

Australian experiences in improving environmental performance

The business and government agency
framework



The world will not evolve past its current state of crisis by using the same thinking that created the situation

Albert Einstein



ecomapping®



As a business person what could I do?

Carthew Corporation Pty Ltd



Roger Carthew, June 2007

The Picture



AUSTRALIA

N

- Free open markets with a strong focus on price
- Tendency away from legislated measures toward voluntary compliance
- Growing awareness of Climate Change as a driver
- Minimal preparedness within government to put money into leadership projects



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espace
DECO & PRINT





Products

Roger Carthew, June 2007

My actions...

1. Engaged in research



My actions...

1. Engaged in research



2. We began to re-invent the wheel



My actions...

1. Engaged in research



2. We began to re-invent the wheel



3. We had an aversion to ISO



My actions...

1. Engaged in research



2. We began to re-invent the wheel



3. We had an aversion to ISO



4. We discovered

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MBWA

Management

By

Walking

Around

We can all do it...



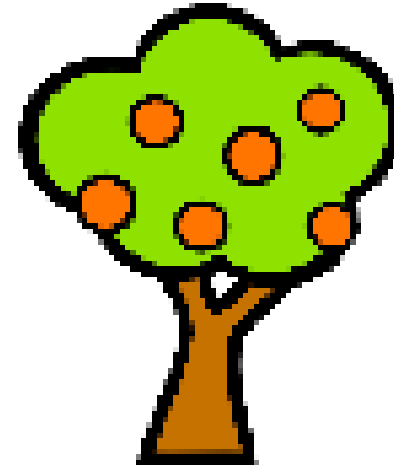
...it is simple



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Our Journey at Carthew Corporation

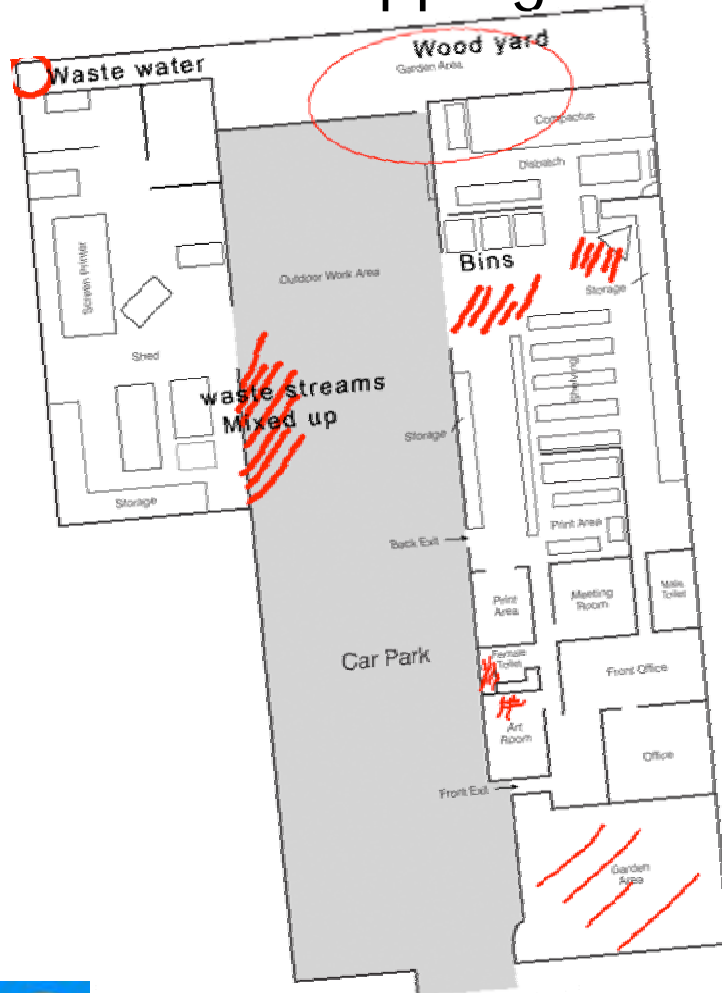
- Pre 2007... no formal structure and method
- Commencement of 2007 using ecomapping and the add-on module of ISOEasy



The results so far....



Baseline Assessment - Ecomapping



ecomapping

<input type="checkbox"/> Urban situation	<input type="checkbox"/> Air, odours, noise and dust Risks
<input type="checkbox"/> water	<input type="checkbox"/> Soil
<input type="checkbox"/> Energy	<input type="checkbox"/> Waste
<input type="checkbox"/> Initial review	<input type="checkbox"/> Annual review

4.3.1. Problems, practices and impacts

- *Waste water sump-water from screen washing, Shed rusted, possible pollution
- *No collection of rainwater from guttering possible for rainwater tank
- *Pollution of stormwater-outdoor work area
- *code of practice vacuum everyday, Rack on drain, gutter guards
- *Watering programme

4.3.2. Environmental legislation

- *water works Act 1929 to establish the laws of solvent laced water disposal into the sump and down the drains
- *Sewage Act 1929

4.5.1. Indicators, data and measures

- *Decrease the amount of screen printing by 2010
- *OR Improve procedures
- *Install fans in screen printing shed
- *Installation of rainwater tank/drip watering system
- *Implement cleaning roster within woodyard & carpark
- *Ask council to install litter rack on storm water drain

4.3.3. Objectives and targets for the year 2007

- *minimise screenprinting by 2010
- *Prevent debris from entering storm water
- *Collect storm water from guttering in rainwater tank by 2008
- *Use rainwater tank for toilets garden & screen washing?
- *Clean out sump

ecoplanning

N°	4.3.3. Environmental action programme	4.4.1. Resp	End date	Forecasted budget
1	*Investigate & implement alternative to screen printing	Roger		
2	*Post up roster for cleaning		18/01/2007	
3	*Ask waste disposal company to pump out sump	Kylie, Deidree		
4	*Get waste disposal co to pump out sump	Deidree		
5	*Investigate funding from council for rainwater tank	Deidree		
6	*Ask SA Wat er to identify where drain empties	Deidree	6/02/2007	
4.4.2. Trainings		# of participants	Date	Duration
Date : 30/11/2006		Name & signature :		Update Nbr :



Roger Carthew, June 2007

YOUR EMS "FLIGHT PLAN"

Policy

ISO EMS Requirement 4.2

Ecomaps
Urban air, odour, noise & dust waste risks water soil energy

Targets
Action plans

Requirement 4.3.1 ⇒ 4.4.2

Weather map

ISO EMS Requirement 4.3.1

Responsibilities matrix
Drivers licence

EMS Requirement 4.4.1

Informal Operation controls
Visual/Oral

EMS Requirement 4.4.6

Manual
ISO routines

EMS Requirement 4.4.4

Ecolog book

EMS Requirement 4.5.4

Quick check

EMS Requirement 4.5.1 ⇒ 4.5.5

Control panel
Environmental review

EMS Requirement 4.6

Material flows
The measurement of resources used & output/yr

EMS Requirement 4.3.1

Competency matrix

ISO EMS Requirement 4.3.1

Flipo

EMS Requirement 4.3.1



PLAN

DO

CHECK

ACT

MY ENVIRONMENTAL LICENCE



Name: Aisha Lelic

Position: Graphic Designer/Sales

My Environmental objectives for 2007

To inform internal & external contacts about the environmental management in our company.
Maximise use of materials printed on, in order to minimise waste by 50%.
Reduce energy consumption by 20%.

Signature

Carthew Corporation PTY. LTD.

See over for my responsibilities within the environmental management system

My responsibilities within the environmental management system:

- *To collaborate with Cheryl, Ben, Deidree & Kylie in Internal and External communication.
- *Report any environmental issues/events to Deidree or Kylie.
- *To follow the environmental code of practice in order to enable Carthew Corporation to become environmentally compliant
- * collaborate with all staff on organising preventive and corrective actions
- *Collaborate with Kylie to record & organise environmental documentation.
- *Ensure waste is disposed of in appropriate bins.
- *Clean up at the end of each working day.

Carthew Corporation PTY. LTD.

MY ENVIRONMENTAL LICENCE



Name: Cheryl Cornell

Position: Production Manager

My Environmental objectives for 2007

Maintain & improve on standard environmental practices.
To inform internal & external contacts about the environmental management in our company.
To ensure that Emergency & OH&S procedures are set in place.
Reduce landfill waste by 50%.
Reduce energy consumption by 20%.

Signature

Carthew Corporation PTY. LTD.

See over for my responsibilities within the environmental management system

My responsibilities within the environmental management system:

- *Collaborate with Roger, Deidree & Kylie to maintain & revise environmental procedures.
- * Collaborate with Roger, Deidree, Kylie and other staff members on:
 - Setting objectives and targets within the development of an environmental management programme.
 - Identify and organise training where applicable
 - Manage internal and external environmental communication
 - Develop codes of conduct and precise instructions
 - Organise preventive and corrective actions
 - Evaluation and review of the EMS
- *To collaborate with Aisha, Ben, Deidree & Kylie in Internal and External communication.
- *Collaborate with Peter Ben, Deidree & Jill to prepare emergency procedures & assist Daniel with creating signage.
- *Report any environmental issues/events to Deidree or Kylie.
- *To follow the environmental code of practice in order to enable Carthew Corporation to become environmentally compliant.
- *Ensure waste is disposed of in appropriate bins.
- *Clean up at the end of each working day.

Carthew Corporation PTY. LTD.



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The Reporting System

- Photographic
 - Before
 - After
- The Metrics
 - Comparative

In SMEs 50% of poor environmental performance is from bad house-keeping



- Before



- After



- Before



- After



- Before



- After



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- Before



- After



Investment: \$30,000

Capacity 4,500KwH p.a.

CO2 Emission reduction: 4.5 Tonnes annually



The first in Australia and the Southern Hemisphere

Printing large format digital powered by our own solar panels



Manufacturing Processes have Changed

Technology has assisted
with an environmental
benefit



To print



car stickers

(a) Screen printing



= 18 Steps

To print



car stickers

(b) Digital printing



+



+



= 3 Steps



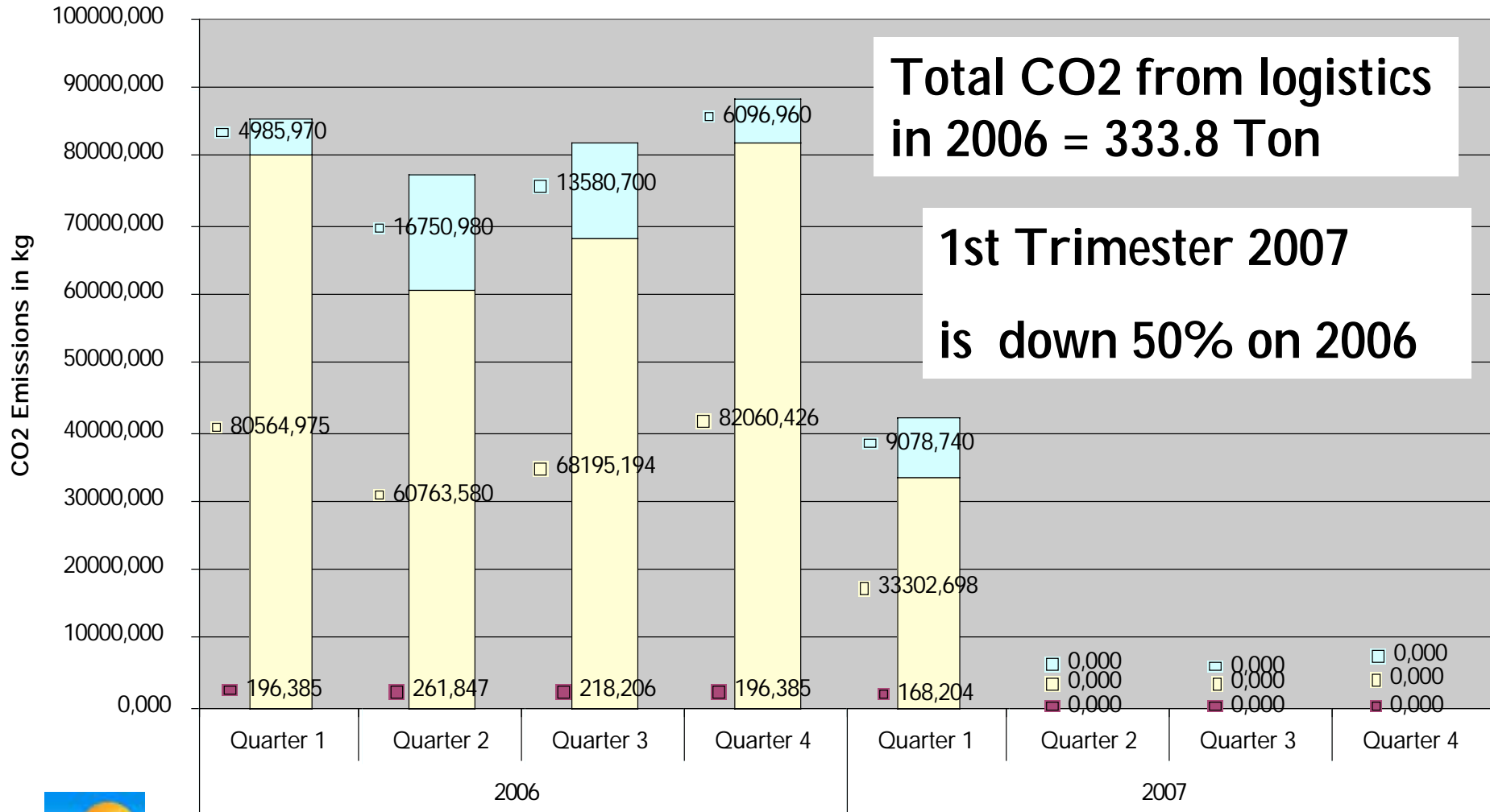
Some Performance Indicators

First Trimester 2007

- Electricity Use ↓ 6%
- Chemical Use in Screen Making ↓ 30%
- Water Usage ↓ 50%
- VOC Emissions ↓ 75%
- CO2 Emissions for Staff travel to work: 10.75 T



Transport of goods - CO2 Emissions



■ CO2 created-Local (outputs)
 ■ CO2 created-Domestic (outputs)
 ■ CO2 created-International (outputs)

**As you think,
so you shall become**

**Bruce Lee,
1940 -1976**




In Australia...

Growing Awareness

- The need for environmental performance improvement
- The benefits to be gained from transparency in reporting business performance
- A community expectation of environmental responsibility
- An expectation for business to begin to deliver those improvements



ISO in Australia

- Australia in 2005 recorded a  of 6.3%
- Compares with international  of 24%

Source:ISO Survey Certifications, www.iso.org, 4/6/2007



EMAS Globally

- Uses an environmental standard familiar to my European trading partners
- Promotes environmental improvement
- Improves Transparency

roger@carthew.com.au

