

Keeping your feet on the ground while your business heads to the cloud

By Faisal Hoque

It's nearly impossible to pick up a technology magazine or sit through a strategy meeting without encountering a reference to what some consider the next and greatest wave in enterprise computing: the cloud.

Cloud is a fitting term for something that's shrouded in mystery and hard to grasp. We're not helped by the plethora of buzzwords that seem to accompany this concept: *grid*, *utility*, *service-oriented architecture (SOA)*, *service management*, *Software as a Service*, *Platform as a Service* and so on.

It's easy to get lost in the wonders of the technology and the lofty promises of the new age it will usher in, but we must stay anchored: This ultimately is a matter of business, not technology. And, as such, its usefulness must be assessed in the context of the enterprise as a whole. New ways of thinking are required. Investment decisions and the measurement of success will not be about individual technologies or projects or even about the IT department itself, because the cloud is about the whole organization.

Cloud computing can be thought of as processing and storage done "elsewhere," meaning physically removed from the user, typically off-site. Users don't need to think about the hardware at all; that is selected and made available by the company that maintains the cloud. In some cases, users won't need to think about specific applications; they will just specify the functionality they need. In still other cases, business-side end users will employ the functionality without a technology department acting as an intermediary; the strategic and tactical guidance now performed by internal technology departments will reside in the cloud.

Efficiency and agility

While efficiency and cost savings are legitimate motives for pursuing cloud computing (and will be the initial motives for most companies), some see the cloud as an enabler of innovation and agility. If hardware and software are available instantly and always up to date, and if reliability and privacy are guaranteed, firms can focus all their energy on new business models, experimenting on the fly and learning from new approaches to finding and satisfying customers. Factoring in the computing resources needed for a new initiative will be a matter of when to push the button.

It's best to not get too wrapped up in parsing the various terms associated with the cloud. *Utility computing*, for example, refers to the pay-per-use or metered approach that Amazon.com uses. Electric power is often used as an analogy: You plug in your appliance and don't really care how the electricity is created or who is doing it. *Grid computing* refers to the linking of thousands of computers to which pieces of a gigantic problem -- today often scientific in nature -- are distributed. The grid offers processing power and storage unavailable in a typical single organization.

In practice, organizations will move to the cloud incrementally, shifting portions of their computing needs to it over time. Smaller companies will see an immediate payoff in moving completely. Larger companies must wrestle with proprietary

systems that are strategically critical and extremely complex, and with unique business processes that have been built up over time and can't be easily handed off.

Work will change

What we cannot avoid -- and it's something much more difficult than buying servers and software seats -- is the changing nature of work itself. Leading companies are moving toward converging their management of business and technology. This simply means that decision makers are conversant in each and act on each to advance a strategy. For them, technology is no longer a mysterious activity hidden away in a glass house.

Computing tools in the cloud will be represented to end users virtually and in nontechnical ways so they can use them without excessive specialty training. At the same time, users will be ever more knowledgeable about the potential of the tools and ever more adept at manipulating them.

Entering the cloud

Deciding to move to the cloud and using it wisely will require creating an architecture of the enterprise, both its current and future desired states. This is known as a *strategic enterprise architecture* (SEA). An SEA is a story of what the organization is trying to accomplish and how. It includes both its business purpose and the enabling technology -- that is, a business architecture and a technology architecture mapped to it.

At the highest level, an SEA is expressed in nontechnical language anyone in the organization can understand. An SEA lays out all business processes end to end, incorporating external partners and customers. Most organizations have various documents describing what they do, from the thick notebooks of long-range plans gathering dust on shelves to various mission statements. An SEA makes sense of those islands of information. It should clearly show where contradictions in purpose and redundancies in execution lie.

At its most granular level, the SEA becomes technical: It specifies the various information technologies in use. In leading organizations, these now are expressed as a service-oriented architecture (SOA) -- that is, software is maintained as modules that can be combined to create applications as needed, sometimes by business users. A SOA can reside within the organization or in the cloud. A SOA is not a necessity to work in the cloud, but it adds tremendous flexibility as the organization senses and responds to changes in its environment.

At some point, the enterprise will need to answer the big question: Is the company as a whole better off? Is it finding and retaining good customers? Is it delivering new, innovative products to them? Is it adjusting on the fly to changes in customer demand, marketplace realities, new technologies and competitor moves? Beyond that, what are changes in management and technology doing for the bottom line?

Taking the holistic measure of an enterprise's performance is a rather straightforward process. This measurement can be combined with interim assessments about the efficiency of individual business processes currently and in a projected best state, and with the costs of internal versus external computing. In no

case should such measures be made in isolation from their impact on customers and the firm's overall purpose and strategy.

My opinion of IT is well-documented throughout my writings, so I can certainly empathize with many of the cynics who profess the end of IT departments as we know them. However, I believe it is more likely that what we are seeing come to an impasse is the role of CIO as we've known it. Technology is far too crucial to every business to simply go away, but how it is perceived, utilized and leveraged in support of driving value is a daily moving target, signifying a critical shift in focus from a basic necessity to a growth enabler of business.

So, before ascending into the virtual world of puffy, white haze, be sure your strategy is clear enough to keep your business focused.

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