Beyond Cost Savings: Driving Business Value from the Cloud Through XaaS

By using the cloud for analytics services and other run-the-business capabilities, organizations can move quickly into new markets and free capital for innovation initiatives.
Executive Summary

The savings and agility provided by cloud computing have solidified IT as vital to meeting the strategic ambitions of every enterprise. Whether or not a business has adopted cloud, its senior management is undoubtedly considering its potential to contribute not only to cost reduction but also to growth objectives.

As with other technology shifts, commoditization – a reduction in the price and perceived difference among competitive offerings – is playing a major role in determining the speed and scope of cloud adoption. In the case of cloud, adoption has been driven primarily by the commoditization of Internet bandwidth and services, making IT resources available to anyone with access to the worldwide Web.

When it comes to IT, most businesses have traditionally operated on an industrial (asset-heavy) model and leveraged internal economies of scale. Many modern businesses, however, are now predominantly service-based, creating relationships with customers and delivering value-added services tailored to their needs. Cloud computing has hastened IT down this path. With so many IT resources available as cloud-powered services, organizations today look to leverage the right mix of “anything as a service” offerings to help them differentiate their products and services.

Amid these changes, the way companies use IT to drive business growth is shifting. Traditionally, IT was primarily applied to back-office workloads and enabling greater productivity within the organization. Today, a growing number of companies are also using IT (much of it from the cloud) at the “front end” of their business, in the applications or services through which they interact with customers and drive new business.

This white paper suggests ways to use the cloud to enhance operational agility, as well as deliver cost savings. It specifically describes how organizations can embrace cloud-powered environments to drive insights from big data analytics, enter new markets more quickly and shift IT budgets from maintenance activities to innovation pursuits.
Embracing Anything as a Service

From an IT perspective, cloud computing is often described as falling into one of several fundamental models: Infrastructure as a service (IaaS), platform as a service (PaaS) and software as a service (SaaS). However, the flexibility of the cloud has led to an ever-increasing range of solutions under the general term of “anything as a service” or “XaaS.” These are delivered increasingly through hybrid (public and private) clouds and one or more of the IaaS, PaaS and SaaS models. They include industry-specific business process as a service (BPaaS), such as insurance underwriting or order management; and more generic business services, such as analytics and collaboration; and IT-specific services, such as storage, desktop or archiving as a service.

XaaS solutions provide not only lower costs but also a flexible and low-risk infrastructure for anything from new product development to data insights and innovative Web-based businesses.

As enterprises continue to pursue “asset-light” models, cloud-based delivery of such services frees them to innovate and drive new business without being limited by the cost, availability or time required to develop traditional in-house systems.

Today’s XaaS offerings allow organizations to choose exactly which IT or business functions to perform internally and which they can better source from the cloud. XaaS solutions provide not only lower costs but also a flexible and low-risk infrastructure for anything from new product development to data insights and innovative Web-based businesses. The pay-as-you-go model also frees money for innovation and growth, instantly scales up or down as business needs change and provides access from anywhere in the world, through any Internet-capable device.

Enterprises can build their own XaaS “catalog” of services, purchase them from outside providers or (as is often the case) use a combination of these approaches.

The Business Value of Cloud

When considering XaaS, many organizations look only to reduce costs. Saving money is indeed a powerful benefit, but it is not the only – or even the most important – competitive advantage the cloud offers.

As organizations gain experience, they find that agility is the real game-changer. The cloud delivers the most lasting business value when it allows an organization to do things it never could before. This includes entering a new market, creating a new product or service or inventing an entirely new industry.

In our work with customers worldwide, we find three primary areas in which the cloud is driving growth:

- **Deriving new insights from data** to improve the efficiency or effectiveness of business processes or to uncover opportunities to provide new products or services.
- **Reducing the cost, risk or time** required to enter new physical or virtual markets.
- **Using cloud-based services to shift funding** from everyday operations or internal infrastructure to initiatives that grow revenue or profits.
When choosing which cloud service is right for you — and from which provider — the following questions can help in your assessment:

- What is the specific quantifiable business result desired? (For example, percent increase in revenue, reduction in costs, increase in customer satisfaction, etc.)
- Which specific applications are required to enter a new physical or virtual marketplace? What data or services do they need from my organization's legacy platforms?
- How much control do I need over a given application? How will I manage this remote infrastructure and get real-time visibility into its performance and SLA compliance?
- How "cloud ready" is my IT staff and end users? Are our businesses processes mature enough to shift to a generic SaaS application rather than a custom in-house platform?
- Does my IT staff have the development skills it needs to build modern apps on a PaaS platform?
- How will I move my organization's legacy applications and data from on-premise to the cloud?
- What regulatory and security requirements must a cloud service provider meet, such as control over the physical location of the application and its data?
- What are my key criteria for a cloud services provider?

No single type of cloud service is right for every enterprise, and no single provider is right for every organization's needs. In fact, the huge range of cloud services and cloud providers makes it essential to create a cloud strategy based on a careful assessment of each organization's unique business requirements and technical capabilities.

**Best Practices for Cloud-Based Growth**

Transforming the business may mean redefining business models, identifying new revenue streams or expanding into new geographies to open new business opportunities. Transforming IT infrastructure often means increasing its agility to respond to dynamic business needs. Transforming processes may involve:

- Simplifying and harmonizing workflows and policies to achieve lower costs and higher quality.
- Making it easier to scale how work is done to meet rapidly evolving workforce and business needs, or for use on new mobile platforms.
- Adding new analytics platforms to improve product or service offerings.

Together, such initiatives can transform the entire enterprise, driving significant and ongoing cost reductions, revenue increases and competitive advantage.

Choosing which cloud services will deliver the most value — and from which provider — requires an in-depth assessment of each segment of the enterprise landscape. Determining the proper mix of internal, external and hybrid clouds also requires understanding which applications are best suited to the cloud, which older “systems of record” must provide information to them, and the security and regulatory requirements the cloud provider must meet.

We’ve found that a vision clarification and readiness assessment exercise can help business and technology stakeholders agree on which systems and business...
processes are the best candidates for the cloud. Once an organization identifies the cloud “levers” that can help it meet its business vision, it can develop a structured roadmap that utilizes pre-built cloud methodologies, services and solutions to help implement that vision.

This process should include a detailed IT portfolio analysis, selection of the appropriate cloud platform, data center migration, creation of the private/hybrid cloud, application migration and application/product deployment. The deployment must be followed by ongoing monitoring and management of the cloud environment to ensure the efficient, effective and secure delivery of services.

Each organization must also assess which cloud model fits its skill set. Does it have, for example, data infrastructure experts who can custom-configure an infrastructure as a service offering to meet its needs? Does it have skilled programmers who can take advantage of platform as a service? Or does it have well-defined business processes it can quickly scale with software as a service, perhaps with the help of business process sourcing services from an external provider?

The focus should be on leveraging the cloud not only to reduce costs but also to drive growth through data analytics, enable entry into new markets or redirect budget from everyday work to transformative growth initiatives.

Finally, it is essential to identify the strengths and weaknesses of each external cloud platform based on the organization’s needs. Not all providers support, for example, the same programming languages or can provide customers equal insight into where data is stored for regulatory purposes or can meet the required industry or governmental regulatory requirements.

Only after clearly understanding its own needs and the capabilities of various service providers should an organization begin tactical efforts such as migrating data and applications from its current environment to the cloud. The important focus throughout should be on leveraging the cloud not only to reduce costs but also to drive growth through data analytics, enable entry into new markets or redirect budget from everyday work to transformative growth initiatives.

Each of these three growth opportunities requires a different set of skills and capabilities from either the customer’s own staff or from an external cloud or professional services provider.

Deriving Insights from Data

With every credit card swipe, Facebook “like” and move of the assembly line, organizations generate data. If analyzed properly, this data holds clues to where it can reduce costs, improve customer service and fine-tune its products and services. This analysis may also uncover opportunities to develop new offerings, enter new markets or deliver existing products or services through new channels.

However, as the volume, velocity and variety of data increases, the cost and effort to store and analyze it can become prohibitive. Cloud-based services can often provide this infrastructure at far less cost and far more quickly than deploying infrastruc-
ture in-house. Organizations can also quickly ramp up a cloud-based data platform and pay for only as much capacity as they need at any given time. Service providers can also help with data and deployment issues such as data management.

For example:

- **A retailer experimenting with new store layouts or promotion strategies** can use the cloud for intensive, short-duration analysis of point-of-sale data without investing in an expensive, permanent data infrastructure. This requires the ability to quickly find, collate and upload the proper transaction data, provide easy-to-use report builders and choose a service provider that can provide the right mix of scale, performance and cost.

- **A financial institution facing a regulatory “stress test”** can use the cloud for complex “what-if” analyses of its ability to withstand a downturn without using valuable capital for a permanent analytics infrastructure. This requires a cloud provider that can provide the highest levels of data security and regulatory compliance, as well as conducting a detailed assessment of the risks vs. the costs of performing such stress tests in the cloud or in-house.

- **A pharmaceuticals company facing a deadline for testing a new drug** can use the cloud for faster evaluation of data from field trials, helping it meet submission deadlines while holding down costs. A cloud analytics provider in this case would need to easily accept test data from multiple providers, meet strict HIPAA data privacy standards and provide greater scale and/or better performance at lower cost than in-house computing resources.

- **An oil and gas exploration company can turn to the cloud for intensive geographic analysis** of potential exploration sites, sparing funds for drilling expenses. This would require a cloud provider that could provide scalable and flexible clustering, high-performance computing capabilities and highly scalable storage to meet the needs of complex seismic data analysis.

- **A political campaign can use cloud-based analytics to fine-tine the micro-targeting** of voters without investing in hardware and software it will not need after the election. It would look for a cloud provider that could provide very rapid, on-demand scaling of compute, storage and network resources as required. It might also look for very granular billing to meet the campaign’s extremely variable needs.

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**Quick Take**

**Excelling with XaaS**

Want to get started using the cloud to deliver anything as a service? Here are some pointers:

- **Educate stakeholders about the cloud**, setting expectations around areas such as performance and security. This helps stakeholders assess which workloads are best candidates for the cloud and prevents future conflicts.

- **Provide common design principles and guidance for choosing cloud services.** Consider a service catalog of approved cloud services with SLAs to avoid the waste and inefficiency of rogue cloud deployments.

- **Proceed only after receiving senior management support** to help drive the technology and workflow changes needed to ensure user adoption and maximum benefits from the cloud.

- **Implement cloud services only after proper change management**, with full participation of both system owners and business users.
Entering New Markets

The globalization of commerce, widespread adoption of mobile devices, the rise of social media and rapid growth in emerging countries are continuously creating new market opportunities. The new markets may be physical, such as rural villages in Asia or Latin America. They may also be virtual, such as a new market segment or a new delivery channel such as mobile devices or e-commerce.

In either case, entering these new markets requires scalable and flexible IT infrastructures that can quickly and easily grow to support the new market, and shrink if results do not meet expectations or market conditions change. These infrastructures must cost-effectively provide access from the new geographies (or delivery channels such as mobile) to the appropriate applications, data and services within the enterprise. These cloud-based infrastructures must cost-effectively integrate with existing enterprise applications, services and information sources, and ensure required levels of security, data protection and business continuity.

Access to and from new delivery channels such as mobile requires knowledge of the development, deployment and testing tools for such environments. This includes expertise in mobile development environments, as well as the creation and management of mobile test environments.

Integration with internal applications requires public APIs and adherence to data-sharing frameworks such as those proposed for the so-called “Semantic Web.” It also requires workflows, processes and tools to identify, collect, share and analyze data from multiple sources. Another valuable skill is expertise in specialized tools to “wrapper” legacy systems to ensure their integration with newer environments.

Providing adequate levels of security and compliance requires, first, a thorough understanding of the security and compliance needs of each workload and data
store being considered for the cloud. Those requirements must then be systematically compared with the technologies and processes in place at each prospective provider.

Examples of how the cloud enables access to new markets include:

- A leading U.S. book publisher needed a robust content delivery Web site to enter the digital publishing market serving thousands of schools and colleges. It developed a cloud-based publishing solution to reduce provisioning time for the infrastructure required for the Web site, and to speed entry into this new market.

- An accounting software vendor needed to move from a traditional licensing model to SaaS delivery so customers could license only as much software as needed, when needed. Through a SaaS model, it not only saved over a million dollars in direct costs but it also reduced the service implementation period from three months to two weeks.

By turning to the cloud for on-demand purchases of infrastructure and services, organizations can use more of their tight IT budgets on new initiatives that grow the business.

- Seeking to drive mindshare and collaboration, a reputed university sought to offer its first online courses and provide a digital platform connecting over 100,000 students and faculty. It was able to go live within a few weeks through a dynamic, on-demand cloud delivery platform. It also reduced the cost and effort required with zero-touch management and increased business visibility into results, service profiles, policies and flexible operations.

**Shifting From Maintenance to Growth**

For decades, IT has been trapped by the need to spend as much as 80% of its budget maintaining existing systems. While this “keep-the-lights-on” work is critical, it does little to transform or grow the business.

To drive expansion and delivery of new services, IT needs to spend less on supporting existing applications or systems, and more on buying enough compute, storage and networking capacity to meet peak needs. By turning to the cloud for “on-demand” purchases of infrastructure and services, organizations can use more of their tight IT budgets on new initiatives that grow the business.

Shifting from maintenance to growth requires understanding which functions are essential but not differentiators, and can thus potentially be handled by an outside provider. It also requires strategic thinking to properly redirect the savings to new initiatives. This is where engagement by senior management, and a vision clarification and readiness assessment, is critical to identify areas where an organization truly differentiates itself in the marketplace and can best be served by an external service provider.

For example:

- A provider of home climate control products wanted to offer customers remote control of their home heating and cooling through a consumer portal. This portal required high availability and fault tolerance, as well as the ability to...
dynamically grow and shrink capacity to meet seasonal demand. Hosting the portal on a cloud-based PaaS platform significantly reduced infrastructure and licensing costs, and eliminated the need to buy hardware to serve peak seasonal loads. It provided faster time to market and updating than on-premise deployment and increased productivity with faster promotion of new code. The cloud-based native content delivery network ensures high service levels even for bandwidth-intensive content. Auto insurers can use the cloud to collect, aggregate, normalize and analyze data from vehicle-based sensors to offer lower rates to good drivers. Use of the cloud allows insurers to enter this new market without the cost and risk of building new infrastructure, or the ongoing cost of managing it. It also enables the rapid, automatic and cost-effective scaling of the infrastructure for associated services, including first notification of loss under sudden demand loads, such as following a flood or other disaster.

- **As communication services providers offer more complex services, kludgy order management can harm customer satisfaction and service delivery.** Among their challenges are legacy in-house systems that are expensive to maintain and difficult to integrate and adapt to new service offerings. These shortcomings mean longer time to market, more expensive manual processes and slower customer service. Cloud-based order management as a service slashes management costs, freeing investment in new offerings. Standardized processes also speed the delivery of new services and boost customer satisfaction.

**Next Steps: Getting Started**

In the midst of the global economic downturn, first-generation cloud implementations focused on cost-cutting. As economic conditions improve and cloud technologies become more sophisticated, organizations are looking to the cloud to also drive agility and growth. Three key opportunity areas are data analytics, faster or easier entry into new markets, and shifting staff and budget from keeping-the-lights-on activities to innovation.

Not all cloud providers are the same, nor are all applications or services an equally good fit for the cloud. Before tapping the cloud for growth, carefully consider your unique business needs, as well as which cloud delivery model is best for your internal skill sets.

As you look to the cloud for growth, an impartial service provider can help you choose which applications and services to move to which cloud delivery models, which combination of internal and external providers to use and how to manage the combined infrastructure. The more complete your up-front assessment, the greater the growth you will achieve with the cloud.
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**About Cognizant Cloud Services and Solutions**

As a global leader in business and technology services, we help drive business benefits with end-to-end cloud services, including development, advising, migration and implementation. Leverage our cloud strategy and roadmap services to identify which portions of your business and infrastructure are best suited to the cloud, and define an adoption roadmap with precise checks and balances to help ensure success.

In addition to these services, our proven Cognizant BusinessCloud™ Solutions include the Cognizant assetSERV digital asset management platform; SmartTrials, which speeds drug development; and OMaaS, an order management service to cut costs and improve process efficiency for communications service providers. Whatever form of XaaS you choose, you’re backed by our hosted cloud infrastructure and proven Cloud360 comprehensive management platform.

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Cognizant (NASDAQ: CTSH) is a leading provider of information technology, consulting, and business process outsourcing services, dedicated to helping the world’s leading companies build stronger businesses. Headquartered in Teaneck, New Jersey (U.S.), Cognizant combines a passion for client satisfaction, technology innovation, deep industry and business process expertise, and a global, collaborative workforce that embodies the future of work. With over 50 delivery centers worldwide and approximately 162,700 employees as of March 31, 2013, Cognizant is a member of the NASDAQ-100, the S&P 500, the Forbes Global 2000, and the Fortune 500 and is ranked among the top performing and fastest growing companies in the world. Visit us online at www.cognizant.com or follow us on Twitter: Cognizant.