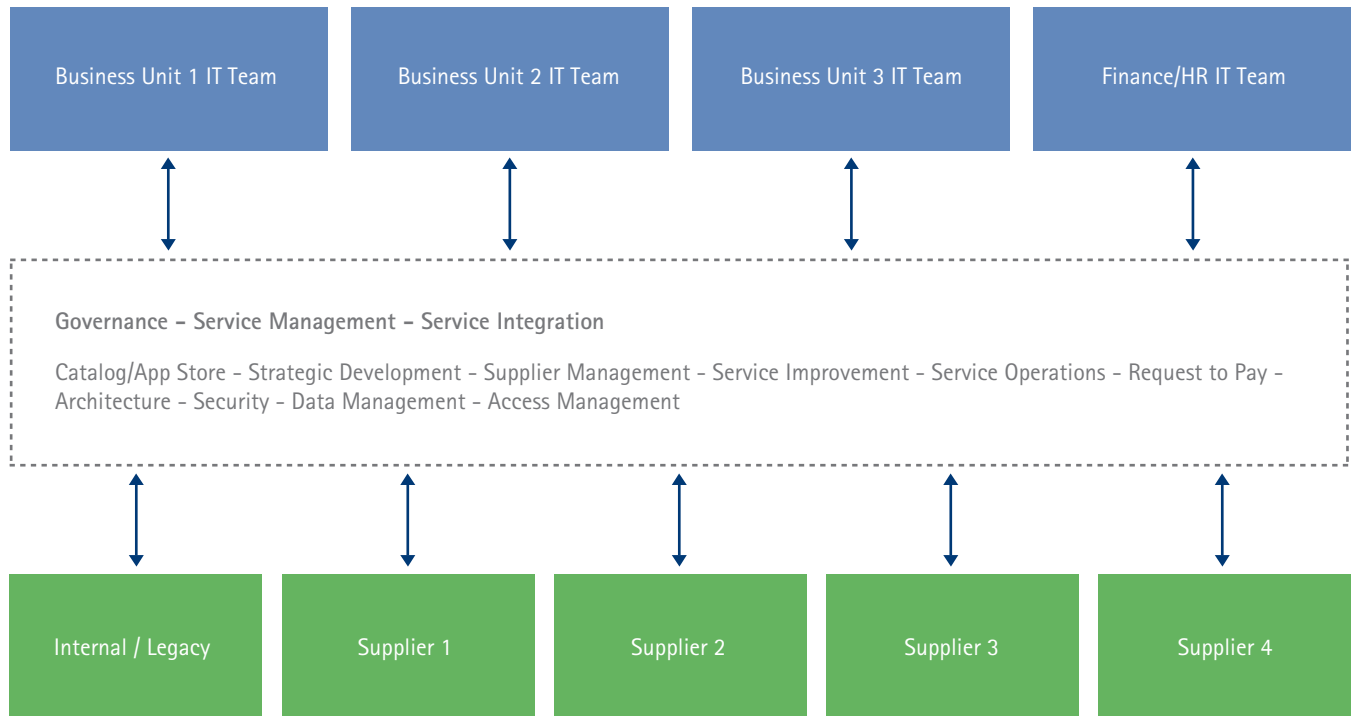
As the organization implements its new cloud-enriched IT strategy, the IT function has a great opportunity to transform its role and status by thinking and acting more like a business in its own right. This involves a more commercial and customer-focused approach, including offering users in the business a clear catalog of services with explicit pricing, and implementing much more automation to make functional amendments easier and cheaper. These changes will help IT to establish itself as the business's supplier of choice for IT services.

Fulfilling this role involves reorganizing IT to interact more closely both with external providers and internal customers. On the supply side, IT needs to be equipped with the skills and processes to manage all the business's current and future cloud vendors, and to ensure integration between different services. On the customer side, IT needs people who are close to the business and understand its needs, but who also have a deep knowledge of the cloud environment at a technical and functional level. These people will enable IT to support the business quickly and effectively with the right cloud-based solutions.

It is vital that IT succeeds in achieving this pivotal role as the business's IT service provider of choice. Experience shows that business units in many organizations are increasingly going out to buy cloud services direct from cloud suppliers, rather than procuring them through the in-house IT function. Where this happens, there is a clear risk that a lack of coordination and integration will seriously undermine the effectiveness and efficiency of the business's IT, and create problems around a lack of enterprise-wide data integration between the fragmented, piecemeal cloud services.

To prevent such issues, the IT function should not only position itself as the most attractive IT partner for the business, but must also implement sound IT governance to enforce compliance with the organization's standardized, quality-controlled IT procurement process. This governance will include centralization of activities such as data security and compliance with data protection laws.

Figure 2. The IT function's service integrator role



IT should also advise and guide the business in the selection of the strategic platform partners with whom the organization will collaborate to build and operate the new cloud environment. Without a clear strategy over which cloud partners it will deal with, the company could face a proliferation of suppliers and increased complexity and challenges around integration. The need to identify the core partners is further increased by the fact that the cloud provider marketplace is changing and expanding so dynamically.

Establish the cloud integration services capability

With the new governance model defined and the cloud partners identified, the IT function is ready to take the mission-critical step of designing and implementing a robust capability for managing and integrating cloud services on behalf of the business. The nature and scope of this role is shown in Figure 2.

In this model the IT function places more resources toward governance, service management and service integration, undertaking an array of activities ranging from strategic development to security to data management. Crucially, IT acts as the key service interface between the business units—where there are embedded IT specialists—and the various suppliers.

There is also a need for the various suppliers to be integrated, and IT again fulfils this role, ensuring changes made with one supplier are also made with the others. A further requirement is integration across legacy systems and with any private cloud services, so that all IT is managed in a coordinated way.

All these activities are vital, because currently not all cloud providers are addressing issues such as SLAs, data privacy and security. Also, only the organization itself—and specifically IT—is in a position to gain a clear view of how each cloud service impacts and connects with the other services across the enterprise.

Ensuring seamless data integration between both cloud and non-cloud services is an especially critical element of IT's new role. For example, the business may be processing sales orders on its central ERP system, while using a cloud-based CRM system connected to mobile devices for the sales team out in the field. Clearly, the business will need the data on the CRM system to be updated in real time—or at least near-real time—when orders are processed, so the sales people have this information when seeing customers.

If IT successfully seizes and fulfils the central role as a flexible and responsive service integrator, it will become a more visible creator of strategic value, using its insights to helping business units drive higher returns from IT investment. This will enable IT to reclaim its position as a "hero" in the business. However, if IT fails to get this role right, then it will find that the business units will bypass it and go direct to cloud providers, significantly reducing the overall benefits of cloud to the organisation.

Even worse, IT will effectively be introducing more risk to the IT environment by failing to establish seamless data integration points.

IT's integrator role is also critical for security purposes. Perceived risks over data security and privacy are often among the main concerns when companies consider moving to the cloud. However, as the accompanying information panel describes, the move to cloud—if properly managed—can actually strengthen security.

Select and implement chosen SaaS solutions

In implementing its cloud roadmap, IT must choose the cloud/SaaS solutions that will best meet the business's needs, and implement these in the new architecture. The choice of solutions may well evolve over time, as the organization's business requirements and maturity in the cloud space advance and develop. As this takes place, a key concern that companies look to address is the risk of becoming "locked in" to specific suppliers—an issue that also exists with previous software and outsourcing solutions.

Depending on the nature of the service, the move to cloud has differing implications for "lock-in risk." With infrastructure as a service (IaaS), cloud makes it easier to migrate relatively smoothly to another provider. But with SaaS, a company wanting to switch providers will still face the issue that its data is stored on the supplier's servers, making it difficult (though by no means impossible) to disentangle. However, in either case the move to cloud means that the company is unlikely to be tied down to long-term contracts. So, while lock-in risk is still an issue to be aware of with cloud, it is generally less of a problem than with previous IT sourcing models.

Replace/replatform existing applications, and build new applications

A critical activity in a successful migration to cloud services is to review the existing applications and decide which ones it makes sense to replace and when, based on factors including

the timing when licenses will expire, and the availability—or scarcity—of skills to maintain specific applications.

This review will enable IT to develop and implement a firm plan to replatform and/or replace existing business applications over time, and then to build the new applications using cloud-based platforms. This stage is likely to include a number of short- and medium-term priorities—with the short-term ones likely to include actions such as moving mail, collaboration and CRM systems to cloud/SaaS, and the medium-term ones including migrating ERP systems, file-based batch processing and legacy development environments. As the business's needs evolve, there may well be a continual cycle of cloud-enabled replacement and renewal to meet those needs ever more effectively.

Design and implement a hybrid cloud-based infrastructure

The final activity in moving to the cloud is to develop and implement a cloud-based infrastructure, both internally and externally. To help our clients do this, we have formulated a proven, tried-and-tested framework and approach for designing and implementing a hybrid cloud-based infrastructure. This framework helps any business to navigate a phased migration to cloud-based services at its own chosen pace, and to focus on migrating those areas of the organization that it feels comfortable entrusting to cloud providers.

A vital aspect of our approach is that it enables the client to leverage and build on its existing investment in its legacy IT infrastructure, rather than just replacing it and throwing it away. And by supporting a "hybrid" approach, the framework allows the client to flexibly mix and match elements of its legacy core enterprise systems, internally maintained private cloud, and externally provisioned public clouds.

All the diverse elements of the framework are integrated and coordinated under a common service model, which insulates the business from the complexity, and enables it

to maintain consistency and control throughout the infrastructure transition and operation. This model means public cloud capabilities can be sourced seamlessly from a variety of vendors, or internally in the case of private cloud.

Using this framework as a basis, we work with the client to lay out a roadmap specifying which applications will move over time, thus advancing along the continuum towards greater flexibility and agility. The roadmap will capitalize on specific opportunities to make the transition, such as when application contracts are up for renewal or an upgrade is due.

Reducing IT infrastructure costs for Telstra with a high-performance virtualization platform

Telstra is an Australian company that owns and operates national fixed line, mobile, broadband and cable networks as well as several online businesses. Telstra wanted to accelerate the lead time for IT deployments and reduce operational costs. So Accenture worked with Telstra to define and then implement a new virtualization environment, including the migration of applications.

Accenture completed the implementation for Telstra in three phases. First, an assessment of the server estate was completed to establish a clear cost baseline and identify virtualization candidates. Second, a Server Virtualization Shared Service was designed, built and deployed in four strategic data center locations. Third, the Accenture team is conducting the physical- to virtual-server migration and the operation of the shared service. To date, the platform is hosting more than 2,500 virtual servers 24/7.

The new capability has helped Telstra make significant cost savings, including a 70 percent reduction in server-related capital investment and a reduction in operational cost for the virtual platform of 30–40 percent compared to the equivalent physical servers. Server provisioning time has been reduced from months to days or even hours.

Robust integration can make security in the cloud stronger than it was in-house

By creating a properly-planned and implemented cloud integration service, the IT function can actually ensure that security policies are not only clearly written down, but also actively embedded in the way services are provisioned. This means that anyone in the business who wants to source IT will have no choice but to comply with the policies and procedures—including robust identity and access management. As a result, it will be harder to break the rules than before, thereby improving overall security.

In our view, a business can move ahead confidently with cloud computing by following five principles around IT and data security:

- Know your appetite for privacy and security risk.
- Expect to share responsibility.
- Demand transparency and accountability from cloud providers.
- Use the cloud to solve identity and access management issues.
- Architect solutions that address the risk.

Into the cloud-enabled future

Successfully completing the six actions we have set out above will help create a fully cloud-enabled business, with a clear competitive edge over legacy IT-based rivals in the critical areas of cost, agility and speed to market.

Furthermore, the move to cloud will open up the many vistas of opportunity that we have described in this paper—including faster domestic and international growth at lower cost, quick and seamless support for multiple devices, better collaboration across and throughout the supply chain, and the ability to scale IT costs and capacity up and down with business need.

You'll also get quicker and more effective delivery of new IT services, end-to-end real-time processes and data analytics, and a new IT function equipped to help drive high performance in the cloud-enabled future.

To find out more about how Accenture can help you along your journey to the cloud, please contact:

Andrew Greenway

Accenture Cloud Services – Global Program Lead

Tel: +44 207 844 2614

Email: andrew.greenway@accenture.com

Copyright © 2011 Accenture
All rights reserved.

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

About Accenture

Accenture is a global management consulting, technology services and outsourcing company, with more than 223,000 people serving clients in more than 120 countries. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world's most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. The company generated net revenues of US\$21.6 billion for the fiscal year ended Aug. 31, 2010. Its home page is www.accenture.com.