

Clouds: In our way or enabling change

July 2013

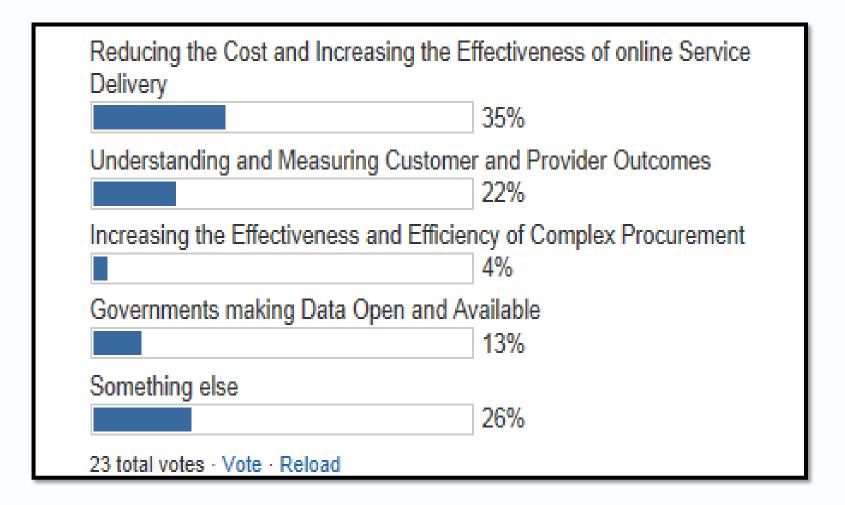
CSIRO

Cloud Services has been promoted as the major driver of productivity for Government and smaller industry.

The relatively slow take-up of Cloud Services however shows that the business case is still not sufficiently compelling.



What are the biggest challenges to be addressed to drive productivity in Government Services?



Source : Australia 3.0 Government Services Stream Roundtable "instant poll"







"The National Cloud Computing Strategy identifies that the Australian Government, with an annual procurement of over \$5 billion in ICT and associated services.."



Why Cloud

Scalability

Users can scale up or down cloud services quickly and cheaply

Resource pooling

Shared computing resoures can provide significant economies of scale which help reduce costs and accelerate innovation

Metering

Users can measure their consumption of cloud services quickly and easily, and adjust accordingly

Device agnostic

Users can access cloud services over a network through a broad range of devices

Capacity on demand

The service already exists and can be provisioned when needed, usually through self-service interfaces. This in turn allows organisations to rationalise their legacy ICT



Challenges retrieving data for 14% 35 reporting 31% 79 Concerns about data security or data privacy 21% Inadequate IT staffing levels 54 29% 74 Inadequate IT systems Inadequate end-user skills 38% 97 28% 70 Integrating data from different systems 15% 39 Integrating data from different locations 12% 31 Insufficient training for IT staff 69 27% Insufficient training for endusers The total cost of IT activities 57% 143 3% 7 Unstable electric supply Total Responses* 252

Source: "2012 Global Cloud Computing Survey Results", Connecting Up



Facing your

rganizations

Activities

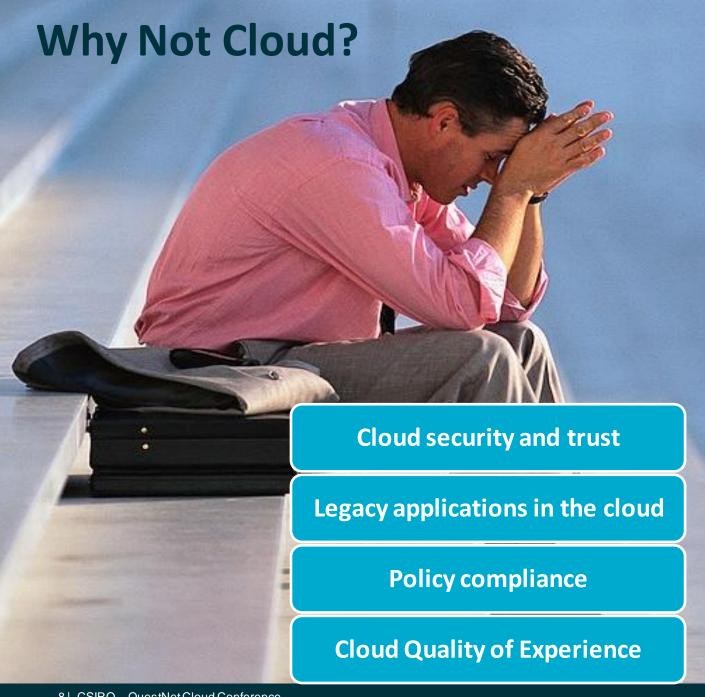
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Does your organization cloud computing

Email (e.g., Hotmail, Gmail, Microsoft Office 365)		38%	94	
Email marketing (e.g., ConstantContact, StrongMail), Vertical Response)		8%	21	
File storage/sharing (e.g., Microsoft Sharepoint online, Dropbox, Box.net, Microsoft Office 365)		22%	56	C
Social networking/Web 2.0 (e.g., Facebook, Twitter)		33%	82	
Web conferencing (e.g., Skype, WebEx, ReadyTalk, Citrix Go to Meeting)		20%	51	

Source: "2012 Global Cloud Computing Survey Results", Connecting Up (compiled)

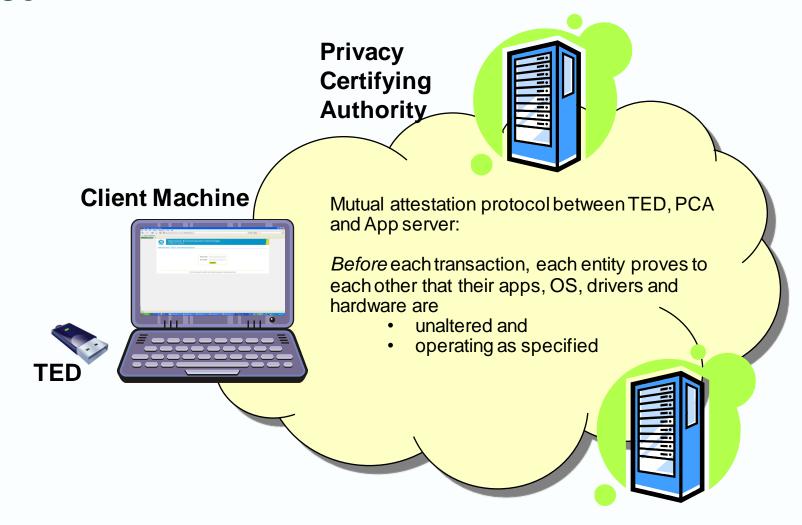








Trust



Application Server



Legacy applications in the cloud





Policy Compliance



Privacy Amendment (Enhancing Privacy Protection) Act 2012

No. 197, 2012

An Act to amend the law relating to privacy, and for other purposes



Privacy by Design

The 7 Foundational Principles

Ann Cavoukian, Ph.D.

Information & Privacy Commissioner Ontario, Canada

Privacy by Design is a concept I developed back in the 90's, to address the ever-growing and systemic effects of Information and Communication Technologies, and of large-scale networked data systems.

Privacy by Design advances the view that the future of privacy cannot be assured solely by compliance with regulatory frameworks; rather, privacy assurance must ideally become an organization's default mode of operation.

Initially, deploying Privacy-Enhancing Technologies (PETs) was seen as the solution. Today, we realize that a more substantial approach is required — extending the use of PETs to PETS Plus — taking a positive-sum (full functionality) approach, not zero-sum. That's the "Plus" in PETS Plus: positive-sum, not the either/or of zero-sum (a false dichotomy).

Privacy by Design extends to a "Trilogy" of encompassing applications: 1) IT systems; 2) accountable business practices; and 3) physical design and networked infrastructure.

Principles of Privacy by Design may be applied to all types of personal information, but should be applied with special vigour to sensitive data such as medical information and financial data. The strength of privacy measures tends to be commensurate with the sensitivity of the data.

The objectives of Privacy by Design — ensuring privacy and gaining personal control over one's information and, for organizations, gaining a sustainable competitive advantage — may be accomplished by practicing the following 7 Foundational Principles (see over page):

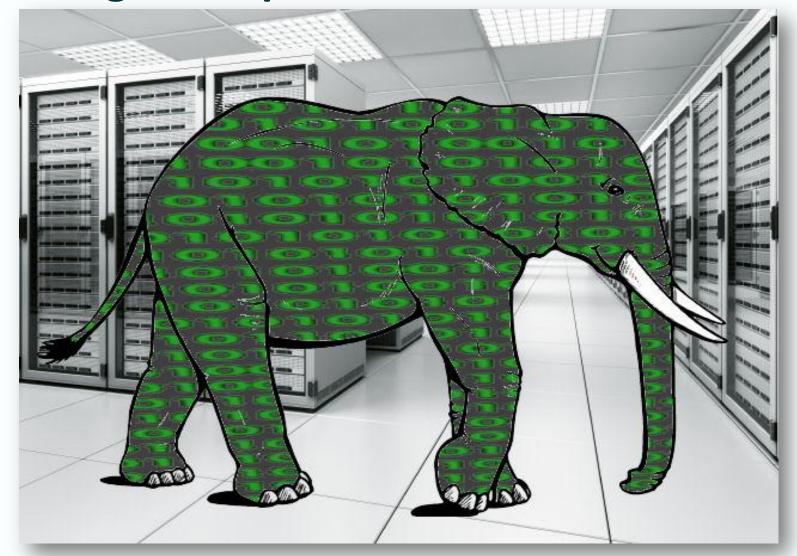




www.flickr.com/photos/29407791@N07/5980978603



The Digital Elephant in the Room





Provide guidelines and use cases where cloud", "public cloud" or some hybrid?	e it is appropriate to use "private		
	45%		
Provide education for the benefits of clo	ud services and training for those		
departments willing to move more Cloud	d based services 9%		
Mandate movement to cloud services at transition	nd provide funding for the		
	0%		
Clarify the scope and applicability of existing regulation on data sovereignty and data privacy as it relates to government 27%			
something else not listed above (please	comment) 18%		
11 total votes · Vote · Reload			

Source : Australia 3.0 Government Services Stream Roundtable "instant poll"





Standards Australia Distributed Application Platforms and Services (DAPS) Committee, known as the JTC1 SC 38 Mirror Committee (IT-038)



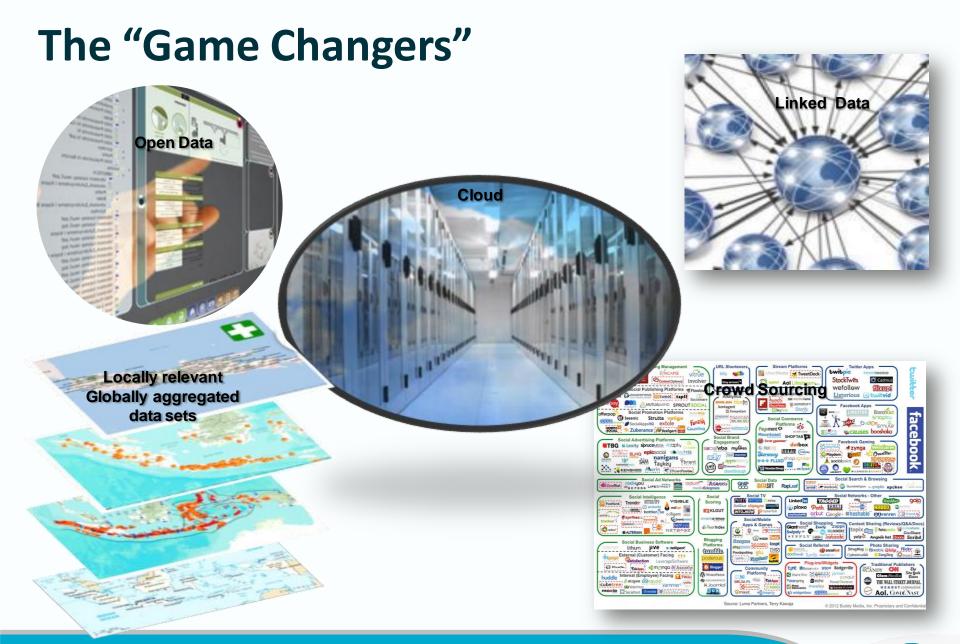
CSIRO's IM&T Storage and Compute Cloud (STACC) Program has been endorsed to develop internal research cloud services and supporting frameworks, to enable researchers to create, manage, scale and retire virtual research IT platforms, supported by self-help user interfaces and tools





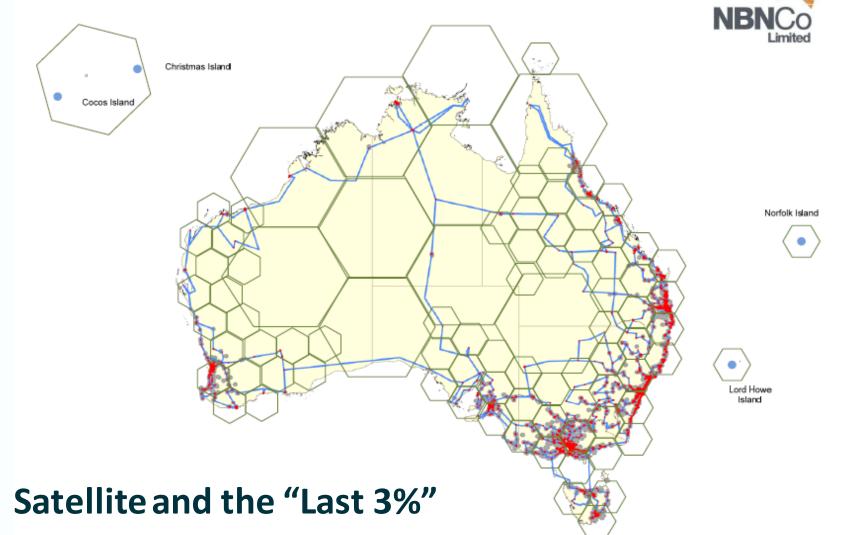
The opportunity







93% Fibre + 4% Wireless + 3% Satellite





One window on the Opportunity

Evidence based policy and decision support

- Analytics
- Optimisation



Service delivery transforma tion

- Services innovation
- Business process and business rules
- optimisation



- Wrapping the service provider
- around the customer
- Services personalisation





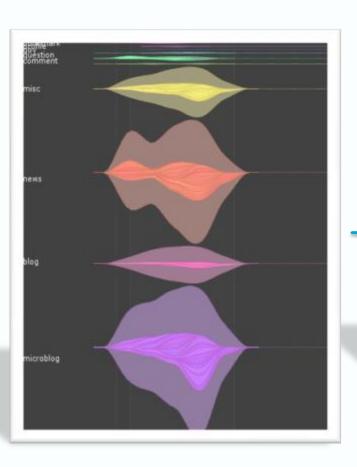
Information from data supports disaster management..

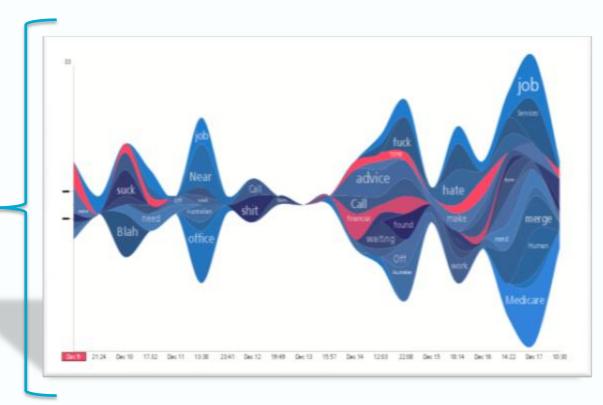




Engaging through social media

Closing the gap between the "1" and the "many"







Case Study Human Services Delivery

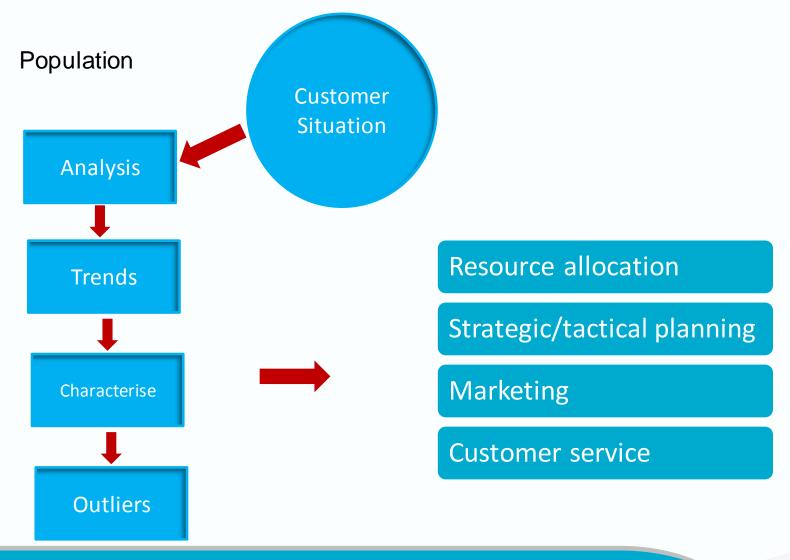


Customer Situational Awareness



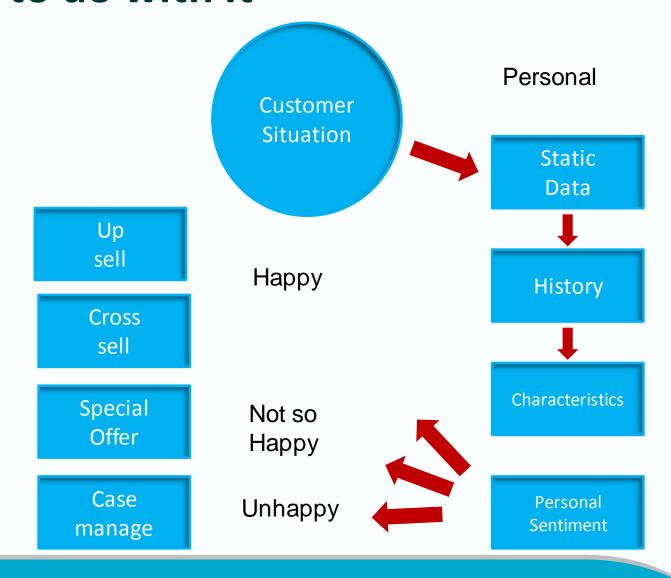


What to do with It





What to do with It



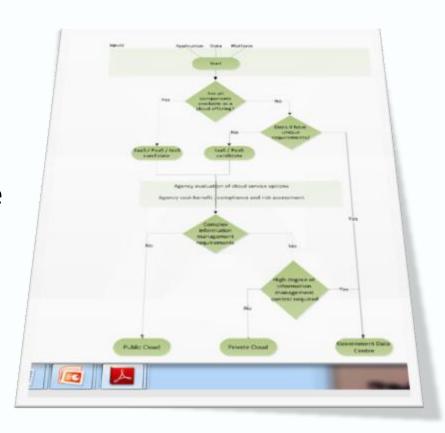


Conclusions



Conclusions

- Focus on Digital Maturity
- •Develop guidelines and use cases for Government agencies and for SME's where it is appropriate to use "private cloud", "public cloud" or hybrid
- Develop means to allow Australian companies to be part of the realisation of the national digital economy strategy



Analyse the benefits over time



Productivity isn't everything, but in the long run it is almost everything.

Paul Krugman, 1991 Professor Princeton University, Nobel Prize in Economics 2008

Digital Productivity and Services Flagship

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