

# Cloud Computing

“The medicine needed for our credit squeezed economy”

Vivian Reding

European Commissioner July 2009

[tim.cowen@theopencomputingalliance.org](mailto:tim.cowen@theopencomputingalliance.org)

# outline

- What is “Cloud Computing”?
- Impact of ICT on productivity and growth.
- Scale of the opportunity/size of the cloud.
- Impediments and solutions.
- The importance of interoperability.
- Government tendering.

# what is cloud computing?

- Hotmail, Gmail, Facebook etc all use a “cloud”.
- “Cloud” slide -off customer premises.
- Amazon, Google, Microsoft, IBM..etc
- Elements: remote shared computing, ‘pay as you go’ business model, virtualisation of resources, also known as software as a service.
- Not just outsourcing/hosting, but total cost of ownership (“TCO”) justification.

# the impact of ICT on GDP

- *0.2% positive GDP (Commission).*
- *IDC estimates that cloud services could add \$800 billion in net new business revenues to the economies of 52 countries between the end of 2009 and the end of 2013.*
- *October 2009 Spending on IT in the 52 countries accounted for 2.6% of GDP last year, up from 2.2% five years ago. At forecasted rates of growth, it will surpass 2.8% in 2013 (IDC).*
- *“for every 10-percentage-point increase in the penetration of broadband services, there is an increase in economic growth of 1.3 percentage points (Qiang 2009).” World Bank 2009 report on ICT and economic growth.*
- *“While we have been in the midst of this global recession, IDC has maintained that we are also in the midst of a technology renaissance”. (IDC October 2009).*

# the size of the cloud: UK gov=£44bn over the next 10 yrs?

- Mckinsey 2007 who estimate the “Size of the Cloud” at \$150bn; Gartner (2008) expects a global market of \$171bn in 2008 rising to \$239bn in 2012.
- IDC estimates that cloud services could add \$800 billion in net new business revenues to the economies of 52 countries between the end of 2009 and the end of 2013.
- “An e-procurement system in Brazil cost only \$1.6 million, yet it enabled savings of \$107 million for the state in 2004” nb process and efficiency benefits, World Bank 2009.
- Big Cloud.

# commercial model

- Nb current over-provisioning for peak load
- Capex for opex and a scaleable resource for SMEs and unpredictable demands
- The 5 areas for cost savings: labour, energy, data center real estate, computer hardware & software licenses; efficiency and productivity benefits = TCO++.
- *“The rise of the cloud is more than just another platform shift that gets geeks excited. It will undoubtedly transform the information technology industry, but it will also profoundly change the way people work and companies operate” (Economist 20th June 2009).”*

# impediments and solutions

- Data security (physical and services/services for physical)
- Data protection
- Contractual
- Cultural
- Bandwidth
- Legacy technology/compatibility

# importance of interoperability

- Applications can 'run' across open platforms; refusal to license may be an abuse of dominance
- "Interoperability encourages competition on the merits between technologies from different companies, and helps prevent lock-in...Interoperability is a critical issue for the Commission." Neelie Kroes, OpenForum Europe Breakfast Seminar, Brussels (June 10, 2008).
- Cloud services may need to interwork with legacy systems and tailored apps.(cf Capita/ibs Competition Commission august 2009).
- Interfaces written to open standards enable component competition.
- 'Outsource and run' may not be a cost effective alternative to interoperability.

# importance of “open output” specifications

- Government is the single biggest spender on ICT in the EU. (1.5-2.0+% GDP)
- Credit Crunch and lack of money
- ‘G-Cloud’ under consideration in UK
- How to specify demand: in terms of products that do not currently exist?
- Public procurement and remedies.

# Conclusions

- Cloud computing is new; like the shift from self generation to the electricity grid.
- Size of the cloud/opportunity is significant; will change ways of working and could be the next wave of technology change.
- Issues and solutions will take time and act as impediments, but solutions can be found.
- Government can, and probably will, lead the way.