

Realizing the potential of the intelligent business cloud

High performance. Delivered.



Although more and more companies have been leveraging cloud technologies in their bids to become agile, digital businesses, most are not getting all they need—or could get—from cloud. The trailblazers are making the operating model and process changes required to unleash the potential of cloud. And the next iteration of hybrid cloud—the “**intelligent business cloud**”—will soon give enterprises everything required to span multiple clouds and multiple vendors and to set a confident course for a truly digital future.

Is your organization getting everything it needs from cloud computing?

If you're like most IT and business leaders these days, you'll probably hedge your answer. But talk to Nathan Blecharczyk, co-founder of Airbnb, and he'll be unequivocal about the seven-year-old company's reliance on cloud. Airbnb has the agile, highly responsive infrastructure it needs to connect ever-larger communities of property owners and travelers with each other in renting vacation spaces around the world.¹

Such enthusiasm isn't limited to Internet start-ups. Talk to senior leaders at John Deere and they'll say why their company is no longer just a manufacturer of equipment for working the land but a pioneer of precision agriculture solutions to promote big gains in agricultural productivity worldwide. Pivotal to Deere's exciting vision and expanding capabilities: the cloud.

These are glimpses of a thrilling new plane of competition. Pioneering organizations—whether scrappy start-ups or century-old corporate giants—are well on their way to defining the intelligent digital business. They are beginning to color inside the lines

of what Accenture calls the “intelligent business cloud”—the next iteration of hybrid cloud that connects all of the capabilities required to outperform in a digital world, from highly adaptable applications to context-rich data and flexible IT infrastructure.

Companies as established as Daimler and as feisty as Facebook are smartly connecting business processes, information and devices to increase the value of each customer experience and every business interaction. The leaders of digital businesses deeply understand the interrelationships and connectivity across all of the elements required to deliver an effective end-to-end outcome. They see that technology as a service—indeed, *everything* as a service—is key to moving and maneuvering more and more rapidly, and at unprecedented scale.

Their vision: to be able to respond faster, innovate faster, and reset the competitive bar not only in their own industries but in others.

That's the vision; that's where cloud is pointing to. But what about all those business and IT leaders who hedge their answers about cloud's efficacy? The reality is that many enterprises are still not getting everything they need from cloud.

The cloud-enabled digital business

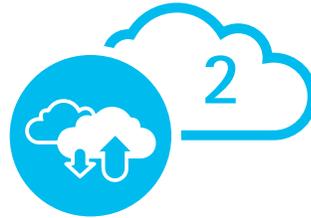
Accenture contends that the companies that will become true digital businesses will exhibit some combination of three factors that are enabled by cloud: **speed and agility**; **integration**; and **consumption of everything as a service**. These factors will determine how and where they invest in the future:



Speed and agility

Leading companies don't differentiate between "speed" and "agility"—they are two sides of the same coin. To those organizations, cloud is not simply a cost play; it is, first and foremost, an agility play. "If you measure the IT cost component as a standalone, you actually miss some of the greatest opportunities and you probably don't take on some of the risks that you should to really get more value out," said the CIO of a global pharmaceuticals company. Far-sighted CIOs are shifting quickly to DevOps methods to speed their development of software and to align development activities more closely with ongoing IT operations. The emphasis is on continuous releases of software—a big change in mindset from the convention of carefully timed releases with updates and patches to follow. They share with their business colleagues the doctrine of "succeed quickly or fail fast"—putting a premium on rapid experimentation enabled by the cloud.

Those IT leaders view automation as a key to speed and agility. So they and their teams are constantly searching for patterns in business activities—patterns that signal which processes are routinized enough to be replicable. The more that software can be applied not only to automating the processes but to searching for and detecting the patterns, the cheaper, faster and more reliable the processes become.



Integration

Pioneering CIOs today recognize that cloud technology allows their organizations to integrate in unprecedented ways—and on spectacular scale. Put simply: cloud allows businesses to connect things better, faster and more broadly than ever. It helps businesses identify what to connect (including other businesses), how to connect—and, importantly, to make many-to-many connections with ease. Digital companies can use cloud concepts to develop powerful integration strategies that can free them to envision entirely new business models.

Integration on this level ushers in what Accenture terms the "outcome economy"—an era in which digital businesses increasingly sell quantifiable results rather than just products and services. (See sidebar: "New reasons for farmers to love cloud.") Marketers have long talked about selling solutions rather than products, of course: decades ago, Harvard University marketing professor Ted Levitt was famously said to have told his students that people didn't want quarter-inch drill bits; they wanted quarter-inch holes. However, the outcome economy has been hard to realize because there have been few effective ways of deeply and continually discerning what customers want. Now, however, companies have the digital tools to do that and to learn how customers define success.



Consuming everything as a service

Forward-thinking IT leaders are already planning for the day when nearly everything is provided and consumed as a service. Accenture's latest High Performance IT research shows that top-performing IT departments approach their new system architectures with a "cloud first" mentality—meaning they are migrating workloads to the cloud and they already have plenty of experience buying technology as a service.

A cornerstone of this perspective is the push for "capital light" financial structures, accelerating and augmenting the shift away from large, administration-heavy capital outlays and toward small, flexible, but solidly controllable operating spend. This in turn has a significant impact on speed and agility—why take the time to provision and consume capital when it can be done in minutes with the cloud? IT leaders who promote this view also know that in a platform-based

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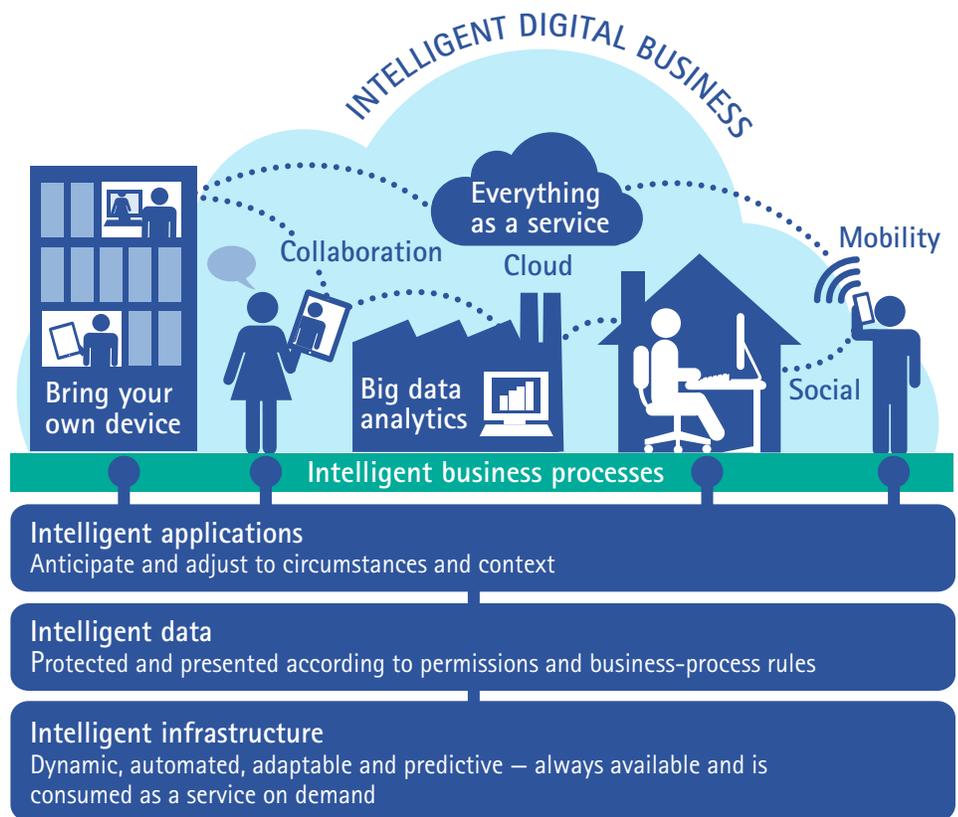
business model enabled by cloud, they can extend their investment dollars by leveraging the services and IT "products" of others. They also know it will change their approach to application development. Their doctrine becomes: consume first, create second.

Those IT executives are also leveraging software and extending virtualization and automation to storage and networks so they can bring their private cloud installations up to the levels of automation that they know, from experience, are typical of public cloud. By reworking their own data centers and networks into highly efficient and agile private clouds—building intelligent infrastructure that is increasingly powered by software—they are starting to realize many of the benefits of public cloud in those data centers. The resulting combination of their own software-defined infrastructure and public cloud capabilities creates a hybrid cloud that is extremely powerful, agile, scalable, and cost-effective; it can be consumed by the business "as a service," irrespective of where the resources live.

At the same time, cloud-savvy IT leaders have their eyes on where the software sector is going. They know full well that more and more of the outputs of the big vendors such as SAP, Microsoft and Oracle will be delivered as a service. That is evident in the investments now being made by vendors. So it is incumbent on IT leaders to avoid getting locked into legacy implementations that will garner less and less attention from vendors as time goes by.

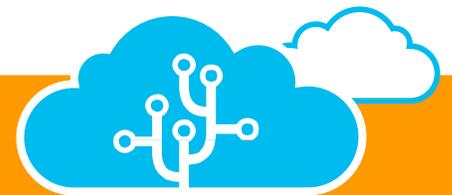
Your business is a digital business

In the digital world, success comes from speed, agility and integration. It means not just doing things differently, but finding entirely new ways to increase the value of every customer experience and business interaction.



New reasons for farmers to love cloud

Monsanto can now gather and manage end-to-end knowledge that helps it provide much more certain outcomes for farmers. Not long ago, the agrochemicals giant acquired Climate Corp., a maker of farm intelligence software that integrates with precision agriculture sensors and systems to deliver deep insights about current and future weather, soil, and crop conditions. Monsanto can help farmers reduce risk and improve yields, and can offer growers actionable insight on increasing profits. It can take geospatial and soil composition data from sensors on tractors, combine it with complex but accurate weather predictions, and incorporate systemic forecasts of commodity markets to paint vivid scenarios for growers, not only depicting the most profitable crops for them to plant, but what types of seed to buy, when to plant, how to tend the crops, when to harvest, what yields to expect, and even what revenue to expect at the end of the growing season.²



An early thumbs-up for hybrid cloud

So if cloud is so much a part of being digital, what's typical of cloud adoption today? Within the last year or two, companies have begun to think in terms of hybrid cloud approaches.³

A new survey by Avanade—the Accenture-Microsoft joint venture that focuses on the innovation and implementation of Microsoft solutions—confirms that companies view hybrid cloud as a competitive advantage.⁴

Nearly three-quarters of those polled concur that adopting a hybrid cloud solution will give their organizations an edge. More than 75 percent agree that in the next three years, more of their critical applications will be hosted on a hybrid cloud than on public cloud services. The study also finds that C-level respondents are more bullish than IT decision-makers about their companies' use of hybrid cloud.

However, the fact is that for most companies in most industries, cloud has created nearly as many complications as it has provided solutions. Today, organizations have to

contend with a blizzard of separate cloud accounts: Workday serving the HR group, Salesforce opening new doors for the sales teams, Azure as the service for developing and running new applications, and so on.

There are private clouds, public clouds and hybrid clouds—all alongside the legacy mainframes, distributed computing, and virtual computing environments. (At one recent event hosted by Accenture, a senior executive pointed to about 2,000 instances of personal cloud in use in his company.)

Yet few IT leadership teams can say for sure what their organizations spend on cloud, or why—largely because more and more of that spend is outside their control, authorized by business teams. “Shadow IT these days is only a credit card swipe away,” is how one CIO puts it.⁵

Nor are there truly automated processes to move application workloads easily among those instances of cloud. Moreover, IT leaders and their business colleagues struggle to cope with the myriad security and privacy issues that continue to complicate cloud.

The situation that confronts IT leaders today is not dissimilar to what they faced in the “best of breed” era: a profusion of tools that, while excelling at the tasks for which they were designed, do not readily work together.

The promise of cloud innovation

The history of cloud has been one of discrete offerings that solve parts of the problem.

For IT leaders, this is like running a parcel service where the warehouse-to-door truck delivery and air-freight operations are exemplary, but the hand-off from truck to airport distribution center is haphazard and done manually.



What's needed is cohesion, where hand-off from truck to airport is as superb as the truck and air freight operations. The entire operation is seamless and automated.



Rethinking the fundamentals of hybrid cloud

Clearly, new perspectives are needed to identify how exactly business value is generated from cloud technologies.

To begin with, it's important not to view "hybrid" solely in terms of bolting together something convenient for an immediate functional need, and to envision it as more than just a kind of wrapper for various instances of public and private cloud. Putting it another way: hybrid cloud involves more than just consuming multiple clouds. (See sidebar: "The intelligent business cloud: Not just hybrid cloud with a silver lining.")

Two years ago, Accenture's Technology Vision report pointed out the need for a holistic but cohesive approach to hybrid clouds—an ongoing approach that spans multiple clouds *and* multiple vendors. Companies that believe they are already part of the hybrid cloud world still must acknowledge their reliance on multiple vendors to meet their growing as-a-service needs.

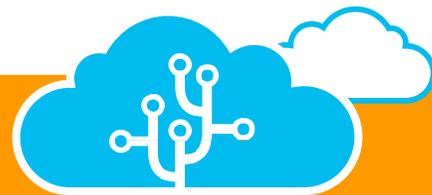
The fact is, the hybrid cloud is still short of "enterprise grade." The history of cloud has been one of discrete offerings that solve parts of the problem and thus push CIOs back into unwelcome best-of-breed face-offs. Ideally, CIOs want solutions that offer the flexibility to integrate with their existing architecture while migrating applications and infrastructure services to the cloud. They want to keep their applications as portable as possible, avoiding lock-in with specific cloud vendors. Although many providers can move enterprise workloads around in a piecemeal fashion, the work is usually labor- and time-intensive because it is neither seamless nor automated. Not only does it call for plenty of human intervention, but the processes are brittle and prone to human error.

One CIO sums it up: "Cloud still needs to evolve."⁶

The intelligent business cloud: Not just hybrid cloud with a silver lining

Crucially, the intelligent business cloud is not a repackaging of hybrid cloud as defined by the U.S. National Institute of Standards and Technology—"cloud infrastructure composed of two or more distinct cloud infrastructures (public or private) that remain unique entities but are bound together by technology enabling data and application portability."

The new vision is of a managed cloud environment that provides a single dashboard view of all the cloud workloads and services, that allows easy, automated portability of workloads, that is properly controlled, multi-platform, analytics-based, and policy-driven, that provides end-to-end data security, and that enables many-to-many connections—in short, everything needed to realize the long-held promise of cloud.



Toward a new vision of cloud

So how quickly is hybrid cloud evolving? How realistic is it for CIOs to expect cloud to become the flexible value-creation platform they've envisioned for years?

The short answer: very realistic. Accenture's perspective is that a new vision of cloud is materializing quickly. Indeed, it is more version than vision: this evolution of hybrid cloud is coalescing as a broad set of technology capabilities that are beginning to provide all the agility and economics that cloud has always promised, with the peace of mind and enterprise-grade reliability that traditional enterprise IT environments provide today. The evidence exists in the advanced pilot implementations of cloud that are surfacing in some unlikely places.

In order to produce superior business outcomes and innovation, more and more companies are pushing speed, interoperability and new models of consumption. There's further evidence of the new approach at DuPont, now assertively prototyping solutions that can deliver IT as a consumable service. The new solutions will allow DuPont to migrate, operate and govern applications across public and private cloud environments so they can be accessed anytime, anywhere with the right credentials—in secure and predictable ways.

It's already clear that this evolving version of cloud—what Accenture calls the "intelligent business cloud"—is focused on business outcomes. It connects all the capabilities that an organization needs to become an intelligent digital business. In effect, it's the connective tissue that ties together the intelligent infrastructure, intelligent applications, intelligent data, and intelligent business processes. That way, applications can anticipate and adjust to circumstances and context; data can be protected and presented based on permissions and business process rules; and infrastructure is consumed as a service, on demand.

The fundamental feature of the intelligent business cloud is that it uses an analytics-based, policy-driven approach to provide unprecedented levels of agility. This puts

the right workloads in the right places and enables enterprises to optimize their IT estates for performance, price and business continuity. This feature eases the formidable cost burdens of moving workloads—much of which is manual today—and frees enterprises from the vendor lock-in inherent in many of their instances of cloud.

At the same time, the intelligent business cloud can span multiple clouds and multiple platforms so that companies can run any application in any cloud—a welcome about-turn from the "best of breed" approach typical today.

The emerging intelligent business cloud helps ensure seamless, automated portability between private and public clouds on demand and at speed, with the entire cloud-based IT estate managed from a single control dashboard. It simplifies migration from legacy environments, making use of migration tooling that identifies, sequences and migrates legacy workloads into public and private cloud environments, and also applies a policy-driven approach to put the right workloads in the right places.

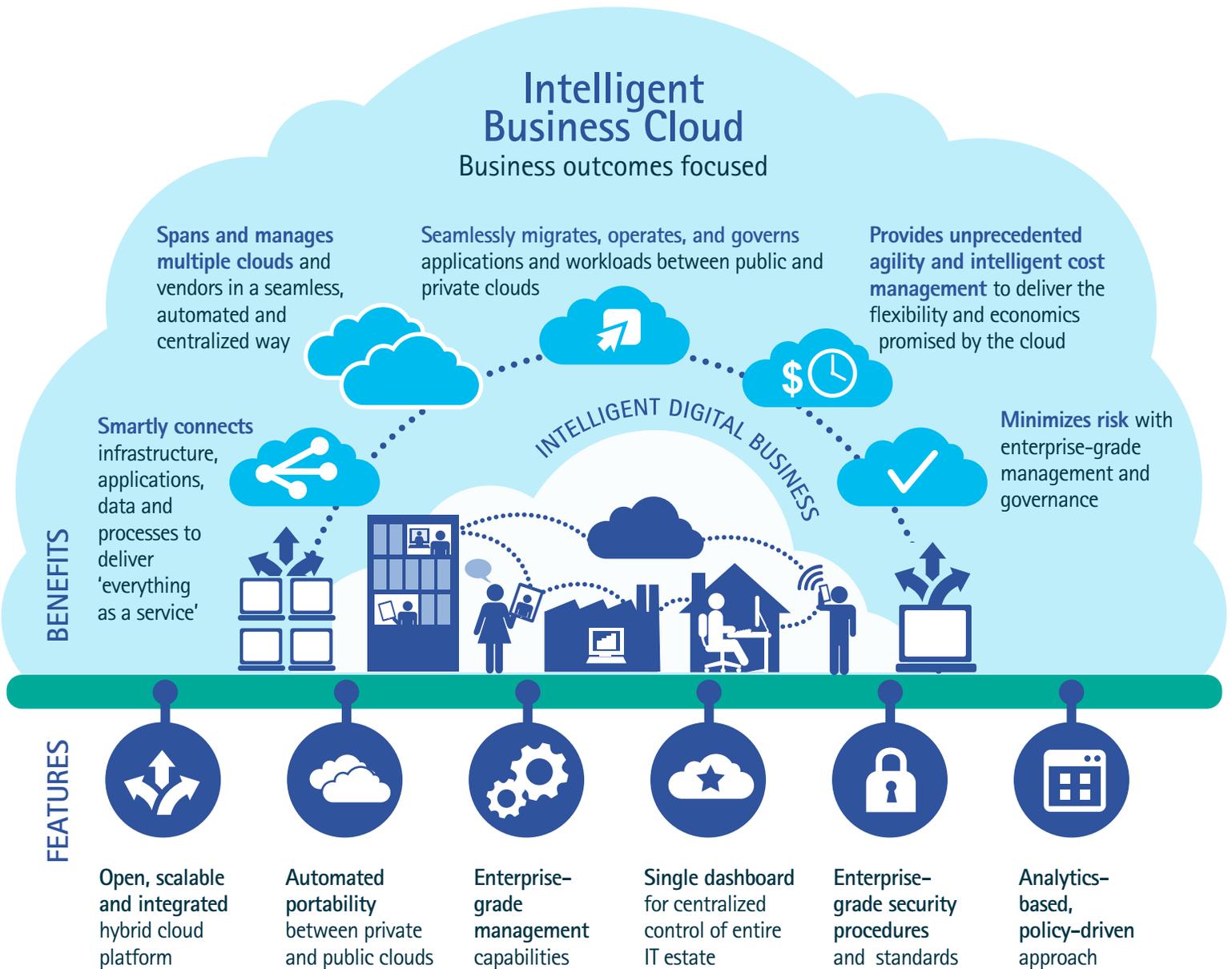
Another crucial element of the intelligent business cloud is that it provides "enterprise-grade" hybrid cloud management capabilities, such as ensuring that the proper security procedures and standards are applied consistently across all cloud resources, and making sure that the cloud solutions are fully auditable. Auto-discovery capabilities make it much easier to track down and inventory all cloud workloads across the company. And a central dashboard control provides a common view of all private and public cloud workloads. This means that IT leaders can monitor and manage cloud brokerage and performance from a single point, giving them the reliability, security and operations oversight they have to come to expect of their IT infrastructure.

These "control" features are far from trivial. The Avanade survey reveals that security and privacy concerns—real or perceived—remain the biggest barriers to adoption and implementation of cloud solutions today; indeed, they are of far more concern than cost. Nearly 60 percent of respondents believe that moving all services and applications to a public cloud poses greater threats to their companies' security than removing all passwords from work computers.

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Intelligent business cloud: The connective tissue

Accenture's vision of the intelligent business cloud is an open, scalable and integrated platform that is the connective tissue that smartly connects all the capabilities required to outperform in the digital world.



Your job now

The intelligent business cloud, then, is the next development in cloud computing that CIOs and business executives can look forward to. But what can they do now to get ready for these new capabilities?

There is an arm's-length list of to-dos, for sure, but four points jump out right away:



Get cloud religion.

This means not thinking of cloud computing as a “new trend” or another technology to be layered on top of everything legacy, but seeing it as the basis for the company’s intelligent digital business foundation from this day forward. Those who have cloud religion—who think in terms of everything as a service—already operate at far higher rates of change and are better placed to make good business decisions about the cloud services in which their organizations should invest.



Re-architect applications with a “cloud first” mindset.

A new mindset for applications is emerging where organizations consume services where possible rather than build, accelerating development and minimizing what needs to be maintained. This “cloud first” mindset calls for new applications to be designed for the cloud, leveraging the elastic and resilient nature of the cloud to provide auto-scaling and fault tolerance while also delivering cloud’s “pay-as-you-go” economics. This new approach applies even if the initial deployment is on premise, since evolving hybrid cloud solutions will provide policy-based architectures that allow organizations to dynamically decide what parts of applications run in public versus private environments. It will be important to establish common component repositories that include cloud components and SaaS-based functionality.⁷



Invest with business outcomes in mind.

The first emphasis of all cloud investments must be on the value generated for and the competitive advantage delivered to customers. All spending on cloud must tie directly and measurably to business results. That spending discipline will prioritize investments on the areas that will produce the highest returns. It will also expose the hidden costs of current cloud deployments, such as inadvertent vendor lock-ins, “excess inventory” of cloud workloads across the company, or simply not turning off unnecessary workloads.



Skill up for the intelligent business cloud.

Two years ago, Accenture’s Technology Vision report made it clear that a hybrid cloud world demands hybrid skills; the most valuable talent will be the architect who understands the functions and roles of all the pieces and who knows how they all work together. The more disparate the instances of cloud, the more the organization needs to design and operate a mosaic of best-in-class capabilities.

Currently, the skills required to address these fundamentals are immature at best. Among the respondents to the Avanade survey who say they have a hybrid cloud strategy in place, less than half have a skilled cloud team (46 percent), data governance and security (45 percent), or a dedicated budget (43 percent). Just one example of the skills needed very soon, if not now: IT architects who think in terms of digitally enabled platforms that span companies, not just departments. Explains one CIO: “IT today is more of a broker of hosting services—both internal and external—than a purveyor of specific tech platforms. It’s changing the nature of the work across IT.”⁸

Conclusion

Quite quickly, cloud has become part of the corporate conversation. That dialogue is no longer confined to the IT department: in more and more organizations, it's now heard in the everyday discussions among business leaders about how to do things faster, better.

The clue to cloud's effectiveness, however, lies in how business leaders talk about it. If their dialogues revolve largely around swapping capital expenditures for operating costs, or if the emphasis is on how to protect data in the cloud, there will be some benefits, of course. But if the conversations soar to new levels—envisioning new competitive possibilities, debating how cloud can connect all of the capabilities required to outperform in a digital world—well, that's where the biggest strides will take place.

The fact is, the intelligent business cloud is coming. Far-sighted IT and business leaders can already list its characteristics and describe them in detail, in terms of their business value. They are figuring out how to put them to work where they will generate the greatest returns.

What's your plan for doing that too?

About Accenture

Accenture is a global management consulting, technology services and outsourcing company, with approximately 319,000 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\$30.0 billion for the fiscal year ended Aug. 31, 2014. Its home page is www.accenture.com.

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¹ <http://aws.amazon.com/solutions/case-studies/airbnb/>

² Climate Corporation's: <http://www.climate.com/>

³ "Hybrid cloud" is defined by the U.S. National Institute of Standards and Technology as cloud infrastructure which is composed of two or more distinct cloud infrastructures (public or private) that remain unique entities, but are bound together by technology enabling data and application portability.

⁴ Global Study: Hybrid Cloud – From Hype to Reality, Avanade, 2014, <http://www.avanade.com/en/innovative-approach/research-and-insights/~media/documents/hybrid-cloud-global-study>

⁵ "CIOs Face Cloud Computing Challenges, Pitfalls," CIO.com, Oct 14, 2014, <http://www.cio.com/article/2825257/cloud-computing/cio-face-cloud-computing-challenges-pitfalls.html>

⁶ Ibid.

⁷ "The future of applications: Three Strategies for the High-velocity, Software-driven Business," Accenture, December 2014, <http://www.accenture.com/us-en/Pages/insight-enterprise-application-strategy.aspx>

⁸ "CIOs Adopt Down-to-Earth Cloud Strategy," CIO.com, Oct 14, 2014, <http://www.cio.com/article/2826675/cloud-computing/cios-adopt-down-to-earth-cloud-strategy.html>