PITCHER PARTNERS

RUSSELL KENNEDY
MEMBER OF THE KENNEDY STRANG LEGAL GROUP

Green ICT

Implementing environmentally friendly ICT practices

26 February 2008

PITCHER PARTNERS

RUSSELL KENNEDY
MEMBER OF THE KENNEDY STRANG LEGAL GROUP

Welcome

- (8:00am) Paul Engelman – Why go green?
- (8:05am) Kent Davey – ICT contract provisions for environmental purchasing and electronic record keeping
- (8:45am) Frank Zahra – Understanding and minimising an organisations environmental footprint
- (9:25am) Paul Engelman – Where do you start?
- (9:30am) Morning Tea

The facts

- Globally ICT generates 2% of the worlds carbon emissions (Gartner)
- Australia's carbon emissions total 522.2 million tonnes annually (National Greenhouse Gas Inventory)
- In Australia, ICT generates carbon emissions of 7.94 million tonnes (or 1.5%) per year (ACS study)

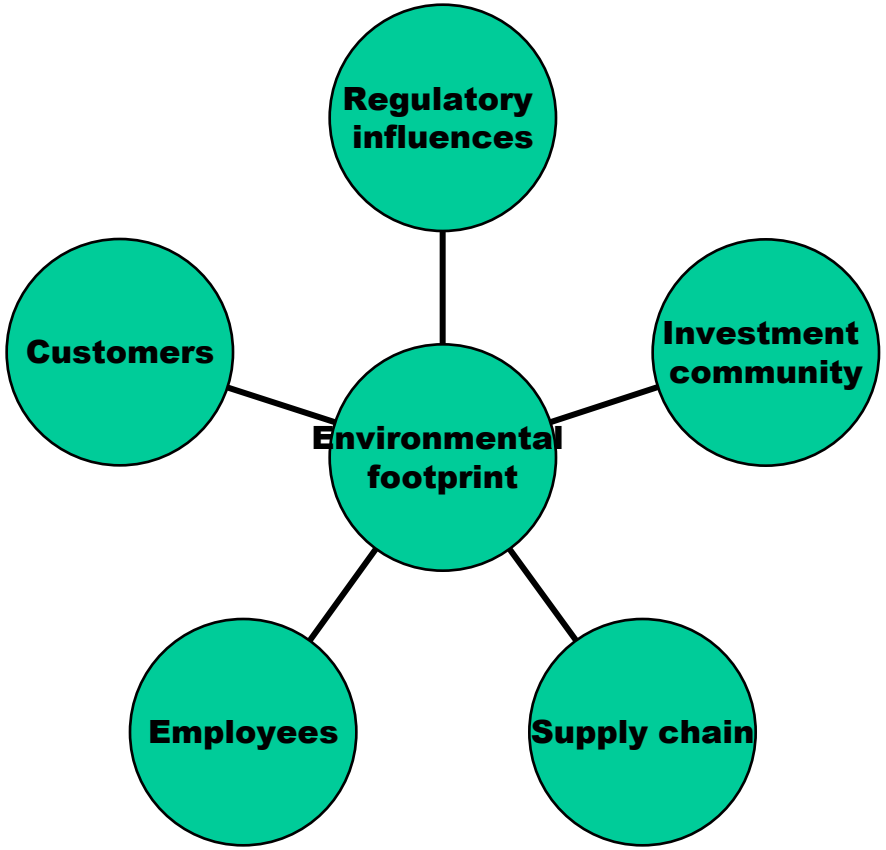
Australia only has 0.3% of the worlds population yet produces 1.5% of global carbon emissions (VicSuper Carbon Count)

Gartners top 10 Strategic Technologies for 2008

- Green IT
- Unified communications
- Virtualisation

The drivers, challenges and benefits

Drivers:
- Measurement/disclosure
- Regulation of emissions
- Taxation of emissions
- Trading schemes
- Social responsibility
- Sustainability
- Generational influences
- Cost savings



Challenges:
- Carbon regulation will incorporate tracking of emissions from diverse sources.
- Lack of market pricing for carbon
- No real reporting standards or comparisons

Benefits:
- Reduction of GHG's, carbon emissions
- Increased use of recycled material
- Overall reduction in utilisation of natural resources
- Reduce energy consumption & costs
- Reduce disposal costs
- Comply with impending regulatory, monetary and trading schemes
- Enhance reputation and appeal to socially responsible customers, suppliers, employees and investors
- Attract investment

What does a CIO actually think about this?

- IBM and ACA research study (September 2007)
- 104 IT managers/directors, large Australian enterprises (>500 employees)

- 61% have environmental policy/strategy
  - Mostly focussed on equipment disposal & reducing energy consumption

- 65% unaware of their energy usage
- 36% believe reduction of GHG's from ICT is high priority

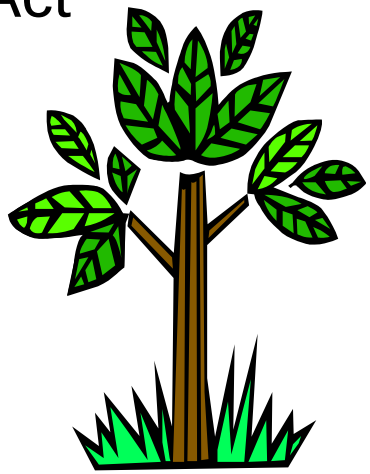
- Primary drivers for tackling emissions:
  - Genuine concern for the environment
  - Enhanced corporate reputation
  - Rising energy costs

ICT contract provisions for environmental purchasing and electronic record keeping

- Kent Davey

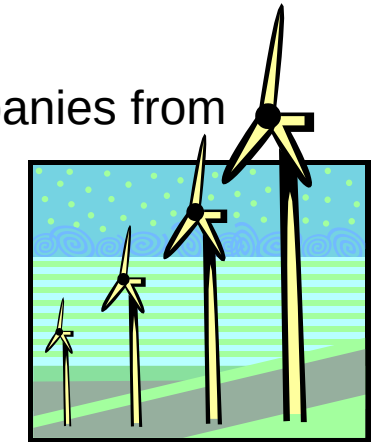
Overview

- National Greenhouse and Energy Reporting Act
- Government procurement policies
- Environmental purchasing checklist
- ICT contract provisions for environmental purchasing
- Electronic record keeping



National Greenhouse and Energy Reporting Act 2007

- Commenced 29 September 2007
- Establishes single, national framework for reporting by companies from July 2008 on:
  - Greenhouse gas emissions
  - Energy production
  - Energy consumption



- Foundation for Australian Emissions Trading System to commence no later than 2010
- Commonwealth Department of Climate Change:
  - National Greenhouse and Energy Reporting System Regulations Policy Paper (February 2008)

National Greenhouse and Energy Reporting Act 2007 (cont'd)

- Mandatory reporting for companies which exceed following thresholds:

	2008/09	2009/10	2010/11+	Facility
Greenhouse Gas Emissions	125 KT (1000 T)	87.5 KT	50 KT	25 KT
Energy Produced	500 TJ (10^{12} J)	350 TJ	200 TJ	100TJ
Energy Consumed	500 TJ	350 TJ	200 TJ	100TJ

National Greenhouse and Energy Reporting Act 2007 (cont'd)

- Companies will be able to register from 1 July 2008
- Registration mandatory by 31 August following trigger year
- Reporting mandatory by 31 October following trigger year
- Estimated that 700 medium & large companies will be required to report

Victorian Government

- Environmental Purchasing Policy requires that all Departments:
  - include *environmental considerations* in:
    - procurement planning
    - tender specifications
    - tender evaluation
  - consider options to *reduce environmental impact* under:
    - WoVG contracts
    - OSOAs

Commonwealth Government Procurement Guidelines

- Recognise that v*alue for money* is enhanced by promoting efficient, effective & ethical use of resources:
  - e.g. consider energy consumption, disposal costs

Scenario: Green Co Pty Ltd Computer Supply & Support

- Green Co Pty Ltd (**Green Co**) wishes to replace its ageing desktop computers
- Green Co has issued an RFT for the supply & support of replacement desktop computers
- Green ICT Pty Ltd has responded to the RFT offering to supply & support replacement desktop computers

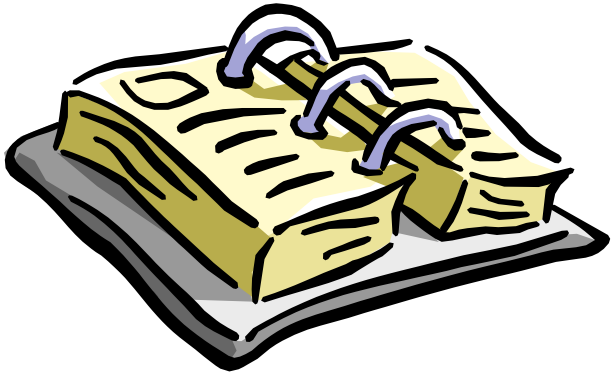
Environmental Purchasing Checklist for Computers

- Tender information required from suppliers:
  - Confirmation that Energy Star compliant
  - Ability to upgrade
  - % of remanufactured / recycled components
  - Ability to return at end of lifespan for recycling
  - Types of packing used for delivery
  - Noise level during operation
  - Weight

(Commonwealth Department of the Environment, Water, Heritage and the Arts – www.environment.gov.au)

ICT Contract Provisions for Environmental Purchasing

- ICT Product Warranties
- ICT Product Recycling & Upgrades
- ICT Service Warranties
- Environmental Management System
- Parties' Meetings & Communications



ICT Product Warranties

- **Energy Star:** Product is Energy Star compliant
- **Power:** Product complies with specified power consumption rates in different modes
- **Upgradeable:** Product can be upgraded

ICT Product Warranties (cont'd)

- **Components:** Product is made up of specified % of remanufactured / recycled components
- **Recycling:** Product is designed to allow recycling at end of lifespan
- **Specifications:** Product otherwise complies with its specifications (e.g. weight, noise)

ICT Product Recycling & Upgrades

- **Recycling:** Supplier will accept return of product for recycling at end of lifespan if requested by customer

- **Upgrades:** Supplier will upgrade product if required by customer

ICT Service Warranties

- **Products:** Equipment / products used in supply of services will comply with environmental specifications
- **Legislation:** Services will comply with applicable environmental legislation (e.g. hazardous substances legislation)
- **Specifications:** Services will otherwise comply with their specifications

Environmental Management System

- **Environmental Management System**: Supplier must have an environmental management system which complies with AS/NZS ISO 14001:2004

- **Environmental Policy Compliance:** Supplier must comply with its Environmental Policy

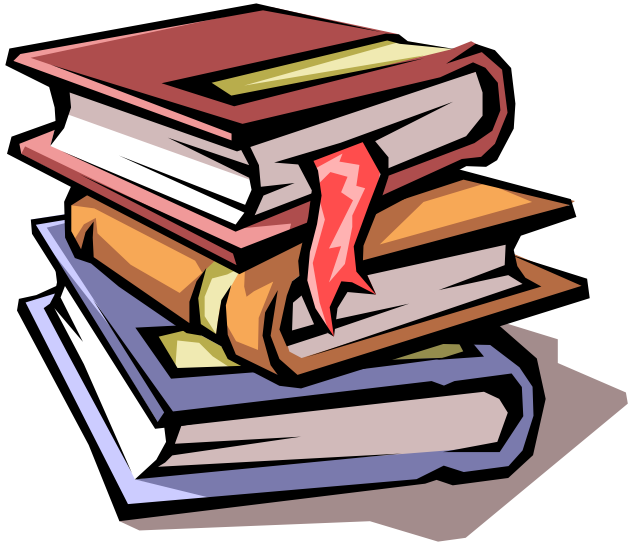
Parties' Meetings & Communications

- **Meetings:** the parties may meet by teleconference / video conference where appropriate

- **Communications:** Notices may be given electronically where appropriate

Electronic Record Keeping

- Electronic Transactions Laws
- Company Financial Records
- Tax Records
- Court Evidence



Electronic Transactions Laws

- **Commonwealth:** *Electronic Transactions Act 1999*
  - Commonwealth legislation
- **Victorian:** *Electronic Transactions (Victoria) Act 2000*
  - Victorian legislation & common law

Electronic Transactions Laws (cont'd)

- **Retention of Electronic Information:**
  - Reasonable to expect electronic information readily accessible in future
- **Retention of Electronic Documents**:
  - Method of generating electronic document reliable means of assuring integrity of document information
  - Reasonable to expect electronic document information readily accessible in future

Company Financial Records

- *Corporations Act 2001* (Cth) s 286
  - Requires companies to keep "written" financial records for 7 years

- Companies may keep financial records electronically provided:
  - Method of generating electronic document reliable means of assuring integrity of document information
  - Reasonable to expect electronic document information readily accessible in future

  (*Electronic Transactions Act 1999* (Cth))

Tax Records

- *Income Tax Assessment Act 1936* (Cth) s 262A
  - Person carrying on a business must keep records that explain all transactions
- *Acts Interpretation Act 1901* (Cth) s 25
  - "Record" includes information stored or recorded by means of a computer

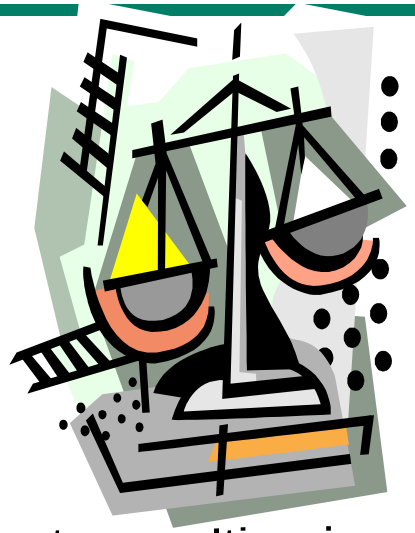
Electronic Tax Records

- *Taxation Ruling 2005/9* recognises storage of paper records in electronic form provided:
  - **Data Quality:** true & clear reproduction
  - **Data Integrity:** not be able to altered
  - **Accessibility:** readily accessible by Tax Office
  - **Retention:** retained for statutory period (generally 5 years)

Electronic Tax Records System

- *Taxation Ruling 2005/9* recognises use of an electronic record keeping system provided:
  - **System Documentation:** entire system must be documented
  - **Data Integrity:** secure from unauthorised access & alteration
  - **Accessibility:** readily accessible by Tax Office
  - **Retention:** retained for statutory period (generally 5 years)

Court Evidence



- **Original Hardcopy Documents:**
  - Best form of evidence at common law
  - Highest evidentiary weight
- **Electronically Imaged Documents:**
  - Usually admitted unless disputed by other party resulting in need for authentication (e.g. evidence as to data quality, integrity)
  - May have lower evidentiary weight subject to authentication evidence

Court Evidence (cont'd)

- **Computer Generated Documents:**
  - Victorian *Evidence Act 1958* s 55B – document admissible if establish following conditions:
    - Computer which generated document used to regularly store / process information for regular activities during period
    - Kind of information in document regularly supplied to computer during period
    - Computer operating properly during period
    - Information in document derived from information supplied to computer

Court Evidence (cont'd)

- **Computer Generated Documents**
  - Commonwealth *Evidence Act 1995* s 147 – presumption document authentic if:
    - Document produced for business purposes (includes purposes involving government activities)
    - Computer used at time for business purposes

Court Evidence (cont'd)

- Steps to assist with admissibility / authentication of electronic documents:
  - Record details of process used to produce documents (including operator & date)
  - Prepare & maintain system documentation
  - Document & implement authentication (e.g. PKE) & security procedures
  - Record details of system access, operation & maintenance
  - Record details of information supplied to system
  - Require witnessing of all signed documents where practicable

Conclusion

- Consider obligations under *National Greenhouse and Energy Reporting Act 2007* (Cth)
- Include appropriate provisions in ICT contracts for environmental purchasing
- When keeping electronic records comply with electronic transactions laws and specific laws / regulatory requirements (e.g. Tax Ruling 2005/9)
- Take steps to assist with admissibility / authentication of electronic documents

Questions?

PITCHER PARTNERS

RUSSELL KENNEDY
MEMBER OF THE KENNEDY STRANG LEGAL GROUP

Understanding and minimising an organisations environmental footprint

- Frank Zahra

Understanding and minimising an organisations environmental footprint

- From Holistic View
- Set internal recycling goals and objectives
- Buy energy efficient equipment
- Purchase recycled IT equipment
- Set power consumption guidelines
- Reduce water and solid waste generation

Greenhouse gases (GHG's)

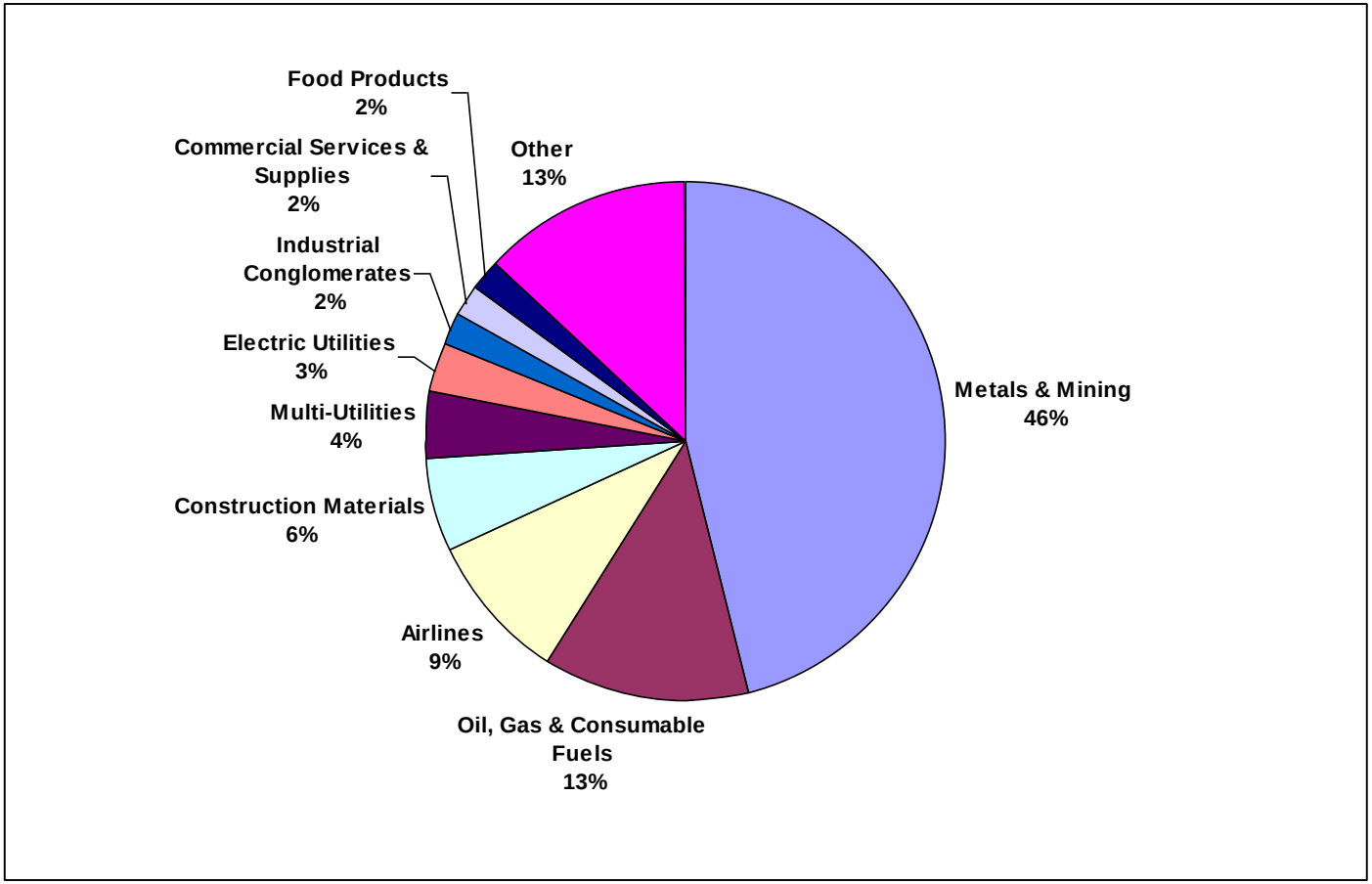
- Direct – Use of fuel/combustion, generating GHG's from company controlled processes (this is relatively low for organisations based on an office environment).

- Indirect – Arising from the supply of goods and services to the organisation through the supply chain.

  - Tier 1 – Those from direct suppliers (e.g. electricity, staff airline travel, outsourced logistics providers)

  - Tier 2 – Those from indirect suppliers (e.g. fossil fuel extraction costs)

Largest GHG emitting sectors (Co2) (ASX200)



Source: Vic Super Carbon Count

How do you measure the footprint?

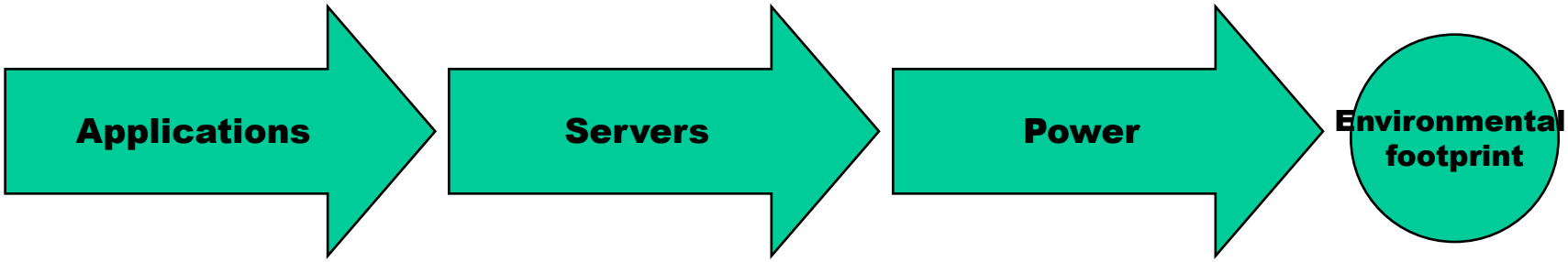
- From a practical perspective in ICT terms:
  - Electricity usage;
  - Paper and printing costs (including disposal);
  - Equipment recycling and disposal costs.

How can you reduce your footprint?

- Overall measures:
  - Rationalise and consolidate where possible;
  - Reduce daily reliance on paper and hard copy;
  - Focus on electricity minimisation.

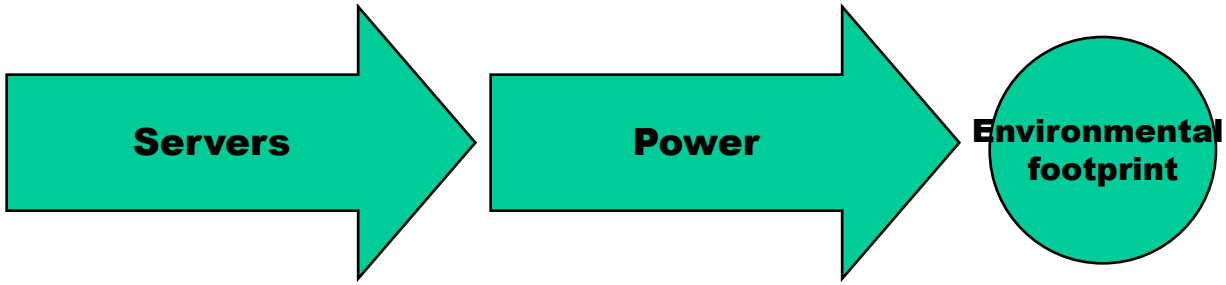
Applications

- Rationalise and consolidate where possible;
- Less applications used means less servers required leading to lower power requirements.



Servers

- Rationalise, consolidate and virtualise where possible;
- Less physical servers means less cooling and power requirements;
- Consider outsourced data centre housing to “share” cooling and power requirements as well as increase data centre processing utilisation (Note: “Blades” require 10-15 times more power than traditional servers).



Desktop and notebooks

- Maximise use of recyclable components;
- Thin client based technology;
- Energy efficient monitors.
- TV and monitors use similar technology – Producer Responsible Organisation to manage end of life disposal.

Power management policy

- Active directory based settings to force minimised consumption during periods of inactivity;
- Software to automatically turn-off and turn on computers as required.
- Turn processor based power management ON for efficient utilisation of processing.

Paper reduction

- Fax to e-mail;
- Storage area networking;
  - High and low availability disk management.
- Archiving and content management.
- Paper and consumables efficiency;
  - Recyclable.
  - Forced duplex / multiple page print.
  - Consumables re-use arrangements.

Convergence

- VOIP;
  - Single infrastructure layer for voice and data.
- Multi-function devices;
  - Print.
  - Scan.
  - Copy.

Establishing & maintaining an environmental policy

- Determine your carbon footprint.
- Set your organisations environmental goal.
- Commitment to applicable legal requirements.
- Document / implement / maintain.
- Communicate internally / externally.
- Review objections / targets annually.
- Longer term – planned internal audit reviews.

Questions?

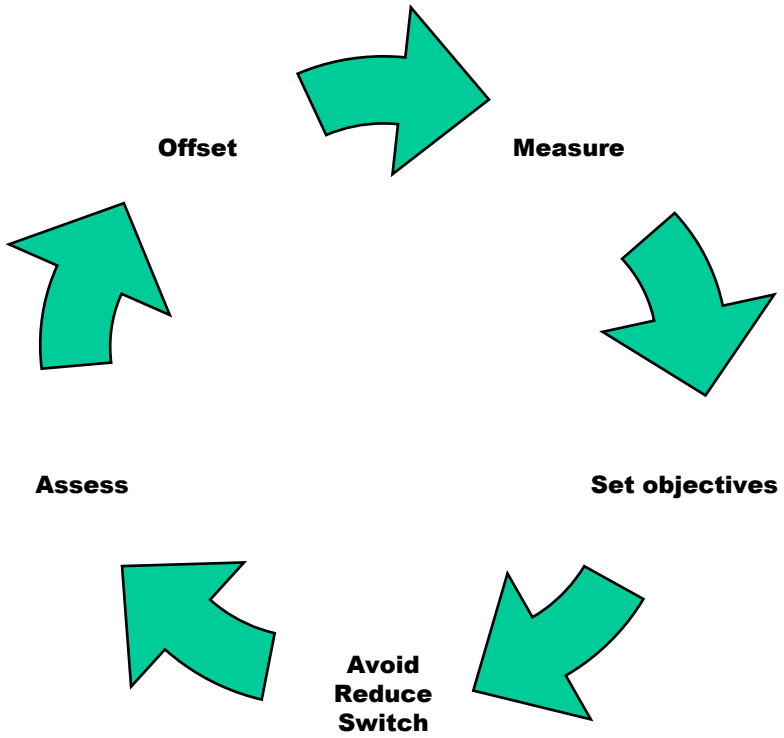
What have we heard today?

- The drivers are here now
- The regulations are coming
- Everyday legal aspects need to be considered
- Practical ICT measures can be undertaken

The appropriate use of ICT can provide a significant contribution to GHG reductions

Where do you start and how can you maintain it?

Where do you start?
1. Identify IT assets
2. Profile consumption
3. Model scenarios



Sources:
1. VicSuper Carbon Count
2. EPA Victoria Draft Carbon Management principles

Case study - News Limited

- Goal to be carbon neutral by 2010
- In the year to June 2006 generated 146,166 tonnes of carbon emissions
- Intends to cut carbon emissions by 20% over next 3 years (saving 30,000 tonnes per year)
- Will be making serious & sustainable changes to its business and providing employees with incentives to cut emissions
- Implementing a Green Procurement Policy encouraging business partners to address their own carbon footprints

PITCHER PARTNERS

RUSSELL KENNEDY
MEMBER OF THE KENNEDY STRANG LEGAL GROUP

Thank you