**Cloud, Services and servers – IT Technologies**

**What does it do?**

Cloud technology is accessing and storing data over the internet instead of a physical hard drive. Put simply, this technology assists in the delivery of different services including accessing things like storage or databases as well software to allow faster innervation, ease of access to resources which in turn can potentially lower operational costs of a business. Cloud services are typically broken down into 3 types, SaaS - software as a service, IaaS - infrastructure as a service and PaaS – platform as a service.

Software as a service delivers the ability to access software or applications over the internet or through a browser. One of the most well-known and popular type of this technology would be Microsoft’s Office 365. It is common for SaaS applications to allow customers to enable addons and modifications through an extensive configuration environment.

Infrastructure as a service outlines storage capability for a user, ranging from low end data storage to high end databases. As outlined in software as a service Microsoft again brings a key component to the table with OneDrive as well as Googles cloud platform. OneDrive and Google Drive offer day to day use either on a personal scale or small business to allow easy access to data via multiple avenues utilising the internet. Another large platform is Apples iCloud, allowing people who own any iProduct to store and access from any of those devices at any time allowing seamless collaboration or access of information when required. For business use, Dropbox is a highlight as it uses a system like that of Windows explorer, allowing ease of access and automatic backups saving within a system similar to that of regular saving process.

Platform as a service or PaaS technology integrates into a business already made software infrastructure. It’s primary services assist in application design and testing for deployment, integration of web based services as well as but not limited to database integration. This is mainly executed through a cloud service providers infrastructure with users gaining access through a web browser. Platform as a service can offer services such as application hosting or program development which can be delivered through a public or private cloud. The principal benefit for this type of technology is for convenience and simplicity.

These technologies have drastically grown over the past 20 years and cloud technology model has altered the way organisations manage their technology systems and resources. Previously businesses wanting to grow their own IT systems were required to establish their own infrastructure which in turn could increase operating costs of a business as well as time and space to maintain those pieces of equipment. Now, business can access endless opportunity that is cloud computing. Allowing business to access data storage, software or essentially any of the 3 technology types outlined above at a reduced cost. These systems are maintained and managed by a third party therefore allowing businesses to have the most current technologies without the stress of maintenance costs and time.

**What is the likely impact of this technology?**

Some of the positive impact of these technologies on businesses are costs, flexibility and increase of capacity. Costs for businesses are reduced due to no further requirement to self-manage and maintain the infrastructure. Costs for a business could go from thousands of dollars to a billing system or service. Flexibility of these technologies allow ease of access to software. In the instance where software developers need an environment to test or deploy products this can easily be done utilising PaaS technologies. Benefits of storage capacity work with flexibility and ease of collaboration. Allowing businesses to store data remotely allows them to have larger capacity and the ability to access it from any machine on their network. In turn positive impacts that a business may face is Improved productivity, ease of access as well as reduction in costs.

Negative impacts include Vendor lock-in, security breaches & loss of data. The initial service a vendor may offer would likely be aligned with your business needs. A barrier faced with this is when a business expands it’s need for further services the initial vendor may not offer this which could lead to further costs changing vendors or the inability to do so due to a contact. Leaking of sensitive data is a large privacy breach which could have legal consequence. Allowing a third party to store this data may be one of greatest impacts when forming a decision to migrate to cloud services. Loss of any data is a large concern to a person or business. Leaving the tasks of backups, storage and maintenance to a third party would be a great risk initially. As a preventative measure business could store data locally as well but that would ultimately defeat the purpose of utilising that technology.

**How will this technology affect me?**

On a personal level, this technology is of benefit especially at work. At work I rely on being able to access the network drives to ensure my day runs smoothly. Working from home in the current climate the whole business is reliant on the use of Citrix Storefront which runs a virtual desktop and allows us to work remotely. Outside of work I regally use OneDrive between my laptop and desktop as well as iCloud for my phone. Utilising the technology to be able to complete these studies online is another highlight as working full time & physically attending a university would be impossible. With the growth of technologies allowing us to access services remotely will have an impact on a person’s social skills and mental health. My goal in this field is to get into cloud & networking, so hopefully the technology continues to grow and become dependant on allowing future potential opportunities for myself and others with interest in this field.