Surviving Clouds
Vendor Hype or Path to the Future?
Where we are going...

- Characteristics of the operational methodology
- Underlying economics
- 2 Non-economic effects
“The problem with the world today is that there are too many people talking shite, and not enough people being smacked in the gob”

Billy Connolly 1991
- Enable refocus of IT organisations from a traditional technology platform bias, to one directly supporting business differentiation and business outcomes;
- Reduce capital and operational cost of IT platforms and services;
- Maximise investment dollars;
- Increase capability, connectivity, capacity and agility.
...the education world is changing and IT teams must be prepared to change to be part of it.
Be the experts in the USE of technology NOT in the support of technology

Take Aways

Exorcise the must-do-it-ourselves culture.

Shared services is evolving and growing.
Seek out ways you can contribute to, and utilise this capability.

Use shared services to let go...
Focus on the needs and the services.
On demand
Scalable
Self service
Metered
Economic drivers -

• Supply side economics of scale
• Demand side aggregation (statistics of scale)
• Multi-tenancy
Economics of scale:

- Power (electricity)
- Infrastructure labour
- Security, resilience/reliability
- Buyer power
Statistics of scale: Utilisation
Statistics of scale

$$C_v(\mathcal{N}) \propto \frac{1}{\sqrt{N}}$$
Randomness

**FIG. 6:** RANDOM VARIABILITY (EXCHANGE SERVER)

Source: Microsoft.
Time of Day

**FIG. 7: TIME-OF-DAY PATTERNS FOR SEARCH**

Source: Bing Search volume over 24-hour period.
Industry Specific

FIG. 8: INDUSTRY-SPECIFIC VARIABILITY

Source: Alexa Internet.
Resource specific

**FIG. 9: MULTIRESOURCE VARIABILITY (ILLUSTRATIVE)**

Source: Microsoft.
Growth

**FIG.10: UNCERTAIN GROWTH PATTERNS**

Source: Microsoft.
Growth (another view)
Multi-tenancy

• Amortisation of instance costs across many customers
Combined impact

**FIG. 15: ECONOMIES OF SCALE IN THE CLOUD**

![Graph showing the decrease in TCO/Server (at average utilization) as the number of servers in the public cloud increases, with an 80% TCO Reduction indicated.](image)

*Source: Microsoft.*
Service model variation:

**FIG. 17: CAPTURING CLOUD BENEFITS**

- **Traditional IT**
  - Applications
  - Data
  - Runtime
  - Middleware
  - O/S
  - Virtualization
  - Servers
  - Storage
  - Networking

- **IaaS**
  - Applications
  - Data
  - Runtime
  - Middleware
  - O/S
  - Virtualization
  - Servers
  - Storage
  - Networking

- **PaaS**
  - Applications
  - Data
  - Runtime
  - Middleware
  - O/S
  - Virtualization
  - Servers
  - Storage
  - Networking

- **SaaS**
  - Applications
  - Data
  - Runtime
  - Middleware
  - O/S
  - Virtualization
  - Servers
  - Storage
  - Networking

*Source: Microsoft.*
Deployment model variation:

**FIG. 22: COST BENEFIT OF PUBLIC CLOUD**

- **Private Cloud**
- **Public Cloud**

- **40x cost benefit for SMBs**
- **10x cost benefit for Enterprises**

Source: Microsoft.
Innovation

Innovation and the Cost of Failure - Illustrative

Time

Cost of Failure

Rate of Innovation

ViFX infrastructure & cloud transformation