

Environment and Energy Sustainability

victoria



A supply chain based approach to carbon abatement: pilot study

Leon Stackpole

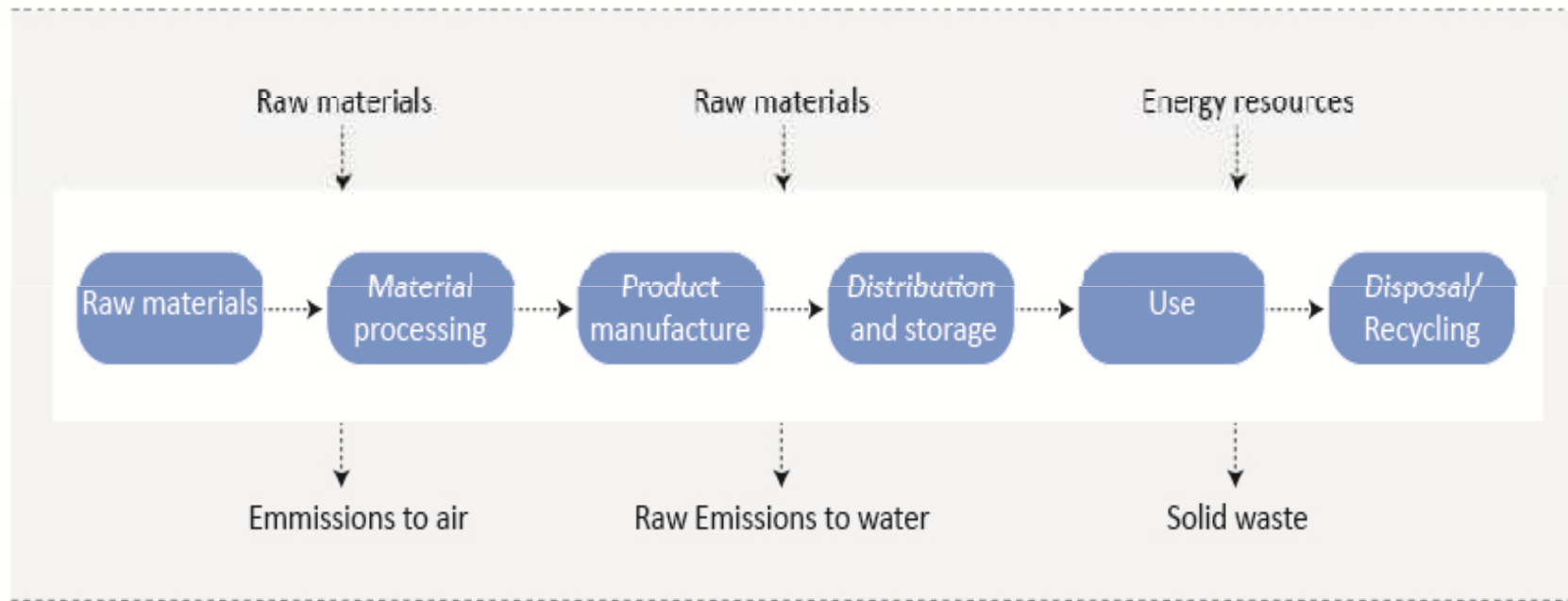
Senior Adviser – Environment and Energy



The products



The scope



Primary project stages

1. Streamlined LCA
2. Workshop #1 with supply chain
3. Site assessments
4. Detailed LCA
5. Workshop #2 with supply chain
6. Develop supply chain road map
7. Monitor

PRESERVE and SAVE!

For lasting pleasure, year in and year out, invest in a

FOWLER **VACOLA** BOTTLING
OUTFIT



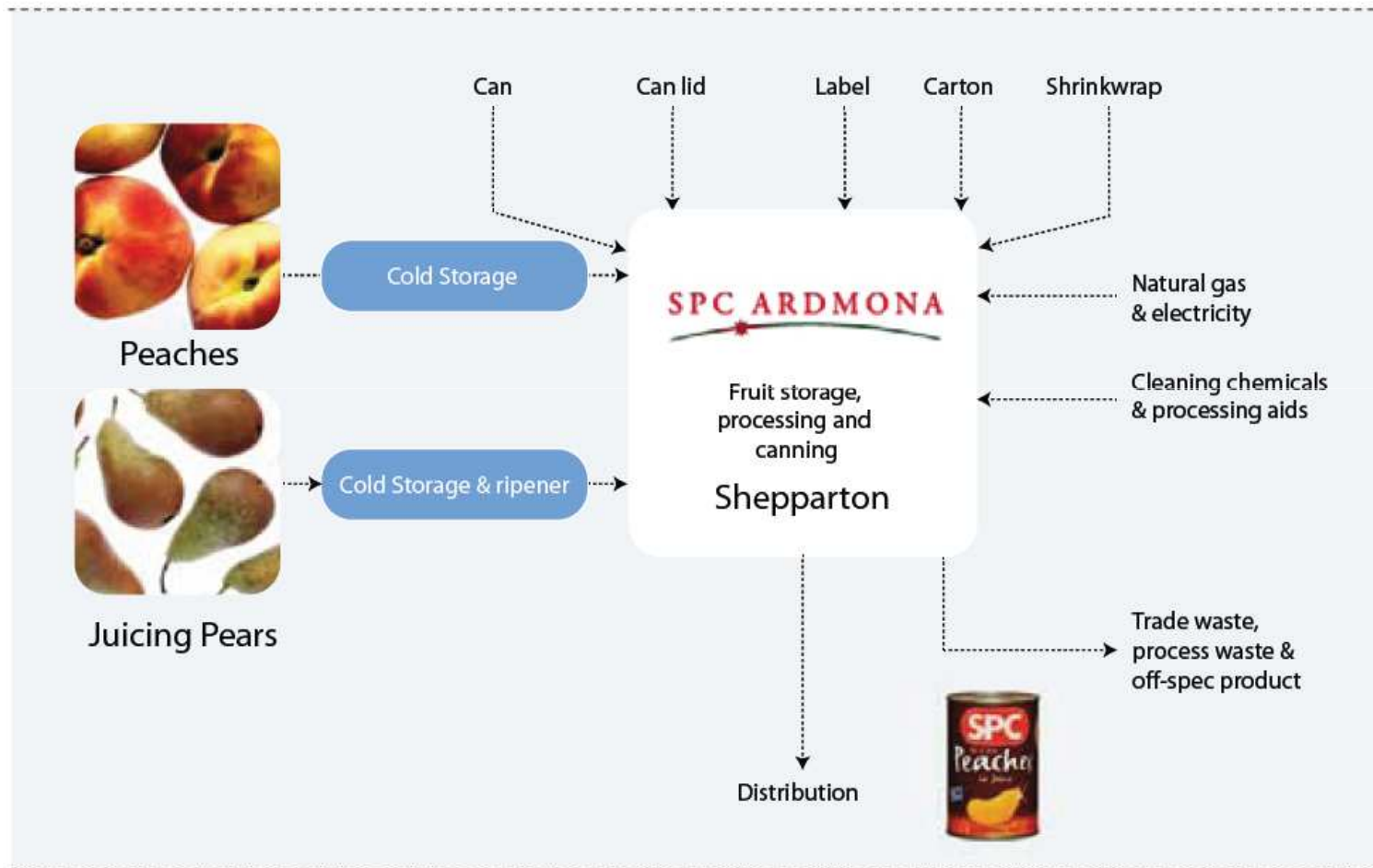
It's so easy, this modern way of preserving. Think what it means . . . fresh fruit all the year round . . . at low cost!

Ask to see the popular No. 2 Outfit complete with 24 bottles, Instruction Book, Thermometer and all accessories

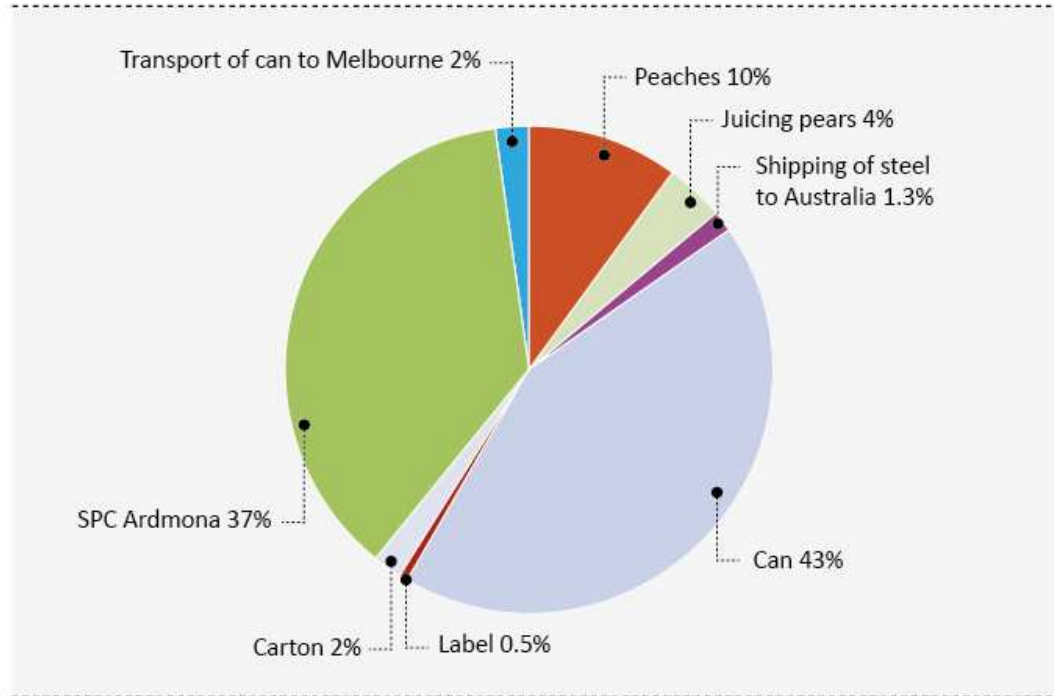
Manufactured by—

FOWLERS VACOLA MFG. CO. LTD.
HAWTHORN, E.2 - - - VICTORIA

SPC peaches – supply chain



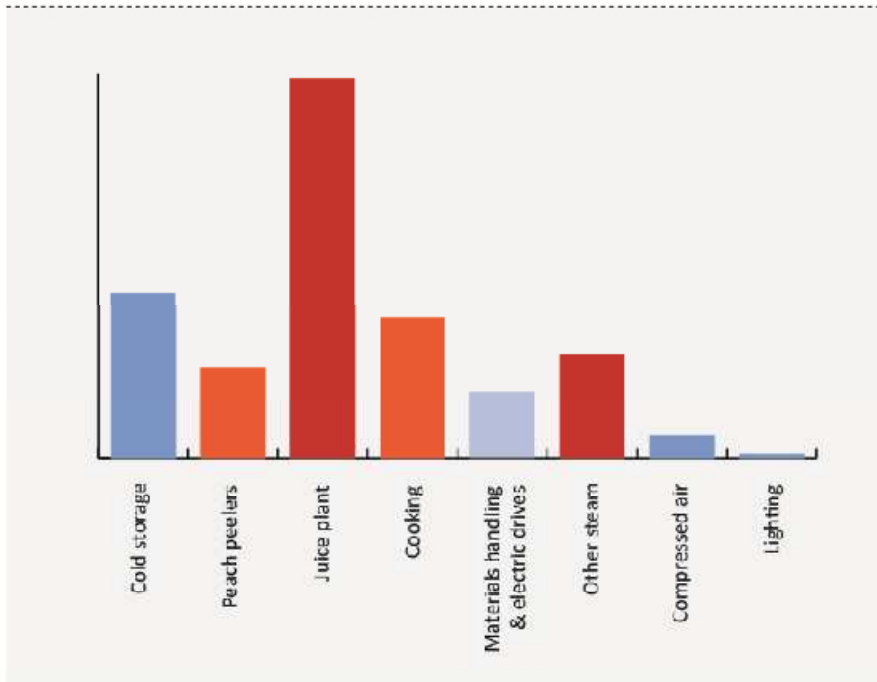
SPC peaches: overall contributions



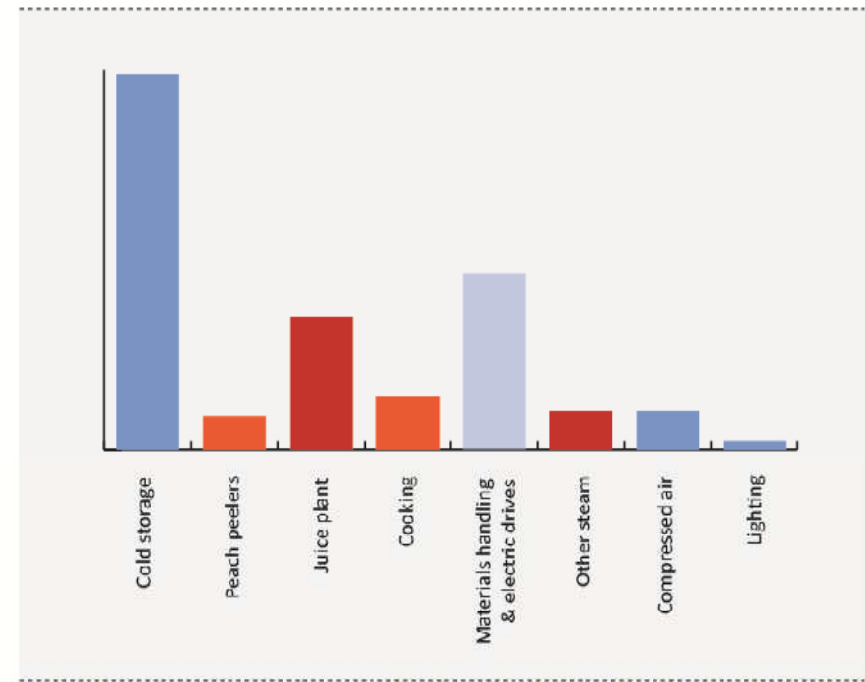
Delivered to a retail store in Melbourne

SPCA: fruit storage, processing & canning

SPCA contribution: 87% energy, 10% processing chemicals



Energy footprint at SPCA

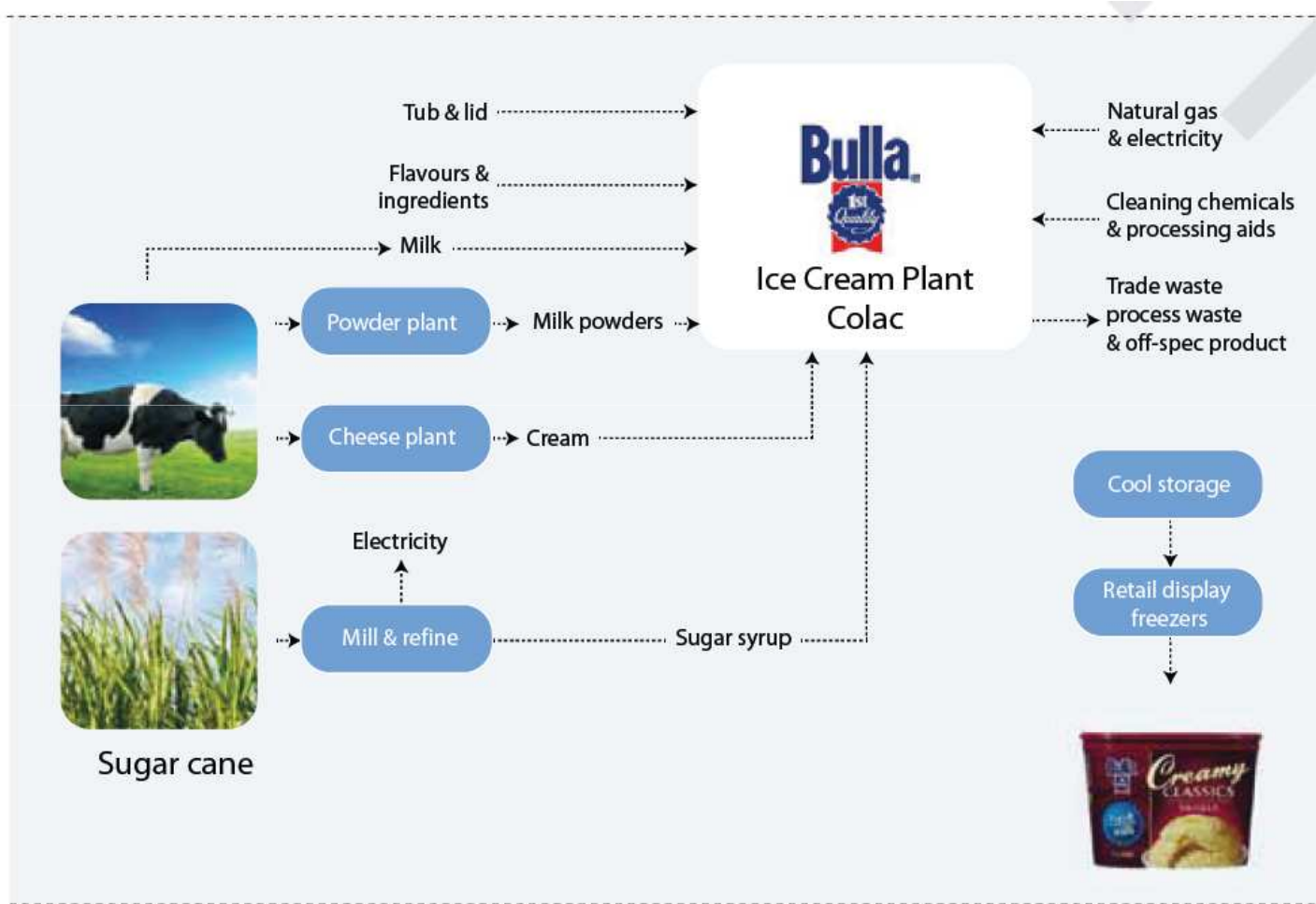


Energy related carbon footprint at SPCA

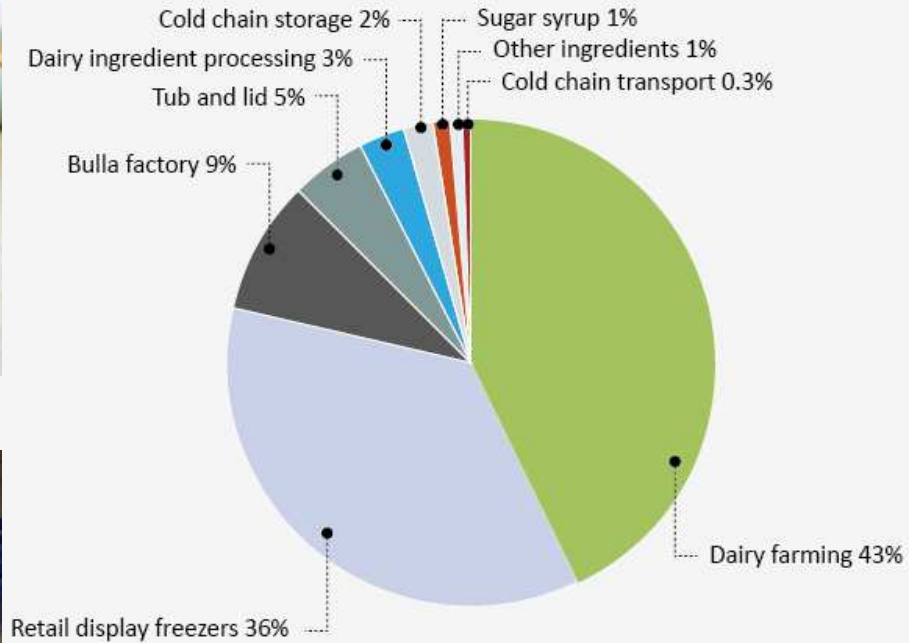
Insights for SPC peaches supply chain

- Carbon emissions driven primarily from material use and manufacturing
- SPCA's direct emissions account for around one third of the product footprint
- Cost effective carbon abatement opportunities exist at SPCA and within the supply chain
- A greater insight into site energy use can improve targeting of company resources
- Opportunities exist for cross supply chain collaboration

Bulla ice cream: supply chain



Bulla ice cream: overall contributions



With seven days storage in a retail display freezer

Insights for Bulla ice cream supply chain

- Bulla's direct emissions account for less than 10% of the product footprint
- Cost effective carbon abatement opportunities exist at Bulla and within the supply chain
- Elements of the footprint may require a sector-wide approach to emissions reduction
- Consumer education may help to reduce emissions associated with the use of the product
- Opportunities exist for cross supply chain collaboration

Overall benefits

- Shared understanding of carbon issues between supply chain participants
- The LCA results and identified opportunities can be drawn upon by supply chain members on an ongoing basis
- The results aid identification of business opportunities and risks associated with carbon management
- Enables incorporation of learnings into company sustainability strategies

Primary challenges

- Engaging supply chain participants
- Handling of commercially sensitive information requires careful management
- Opportunities that arise through supply chain collaboration are more challenging to implement and may require significant investment of time and resources
- Ensuring that the focus on carbon does not result in unintended environmental impacts (e.g. increased water use)

Life cycle assessment

- The streamlined LCAs were able to determine the carbon hot spots for each product. This was confirmed by the detailed studies
- Detailed LCAs can help to identify carbon abatement opportunities that would not be apparent from a streamlined study and will more accurately calculate the total carbon footprint

Carbon abatement opportunities

- On-site & within organisations
- Across supply chains
- Design related
- And those others...

Cross supply chain opportunities incorporated into a roadmap for each supply chain

Key learnings & next stages

Helps participants to:

- Proactively address customer expectations
- Stay ahead of legislated requirements
- Maintain a competitive edge

Contacts

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