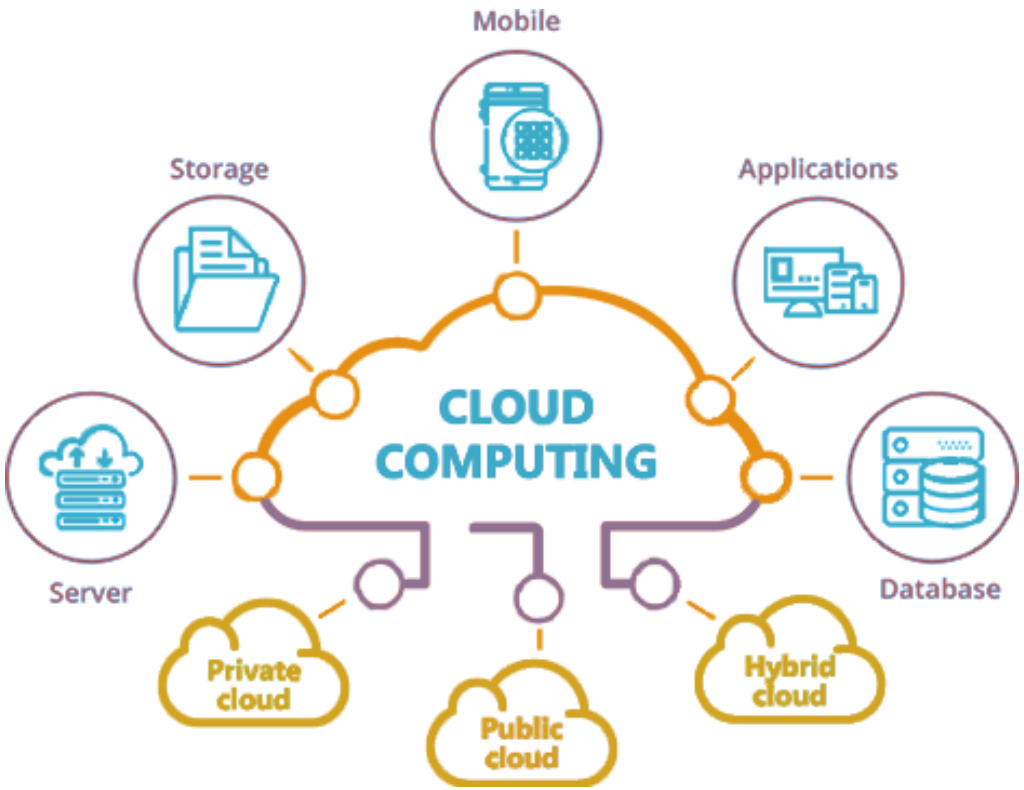
ADI
ASSOCIATE DIGITAL INSURER

TDI ACADEMY
LEARNING FOR THE DIGITAL AGE

OUR CHANGING WORLD
ADI

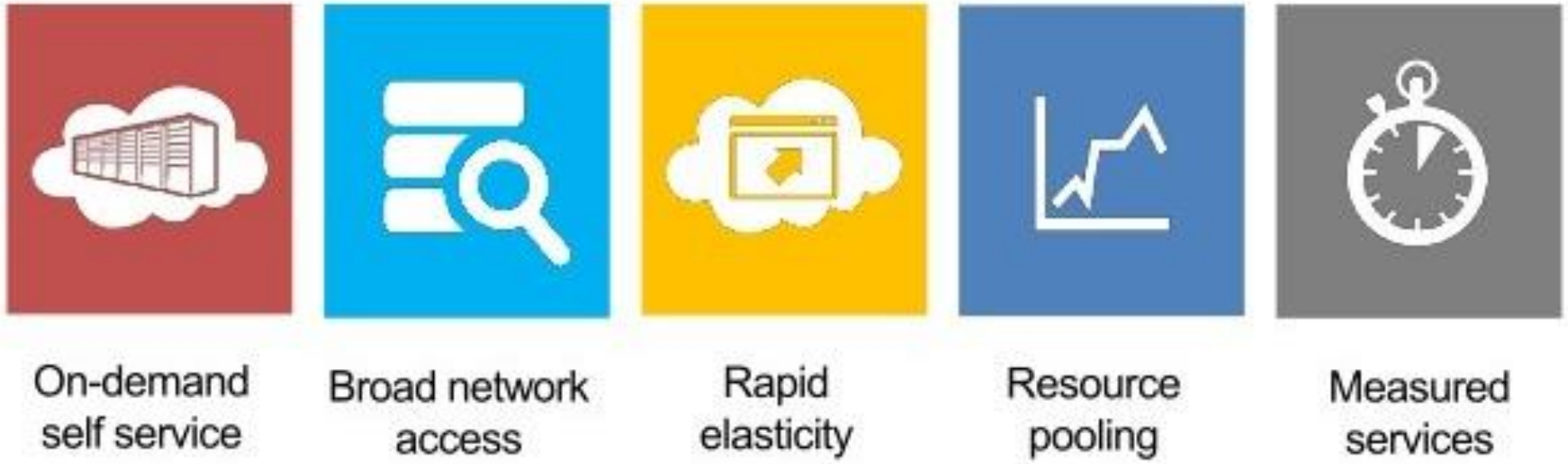
Lesson 7 – Cloud Crushes Cost



Topic 1 – What is Cloud Computing

What is Cloud Computing?

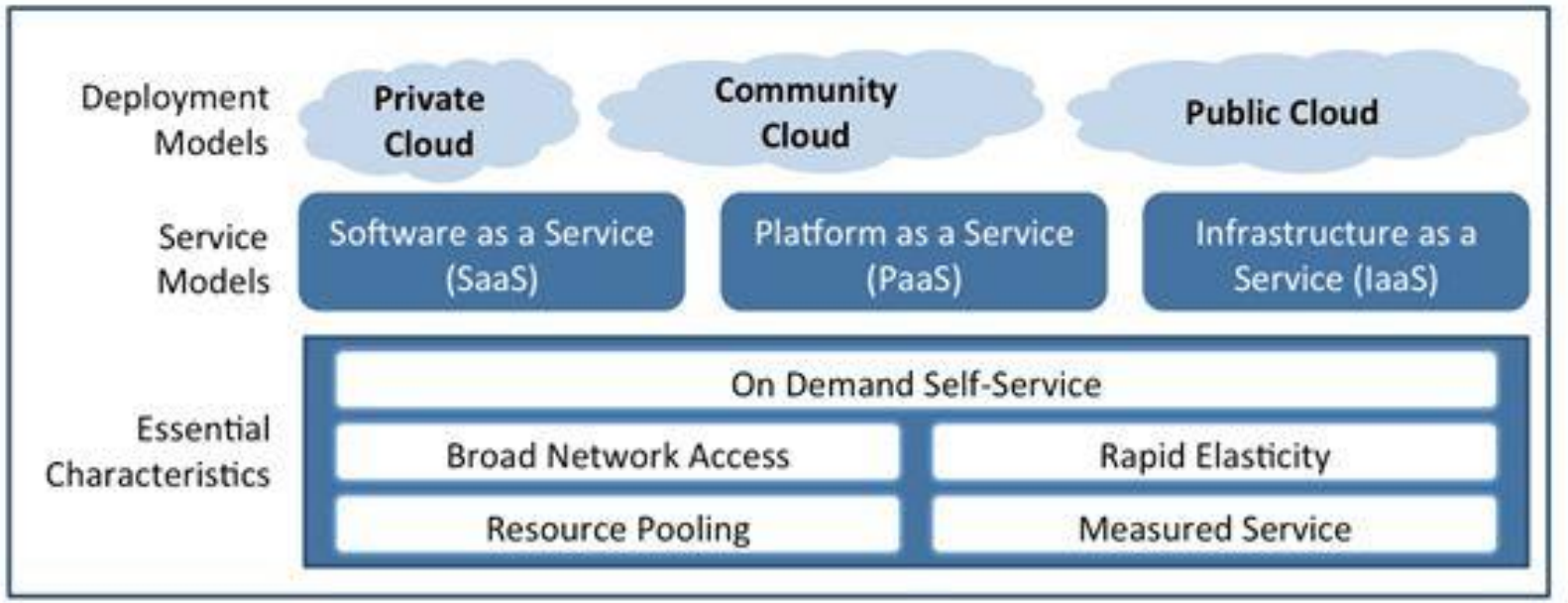
Cloud is the virtualization of IT hardware and software resources into Internet-based, on-demand services with no direct active management by the user.



Key characteristics:
1) Agility in Provisioning: Cloud services allow IT resources to be made available quickly typically on demand and via the Internet.
2) Elasticity: Cloud services allow you to quickly (on-demand) scale up or pare down the pooled IT resources required to support your business needs.
3) Utility Pricing: As you scale up or pare down the pooled IT resources required, you only pay for the IT resources that you have consumed in the cloud.
4) Resilient: Cloud services are typically deployed in data centres across the region (or globally), adding on to its resiliency.

Source: Monetary Authority of Singapore

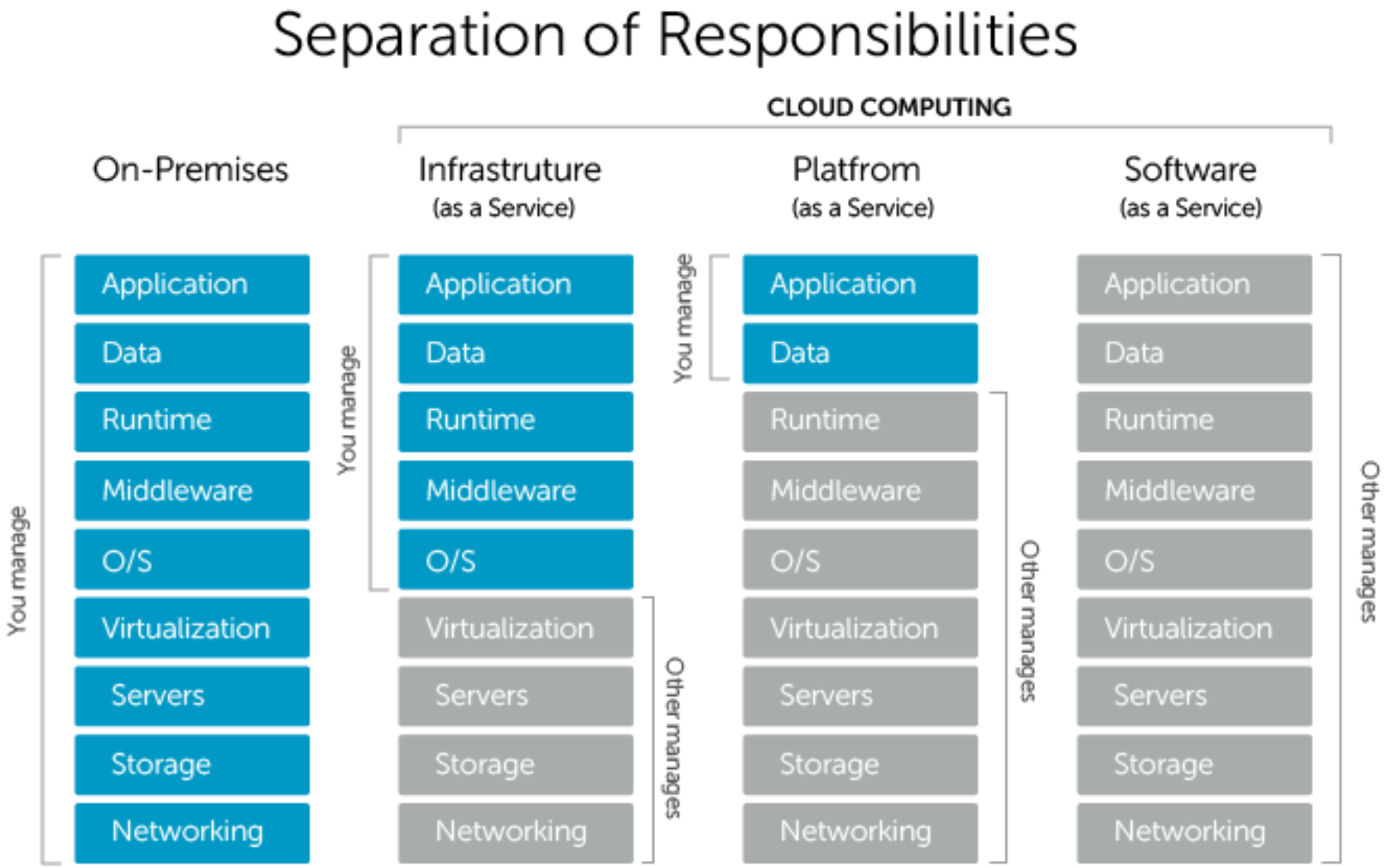
Cloud Deployment / Service options



Source: National Institute of Standards

Cloud services can be deployed in 3 main ways: Private, Community, and Public, with variations such as Hosted Private and Hybrid, determined by its location as well as whether access and control is dedicated or shared.

Cloud Service Models defined



Source: Cloud Industry

How is Cloud is used?

- Back up and Recovery
- E-mail and Messaging
- Virtual Desk-top
- Dev and Test
- Data & Analytics
- Internet of Things (IoT)
- AI and ML Development
- Client-facing Applications

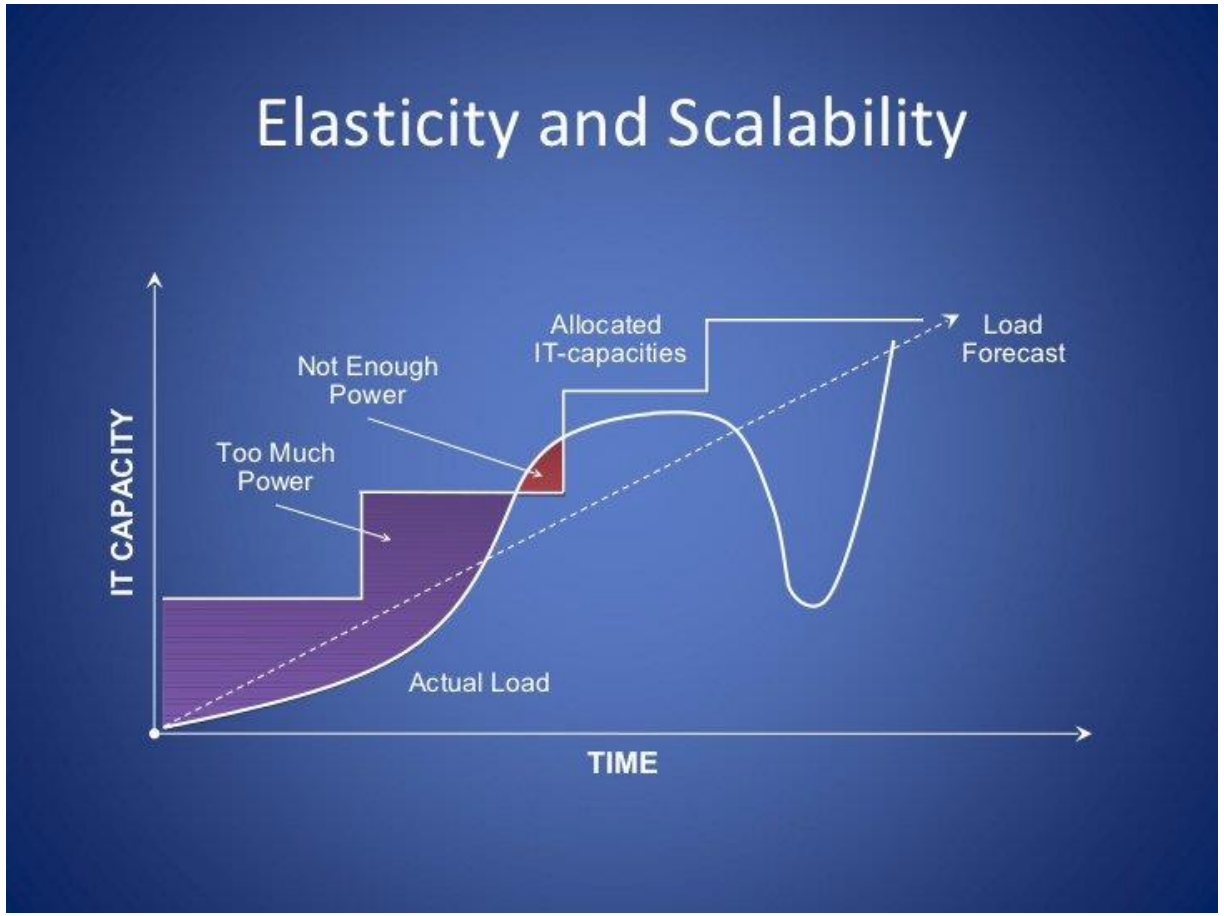
The Benefits of Cloud

Cloud crushes cost by freeing business from having to invest in excess IT capacity just for peak usage.

Cloud utility-pricing also allows business to save during low utilization periods as it only pays for what it consumes.

Cloud-based services such as Salesforce can be piloted by business quickly and cheaply enabling agility - the ability to experiment and quickly scale-up in light of success.

Cloud to a large extent frees business to focus on its core mission, knowing IT concerns are being managed by a cloud provider who's main focus are those IT concerns.



What is Cloud Computing?

Duration: 3 mins

What is Cloud Computing?

Amazon Web Services

TDI viewing Tip: Excellent overall summary of the proposition, well worth watching all of this one to reinforce the learnings for this segment.

Video link

Possible discussion points for Weekly Clinic / Things to think about

- What kinds of uses for the cloud are mentioned?
- Do you agree that cloud can make insurance businesses more agile? Why?
- Do you agree that cloud underpins many of the technology advances discussed in this course?

Video Source : AWS via YouTube https://youtu.be/dH0yz-Osy54

Cloud Security

Key Issue: How can I be sure my cloud environment is secure?

The diagram outlines the various aspects of a cloud security program. The major enterprise cloud providers have a tiered range of security options. Best to take on the more extensive options which should include:

- Identity and Access Management (IAM) to ensure only authorized parties have access to data and computing resources.
- Physical security of cloud facilities.
- Encryption of data at rest and in motion.
- Penetration testing on regular basis.
- Compliance controls to ensure adherence to applicable regulations.

We delve into several of these topics in greater detail in the following slides. Check out further reading on this topic.

Cloud Disaster Recovery (DR)

Key Issue: Can I be sure of recovering my data in the event of a disaster (DR)?

This is a concern with all outsourcing arrangements. Only through proper due diligence initially and on-going regular testing of recovery capabilities, can you be assured of a working DR plan.

It is important to have clarity from the cloud provider on all aspects of the architecture.

There was a case where a DR plan had separate ISPs in place, but unknown was that both ISPs shared the same physical connection to the internet and the system was brought down when a tractor cut that cable.

When done correctly, cloud DR presents the most comprehensive and cost effective way to do it. Check out further reading on this topic.

Cloud Data Sovereignty

Key Issue: How can I be sure my data won't leave the country?

In the early days as we evolved from on-premise to cloud, public cloud providers could have server farms literally anywhere - there was no guarantee where data would be processed or stored.

Now as cloud solutions have matured, providers such as Amazon, Google and Microsoft have tools & methods to assist compliance with data sovereignty regulations.

One solution is deploying a hybrid cloud which uses a combination of private and public cloud with data stored appropriately.

Having a data governance program in place is foundational to solving this issue. See this excellent article on the nine-steps to a solution.

What is Cloud - Summary

- Definition of Cloud
- Varieties of Cloud deployment
- Uses of Cloud
- Benefits
- Key concerns