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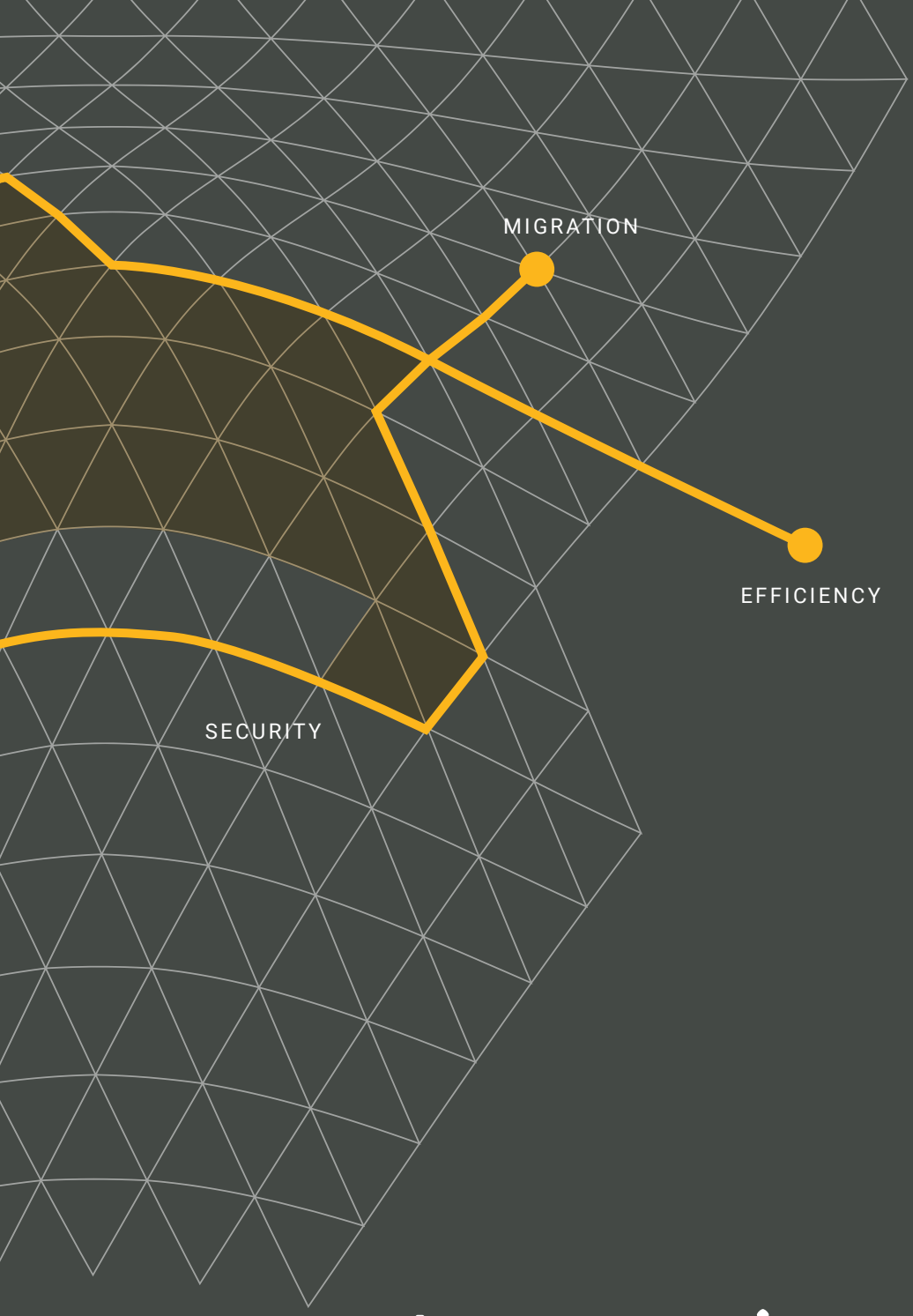
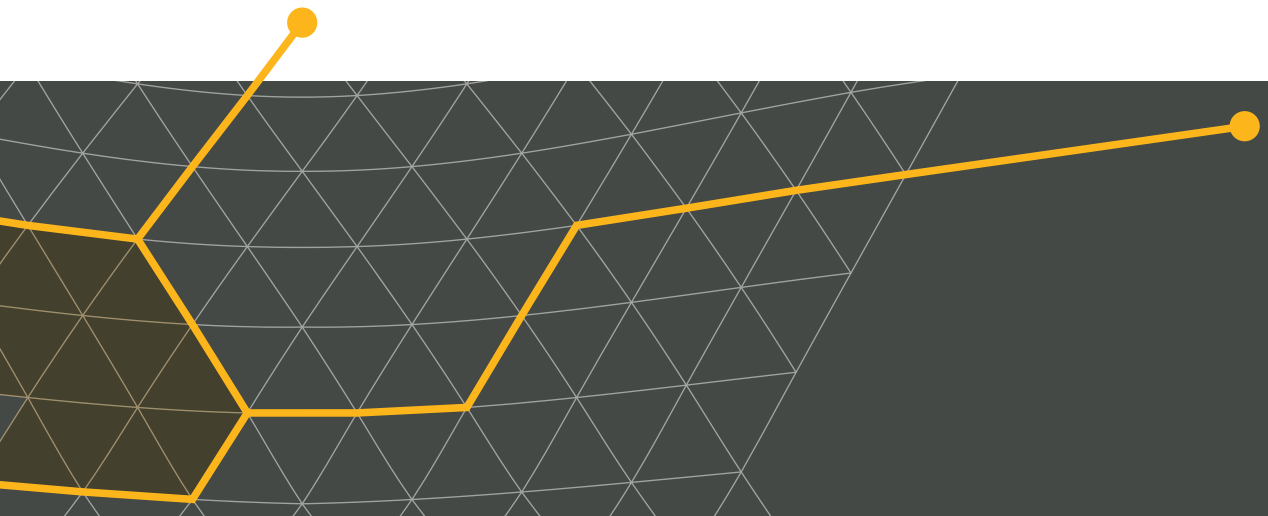


Leveraging the cloud:

From basic activities to advanced usage.

Cloud computing generated $100 billion in 2012, which is estimated to be an impressive $500 billion by 2020.[1] What was once an innovative technology of the future is now the standard way of doing business.

The challenge for companies is to leverage what still works well from their in-house legacy infrastructure and augment that with a new cloud-based infrastructure to meet their future needs. Learn how to transition to advanced cloud usage and build a strong team for your company.



"Cloud is about efficiency, economy, scalability, elasticity and doing things faster and better."

- Reynaldo Mincov Junior [2]

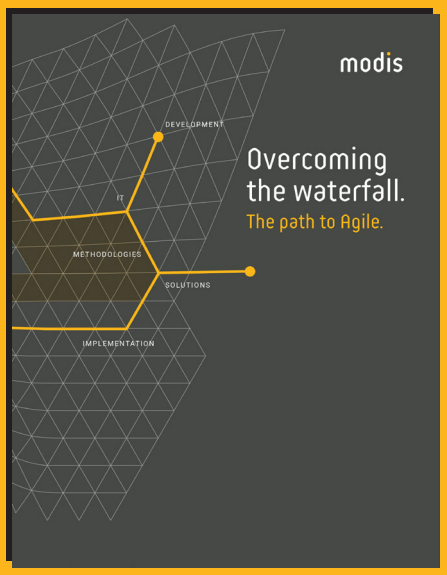
Good foundations need good enterprise architecture.

Enterprise architecture integrates management of the IT infrastructure currently in place while designing and building the infrastructure needed for the future. The value in this discipline is in presenting leadership with signature-ready recommendations to alleviate disruptions and achieve business objectives more quickly. [3]

"Enterprise architecture applies architecture principles and practices to guide organisations through the business, information, process and technology changes necessary to execute their strategies." [4]

Enterprise architecture methodologies are shifting toward an Agile approach. Previous methodologies primarily focused on processes and tools. An Agile approach, in contrast, emphasises individuals and interactions.[5] This methodology also improves the project team's enterprise architecture awareness, enhancing focus and functionality.

Wondering if Agile is right for your team? Read our free white paper, "Overcoming the Waterfall: The Path to Agile", to learn the benefits of the Agile methodology and the positions needed to implement it.



The first step: making the leap to the cloud.

Migrating to cloud technology involves moving legacy in-house systems, including enterprise resource planning (ERP), human resources management, and similar enterprise applications, into the cloud.

Companies who have migrated to the cloud

NETFLIX

In 2008, Netflix made their move to the cloud primarily based on their cost reduction strategy. Their initial experience was mixed. It took seven years (2008-2015) to move most of their systems to the cloud using Amazon Web Services (AWS), with full migration complete in 2016. They initially faced major database corruption issues and were unable to ship DVDs to customers for three days, but were able to resolve these.

Netflix now has eight times the clients they had in 2008. The improved scalability has allowed Netflix to expand its service to more than 130 new countries, becoming a truly global Internet TV network. Even though there are still some challenges, Netflix says they are not constrained by the limitations they previously faced. [6]

COCA-COLA

Coca-Cola embraced the cloud in 2011 and has never looked back. The beverage giant went from 3-4% of its 2,000 applications being hosted in the cloud to having almost all of them in the cloud. Their CTO anticipates within the next five years the company will be "as cloud-based as it will ever be." Coca-Cola says they benefit from wide coverage through Google's presence. The company sees the cloud as a long-term approach. [7]

Building a foundation for the future.

Companies develop the foundation needed for future big data and business analytics capabilities when they begin their transition to the cloud. This foundation is composed of a three-tiered cloud infrastructure.[10]

The intermediate steps: combining cloud services.

Public cloud falls within the standard cloud-computing model whereby the general public can access applications and use the available storage provided by service providers for free or on a pay-per-usage model. These are highly scalable and self-serve.[11]

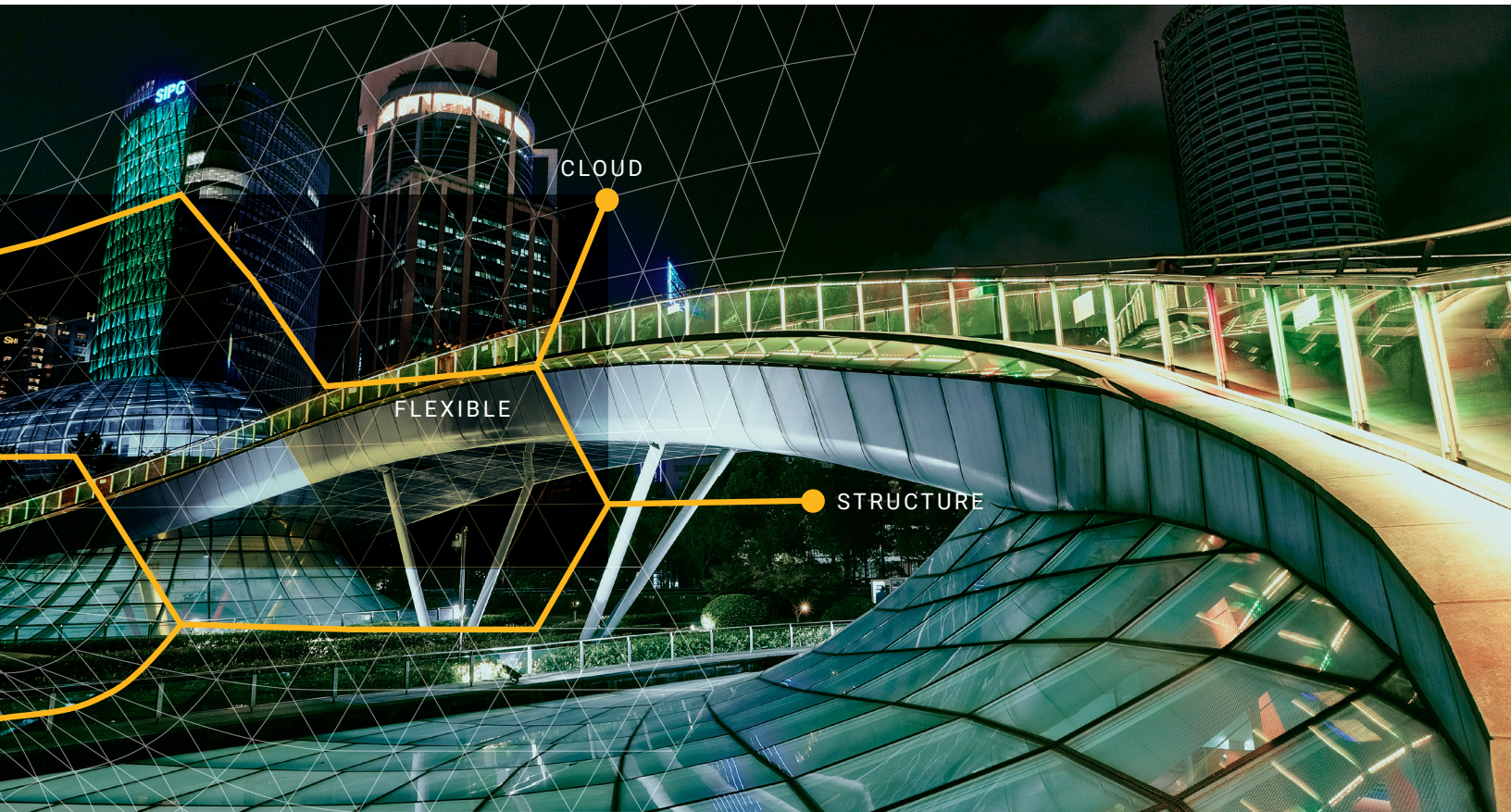
The top cloud providers available for general public use are Amazon Web Services (AWS), Google Drive, Microsoft OneDrive, and Windows Azure.[11]

Private cloud offers similar benefits to public cloud, including scalability and self-service. The difference is that this method is provided through proprietary architecture on dedicated servers within a single organisation. This method is ideal for larger organisations because it provides greater control over their data and does not require them to share space on servers with other tenants.

Private cloud providers include Microsoft Private Cloud, OpenStack Private Cloud, Platform9 OpenStack Private Cloud, and Apache CloudStack Private Cloud.[12]

Hybrid cloud uses a combination of public and private cloud services, allowing the platforms to work in synergy and sync to provide businesses with increased flexibility. This works in businesses and industries where physical space is an issue, yet the business needs to keep critical and sensitive data secure. Financial and healthcare industries, law firms, and other customer-facing industries often utilise this model.[8]

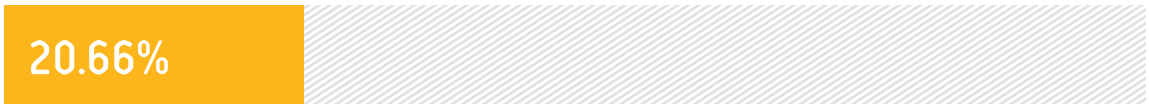
For example, if a healthcare provider needs to transmit a large amount of patient data to insurance companies while maintaining compliance with HIPAA (Health Insurance Portability and Accountability Act), hybrid cloud is the ideal solution. It also enables offsite data encryption to reduce the risk of data loss.[8]



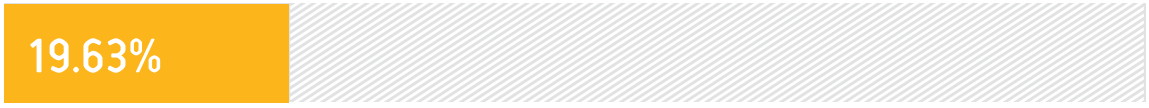
Measurable benefits of cloud implementation.

81% of financial decision makers said the benefits of using the cloud were more than just technology based. They outlined the following benefits, with many businesses experiencing notable measurable benefits across several areas:

Average quantifiable increase in getting new products/ services to market faster

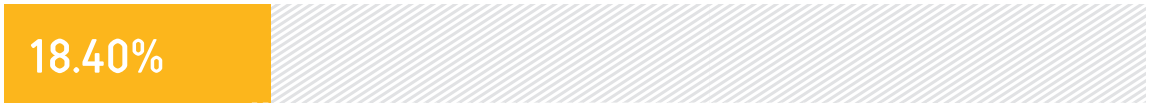


Average quantifiable increase in enabling fast growth

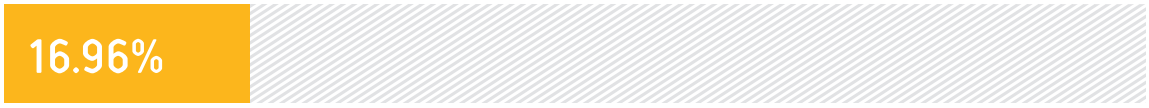


Average quantifiable increase in process efficiency

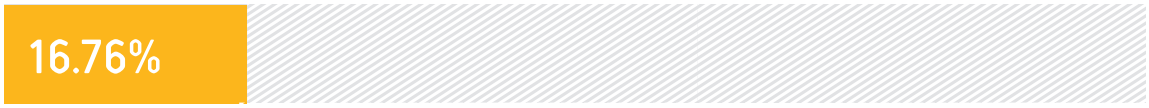
Average quantifiable increase in employee productivity



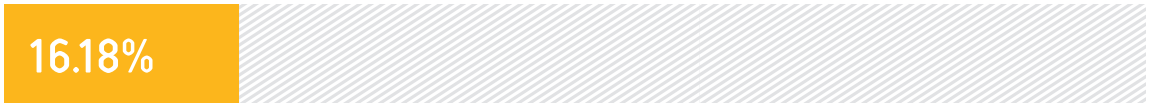
Average quantifiable reduction in M&A integration costs



Average quantifiable reduction in IT maintenance costs



Average quantifiable reduction in operational costs



Average quantifiable reduction in IT spending

The advanced steps: data and analytics.[17]

Predictive analytics involves a variety of techniques, including data mining, statistics and modeling, to analyse current data and make predictions about future.

It has allowed companies like Utica National Insurance Group to reduce their effort while receiving higher than expected returns. Used for risk assessment purposes, it provides the company with a continuous flow of incoming credit reports that can assess risk appetite built on a range of existing data instead of just credit scores alone.

Predictive analytics has also aided CenterPoint Energy in measuring ongoing performance by monitoring usage and outages with greater ease. They can now capture and analyse automated data from their metering systems, and also advance in information sharing across departments and users.

LOOKING TO COMBINE IAAS AND PAAS FOR PREDICTIVE MODELING? THINGS TO CONSIDER:

- Impact to the business overall
- Correct configuration in test and production environments
- Performance and response times
- Complexity of architecture systems and application integration
- Cloud licensing models
- Support and service level agreements
- Sufficient security and protocol support in place
- Platforms, operating systems compatibility and support
- Data hosting and cloud center locations
- Organisational transition readiness[2]

Cloud computing and the future of it careers.

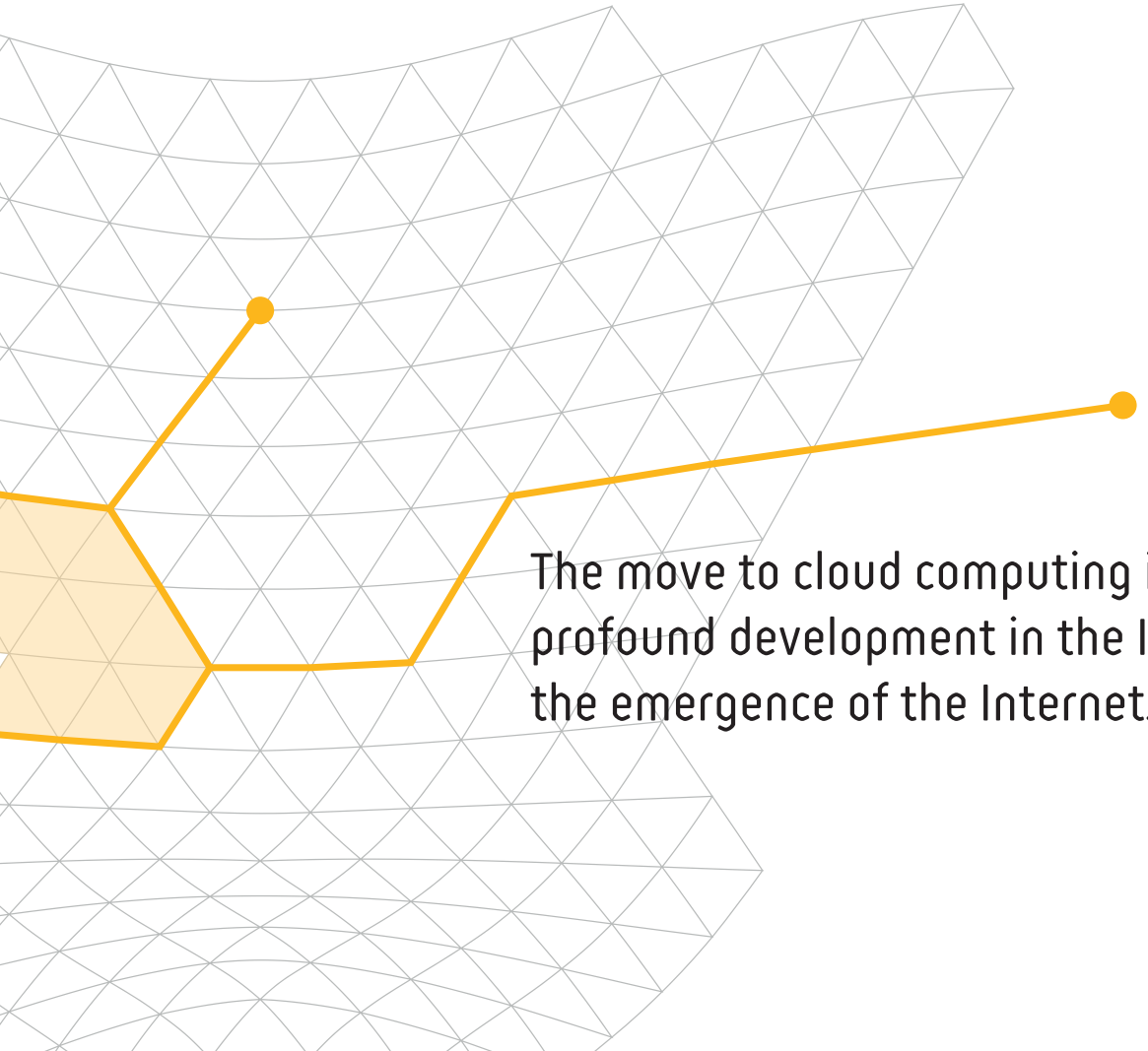
Automation in IaaS-related activities is increasing since the technology and operations involved are the most standardised. As such, the number of people needed to perform services in IaaS is shrinking.

Activities related to PaaS are also being automated and consolidated, but jobs in this category of services continue to grow because demand continues to increase. Many companies have unique needs for the way they store and manage their data.

The number of jobs and demand for SaaS services is steadily growing. In this category, the capabilities of IaaS and PaaS are combined with custom built or packaged software applications to deliver capabilities needed by companies to grow and run their businesses. Because of the unique nature of individual company needs, this work is difficult to automate and requires person-to-person contact, communication and collaboration. This is where most IT professionals will find jobs in the coming years as cloud services are incorporated in the operations of more and more companies. [19]

The cloud is impacting significant change to the ongoing mission of company IT groups. Traditionally, IT groups have been devoted to the installation and operation of computer and communications hardware and the operation of software hosted on that hardware. Increasingly, the adoption of cloud services in IaaS and PaaS is resulting in a shift away from traditional IT jobs as those jobs are outsourced to cloud service providers. [20]

With this shift of traditional IT jobs to cloud service providers, company IT groups are redirecting their people and budgets to working with the business operating units in their companies. They are focusing on helping business units create competitive advantages in their industries and strengthen their bonds with customers. Just as software applications are more deeply integrated into the daily operations of many businesses, so too are IT professionals becoming more integrated into the organisational structures and operating units of those businesses.



The move to cloud computing is the most profound development in the IT world since the emergence of the Internet.

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