A used-oil recycling program demonstrates measurable behavior change in response to a concerted education and marketing program.

The Holy Grail for cause-related marketing and other community-based social marketing efforts is establishing a metric by which you can measure whether your well-intentioned, carefully-crafted efforts have had a measurable impact on the human behaviors you are attempting to influence. Or more specifically in this case, did our outreach and education efforts have a positive influence on the environmental risk factor we were trying to minimize?

In 2003 the City of Bellevue, Washington designed a program for its 112,000 residents with two goals:

- Measure whether education and outreach efforts in a retail setting can change customer behavior
- Increase the amount of used do-it-yourself (DIY) motor oil collected through a city-supported network of private-sector used-motor-oil collection sites.

A long-standing program

Since the early 1990s, Bellevue has actively supported a network of private-sector collection sites where DIY motor-oil changers could bring their used motor oil for recycling. The city has promoted this network of auto parts stores, car dealerships, repair shops and gas stations through direct mail, radio spots, newspaper advertising, newspaper inserts, and in-store outreach and education. To a lesser degree, the program also addressed used oil filter collection and market development for re-refined motor oil.

Bellevue has worked with collection sites to measure the amount of used motor oil brought in by DIYers during this period. Also measured were volumes of used motor oil brought in by DIYers to public collection sites and special collection events for household hazardous waste. As a result, Bellevue has a multi-year record of how much used motor oil is recycled by DIYers.

Similarly, the city has developed a model to estimate the amount of used DIY motor oil that is potentially available for collection. The generation model is intended to provide a denominator under the numerator that is provided by the measured volume of used DIY motor oil collected in the city. In this way, a useful used-motor-oil recycling rate can be determined.

If the recycling rate goes up, can we say why?

The DIY recycling rate estimated each year was a useful guide, though not without vagaries. Given slight adjustments to the model made over time, changing economic conditions that influence the DIY rate, and a reliance on an annual poll of collection sites to estimate the majority of used DIY motor oil collected, the model is perhaps the best tool in the box, yet still less precise than would be ideal.

And even were the model to be airtight, this approach would tell us little about which messages and communication channels motivate DIYers to recycle motor oil. The bottom line from a program evaluation standpoint is, there was no way to assess whether the outreach efforts were having a direct, positive impact on the amount of oil brought back to stores.

To get at the issue, the city’s long time program contractor and the project manager developed an approach to test the effectiveness of in-store outreach materials in driving DIY used motor oil back to the store. They then successfully recruited the participation of Schuck’s Auto Supply, a national retail chain owned by CSK Auto Inc. (Phoenix) with three stores in Bellevue. All three stores had been long-term partners in the city’s used-motor-oil collection program.

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Program design and implementation
Bellevue and its contractor developed a simple outreach campaign built around a Dr. Seuss-like fish proclaiming, “No Fish Wants to Find Itself in Hot Oil.” The bright graphic was used to develop the following materials:
- Window and entry door decals
- Large and small posters
- Shelf-talkers placed along the oil aisle counters
- Easels with tear-off information sheets placed at cash registers and the parts counter
- Buttons for use by clerks
- Case stickers placed on every case of oil sold that contained the store’s address and a reminder to bring used oil back to the store
- Floor clings used on the oil aisle.

The city established a partnership with FedExKinkos (Memphis, Tennessee) to provide discounted and free materials, and production for this pilot in exchange for inclusion of their logo on certain materials. Program objectives included the following:
- Select a single Schuck’s Auto Supply store in Bellevue to serve as the pilot store.
- Provide broad in-store promotion regarding used-motor-oil collection and DIY recycling.
- Measure the motor-oil-volume collected and compare it to that store’s collection pattern immediately prior to the promotion campaign and during the same period in previous years.
- Measure the motor-oil-volume collected and compare it to the collection pattern of other Schuck’s stores that did not feature the promotion campaign.

As designed, the program was intended to result in the following benefits to Schuck’s Auto Supply and any other future program partners:

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- Strong potential for increased customer retention due to the value-added service of used-motor-oil collection
- A marginal increase in store sales attributed to DIYers bringing in used motor oil to the store
- Public, customer and governmental good will.

The program was carefully designed to create controls that would allow the pilot store data to be accurately interpreted. Specifically, used-oil-collection-volume data was gathered not only for the pilot store during the pilot period, but also for the two other stores in Bellevue during the pilot period.

Additionally, data was assembled from a multi-year period to allow comparison of the pilot period to that same time of year in earlier years. This helped rule out seasonal shifts in the amount of used motor oil brought in. Finally, an attempt was also made to account for differences in sales volume at each of the three observed stores to help rule out the possibility that an increase in sales at a given store was responsible for a rise in DIY oil volume as opposed to the education and outreach efforts.

I told you, it was the marketing
Having reviewed and compared the pilot-store data to the control-stores' data, it seems evident that DIY used-motor-oil volumes increased at the pilot store during the pilot period due to the city and Schuck’s outreach and education efforts.

At its simplest, Figure 1 shows that the amount of used oil brought into control store #4342 remained flat during the pilot period over the previous two years. Similarly, control store #4330 remained comparatively flat, though it rose during the pilot period. The pilot store, however, shows a steady increase in used oil brought in by DIYers.

More specifically, Figure 1 demonstrates a 40-percent increase in
used motor oil brought into the pilot store during the pilot period when compared to the average of the previous two years during that same period. The other stores show a one- and 13.5-percent increase respectively when compared to the average over the prior two years at each store.

Figure 2 provides a different perspective, and further evidence, by showing each store during the pilot period compared to the two immediate periods prior to the pilot period. In this analysis too, the pilot store demonstrates a 27-percent increase in used-motor-oil volume compared to the average of the two immediately previous periods. The other control stores show a drop of 5.7 percent and an increase of 11.6 percent respectively.

In other words, the pilot store consistently demonstrates more used motor oil being brought in compared to the other stores whether you compare the pilot store to the pilot period in earlier years, or compare the pilot period to similar intervals of time immediately prior to the pilot.

This data is all the more bolstered by the fact that the pilot store experienced a decrease in overall sales during the pilot period. Specifically, pilot-store sales dropped in the categories of "motor oil" and "oil filters" compared to both control stores during the pilot period. Simultaneously, the other store that witnessed a slight increase in used motor oil also lost 8 percent of overall sales during the pilot period.

Thus, the pilot store, despite declining comparative sales, also got more oil back than the other two stores, indicating that the marketing campaign worked to bring in more motor oil than would have been expected, particularly given declining oil-related sales at the pilot store. The study did not reveal whether the pilot activities also generated unexpected marginal sales, thereby offsetting a bit the otherwise comparatively declining sales.

**What to keep on the burner**

Bellevue is currently analyzing the results of the pilot to determine what to carry forward from the pilot and what next steps to take. Anecdotal evidence indicates that the floor clings, while providing high visibility, quickly got dirty and did not adhere well. Given the high cost of this item, relying upon floor clings in future marketing efforts is unlikely. The buttons were wildly popular, with many customers spontaneously asking if they could have a copy of the button. Unfortunately, staff found them hard to keep track of, and many were lost between shifts or not put on at the beginning of shifts.

The shelf tags and case stickers proved to be the most reliable in prompting customer questions about used oil recycling and whether the store provided recycling service for used oil. Both will be continued in the city's outreach efforts. The tear-off information sheets provided on the stand-up easels will also be continued given that they had been specifically designed at the request of the pilot store manager to help him answer the frequent questions posed to him by individuals dropping off used motor oil.

Project staff will also continue to track and analyze data at the three stores to watch for a drop-off in used oil volume at the pilot store after the intensive pilot period, and after some...
of the items, such as posters, window decals and floor clings, are no longer present.

The city is interested in taking the lessons learned from the pilot and developing additional outreach and education materials and approaches. Ideally, these methods will capitalize on two program aspects that are important to participating stores: customer retention and increased marginal sales. Past studies demonstrate that a percentage of DIYers returning used motor oil make a purchase that they were not otherwise planning on making. This phenomenon could be leveraged to boost used oil volumes and to boost store sales.

More specifically, the city and its used oil collection partners are discussing the development of a used-oil punch card program. Under such a system, DIYers that bring in used motor oil would receive a punch on a punch card based on the volume of used oil brought in. Once a pre-determined number of punches is accumulated, the customer could turn the card in for a free reward, a product discount, a buy-one-get-one free coupon, a free oil filter or an alternative in-store incentive.

The program could be advertised in a manner that reinforced the city's used motor oil outreach efforts and collection goals. It would also create an incentive for the customer to keep coming back to the particular store, and perhaps to make a purchase they would not otherwise have made.

The generation model was published in the June 2001 issue of Environmental Practice, Journal of the National Association of Environmental Professionals, a peer-reviewed journal, under the title “Estimating Used Motor Oil Volumes Generated by Do-It-Yourself Oil Change in Bellevue, Washington.” For a copy, please contact David Stitzhal at stitzhal@fullcircleenvironmental.com.