

The CEO's Guide to Cloud Computing

What Every CEO Needs to Know about "The Cloud"

New digital technologies are not trends, fads, or only relevant to companies in the technology industry. Social media, cloud computing, and mobility are seismic shifts in the technology ecosystem and are as significant today as the introduction of the PC and internet were over the past two decades.



Cloud computing is 1 of 3 technology areas that cannot be ignored

Three areas of technology that will unequivocally affect every business over the coming years are: social media, cloud computing, and mobility.

If your business (regardless of industry) has not yet accounted for how these technologies can or will affect you, you may be falling behind. If embraced, these technologies have the capability to reduce costs, increase efficiency, expand scale, and, ultimately, enhance profitability. If ignored, these technologies may put your company at a tremendous competitive disadvantage and unmitigated, unnecessary risk.

Cloud computing can provide your business with secure data and application storage, increased reliability, and decreased data storage costs. An increasing number of complex organizations are switching to the cloud – like the NASA Jet Propulsion Lab and *The Washington Post* – but there are benefits for companies of all sizes. Here is a quick guide to what every CEO needs to know about cloud computing.

Cloud computing reduces costs, increases security, and makes your company more nimble.

Cloud computing is essentially the outsourcing of computing services to an external location, and it is typically used by accessing these services over the internet. The simple advantages of using cloud computing are that your company does not have to maintain IT architecture or systems that are required for running computing services.

Many companies are taking advantage of cloud computing and don't even realize it, often in the form of email or document storage. You may also use software-as-a-service (commonly known as SaaS) applications that have taken the greatest benefits of cloud computing and revolutionized the enterprise software industry.

What can cloud computing do for your business?

What Is The Cloud?

[What Cloud Computing Really Means](#)

This article explains the cloud and outlines the kind of resources it can provide: software as a service (SaaS), utility computing, platform as a service, service commerce platforms and more.

[How Cloud Computing Works](#)

This article from HowStuffWorks.com is a comprehensive explanation of how the cloud works, how it is built, and the services it can provide.

[Learn About Everything Under The 'Cloud'](#)

This is *The Wall Street Journal's* exploration of the cloud and its uses.

Case Study: Rapidly growing online game company utilizes the cloud for its low maintenance and easy scalability

Zynga is an social gaming site that runs popular applications like Farmville. The game quickly became an internet craze, and Zynga went from 0 users to 10 million users within 6 weeks of launch. Needless to say, the company needed a sustainable and scalable resource to manage their applications.

[By choosing to put its games on the cloud, Zynga is able to manage its applications in less time and with a smaller staff.](#) A cloud hosting system has allowed the company to grow into the largest social gaming site, with 70 million visitors every day.

This type of storage, maintenance, and rapid scalability would have been very difficult, or nearly impossible, without cloud technology.

Case Study: New Jersey Transit Authority switches to a customer relationship management system (CRM) and increases productivity and better customer service

Running over 900,000 trips per day on its bus, train and light rail systems, the New Jersey Transit Authority is the largest and busiest public transportation system in the U.S. This extremely complex organization had difficulties with its legacy infrastructure for tracking customer service information and inquiries.

[To solve this problem, the NJTA implemented a customer relationship management system \(CRM\) using Salesforce.com and found much success.](#) In just two years, and with the same number of staff, the NJTA was able to log 5 times as many customer inquiries; the organization logged 8354 inquiries in 2004 and 42,323 in 2006.

Here are the 4 benefits of cloud computing that every CEO should know:

1. Switching to the cloud could save you thousands, or even millions, of dollars a year

You CIO might not like to hear this, but having extensive in-house IT staff and resources is a relic of the past. If your company manages its own e-mail systems, web hosting, or file servers, you are likely wasting thousands – or even millions – of dollars a year, depending on the size of your company.

All of these services are integral nowadays for businesses to compete and thrive, but having a closet full of servers that need constant maintenance and updating is expensive and time-consuming. Now, there are professional services firms that will not only do a better job of managing these systems for you, but can do it at a fraction of the cost – often a monthly fee that does not involve a contract.

Companies like [Rackspace](#), [Google](#) and [FuseMail](#) can be in charge of your e-mail systems for pennies on the dollar of what it costs you to do it in-house. Additionally, with a hosted solution you never have to worry about upgrading or maintaining your servers.

For web hosting, there are hundreds of great, affordable options, including [Rackspace](#) and [LiquidWeb](#), that give you 24/7 customer support and 99.9% uptime with data back-up. To have that kind of service and reliability in-house, you would have to pay hundreds of thousands of dollars a year on staff and equipment, as opposed to monthly fees likely less than \$500. If you're a small, niche business, you can probably host your website for less than \$10 a month.

For complex web systems (for example, if you have a web application like online banking), hosted services are still likely your best option. Though significantly more expensive than the \$500 a month option mentioned above, larger hosting solutions will be far less costly than having an in-house solution.

For most companies, file servers are no longer the best option to store and share files. Services like [Dropbox](#), [Box](#), and [Syncplicity](#) offer file sharing services on affordable monthly plans. With these services, there are no servers to maintain and no back-ups to worry about. They handle everything for you.

If you switch to the cloud to manage basic services, the latest greatest hardware and software will constantly be used by your host company – all you'll have to focus on is having your services work the way they should.

2. Disintermediation of complex software infrastructures

In the past, if you wanted great enterprise software to manage your business, you would need a company like IBM or SAP to install incredibly complicated and expensive systems. You would not be able to upgrade to the latest version of their software, and if you wanted to install new hardware to increase performance, it would cost you thousands or even millions of dollars each and every time.

With the advent of software-as-a-service (SaaS), your business can take advantage of the cloud to access the best software solutions. To make sure their systems are as reliable as possible for their customers, SaaS vendors constantly upgrade their software with improvements without ever charging you – you always have access to the latest and greatest versions of their software and you don't have to worry about the cost of new hardware.

When it comes to pricing, enterprise-style software solutions cannot compete with SaaS services. An enterprise install costs hundreds of thousands of dollars and will require ongoing maintenance fees. SaaS applications typically charge a low monthly fee (depending on the service).

SaaS applications also allow you to access their software over the web, so you have access to the data and software you need from anywhere you have an internet connection. Your employees can work remotely as effectively as if they were in the office, because they have access to all of the software and data they need.

SaaS vendors also typically have extremely reliable uptime and data backup, so you know that your data is safe and you can access your services whenever you need to.

And, because of the incredible level of competition and innovation in the SaaS industry, these services keep getting better and better while prices stay very affordable.

3. Increased company agility

By using SaaS and cloud computing services vendors, your company is much more flexible. You can change to the best software options using the best hardware quickly and easily. Enterprise systems are complex and expensive, and once you've chosen one, it's incredibly costly and burdensome to make a switch.

Cloud services vendors also have great incentives to keep their offering to you competitive, because switching requires very little on your part. They also must maintain the best uptime and speed of their hardware, because if you are not completely satisfied, they know that you can easily switch to one of their competitors.

Recommended resources for learning about and choosing cloud computing vendors

[85 Cloud Computing Vendors Shaping the Emerging Cloud](#)

This comprehensive list shows some of the biggest vendors in the cloud computing space. It also gives helpful descriptions of each company.

[How to Choose a Cloud Computing Vendor](#)

This helpful article from Inc. explains what you should be looking for and how to assess a cloud computing vendor.

Here are some companies who use Amazon Web Services as their cloud computing vendor:

- 37 Signals
- Amazon.com
- Ericsson
- Etsy
- Guardian News & Media
- Harvard Medical School
- Hitachi Systems
- IMDB
- Indianapolis 500
- NASA Jet Propulsion Lab
- PBS
- Swiss Federal Office of Topography
- The University of Barcelona
- The University of Melbourne
- United States Tennis Association
- Virgin Atlantic's Vtravelled.com
- Washington Post
- Yelp

[Amazon Web Services Case Studies](#)

Managing your own hardware and software keeps the cost of change high and the ability to adjust limited, but a cloud-based business is a nimble one that can adjust to changes in your company and industry and keep you ahead of the curve.

4. Enhanced data security and systems reliability

There is a lot of concern around data security in cloud computing services, and these concerns are not without merit. However, reputable cloud and SaaS companies have built their businesses around sound data security. In the digital age, there is no such thing as 100% secure, unfortunately. But by using companies who constantly innovate and improve their security systems, you are making your company much safer.

If you store your data on company servers, it is highly likely that your systems are more vulnerable to cyberattack than they would be on a vendor's system. To keep your information secure on internal systems, you would need to hire a staff that is constantly updating and innovating your digital security systems and software. This is an incredibly challenging job that requires lots of employees and ultimately is not cost effective.

By using a vendor, you get to use their security expertise and innovation to keep your data safe. There is no way to say that your data is 100% safe if you use a vendor, but it is likely that maintaining your data systems yourself would leave you far more vulnerable.

In addition to security, SaaS and cloud services build their businesses around the reliability and uptime of their systems. A typical business that maintains its own systems suffers significant downtime and service stoppage. Though no vendor can guarantee 100% uptime, they typically guarantee and deliver on over 99% uptime. When a vendor's services go down it can become big news ([like when it happened to Amazon](#)), but chances are that handling the systems internally would cause even more downtime and trouble.

The security and reliability of cloud and SaaS services are almost always better than those of internally managed systems.

If your company has not considered using cloud or SaaS vendors for your information technology needs, you may be putting yourself at a disadvantage. Most companies can significantly grow their bottom line, stay up-to-date with software and hardware, remain nimble in a world of ever-changing technology, and enhance their systems' security and reliability simply by switching to SaaS and cloud services.

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