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Cloud Hits the Enterprise

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> ILLUSTRATION BY ELIZABETH BADDELEY

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Five things business leaders need to know about cloud computing and software as a service

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Millions of people use cloud computing every day to send and receive personal emails, shop online, read the news and more. But that's just the leading edge of a growing storm. Cloud services are also penetrating the walls of the enterprise, upending IT organizations and operating models alike. Business leaders in every function need to understand cloud basics—both the opportunities and the risks—and that means going geek.

CLOUD HAS TECHNICAL ADVANTAGES THAT TRANSLATE DIRECTLY INTO BUSINESS VALUE

Looking beyond the hype around cloud, there is one unifying theme to remember: cloud capabilities—software, infrastructure and platform—are delivered "as a service." Web-based email, for example, is a ubiquitous example of software as a service (SaaS). Instead of having software loaded onto your laptop or tablet, it is hosted on the Internet, largely insulating the user from the underlying technology. Infrastructure and platform services deal with the nuts and bolts of cloud computing—aspects that are primarily of interest to IT. Yet there are a number of technical and business advantages over traditional forms of computing that can have a direct impact on how businesses operate. These include:

- **Broad network access:** Services are accessible from a wide variety of devices (such as PCs, smartphones and tablets) and from any location with network access to the cloud.
- **Resource pooling:** Computing resources are pooled to serve multiple customers, which creates significant efficiencies and economies of scale. Resources are deployed based on demand, and customers generally don't know (and don't need to know) where those resources are physically located.
- **Rapid elasticity:** Computing capabilities in the cloud are essentially unlimited and can be quickly scaled up or down in response to an organization's changing needs.
- **On-demand self-service:** New services and capacity can be provisioned quickly and easily, often without vendor employee involvement.
- **Measured service:** Businesses pay only for the cloud services and resources they actually use.

These technical advantages translate into some apparent, but significant, business advantages:

- **Rapid implementation:** Less time is required to get up and running on cloud-based systems.
- **Cost predictability:** Cloud's pay-as-you-go model, which includes the cost of system upgrades, makes it easier to predict IT costs.
- **Balanced ROI:** Cloud delivers a faster return on IT investments, thanks to accelerated implementation and elimination of upfront licensing and infrastructure costs.

- **Agility:** Companies can quickly develop and deploy new IT capabilities and business processes to stay ahead of the competition and keep pace with changes in the marketplace.
- **Scalability:** Cloud provides a flexible platform that can grow or shrink as needed, enabling businesses to explore new markets, pursue new innovations and serve new customer segments.

THE DISRUPTION IS REAL

At first glance, cloud's business impact may be analogous to what happened within the music industry when its distribution shifted from analog to digital—but in many ways it is much broader in scope and scale. In music, the shift to digital opened the door to innovative products and services that were previously unimaginable, creating new markets and turning the music industry upside down. Consider the case of Apple, which began its remarkable ascent with the iPod music player and rode a string of subsequent successes—including the iTunes ecosystem, iPhone and iPad—to become the dominant force in music and mobile devices, and—as this is being written—the world's most valuable company.

SaaS is now widely recognized as a core component of the future IT landscape. SaaS market share in enterprise applications is growing rapidly, and major vendors such as SAP and Oracle are working hard to develop cloud-based versions of their market-leading enterprise applications.

But the business impact of cloud isn't limited to just a few industries or a handful of companies. Businesses of every shape and size are using cloud and SaaS to gain instant access to world-class IT capabilities without having to spend time and money acquiring, developing and maintaining their own IT systems and applications. This new model enables large companies to respond more quickly to market shifts and emerging business opportunities, improving their agility and flexibility. At the same time, it enables smaller companies to grow at

unprecedented speed and in some instances to compete on equal footing with businesses that are much larger.

First Horizon, a regional bank, recently adopted Salesforce.com's Sales Cloud to improve support for its sales and marketing functions and to help eliminate operational silos. The bank had been suffering from inconsistent marketing processes across regions, as well as variances in incentive systems, and was having trouble tracking opportunities throughout the sales cycle. By using a cloud solution, First Horizon gained a consistent customer view, closed the loop between sales and marketing, and improved visibility and management reporting. Although this was a large deployment, the organization was able to complete the implementation in months—not years—and quickly captured significant benefits, including increased revenue through improved cross-selling and up-selling, an improved customer experience, and significant cost savings compared to its previous ERP system.

SAAS IS FIRMLY ESTABLISHED IN THE ENTERPRISE SPACE—AND PROBABLY EVEN IN YOUR OWN COMPANY

Large enterprises are using SaaS to become more flexible and nimble. They are also using SaaS to make key business processes more effective and efficient, and are harnessing the power of the cloud to stay in tune with customers and to improve collaboration and teamwork across organizational boundaries. At the moment, SaaS is having the biggest impact in four key business areas:

- **Customer relationship management (CRM):** This was one of the first areas where SaaS provided a legitimate—and often superior—alternative to traditional IT systems. SaaS can help a marketing organization improve coordination of activities across the enterprise and present a unified face to the customer. Large enterprises are using SaaS CRM to gain a 360-degree view of their customers to help boost sales, improve segmentation and increase cross-selling and up-selling.
- **Enterprise content management (ECM):** With the volume of information growing exponentially, companies are using SaaS to stay on top of all the content they generate—including everything from product manuals and sales contracts to emails, word documents and social media. Traditional on-premise ECM tools require time-consuming infrastructure upgrades to accommodate the need for increased storage capacity. SaaS-based ECM tools have the advantage of being rapidly scalable. Also, SaaS ECM tools have the native ability to make information searchable and accessible from almost any device and location.

- **Productivity and collaboration:** Many companies are supplementing traditional PC-based office software suites with SaaS versions that are easier to support and maintain, and that take advantage of cloud to improve collaboration. SaaS-based documents can be shared in real time and are no longer locked up within a single team or departmental silo. Other advantages include ubiquitous search and access to documents, and fewer problems with version control.
- **Human capital management (HCM):** SaaS adoption in human resources has increased rapidly over the last few years. As companies become more global, there is greater need to coordinate HCM activities such as recruiting, training and succession planning across geographies. In the past, smaller market operations often had to wait years for their company's top-down ERP and HCM rollouts to trickle down. SaaS turns the tables by making it economically feasible for a small market to adopt HCM first, and then roll up the solutions and lessons learned to help jump-start adoption at the enterprise level.

SAAS EXPANDS ITS REACH

SaaS is now widely recognized as a core component of the future IT landscape. SaaS market share in enterprise applications is growing rapidly, and major vendors such as SAP and Oracle are working hard to develop cloud-based versions of their market-leading enterprise applications. They are also aggressively pursuing strategic acquisitions to improve their competitiveness in this fast-paced and critical segment. SAP recently acquired SuccessFactors (HCM and talent), while continuing to develop its own cloud offering, ByDesign. Likewise, Oracle recently acquired RightNow (CRM and customer service)and Taleo (talent), while continuing to invest in its own cloud-based enterprise platform, Fusion.

Investment markets are also placing big bets by providing significant late-stage funding for fast-growth companies in the enterprise application space. All of this activity suggests that SaaS is well on its way to becoming a leading delivery model for enterprise applications. Many analysts agree, with Forrester Research, Inc. predicting the SaaS market will grow to become a $132.57 billion industry by 2020, up from $13.4 billion in 2010, a growth rate of 890 percent over the course of a decade.[1] In 2020, the SaaS market is expected to represent 83 percent of the total market for public cloud services, far outpacing the growth of other cloud service models including "infrastructure as a service" (IaaS), "platform as a service" (PaaS), and "business process as a service" (BPaaS) (see figure 1).

CLOUD SERVICE MODELS

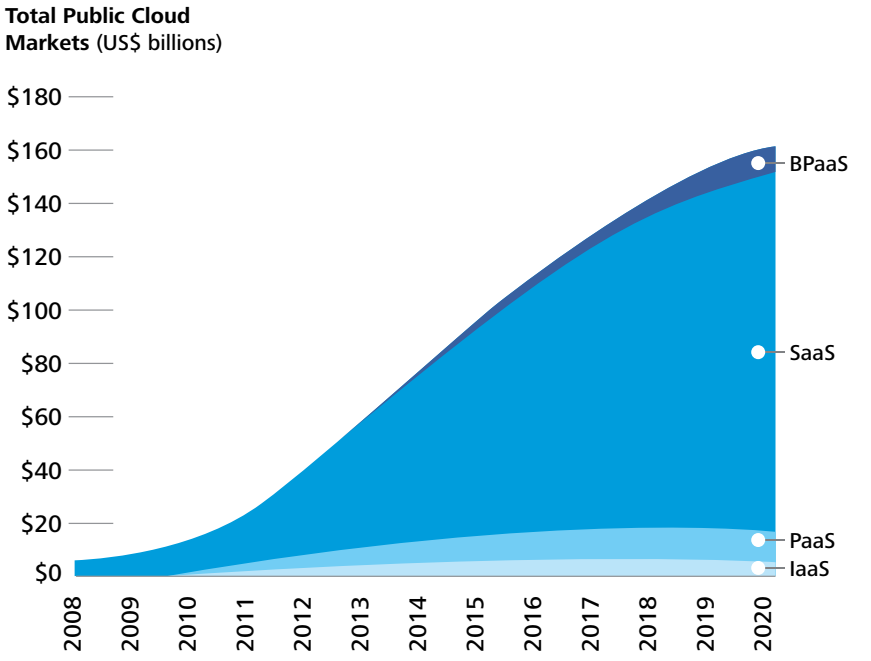
Infrastructure as a service (IaaS): IaaS is the lowest level of cloud and can be thought of as a cloud-based data center that offers businesses direct access to virtual IT assets such as servers and disk drives.

Platform as a service (PaaS): PaaS is the middle level and is a more esoteric offering which provides a virtual IT environment that allows businesses to develop and run their own customized applications without having to manage the details of a physical or cloud-based data center.

Software as a service (SaaS): SaaS is a higher-level service model that provides users access to software applications while largely insulating them from the underlying technology.

Business process as a service (BPaaS): BPaaS is the highest level and provides businesses with access to complete business processes. The key difference with traditional business process outsourcing is that the infrastructure and people required to deliver the service are shared.

Figure 1. SaaS dominates the cloud market



By 2020 SaaS will account for $133 billion of the $160 billion industry, while IaaS will make up $5 billion, PaaS $12 billion, and BPaaS $10 billion.

Source: "Sizing the Cloud." Ried, Stefan and Kisker, Holger. Forrester Research, April 21, 2011

SaaS ERP will likely grow significantly as Oracle and SAP continue to pursue aggressive development and acquisition strategies. The focus will initially be on small and mid-size companies but over time will likely expand to include ever larger enterprises. However, it may be years before SaaS solutions develop the deep end-to-end capabilities necessary to compete with traditional ERP systems in the large enterprise space.

In the interim, finance solutions are likely to be the next major enterprise capability to be offered via SaaS. Finance systems are fed by CRM and HCM, which are two areas where SaaS has already gained significant enterprise traction. Workday has invested heavily in the finance space, and there is already strong market demand for Workday financials. Gartner has stated that low current adoption of SaaS financials is driven more by "limited supply of options rather than limited demand." As vendors continue to roll out SaaS financial solutions, adoption will likely accelerate quickly, closely tied to the growth of SaaS-based CRM and HCM.

In parallel with the push into finance and ERP, there will likely continue to be significant investment in a variety of niche markets for SaaS. Some niche vendors are targeting the specialized needs of peripheral functions such as legal and real estate. Others are focused on filling gaps or extending the capabilities of leading SaaS applications, creating an ecosystem that can better address the demands of a large enterprise.

Major SaaS vendors are aggressively acquiring niche players to help round out their market offerings or to overcome real or perceived barriers to SaaS adoption. For example, Salesforce.com recently acquired Radian Six, which provides tools to monitor and proactively address issues that users raise on Twitter, Facebook and other social media channels. It also added to its HCM/Talent capabilities with the acquisition of Rypple, a performance management tool that focuses on improving performance through social goals, continuous feedback and meaningful recognition.[2]

SAAS AND CLOUD ARE BETTER, FASTER AND SOMETIMES CHEAPER

According to a recent Forrester survey of more than 1,000 firms across North America and Europe, cloud buyers anticipate the following benefits:[3]

- Lower cost both upfront and long-term (48 percent of respondents anticipated long-term cost savings from moving to SaaS).
- Faster delivery of application features as well as greater business agility.
- Better support and satisfaction.

These findings suggest that cloud solutions are cheaper than on-premise solutions, but that's not always true. In fact, companies such as Salesforce.com and Workday are leaders in their market segments and are priced accordingly. Although the upfront costs of SaaS are generally lower, a recent Gartner study found that over the long run, defined as five years or more, infrastructure and license costs of on-premise solutions are often less expensive than SaaS.[4] This is particularly true for businesses with highly efficient IT operations. Although cost remains an important decision factor when considering SaaS, it should not be viewed as the entire business case.

PREPARING FOR SAAS

Although SaaS is more flexible and can be implemented much more quickly than traditional enterprise technologies, it also presents new challenges. Because SaaS has the potential to fundamentally change how a business operates, there are several important steps a company should take to prepare for the move:

Create a cloud-ready organization. SaaS can provide the tools to transform how people work. But to more fully realize the benefits, the organization needs to align with the new cloud-based model. This requires new skills and a collaborative approach that cuts through organizational boundaries. For example, in a non-cloud environment, a sales rep looking for help to answer a customer's technical question might fire off an email to a colleague in engineering and then hope for a response within a few days. But for enterprises that use Salesforce.com and its collaboration tool Chatter, the rep's standard process for answering a technical question might involve doing a quick search of all Chatter posts to see if the question had already been answered. If it hasn't been answered, she could post the question so it would immediately be visible to everyone in the company with the skillset to address it. To take advantage of these new capabilities, people in different parts of the organization must learn to work together. Technology alone is not enough. Readying an organization for the shift from controlling and protecting information to facilitating the free flow of information, therefore, is an important part of planning.

Redefine the roles of IT and the business. With SaaS, the business side of the enterprise has more direct control and responsibility for decisions about its systems and data. It can adapt its systems and processes to changes in the marketplace without having to go through the IT department. For example, a sales

manager who wants to add a qualification step to the sales process can have his business analyst make the change rather than filing a ticket with IT. Perhaps more enticingly from an IT perspective, SaaS makes that group's role more strategic, with increased focus on strategic technology issues and less focus on routine activities such as bug fixes, software upgrades and system maintenance. For SaaS to be effective, both the business and IT must understand and embrace their new roles.

For businesses considering SaaS, it is important to assess how prepared the IT function is to relinquish control over routine system activities and to focus on using information and technology as a strategic driver. This typically will affect IT's skills and staffing models, and suggests a realignment of business and IT leader incentives around these desired results.

Strengthen IT governance. In the past, many organizations have gotten by with lax IT governance because their systems and data were largely contained within their own walls. As IT assets shift to the cloud, weaknesses in governance can become a major source of risk. With SaaS, some IT assets are controlled by a third party and no longer reside within the real or perceived safety of a company's systems. Under this new model, strong governance is needed to help ensure the company's security and privacy standards are maintained. This includes clear policies and procedures about user access and data quality, formal audit trails to support regulatory compliance, and robust controls to verify that the right things are being done—and to identify hidden issues before they become problems.

Businesses considering SaaS should conduct a full assessment of potential vulnerabilities with explicit mitigation strategies for all significant risks. Is there a governance plan that is consistently applied across the enterprise and how might it need to be strengthened?

Design a cloud-ready IT architecture. After decades of acquisitions and organic growth, many businesses are trapped in a rat's nest of redundant systems, data silos, point solutions, hard-wired interfaces and human middleware. SaaS can help solve this problem, but it may require some serious untangling to get there. The key is to rationalize IT systems and assets into logical units that are *highly cohesive* (i.e., all revolving around the same business activity instead of having related functionality scattered across unrelated systems) and *loosely coupled* (i.e., not hardwired into unrelated systems). Having an IT architecture with these two critical attributes makes it much easier to carve out a specific business capability and move it into the cloud. This is a large undertaking for

many enterprises and does not have to be performed for every functional area at once. However, for most enterprises it is an important precursor to global standardization and SaaS adoption.

Define criteria for deciding which activities to migrate. Another key step to SaaS adoption is to define explicit criteria for deciding which capabilities are the best candidates for migration to the cloud. Questions to consider include: How mature are the existing SaaS applications for that business area, and do their capabilities align with the specific needs of your business? Are your existing systems and data in that area ready to migrate, or are they still a tangled mess? Which parts of your company have the strongest business case in terms of strategic impact and ROI, and are they hungry for improvement or likely to drag their feet? Moreover, it is important that business and IT leaders agree on a common set of selection criteria for SaaS migration.

Develop a cloud strategy and roadmap. The move to SaaS generally occurs in phases, so it's essential to have a clear strategy and roadmap based on the defined selection criteria. One major factor to consider is an organization's overall stance toward cloud adoption. Some organizations are taking an aggressive position, moving to cloud wherever they can, as quickly as they can, even if their existing systems are adequate. These organizations believe the benefits of flexibility, improved user experience and reduced IT effort outweigh the adoption costs. Others are taking a more reactive position, considering cloud whenever a pressing need arises for a new system but not actively looking to replace systems that are currently sufficient. Regardless of the approach, a SaaS adoption strategy includes guiding principles that reflect the organization's overall stance toward cloud, a roadmap that specifies the order and timing of SaaS moves (as well as the required organizational, IT and governance changes), and specific plans for managing an agile transition.

Establish an integration plan. Integrating a SaaS solution with existing systems can be one of the most complex, costly and time-consuming aspects of cloud adoption. In fact, it is not uncommon for the integration effort to take significantly longer than deployment of the core SaaS solution itself—especially if the organization's existing IT architecture remains tangled. Internal politics can also be a major stumbling block, with various system owners vying to be the master source of data for the new solution. Organizations going this route will need a formal integration plan that clearly spells out how, and to what extent, the SaaS solution will be integrated with existing systems, as well as which

systems will be the master source of data. Moreover, it is essential to confirm that all system owners have bought into the plan.

YES OR NO TO SAAS?

There is a lot of momentum and some hype surrounding SaaS, but it is not the only option and not entirely straightforward. There are many factors to consider. On the plus side, SaaS can help a large enterprise achieve the speed and agility of a much smaller company, thanks to low upfront investments, rapid implementation, and easy scalability. SaaS also has a distinct cost advantage in the short run, although the long-term cost savings are less clear.

Yet perhaps the biggest constraint to SaaS adoption in the large enterprise space is the capability gap between established enterprise applications and still-maturing SaaS applications. In some areas, such as CRM, the capability gap is already negligible—and in some cases may even favor SaaS. But in other areas, SaaS-based enterprise solutions still have a ways to go.

Business leaders must carefully weigh the available SaaS offerings against their company's unique requirements and then make their own decisions. In cases where SaaS comes up short, leaders should revisit their decisions often because SaaS capabilities are maturing rapidly and can quickly change the whole equation.

In practical terms, SaaS adoption is no longer a radical or experimental proposition. For most businesses, it has emerged as a viable weapon in the strategic quiver. How and when to deploy it are increasingly crucial questions that business leaders will need to explore. DR

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Endnotes

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