

THE WHOLE CHAIN GANG



What can be achieved if you gather all the main players in a product's supply chain in a single room to talk about emissions reduction? Ai Group and Sustainability Victoria decided to find out.

If we are to accept the inevitability of a carbon-constrained economy, including national targets for emissions reduction, we must also accept the requirement for significant changes to the processes we employ in delivering our products and services. Ultimately, this demands that we consider greenhouse gas (or carbon) emissions across the entire supply chain.

With this in mind, Ai Group partnered with Sustainability Victoria in a project called the ResourceSmart Business Industry Pilot. Two companies, SPC Ardmona and Bulla, were asked to nominate a major food product to undergo a full life cycle assessment (LCA) in order to identify the key contributions to its carbon footprint.

And in a unique extension to the study, Ai Group endeavoured to gather all participants in each product's supply chain in a single room for two workshops aimed at maximising opportunities for emissions abatement.

The products chosen for assessment were SPC's 410 gram can of peaches in natural juice and Bulla's two-litre tub of Creamy Classics Vanilla icecream, both long-standing flagship products for their Victoria-based manufacturers. Analysis started with the extraction of raw materials, extended right through agriculture, processing, packaging and distribution, and ended with energy consumption at a Melbourne retail outlet and materials recycling.

Neither manufacturer had any previous experience of LCA techniques and both were surprised by the complexity of the process. "One of our fundamental lessons was the level of detail and technical data required," says Bulla environmental manager, Stephen Mitchell. "We now know we'll need specialists to conduct any similar assessments in the future, because we just don't have the necessary skills and resources in-house."

For SPC Ardmona managing director, Vince Pinneri, the level of complexity served to emphasise the importance of scope. "By selecting one product rather than our entire operation, we were able to focus on getting the methodology right, and it provided a much higher degree of confidence in the end results," he says. "Now that we understand what is involved and how to do it, we can apply the same methodology across other production processes."

Some of the results of the LCA were also unexpected. "Aspects of our operations that we thought would account for a high or low proportion of our energy use actually ended up at the opposite end of the spectrum," Pinneri says. "Without conducting the LCA, I have no doubt we would have targeted projects in areas with less potential for both environmental and financial return."

For Stephen Mitchell, the biggest surprise was the proportion of the product's total carbon footprint that was directly attributable to Bulla's own manufacturing processes – less than 10% (see pie chart below). "We could go hell for leather on our own stuff and have a fairly negligible impact – we might drop it by 1%," he says. "For us, the big contributions were coming at the farm gate and in the supermarket freezer, so it emphasises that we've got to work with our partners across the whole supply chain."

For both companies, the workshops afforded a rare opportunity to do just that. While the first was basically an information session, the second involved participants working together to identify and quantify opportunities for emissions reduction.

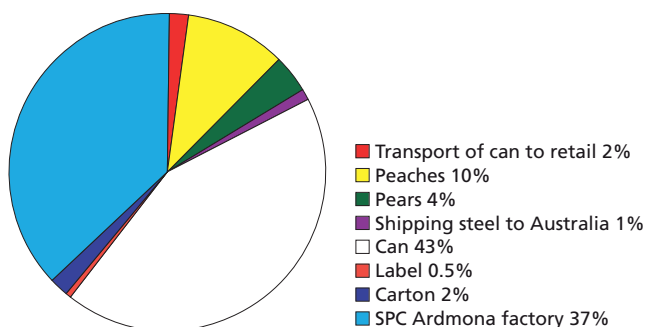
Clearly, the gathering of such a wide array of suppliers and customers was a significant challenge for Ai Group environment and energy adviser, Leon Stackpole. "While we had to leverage customer engagement strategies to bring some people on board, most of those we approached were keen to find out about carbon footprinting themselves," he says. "We also offered site assessments for many of those along the supply chain as well."

As a result, both Bulla and SPC Ardmona have developed closer relationships with their supply chain partners that they believe will have long-term benefits as they implement broader corporate sustainability strategies. "As we expand our efforts from carbon to other sustainability practices, we've already got these key suppliers communicating," says Mitchell, who has used the detailed LCA to sell sustainability initiatives to management, including the employment of two additional environmental coordinators.

"We will be seeking collaborative projects that impact across the entire supply chain," Pinneri says. "We're looking at new solutions that impact on multiple stakeholders, potentially involving new fruit varieties or packaging formats."

Ai Group will continue to work with participants from each supply chain to help embed the results of the program, and outcomes will be shared with broader industry. For more information contact Ai Group's Energy and Sustainable Business Help Desk on 1300 733 752 or email sustainablebusiness@aigroup.asn.au.

Contributions to the carbon footprint of a can of SPC peaches delivered to a retail store in Melbourne



Contributions to the carbon footprint of a tub of Bulla ice cream delivered to a retail store in Melbourne, incorporating 7 days storage in a retail freezer

