

Carbon reduction along supply chains using life cycle thinking



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Carbon reduction along supply chains

Resource Smart Business Industry Pilot

Program partners: **Sustainability**
victoria



Why carbon?

Ai Group experience:

Industry seeking advice and support to manage carbon emissions


78% of business said they should reduce their carbon emissions. Only 1 in 10 know how.

The National Survey of Environmental Sustainable Practices 2007 – Road to a Sustainable Future

...and why supply chains?

Carbon pressures and opportunities...


Wal-Mart unveils “huge greenhouse cuts”...

- New York, Feb. 26 -- Wal-Mart, the world's biggest company, Thursday announced it will cut 20 million metric tons of greenhouse gas emissions from its global supply chain by the end of 2015.
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What products?

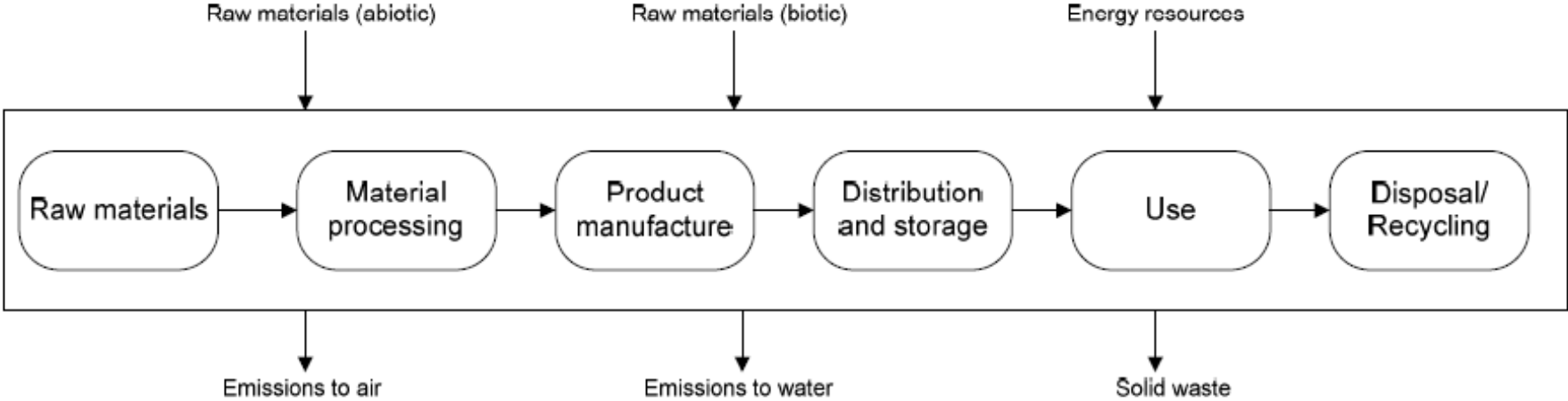


Project plan

- Stage 1: Streamlined LCA
 - Stage 2: Workshop, on-site assistance and investigations
 - Stage 3: Financial assistance to implement energy saving opportunities
 - Stage 4: Complete detailed LCA (by end of 2010)
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Life Cycle Assessment

Process of evaluating the potential effects that a product, process or service has on the environment over the entire period of it's lifecycle



Life Cycle Assessment

Process uses ISO 14044:2006:

- Goal and scope definition (next slide)
- Inventory analysis (data collection/validation)
- Impact assessment (determine environmental impact)
- Interpretation (how do we reduce the impact?)

LCA can include carbon, water, eutrophication, toxicity...

This LCA - Goal and Scope

Just carbon

Goal: identify carbon hotspots to target mitigation

Scope: streamlined followed by detailed LCA

Defined functional unit: can & tub

Allocation: eg for multiple outputs

Greenhouse gases: CO₂, methane, nitrous oxide

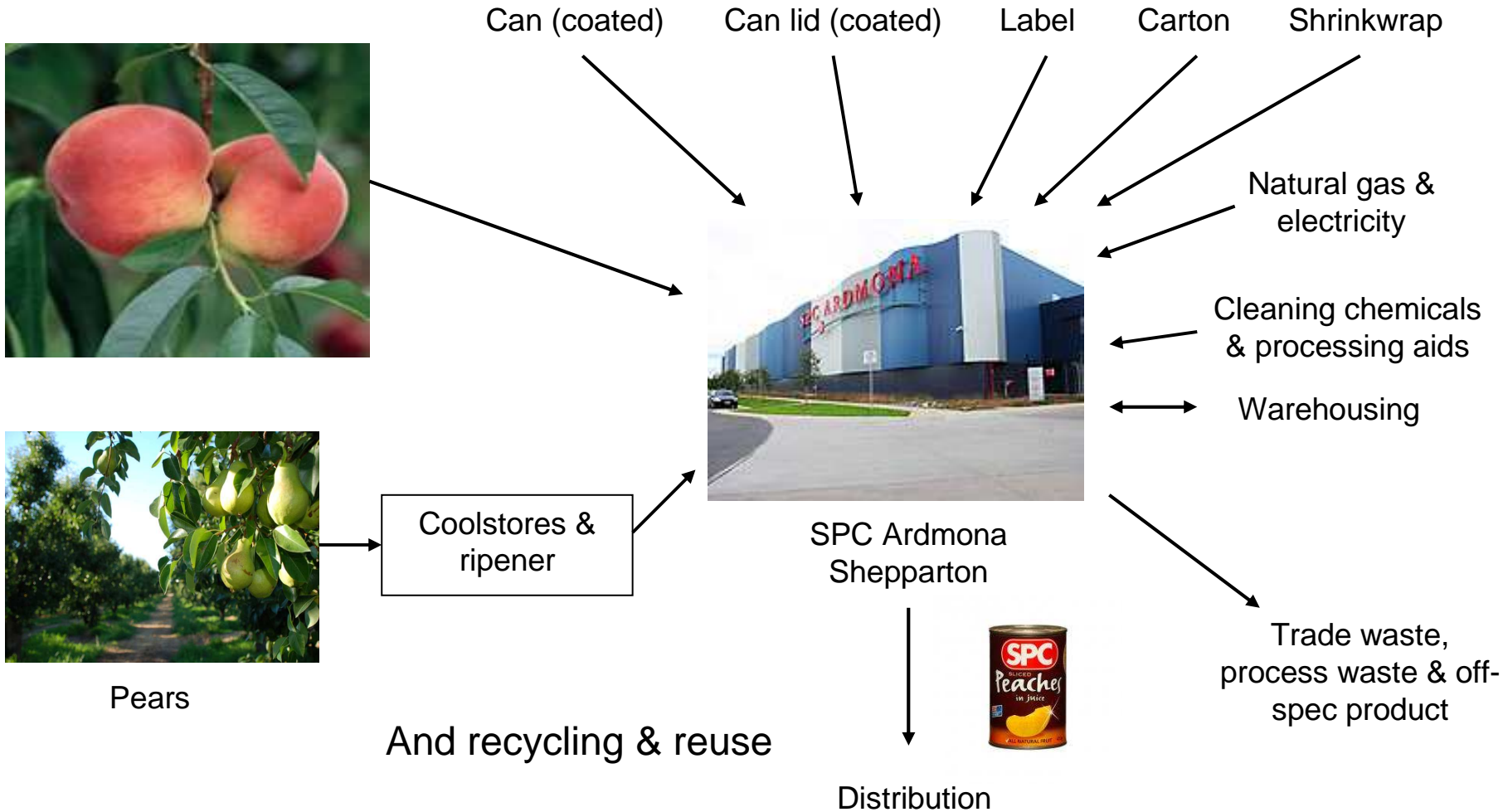
Software: SimaPro

System boundary

SPC Ardmona - Shepparton



Peach can manufacturing process



410g can of sliced peaches

Streamlined LCA Results

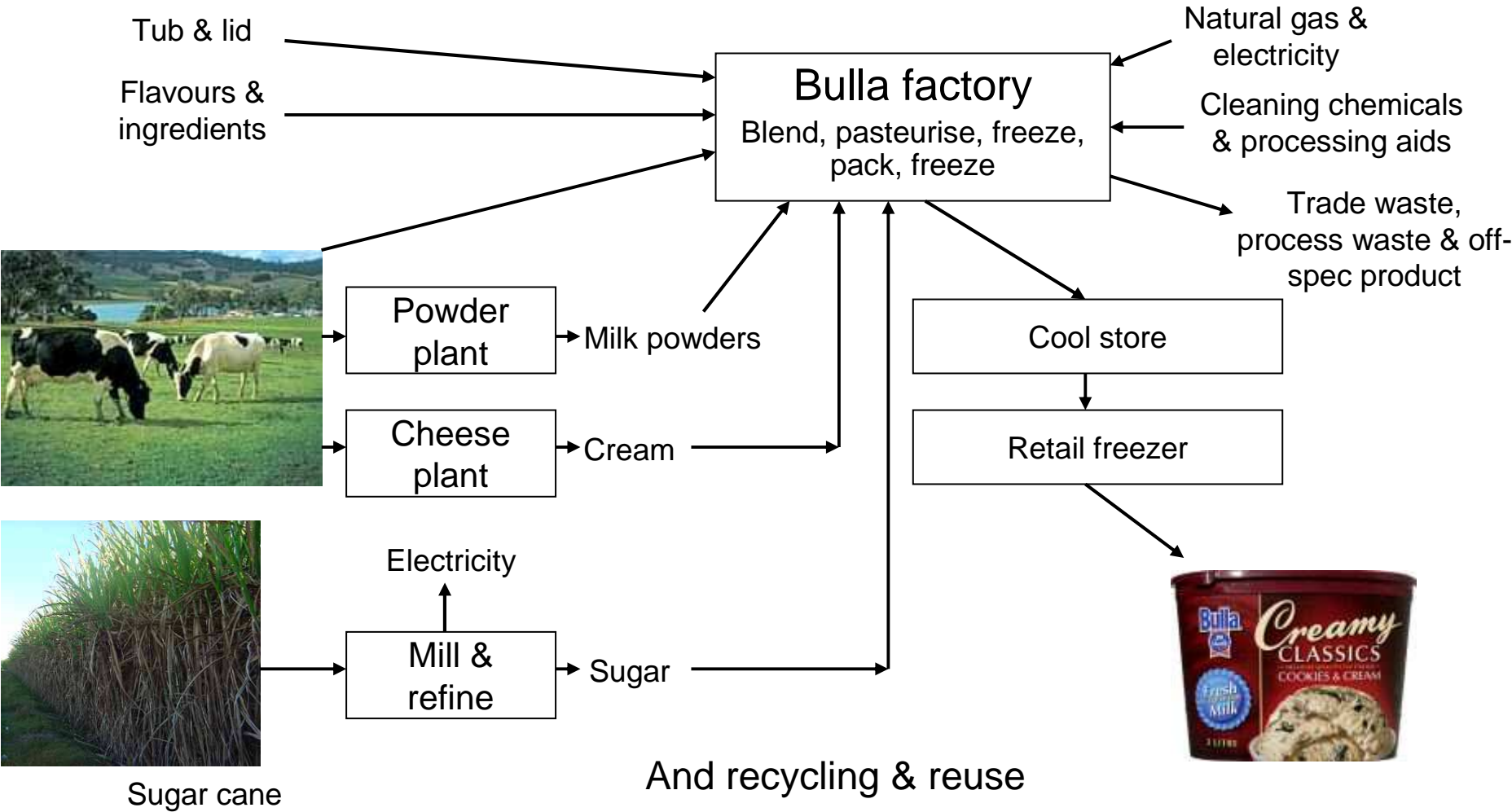
Process contribution to a 410g can of sliced peaches delivered to Melbourne (kg CO₂ eq)

Higher	Energy at SPCA	Can			
Med	Peach				
Low	Transport	Packaging	Pear juice	Label	Processing aids

Regal Dairy Products - Colac



Ice cream tub manufacturing process




2L Tub of Ice Cream

Streamlined LCA Results

Process contribution of a 2L tub of Creamy Classic Vanilla Ice Cream delivered and stored in a Melbourne retail store (kg CO₂ eq)

Higher	Raw milk	Energy at Bulla	Storage at retail outlet	Milk powders
Med	Cream	Tub & lid	Flavourings & additives	
Low	Transport	Coolrooms	Sugar	

Where to from here?

- Stage 1: Streamlined LCA
 - Stage 2: Workshop, on-site assistance and investigations
 - Stage 3: Financial assistance to implement energy saving opportunities
 - Stage 4: Complete detailed LCA and workshop results (by end 2010)
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Questions?

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