

# Productivity through Resource Efficiency

## Forums / Guest speakers.

During the year we will be hosting speakers on topics related to resource efficiency. In the first program speakers such as Paul Tebo were featured. Sustainability Victoria have access to a range of experts, either based in Australia or visiting who we may have an opportunity to feature in Geelong.

If you know of someone who would be an interesting guest speaker on this topic, please let us know and we can check on their availability.

*Timing: We anticipate holding events every quarter.*

## Why you should be involved.

Many companies have already recognised the benefits of collaboration in aspects of their operations. This can be done through non-competing industries sharing aspects of what they are doing in relation to waste management, resource efficiency and energy savings etc.

In Geelong we have found that this type of learning works well and also makes things interesting and topical. Cross industry learning opens up the possibility of employing new 'outside the box' thinking to what may be a longstanding problem. In many cases it is likely that other industries have dealt with similar issues and developed solutions.

Geelong Manufacturing Council in conjunction with Sustainability Victoria is conducting a program to assist manufacturers to reduce material usage as part of their manufacturing activities.

## Godfrey Hirst - Case Study 1

Geelong carpet manufacturer Godfrey Hirst is living proof that the manufacturing industry has a sustainable and profitable future.

During the last 10 to 12 years the business which employees nearly 800 employees has been evolving to become a more efficient, cleaner and far less wasteful producer and is reaping rewards of doing so. By investing in more efficient machinery, the business now uses less power, less water and bins less waste. For example, Godfrey Hirst is also very dependent on water for cooling machinery. It uses about 130 litres an hour. Now it has introduced a system that recycles that water – saving about 85 megalitres a year – a saving of about \$160,000 per annum off the water bill. The company expects that investment to pay itself off within 18 months.

The company has also developed a system to capture and treat seal water used in the carpet drying process, which can then be reused on a closed loop continuous process. This

innovation is saving more than 232 kilolitres of water per day or equivalent of 85 ML a year. Godfrey Hirst has also reduced waste by about 50% over the last 3 years. Together these two major water saving projects have saved over 170ML of water per year.

A similar 'mindset' was employed in terms of power costs – and its role in adding to greenhouse gases. State of the art equipment has made the process much more efficient and cleaner.

The changes were driven by the CEO and Executive Team and water and waste reduction have become key components of the company's business strategy.

For its success, the company has been recognised through an Outstanding Achievement in Greenhouse Gas Abatement and Award for Excellence at the Victorian Savewater Awards.



Photo: 'Savewater Awards.' Godfrey Hirst.

## Backwell IXL - Case Study 2

Backwell IXL is an Australian owned company established in Geelong in 1858 and produce a range of electric heating appliances, metal pressed components and castings. The company has been a successful innovator and manufactures the famous IXL brand of heaters and heating products including the IXL Tastic.

The company is a significant manufacturer of automotive components. Backwell IXL has been successful in adopting lean manufacturing and Toyota Production System techniques necessary for the automotive industry.

Backwell is an example of how innovation and problem solving can be successfully applied to a diverse manufacturing operation.

Backwell IXL has similar challenges to many other Australian manufacturers including competing against cheap imports, globalisation, ensuring more efficient material and labour processes and meeting cost reductions required by major customers. The company has used lifecycle design to deliver a significant advantage.

## Aims of program.

**"Improving learning, adoption and uptake of leading edge solutions to resource efficiency across manufacturing industry in Geelong."**

Manufacturing operates in a competitive arena and to remain in business requires understanding leading edge thinking and using innovative solutions.

The Geelong Manufacturing Council believes that it can encourage this further in Geelong. Future viability of the regions' manufacturing industries can be improved through using these principles which drive this program.

The program encourages a shared approach where learning, communication and interaction across companies is encouraged.

Feedback from the earlier program indicated significant benefits of being involved in this program.

## How the project will operate.

Participation is free.\* The project consists of a number of programs including:

### Plant Visits & Workshop Discussion

This was very popular in stage 1 of the project and has been expanded to include sites out of Geelong.

Visits will demonstrate how companies have successfully put into place solutions. Future challenges for these operations will also be discussed. Five visits are planned for 2007.

*Timing: These will be held every 2/3 months*

### Facilitated Program

Companies wishing to improve their expertise in this area will be able to nominate to be part of the facilitated network.

This activity is 75% funded and will include: introduction to resource efficiency, group learning and discussion, project work on site, access to facilitator on site and group discussion of progress.

This will typically appeal to small to medium sized companies lacking the resources to undertake this work. Successful nominations will be advised by the project committee and is open to 10-12 companies

*Timing: Commencing mid 2007.*

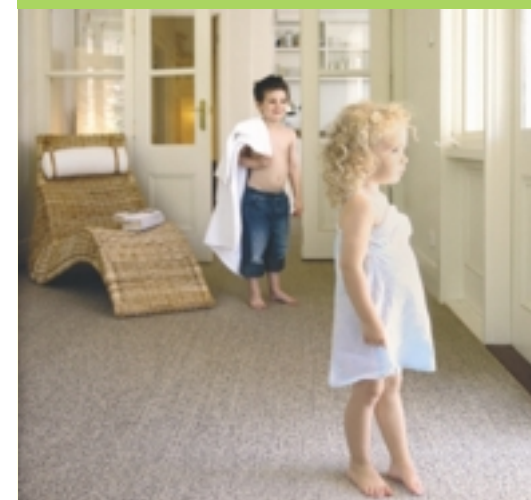
### Benchmarking

In order to evaluate the impact of the program, measures of efficiency will be taken at the commencement of the program and at the conclusion of the program, this will enable measurement of the impact of the program.

### Communication Program

Through website, newsletters and seminars the message of productivity through resource efficiency will be further spread across industries in Geelong.

\*With exception of the heavily subsidised facilitated program for small to medium sized companies -smes



## Bekaert Australia Steel Cord - Case Study 3

The company has used the following to deliver improved productivity through materials efficiency:

- Process change-reduced material handling and improved yields life cycle assessment-resulting in improved life of consumable product and significant savings to customers
- emphasis on quality-through ISO 9000-2000, QS 9000 and ISO 14001
- guiding philosophies- visual systems, benchmarking and adopting a people road map.
- streamlining of waste systems
- reuse of foundry sand
- reducing waste to landfill
- increased material yield
- product re-engineering

### Measurable outcomes

reductions in electricity consumption (11%), chemical binders (20%), sand disposal costs (67%), scrap metal (48%), absenteeism (20%).

### Understanding & Controlling Processes.

Understanding processes and analyzing sources of variation can deliver significant operational efficiency improvements. The search for any process improvement always leads to better performing materials, improved labour and machine efficiency, reduced energy and water consumption and lower levels of waste.

### Bekaert Australia Steel Cord (BASC)

BASC is a joint venture business formed in 1986, between N.V. Bekaert S.A. of Belgium and Onesteel Limited. BASC supplies brass plated steel cords and hose wires to tyre and hydraulic hose manufacturers in Australia, New Zealand and South East Asia. The business has sales revenue of \$35 million per annum and exports 74% of its total output.

### Challenges / Issues:

- Re-establishing control of our process.
- Improving labour and machine efficiency and reducing costs.
- Remaining globally competitive.

### Actions Taken:

- Benchmarking of steelmaking, hot rolling and steelcord processes in Australia with other parts of the world.

- Establishing a 6 Sigma improvement group to gather data and analyse all steps in the steel supply chain.
- Undertaking a benchmarking High Performance Plant study within Bekaert.
- Communicating current performance versus world class performance with all employees and establishing an understanding of the need for change.

### Summary of Lessons Learned:

- Establishing strong customer / supplier relationships is essential.
- Benchmarking studies should start with what is 100% maximum theoretical performance.
- Involving all employees in improvement activities is essential.
- Regular measurement and feedback helps drive continual improvement.

### Summary of Achievements:

- Over the past 5 years the company has:
- Reduced process fractures by 70%.
  - Increased plant labour efficiency by 75%.
  - Reduced conversion cost by 40%.
  - Reduced water consumption by 35%.



## Key dates for events

<b>April 2007</b>	Program Launch and first company visit to Godfrey Hirst Australia
<b>May/June 2007</b>	Plant visit to Bekaert Australia
<b>August 2007</b>	Industry visit to be announced
<b>October 2007</b>	Industry visit to be announced
<b>Nov/Dec 2007</b>	Seminar

## Further information

To register for the tour program, please contact:

### Geelong Manufacturing Council

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Resource Efficiency

Geelong Industry Network

