

**INFORMATION  
INTEGRITY  
SOLUTIONS**



**THE UNIVERSITY  
OF AUCKLAND**

**BUSINESS SCHOOL**

# **Clearing the Fog: Effective Privacy Protection in the Age of Cloud and Big Data**

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**Information Integrity Solutions**

**Department of Commercial Law presentation**

**Auckland, 19 July 2013**

# About IIS

- Building trust and privacy through global thought leadership and consultancy work for a range of public and private organisations
- **Services:** privacy governance & strategy; privacy impact assessments and audits; regulator, customer & stakeholder engagement; identity management; privacy training.....



Australian Government



**Microsoft**<sup>®</sup>



**Commonwealth**Bank



ebay<sup>™</sup>

**CISCO**<sup>™</sup>

Google  
Singapore

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# Big Data is here



TOP SECRET//SI//ORCON//NOFORN

SPECIAL SOURCE OPERATIONS (TS//SI//NF) PRISM Collection Details

Current Providers

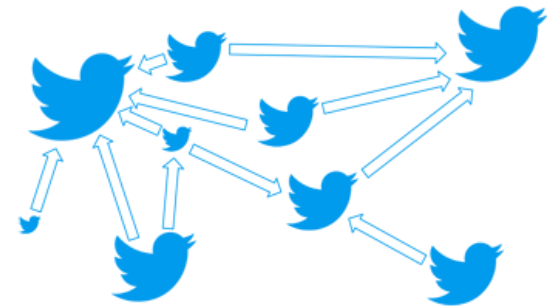
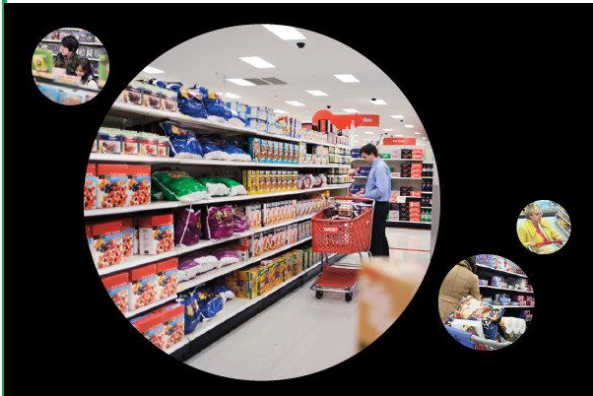
- Microsoft (Hotmail, etc.)
- Google
- Yahoo!
- Facebook
- PalTalk
- YouTube
- Skype
- AOL
- Apple

What Will You Receive in Collection (Surveillance and Stored Comms)? It varies by provider. In general:

- E-mail
- Chat – video, voice
- Videos
- Photos
- Stored data
- VoIP
- File transfers
- Video Conferencing
- Notifications of target activity – logins, etc.
- Online Social Networking details
- **Special Requests**

Complete list and details on PRISM web page:  
Go PRISMFAA

TOP SECRET//SI//ORCON//NOFORN



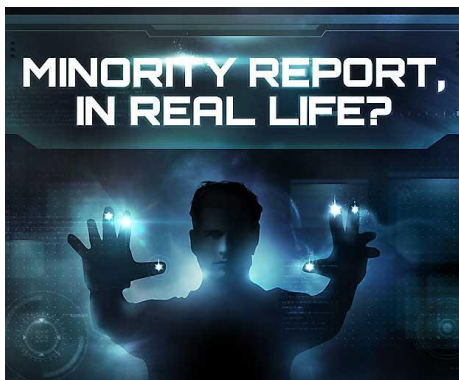
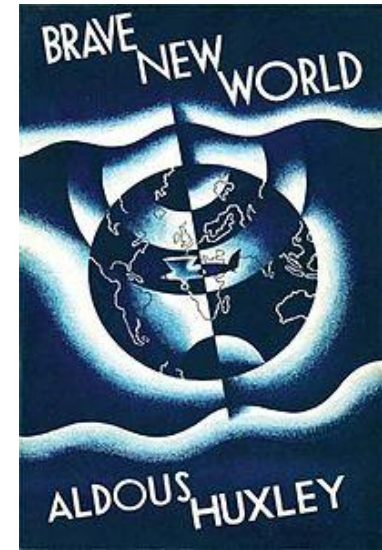
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# It's a brave new world

➤ Manipulation and conditioning

➤ Genetic determinism

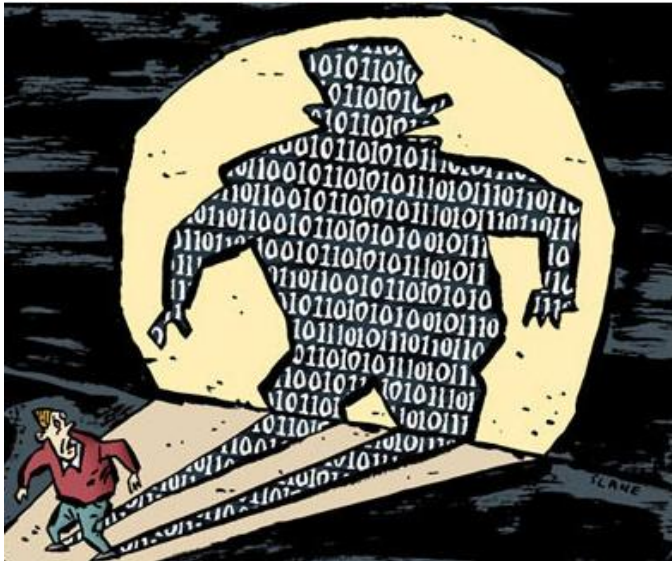
➤ Prediction and foreknowledge



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# It's a brave new world

➤ Is this the world we want to live in...



➤ ...or can we have our cake and eat it too?

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# Competing responses

I've got nothing to hide



Stop this ride!



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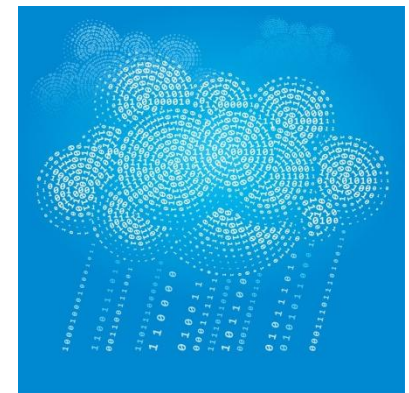
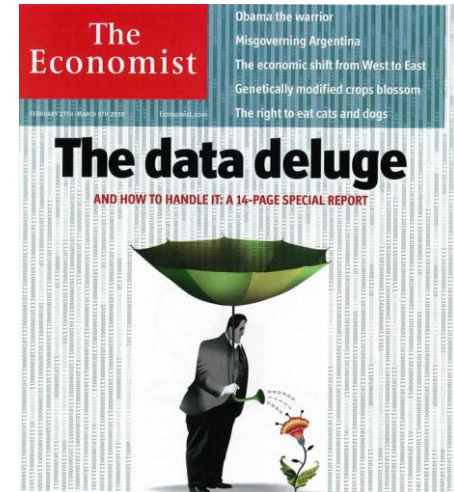
# Big Data: the reality

➤ It's here whether we like it or not

➤ Scale and speed

- Exponential growth of data
- Exponential growth computing power

➤ Cloud is the perfect facilitator



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# How Big Data works

➤ Massive data set



➤ Analytics

- Producing correlations → Discovery
- Making predictions → Application
- Probabilities, NOT certainties

➤ Implications

- “Big Data saves babies”
- “End of privacy as we know it”



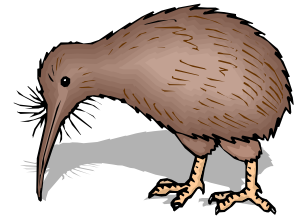
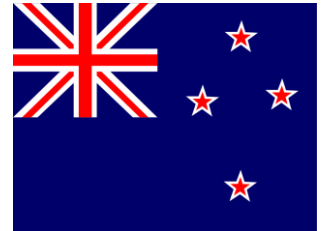
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# Big Data & Privacy Law

## Privacy Act 1993 (NZ)

- ★ **Personal information:** Information about identifiable, living people
- ★ **IPP 1:** Collection limitation of personal information
- ★ **IPP 2:** Personal information collected directly
- ★ **IPP 3:** Notice and transparency
- ★ **IPP 4:** Fair, lawful and non-intrusive collection
- ★ **IPP 5:** Storage and security of personal information
- ★ **IPPs 6 & 7:** Access to and correction of personal information
- ★ **IPP 8:** Accuracy of personal information to be checked before use
- ★ **IPP 9:** Personal information not to be kept for longer than necessary
- ★ **IPPs 10 & 11:** Limits on use and disclosure of personal information
- ★ **IPP 12:** Limits on use of unique identifiers



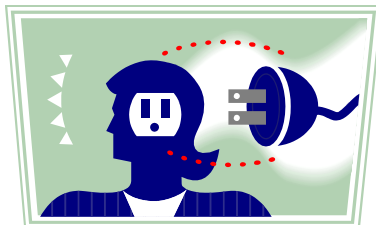
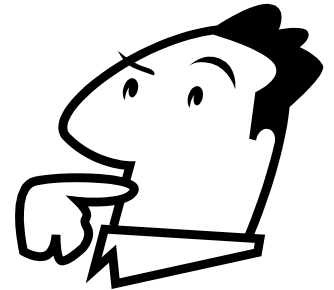
# Big Data & Privacy Law

1. Data collected for specified (and related) purposes 
  - Eg, improving existing processes, fraud detection
2. Data used for specified purpose beyond what the individual would reasonably expect, and informed consent is obtained 
  - Eg, behavioural advertising and profiling
3. The big growth area: 'unrelated' use of 'personal information' 

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# Conceptual challenges

- Where do we draw the line with 'personal information':
  - When anonymised information is becoming increasingly easier to re-identify?
  - When triangulation pinpoints individuals without using any specific pieces of personally-identifiable information?
- How do individuals obtain knowledge and exercise 'control' when their locations, transactions and likes are recorded 24/7 and the data is transferred instantly to third-parties around the world?
- What does it mean to have collection limitations if the greatest benefits arise from maximising the data pool?
- What does it mean to have use and disclosure limitations if the best ideas do not exist until the data is collected and analysed?



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# A new perspective

## TRADITIONAL APPROACH

Data actively collected with user awareness

Definition of personal data is predetermined and binary

Data collected for specified use

User is the data subject

Individual provides legal consent but is not truly engaged

Policy framework focuses on minimizing risks to the individual

## NEW PERSPECTIVE

Most data from machine to machine transactions and passive collection – difficult to notify individuals

Definition of personal data is contextual and dependent on social norms

Economic value and innovation come from combining data sets and subsequent uses

User can be the data subject, the data controller, and/or data processor

Individuals engage and understand how data is used and how value is created

Policy focuses on balancing protection with innovation and economic growth

*World Economic Forum, 'Unlocking the Value of Personal Data', February 2013, p 7.*

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# A new perspective

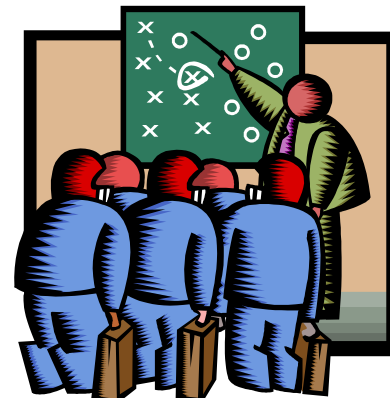
➤ Shifting from “Have certain processes been met?” to “Are individuals well-served?”

- [Some notice and consent, where appropriate](#)
- Clever use of defaults
- Well-designed user interfaces



➤ The problem has been solved in the past...

- [The 4As framework](#)



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# The 4As framework

- Developed by the Office of the Privacy Commissioner, Australia (now OAIC)
- Guide to decision-making in relation to potentially intrusive powers and practices
- Critically depends on **good governance**

## 1. **Analysis** – Is this OK? What safeguards are needed?

- Privacy Impact Assessment
- Privacy by Design
- Consultation
- Leadership



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# The 4As framework

## 2. Authority – Doing the right thing



- Legislation?
  - Strictly defined, prescribed – inflexible, can be broken by bad people, good guys can make mistakes
- Conditionality?
  - Individual control and consent – problems outlined above
- Infrastructure?
  - Cabinets, passwords, encryption – with enough effort, any system can be broken, good guys can make mistakes
- Guidelines?

# The 4As framework



- A medical ethics approach to authority:
- **Autonomy** – Companies should respect the privacy and choices of the individual
  - **Justice** – Companies should act fairly, be transparent in their dealings and responsive to the individual
  - **Beneficence** – Use of the personal information should provide some sort of benefit for individuals
  - **Respect** – Companies have never ‘owned the customer’ and never will
  - **Non-maleficence** – Beyond obvious misuse, companies must be careful to prevent unintended exposure as well as use that may result in discrimination





# The 4As framework

## 3. **Accountability** – Ensure that the right thing is *being done*

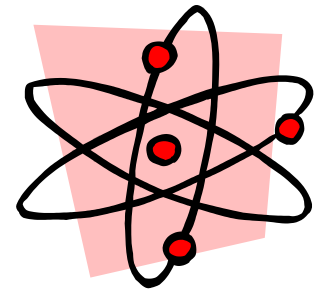
- Internally – leadership, policies and procedures, training, rules, sanctions
- Externally – independent oversight, audit, enforcement



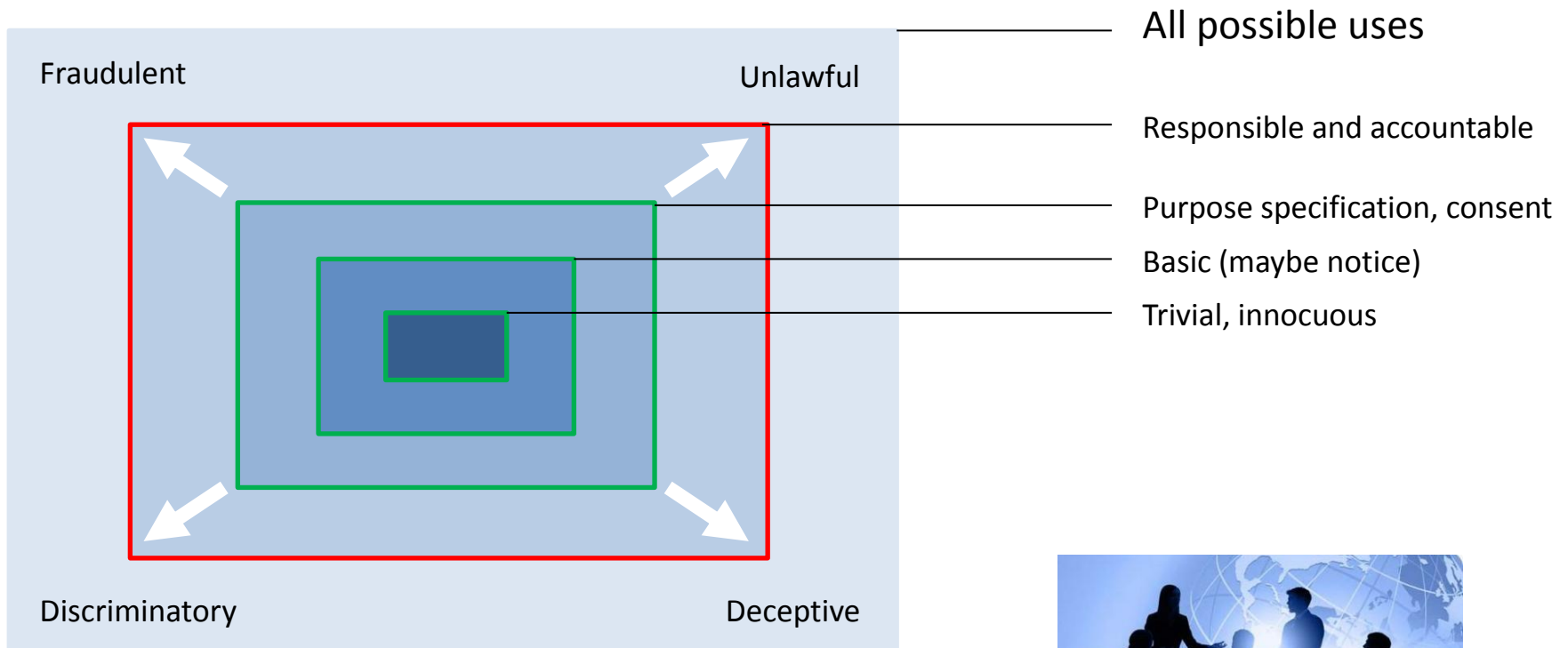
# The 4As framework

## 4. Appraisal – Have things been working and what, if anything, needs to change?

- All systems degrade over time (2<sup>nd</sup> Law of Thermodynamics)
  - Mistakes, errors and maleficence
  - People get old and move on
  - Systems and infrastructure age and decay
  - Governance also degrades
- Respond to new conditions (eg, technology, environment, etc)



# A possible way forward



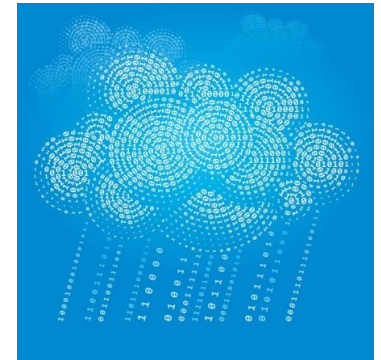
- Credible decision-making process expands the scope of permissible uses
- Governance is key



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# Conclusion

- Big Data is here
- Big Data is going to change things
- Current law will have trouble keeping up
- New perspective is needed
- Governance and the 4As framework: oldies but goodies



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# Questions?

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