Cloud Computing: Managing the impact on ICT

Simon Robinson

29 September 2010
Agenda

- Connecting the cloud to the people
  - Networks
  - Devices
- Delivering an ICT Service
  - Contracts or computers
  - New opportunities
- A couple of Case Studies
Cloud Computing and ICT

That depends on...

- The type of cloud deployed

- The starting point and the journey

- The scale
Reaching the cloud

- **IaaS**
  - Client devices, Network connectivity, Application software, Infrastructure software, Operating systems

- **PaaS**
  - Client devices, Network connectivity, Application software

- **SaaS**
  - Client devices, Network connectivity

- **Private cloud**
  - All of it
Connecting people and cloud

- **Network connection issues**

- **Rural networks:**
  - Affects businesses as well as people

- **Network designs:**
  - Reliability
  - Resilience
  - Redundancy
Connecting people and cloud
Delivering the ICT Service
Delivering the ICT Service

Incompatible Browser:

Unfortunately the browser you are using does not have a sufficient level of functionality to support this application.

Error 503 Service Unavailable

Service Unavailable

Guru Meditation:

XID: 974421233

Varnish

Our web site is busy now, so you are hard to access.

Could you try again after a while?

Thank you for your cooperation.
Delivering the ICT Service

Incompatible Browser:
Unfortunately the browser you are using does not have a sufficient level of functionality to support this application.

A First Look at Problems in the Cloud

Theophilus Benson*, Sambit Sahu†, Aditya Akella* and Anees Shaikh†
*University of Wisconsin – Madison, †IBM Research


Could you try again after a while?
Thank you for your cooperation.
Delivering the ICT Service
Delivering the ICT Service
Delivering the ICT Service

The ICT department

- Public cloud: ICT becomes a consumer rather than provider
- Partial cloud: can increase service complexity
- “50 – 60% of the IT department’s role was pressing buttons and looking after hardware” – Chris Jones, Remploy
- Re-focus on the service that ICT provides
- Staff reductions?
- Business adoption of cloud computing without ICT?
Case study: The University of Cambridge

Telecommunication services via a public private cloud

- 200 autonomous organisations
- New IP telephone system – 17,000 extensions
- Delivered over the existing data network
- End devices could be chosen by the institution (SIP standard)
- Local networks had to be strengthened
- New approaches to service delivery
  - self service portal
- Telecoms staff now focus on enhancing services
Case study: A Large Financial Institution

The perfect opportunity for developing a private cloud?

- All new
  - Data Centres / Servers / Storage / Network
- Strategy: virtualisation -> private cloud
- From 5000 to 3000 servers (only 4 types)
- From 350+ to 270 applications (business and infrastructure)
- Test labs to prove application migration
- Not all applications could be virtualised
- Processes developed for the migration are now BAU
- New server <1 day rather than >1 month