



## CASE STUDY

# Changing behaviours to improve the rollout of a new kerbside organics collection service

In 2015, the City of Wodonga and Indigo Shire Council introduced a third kerbside bin to allow residents to collect food and garden organic (FOGO) waste for recycling. In the lead-up to the launch of the new service, the councils rolled out an extensive behaviour change and education program, resulting in high diversion and low contamination rates.

### Meeting landfill reduction and environmental targets

Wodonga and Indigo share use of a landfill in Albury with four neighbouring councils. Since 2010, these councils have been paying a contribution on every tonne of waste sent to landfill to fund waste diversion programs and activities under a regional waste education campaign called Halve Waste. The goal of Halve Waste is to reduce the amount of waste going to landfill by 50 per cent by 2020.

In 2012, the six neighbouring councils signed a 12-year kerbside waste collection contract with Cleanaway. Four of the six (Albury City and Corowa in New South Wales and Wodonga and Indigo in Victoria) opted to implement a 3-bin kerbside collection system to collect FOGO waste to meet landfill reduction and environmental targets.

### Starting from scratch

The councils wanted to help the community to accept the new service and use it correctly from the start to keep contamination low and diversion rates high. Residents responded positively to a FOGO trial in 2011 but some groups in the community found it more difficult to use the proposed service than others.

They decided to implement a behaviour change and education program using community-based social marketing (CBSM). CBSM is an evidenced-based methodology that can be used to develop and deliver programs to promote health and sustainability.

It works by identifying community barriers to a proposed service and linking education and engagement tools to reducing those barriers.

Sustainability Victoria funding was sought to develop a program to achieve the community-wide behaviour change required, recognising the gap in the current role of the Cleanaway education staff, Halve Waste education plan and council waste management staff to achieve this goal. The funding enabled the project partners to launch the first large-scale CBSM program for kerbside waste in Victoria. The team also committed to documenting the process for other councils to replicate.

### Results

The CBSM program increased waste diversion by more than 36 per cent (compared to the baseline figure for annual waste to landfill in 2014-15) and kept contamination in the organics bin at an exceptionally low level; well below the 2 per cent performance target agreed between the councils and the contractor. Residual waste continued to decline following the first 12 months of operation and contamination rates dropped further and continued to stay low 18 months later.

The lower cost of organic waste disposal compared to landfilling enabled the councils to 'pay back' the investment in the behaviour change and education program within year one.

### SNAPSHOT

#### STAKEHOLDERS:

City of Wodonga, Indigo Shire Council, Cleanaway Waste Management Limited, Halve Waste green team

#### PROJECT:

Launching a 3-bin waste collection service including food and organics waste, supported by a comprehensive behaviour change and education program

#### OBJECTIVES:

Reduce waste to landfill and minimise contamination in the organics bin

#### OUTCOMES:

Waste diversion increased by 36 per cent and contamination in the organics bin fell to below 1 per cent. Investment in the behaviour change program paid back within one year thanks to reduced waste disposal costs.

## Moving to a new waste collection service

The councils weighed up several factors before deciding to move to a 3-bin service, including:

Community interest	Audits	Trials	Cost	Infrastructure
<ul style="list-style-type: none"> <li>› Around half the local population in Wodonga had already signed up for an optional garden waste bin service</li> </ul>	<ul style="list-style-type: none"> <li>› Audits showed potential to divert 46–52 per cent food and garden waste from the residual/refuse bin</li> </ul>	<ul style="list-style-type: none"> <li>› Residents responded positively to a local FOGO trial in 2011, although some residents would need additional help to adapt</li> </ul>	<ul style="list-style-type: none"> <li>› Cost effective if general refuse collections changed to fortnightly</li> </ul>	<ul style="list-style-type: none"> <li>› Suitable distance from contractor able to process material locally</li> </ul>

### The logistics of collecting food and garden waste

While many councils in Victoria already collect garden waste in a separate bin, food waste is generally disposed of in the refuse bin which is collected once a week. Recyclables and garden waste are then picked up once a fortnight (with pick-ups alternating each week).

To keep the 3-bin collection service cost-effective and to encourage residents to use the organics bin over the refuse bin, Wodonga and Indigo swapped to a weekly service for FOGO waste, with a fortnightly rotating service for refuse and recyclables (see Figure 1).

#### Kerbside Collection Service Bin Configuration

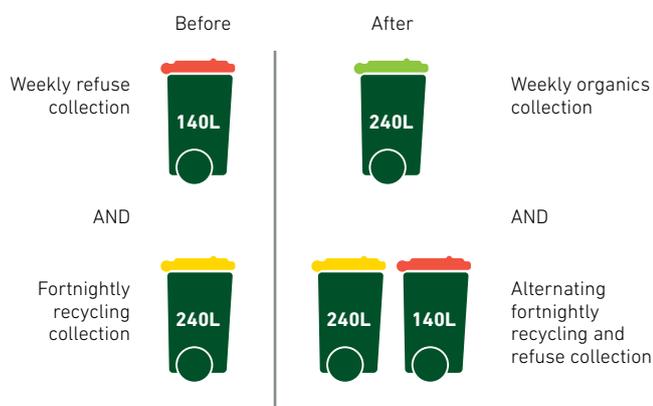


Figure 1: Comparison of the former 2-bin and the newer 3-bin kerbside collection systems in Wodonga and Indigo

### Rolling out the program

In 2013, the councils received funding from Sustainability Victoria to begin the education and engagement plan in collaboration with Cleanaway and other Halve Waste councils in New South Wales. All the stakeholders worked closely together, setting key performance indicators (KPIs) upfront and making sure everyone knew what they needed to do to make the service a success.

In the meantime, Cleanaway was looking for a suitable organics processing site. Local opposition to the initial proposed site saw the service rollout delayed to 2015. This gave the councils more time to test and refine the tools proposed to increase community engagement before the launch of the 3-bin service.

#### CBSM methodology

CBSM emphasises direct contact among community members and removing structural barriers, since research shows that these approaches are often likely to bring about behaviour change. The council used Doug MacKenzie-Mohr’s five-step process available at [cbsm.com](http://cbsm.com):

- Selecting behaviours:** Develop a step-by-step breakdown of behaviours required by residents to dispose of organic waste correctly. This process also identifies unwanted behaviours.
- Identify barriers and benefits:** Identify barriers and benefits for each behaviour.
- Developing strategies:** Develop a program to address barriers, with an emphasis on personal contact, removing structural barriers and using proven tools of change.
- Piloting:** Develop and pilot strategies to overcome barriers.
- Broad-scale implementation:** Implement the program throughout the community and put procedures in place to monitor its effectiveness on an ongoing basis by linking program objectives to KPIs.

**“The potential to extend the landfill life and increase household waste diversion were significant community benefits.”**

Mark Verbaken, Manager Environment and Community Protection, City of Wodonga

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### Timeline of service rollout



### CBSM in practice

Using trial results, community surveys and information from other councils, the councils identified numerous behaviours and their associated barriers and benefits. CBSM focuses on encouraging positive behaviours and discussing benefits in education and engagement materials. It deliberately removes the focus from the barrier or behaviour to be discouraged.

**For example:** Getting residents to separate food waste from packaging is key to reducing contamination in the organics bin. So, one of the behaviours identified in Step 1 was 'separate food waste from packaging'. Barriers included laziness, never having done it before, the 'yuck' factor and not caring. Benefits included not getting contamination stickers on their bin, doing the right thing and contributing to making good quality compost.

The councils then created strategies to overcome these barriers and tested them in small groups. The results were used to build an overarching strategy listing every behaviour and the tools to promote that behaviour in a matrix to ensure multiple methods of engaging with the community. The strategy needed to build the idea that the new service was the 'social norm'.

Key behaviours were ranked by their potential impact on contamination and/or diversion of waste from the garbage bin. Advertising and communications materials were initially limited to the top six key behaviours to reduce confusion. Other behaviours were then promoted where community groups were engaged with for longer periods of time and after the service launch.



Halve Waste fact sheet

Table 1: Snapshot of tools used to influence desired behaviour

Tool type	Examples
Physical	<ul style="list-style-type: none"> <li>240 L green-lidded organics bin</li> <li>Kitchen caddy (small benchtop container) with a year's supply of compostable liners (research showed liners reduce the 'yuck' factor and increase materials diverted)</li> <li>Alternative bin arrangements offered for different types of households</li> <li>Moving to a weekly organics collection and fortnightly refuse collection to encourage correct use of bins</li> </ul>
Prompts	<ul style="list-style-type: none"> <li>Prompts used on the lids of kitchen caddies and organics bins to remind residents of the desired behaviours</li> <li>Residents received a magnetic collection calendar to remind them of the new schedule</li> </ul>
Staff training	<ul style="list-style-type: none"> <li>Customer service staff from all councils, Cleanaway and a contract call centre were trained to respond to most resident enquiries such as liner and bin supply and 'what goes where'</li> <li>Questions that could not be answered or bin service change requests were passed onto the Halve Waste green team</li> </ul>
Printed collateral	<ul style="list-style-type: none"> <li>Introductory pack sent to residents with Halve Waste letter, brochure, sticker, collection calendar magnet, phone app and webpage with how-to videos</li> <li>Halve Waste fact sheets</li> <li>Case studies of local people having positive use of the service to create social norms</li> <li>Vehicle and bus signage</li> </ul>
Community engagement	<ul style="list-style-type: none"> <li>Demonstrations at community events, using figureheads if possible</li> <li>Talking to community groups about the importance of separating waste</li> <li>Education sessions for groups identified as experiencing problems</li> </ul>
Advertising	<ul style="list-style-type: none"> <li>Radio, newspaper and TV advertising</li> <li>Use Halve Waste and council websites and social media</li> </ul>

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### Measuring results against KPIs

Since the rollout of the new food and garden 3-bin kerbside service, the councils have achieved great results and, importantly, maintained these results over time, meeting and exceeding project KPIs (see Table 2). The councils paid back their investment in the CBSM program in less than a year thanks to the lower cost of organic waste disposal compared to landfilling.

Table 2: Program results against KPIs

Objective	KPI	Result
Identify and address potential issues/complaints related to rolling out kerbside organics collections and reducing residual waste collections to fortnightly	Key barriers identified for diverting waste from residual bin and for reducing contamination	All barriers successfully identified during Step 2 of the CBSM process. Customer service reports post-launch showed no additional barriers raised by residents.
Trial solutions to mitigate potential issues/complaints	Solutions identified and tested in trial situations	All solutions/strategies trialled. Resident feedback used to evaluate the success of these strategies.
Implement an education program to target potential issues/complaints	Significant decrease in complaint rates one month after service launch	Customer service enquires peaked in the first month of service launch at 400 per day (City of Wodonga) and around 250 to the call centre (handled both Wodonga and Indigo calls). Complaints decreased significantly after one month.
Develop and document the process for other councils to replicate	Best practice reports and case studies generated, post-service audits shared	The council completed its final report for Sustainability Victoria and contributed to a case study.
Achieve high diversion rates from the residual bin and low contamination rates in the organics bin	Diversion rates of >35% from residual bin compared with 2-bin service. Best practice organics contamination rate of <2%	Post-service audits from July 2015 to February 2017 showed: <ul style="list-style-type: none"> <li>&gt; more than 16,500 tonnes of food and garden material collected in the two shires</li> <li>&gt; 45.2 per cent diversion from landfill for Wodonga and 36.7 per cent for Indigo</li> <li>&gt; exceptionally low contamination rates, averaging 1.1 per cent over the monitoring period and lower than 1 per cent per month since September 2016.</li> </ul>

**“Our 3-bin service and education and engagement program has increased waste diversion and kept contamination in the organics bin at a record low.”**

Mark Verbaken, Manager Environment and Community Protection, City of Wodonga



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### Program costs

The team had significant funding to trial and develop the education and engagement program and rollout the materials, including bins, caddies and liners. This included:

- > education contribution of \$2.50 per tonne collected by the Albury Waste Management Centre to support programs under the regional Halve Waste campaign
- > a fee of \$0.09 per household per week, built into the contract
- > funding from Sustainability Victoria.

The cost per household/service of developing and implementing the 3-bin service was \$10.40 over two and a half years (this does not include the cost of the green-lidded organics bin).

### Budget considerations

- > What are the bin, caddy and liner charges (including delivery) per household? Consider the cost of annual compostable liner rollouts, if being used.
- > What proportion of residents (if any) already have a garden organics bin?
- > Can you access other waste education funds by collaborating with neighbouring councils for example? Economies of scale will stretch your advertising and print budgets.

### Adapting the program for other councils

Councils wishing to implement a similar service could spend substantially less by using the research and learnings from this program. A final report evaluating the project and the behaviour change strategies used is available from City of Wodonga.

The report analyses the tools used during the rollout of the 3-bin service, rating them by cost effectiveness. Table 3 summarises some of the tools that provide value for money at different budget levels.



Disposing of food organics using a compostable liner

Table 3: Sample of tools and indicative cost per residence

Budget	Cost per residence*	Tools
Low	\$2.50	<ul style="list-style-type: none"> <li>&gt; Print key messages on bins and caddies.</li> <li>&gt; Use displays at key community centres.</li> <li>&gt; Use waste and other council staff to connect with many community groups. Use council communication channels and free local media where possible. Deliver simple brochures with key messages inside the caddy.</li> <li>&gt; Staff training can be achieved inexpensively – train as many staff as possible.</li> <li>&gt; Engage your customer service team early in the project to have 'ownership' of the rollout and help with solutions that are resident focused.</li> </ul>
Medium	\$5	<p>As above, plus:</p> <ul style="list-style-type: none"> <li>&gt; Consider temporary staff to better engage with community groups and provide specialist assistance to residents.</li> <li>&gt; Budget may allow limited advertising.</li> <li>&gt; Does council customer service team have enough support? Consider cost of temporary customer service staff or contract call centre if lacking.</li> </ul>
Higher	>\$8	As above but may increase the advertising budget.

\* Does not include the cost of bins, caddies and liners

**Top ten tips for councils**

**1 Learn from others**

Talk to other councils who have introduced the system and ask your community early if they think a similar system will work for them. Use the behaviours, barriers and benefits research from this program and check what applies in your local community. Learning what has worked elsewhere can save you a lot of research and money upfront.

**2 Engage early with key stakeholders**

Get your councillors involved and on side as they help sell the message to the community. Engage early with your waste contractor (if you have one) to work on bin options, caddies and liners – this is a more involved process than it initially seems.

Identify the groups that will struggle with the new service early in the project and find ways to connect with them (e.g. at a mothers' group), listen to their needs and develop solutions.

**3 Sell the positive environmental messages**

Make sure you have someone local for your organics to go – the community loves this message and it really helps reduce contamination. Be on the front foot with PR – don't assume negative press or 'not in my backyard' sentiments will just go away.

**4 Get the community involved in designing the system**

People are much more likely to use something they have some ownership or involvement with. It also helps to double-check that any proposed changes suit your community.

**5 Make the big change in one go**

Some sections of the community will have difficulty adjusting to separating more waste and learning to adapt to less space in the refuse bin. But do not delay the changes for a second time by keeping the refuse bin large. It just doubles the education and engagement effort.

**6 Understand your community**

It is easier to sustain behaviour change if you plan your service to suit the needs of your community, so allow enough time to research behaviours, barriers and benefits. Recognise that the community is not one distinct group and you may need different strategies for different groups (e.g. urban and semi-rural areas) and different options such as larger refuse and recycling bins for larger families and smaller bins for single households.

**7 Plan customer service responses and train staff on the key messages so that all staff can answer**

If your budget allows have extra staff trained for the service rollout. Council customer service staff handling enquiries worked

better than using external call centres as they had greater ownership of the issues and were more able to provide solutions.

**8 Split the bill**

Both councils list the waste charge and even breakdown the charge per bin. No other council service is identified as a separate charge – residents question their value for money if they feel they don't need the organics bin. The program messaging was based on seeing waste collection as a whole-of-community service. Much like providing roads, libraries and kindergartens – individual residents may not use them but as a community we all contribute.

**9 Use as many community channels as possible**

Get positive messages about the service out through as many community channels as possible. Community ownership of the service is an important message, as is connecting people with the local landfill, the resource wasted (compost) and other environmental benefits.

**10 Consider the rural service**

Indigo council had a different service to Wodonga with many service 'zones' around townships. Be prepared for extra work consulting residents on the 'edge' if you have any zones and consider the costs for larger distances for rural properties versus benefits of service.

**ABOUT THE COUNCILS**

	City of Wodonga	Indigo Shire Council
Population	38,559 (16,000 households)	15,431
Area	434 km <sup>2</sup>	2044 km <sup>2</sup>
Predominant dwelling type	Single dwelling (81.7 per cent)	Single dwelling (95.3 per cent)
Major centres	Wodonga, West Wodonga, Baranduda	Beechworth, Rutherglen, Yackandandah, Chiltern

**Further information**

For more information contact Mark Verbaken on 02 6022 9279, email [mverbaken@wodonga.vic.gov.au](mailto:mverbaken@wodonga.vic.gov.au) or visit [halvewaste.com.au](http://halvewaste.com.au)