Sort Toss Roll Automated Waste Collection Program

CEM Tools used during phase one

**Jurisdiction:** City of Nanaimo, British Columbia.

**Population:** 90,540 (8,000 of the 28,500 single-family residences were included in phase one)

**Cost per household for the project:** $3.15 per household

**Approximate budget:** $89,835

**Nominated by:**
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INTRODUCTION

About the City of Nanaimo Public Works Department

The City of Nanaimo’s Public Works Department is responsible for keeping the City of Nanaimo clean and healthy through waste management, water distribution, road maintenance and sanitation. We collect 32 kg of organics, 11 kg of recycling and 10 kg of landfill waste on average each month from each of our 28,000 residences within the City’s limits. The public can visit the facility to pick up recycling bags and schedules, information on the Sort Toss Roll automated waste collection system, purchase extra garbage tags as well as get information on snow removal, roads, water mains, street lights, garbage, organics and recycling. The City of Nanaimo has worked hard to improve the City with the Keep Nanaimo Clean campaign, continual improvement to organics and recycling initiatives and a constant focus on improving our diversion rate.

EXECUTIVE SUMMARY

Communication, Education and Marketing Tools used during the City of Nanaimo’s Sort Toss Roll Awareness Campaign informed residents about the new automated waste collection system.

In October 2017 The City of Nanaimo rolled out new automated waste collection carts to 8,000 homes in central Nanaimo. Each home received a recycle, organics (food/yard waste) and garbage cart. The $2.2M endeavour required the purchase of two automated trucks and 24,000 carts. A strong awareness campaign was absolutely necessary since this will be the biggest change to waste management since the city began collecting food waste in 2011. The campaign was branded as SORT TOSS ROLL (STR) and the City developed some innovative tools to raise awareness. The CEM tools included promoting the Nanaimo Recycles App, developing print items and a 16 page guide, custom display material, videos, decals for a LEGO display, and much more to build awareness and understanding of the waste collection system. This initial roll out of STR was the first phase in a two-phase project, with the remaining 20,000 homes set to receive automation in summer 2018.

RESEARCH

The main reasons for moving towards automation were:

1. **SAFETY.** 100% of the City’s refuse collectors had reported job related injuries that cost the city over $300k in the past three years. The job was most suited towards young men for a maximum of five years. Injury claims had cost the city over $300K in the three years preceding automation. The STR program aims to increase safety and diversity in the department.

2. **YARD WASTE COLLECTION.** Residents wanted curbside yard waste collection. Council asked staff to identify the feasibility of adding yard waste collection into the food waste only collection when researching automation. Staff provided council with a comprehensive business case and cost benefit analysis, and council opted to add the new service based on staff analysis.
Once an automated system was identified as the preferred option, research went into identifying all the “pains” residents have with the current system and how automation can resolve them. Solving these concerns for residents became key messages during the awareness campaign.

The top five benefits identified were: That the new system...
1. Is easier and cleaner for residents (easier to roll a cart than carry them)
2. Offers a tidy three-cart system (improving the “look of the neighbourhood” with no more waste blowing down the street)
3. Allows residents to include yard waste in with their kitchen waste
4. Makes recycling more convenient (residents previously had bags that were not easy or practical to use)
5. Reduces workplace injuries

Researching CEM tools for the Awareness Campaign: We looked back to the marketing tools used implementation of organics collection in 2011 in the City of Nanaimo. The City gave all residents a small green cart and moved to weekly food waste only collection, and the uptake was very well received; the amount of waste was reduced by half overnight. Staff also looked at successful campaigns and the CEM tools they used in other communities such as Wood Buffalo, AB, Saanich, BC, Prince George, BC, The Region of Peel, ON, Kelowna, BC, Penticton, BC and Kamloops BC. Building upon these ideas, staff pulled out the campaign elements that would work for Nanaimo and sought out to broaden these elements in a creative way.

REBRANDING – The City wanted the campaign to have a clean and simple look which showcased how easy it was to participate in the program. The Public Works department came up with SORT – TOSS – ROLL, and had the logo and branding elements designed. Care was taken to use colours that represented each waste stream, and the arrows represent composting and recycling aspects in order of diversion, before waste enters the landfill.

RESEARCHING TOOLS

We researched what worked in other communities and wanted to add in more videos, social media posts and custom display materials to enhance awareness. More and more people are using their phones to access information, so we wanted them to be able to find adaptive web information, videos through social media posts and to find their collection schedules and identify what goes where by using the app. More classic tools were also utilized including print ads, radio, mail outs and print materials.
PLANNING AND GOAL SETTING

The target audience was a) residents living within the phase one delivery area, and b) all residents living within the City of Nanaimo (as they will receive services during phase 2 in 2018).

Our Mandate: Create excellent custom communication and education marketing tools to ensure that a) the majority of phase one residents know the roll out is coming (and when) and have a basic understanding of program specifics (i.e. how to place the carts and what goes in them), and b) the entire population understands why this change is occurring and how it will benefit them.

Introducing automation was the biggest change to waste management since organics collection was introduced in 2011. We knew with the right campaign we could meet our goals.

CAMPAIGN SMART GOALS

GOAL 1: To produce CEM tools to explain WHAT the new automated system is all about and let residents know WHEN it is starting.

SPECIFIC: Develop tools as part of the SORT TOSS ROLL awareness campaign that resonates with the target audience and provides a simple, clear and clean look on all traditional and digital platforms. Outline delivery areas and timelines for phase one (October, 2017) and two (summer, 2018).

MEASUREABLE: Report on views of social media posts and video views on You Tube and Facebook. Report on number of calls/emails received regarding when the system is coming.

ATTAINABLE: Coordinate communication channels in a strategic implementation strategy to ensure residents are receiving consistent messaging from multiple sources at all times leading up to and during the roll out.

RELEVANT: Shift messaging from general to specific as we near the roll out. Combine messaging with other relevant events or opportunities, and identify ways to present the message from various relevant and creative angles to keep the message fresh.

TIMEBOUND: Goal one will take place from April to October 2017 (7 months).
GOAL 2: To create CEM tools that help residents understand WHY the city is implementing a new automated system.

SPECIFIC: Design print material, press releases, video, radio spots and display material that clearly and simply explains the top five benefits of the new system. The wording must resonate with target audience so that they strongly understand where the City is coming from and why their taxes will increase to cover the cost of the program. The new system will be better, easier and safer and provide residents with a higher quality service.

MEASUREABLE: Report on views of social media posts and video views on You Tube and Facebook. Report on number of calls/emails received regarding why the system is being implemented.

ATTAINABLE: Coordinate communication channels in a strategic implementation strategy to ensure residents are receiving consistent messaging from multiple sources at all times leading up to and during the roll out.

RELEVANT: Introduce all benefits in press releases and the City’s website, followed by introductory videos shared through social media to show residents WHY this system is better. Combine messaging with other relevant events or opportunities, and identify ways to present the message from creative angles to keep the message fresh.

TIMEBOUND: Goal two will take place from April to October 2017 (7 months).

GOAL 3: To create multiple opportunities for residents to understand HOW to use the new system and engage with staff.

SPECIFIC: Create CEM tools that promote ‘how to’ messaging, FAQ and Fact sheets, guide books, graphics, social media posts, web content, videos and public displays so residents can learn how to use the new system and have their “how-to” and “what-if” questions answered.

MEASUREABLE: Report on views of social media posts and video views on You Tube and Facebook. Report on number of calls/emails received regarding how to use the new system. Complete a satisfaction survey.

ATTAINABLE: Coordinate communication channels to ensure residents are receiving consistent messaging from multiple sources at all times leading up to and during the roll out. Provide direct messaging to residents in phase one about how to use the new system through customized letters, door hangers and program guides and in person conversations at events. Enhance number of staff to answer hotline.

RELEVANT: Detailed program information will be in the program guides, delivered with the carts, to keep all public ‘how to’ information simple and clear so residents can easily remember key items like which way to set out their carts, where to place them, how far apart they should be and what goes in each cart.

TIMEBOUND: Goal three will take place from May to October 2017 (6 months).
IMPLEMENTATION TIMELINE

The following implementation timeline was created to guide an awareness campaign that utilized as many communication channels as possible, while using as many in-house resources (videographer, graphic designers, printing, press releases, social media and web updates) as possible to reduce external costs. The timeline contains reference to the development of all noted CEM tools. In addition, there were several new opportunities (see the next section) added once the campaign was being implemented.

PROJECTED BUDGET

The awareness campaign budget was budgeted at $75,000, which included the development of all CEM tools (and only including the promotion of the Nanaimo Recycles App). The capital costs of the project (including all wheeled carts and two trucks) were covered by a mix of City reserves and short-term borrowing from the Municipal Finance Authority.

IMPLEMENTATION

The well-rounded awareness campaign reached residents in all media forms before and during the roll out. This campaign also included personally reaching out to residents with special collections issues and leaving a informative
door hanger at each home in phase one area. Staff kept to the implementation timeline (noted above), and used the following list of tools to assist in rolling out the campaign in a timely and effective manner.

**BRANDING**

*Word mark (logo development):* The logo used colours that represented each waste stream, and the arrows represent composting and recycling aspects in order of diversion, before waste enters the landfill.

The message was also kept clear:

**SORT**
your materials the same way you’re used to doing.

**TOSS**
your sorted materials into the correct cart.

**ROLL**
your carts to the curb on collection day and return them to their storage area after they are emptied.

**Trucks:** Trucks are branded with both the City of Nanaimo and a display for SORT TOSS ROLL logo and information.

**ONLINE TOOLS**

The creation of the Sort Toss Roll hotline helped streamline calls and emails specific to the new program and provided residents with a qualified staff member to respond to their enquiries.

The website was kept up to date leading up to and during the roll out to ensure information and timelines were on track. Residents could view the phase one map, download a variety of materials, watch videos, read through the information and find the Sort Toss Roll hotline information.

The majority of program information can be found on the website.
Here are list of all online tools used during the campaign:

- Sort Toss Roll hotline and email address
- City website
- City newsletter
- Social Media – Twitter, Facebook (links, custom graphics)
- Press Releases
- PPT presentations - for council and stakeholder groups

Our social media campaign was boosted during October when we focused on reminding people their carts are coming and that they have arrived. We posted several videos and web links to engage residents to ask questions and learn more. We were always quick to respond to anyone that left comments, helping to address their questions quickly.

*Image left: Example of one of the many Facebook posts, Oct. 13, 2017*
In advance of the roll out, FAQ and fact sheets were printed for people to take home. When nearing the start of the roll out, residents received their new schedules, and an informative door hanger to let them know their new carts would be delivered soon. The following printed tools were used:

- FAQ sheet (4 pages)
- Fact sheet (4 pages)
- Door hanger (left)
- Print Ads – The facts, STR coming soon, displays
- Sort Toss Roll Guides (16 pages) – delivered with the carts
- Customized letters (see below)
  - ‘Oops’ postcards – to utilize the technology to identify and deal with letting residents know when they’ve put something wrong cart
  - ‘Oops’ postcards – to utilize the technology to identify and deal with letting residents know when they’ve put something wrong cart
  - ‘Oops’ postcards – to utilize the technology to identify and deal with letting residents know when they’ve put something wrong cart

**Customized Letters:** Residents living within the phase one area received several customized letters explaining the new system. Homes with legal suites and non-strata fourplexes were also sent information explaining how they would receive a larger set of carts to accommodate two homes. Customized letters were also sent to residents participating in assistance programs such as the ‘carry out service’ and ‘medical program’.
The SORT TOSS ROLL Guide was delivered in a plastic envelope stuck to each organics cart during delivery. They were not given out in advance of the program. Everything residents needed to know about the new system and waste collection is in this booklet. All pages are shown below.
SORTING IT RIGHT:

**GARbage/LANDfill**

**Plastic, Glass, & Steel**
- Items must be clean and dry.
- Recycle cans must be empty and clean.
- Aluminum cans, bottles, and jars should be empty and clean.

**Paper**
- Newspapers, magazines, and paper that is not waxed should be clean and dry.

**Non-Recyclables**
- Items that cannot be recycled include:
  - Food containers
  - Plasticwrap
  - Waxed paper
  - Styrofoam

DOWNLOAD OUR NEW WASTE COLLECTION AND SORTING APP!

We have developed an app to help residents remember their garbage day and learn how to sort their waste better.

**Nanaimo Recycles**

With this app, you can do:
- Receive weekly pick-up day reminders
- Receive emergency pouches for extra在上海
- Search for “What Goes Where” to help you sort your waste
- Play fun eco-themed games
- Report conditions, such as missed collection or any other issues relating to City of Nanaimo Public Works

**With your phone**

Don’t have a smartphone? No problem!
All of the above features are also available on the City’s website (www.nanaimo.ca) where you can always access up-to-date information on collection day, lost, found and whether your street is served.

**Frequently Asked Questions**

**Why is responsibility for curbside collection and repair?**
The City will assume ownership of the cart at the time of delivery and will contract out the service. The City will determine the size of the cart, and we will make arrangements for repair or replacement in cases of damage.

**Please note:**
Residents are responsible for bringing their cart to a spring-loaded condition.

**If someone can’t take the cart with them?**
We make arrangements for the cart to be returned to curbside collection. If you know, please let us know.

**Can I add my address to my cart?**
Each cart is unique and cannot be replaced. The City will determine the size of the cart, and we will make arrangements for repair or replacement in cases of damage.

**Help! I have a problem with rodents and raccoons.**
The cart features a permanent metal cover for the bin; this is designed to keep rodents out. Also, please remember to place cart out the day before collection and not the day before.

Changing Your Cart Size

**First, Test Your Cart**

You will receive notification via email that your cart is now delivered. Before testing your cart, please ensure it is ready for collection.

**Then, Exchange It If You Need**

Between Monday, February 10, and Friday, March 2, 2018, you will have the option to change the size of your cart and/or cart size for free.

There is no limit to how many cart exchanges you can make. If you desire to change the size of your cart outside of the free swap period, a $25 service fee will apply.

**Please note:**
Your cart will not collect extra garbage. If you have extra garbage, please contact Customer Service.

FREQUENTLY ASKED QUESTIONS

**Who is responsible for cart maintenance and repair?**
The City will assume ownership of the cart at the time of delivery and will contract out the service. The City will determine the size of the cart, and we will make arrangements for repair or replacement in cases of damage.

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Residents are responsible for bringing their cart to a spring-loaded condition.

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RADIO

All radio messaging and videos were geared towards how to use the new system with tips and examples on how to set out their carts and reduce contamination. The following graphic shows the radio spot schedule. A total of 14 different spots were created and played over the 7-month time frame, and played 552 times over the seven month time frame.

**RADIO SPOTS**

<table>
<thead>
<tr>
<th>Canada Day – mobile booth presence</th>
<th>January</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automaton is coming</td>
<td>June</td>
</tr>
<tr>
<td>Bathtub Day – mobile booth presence</td>
<td>July</td>
</tr>
<tr>
<td>Download the app</td>
<td>August</td>
</tr>
<tr>
<td>Automation is coming</td>
<td>September</td>
</tr>
<tr>
<td>Contamination</td>
<td>October</td>
</tr>
<tr>
<td>Automation is coming</td>
<td>November</td>
</tr>
<tr>
<td>Tail gate sale</td>
<td>December</td>
</tr>
<tr>
<td>Name the truck</td>
<td></td>
</tr>
<tr>
<td>Download the App</td>
<td></td>
</tr>
<tr>
<td>Cart delivery</td>
<td></td>
</tr>
<tr>
<td>Automation is about to begin</td>
<td></td>
</tr>
<tr>
<td>Automation is here</td>
<td></td>
</tr>
<tr>
<td>Trial Period/Christmas Messaging</td>
<td></td>
</tr>
</tbody>
</table>
VIDEO PRODUCTION

The video production provided easy instructions on how to use the carts, introduced the program and answered program questions. We created 12 videos between May and October. Collectively, there were over 16,000 views on Facebook and You Tube.

Please view all videos at https://www.youtube.com/channel/UCZjgTmysv6s4y-4SQEPDFLA (Search Sort Toss Roll)

There are several videos that are only posted through Facebook and not on You Tube. View the Sort Toss Roll Instructional Video Teaser https://www.facebook.com/cityofnanaimo/videos/10155622206046203/, Sort Toss Roll Quick Facts https://www.facebook.com/cityofnanaimo/videos/10155627826911203/ and Sort Toss Roll Quick Facts – Maintaining your Cart https://www.facebook.com/cityofnanaimo/videos/10155632577686203/.
COMMUNITY OUTREACH

Having in-person conversations at public locations allowed residents to get a better idea of how the program will affect them personally. There were several occasions where staff members were present and available to answer questions at public locations around the City, including Woodgrove Mall, Country Club Mall and Port Place Mall. Staff set up a public display with carts at Bowen Park Complex, Beban Social Centre, the Service and Resource Center, Oliver Woods Community Centre, Vancouver Island Exhibition and the Trunk Sale, which allowing residents to test out the carts for themselves. An information display was set up at Woodgrove Centre for residents to visit and learn about the program from July 4 to October 31, 2017.

The conversations were not measured, however staff noted that the majority of residents that visited one of these exhibits left with a better understanding of the new system. Awareness through public events played a very important role in the success of the phase one roll out.

Creative Tools for community outreach included:

- Display panels (design and create)
- Feather banners (design and create)
- Print + design through Woodgrove Mall
- Display signs for carts
NEW OPPORTUNITIES: OTHER CEM TOOLS UTILIZED

Mid Island LEGO Users Group (MILUG) (August – September)
MILUG got involved with Sort Toss Roll and created a LEGO city that was on display at the Nanaimo Aquatic Center. Each member built a piece of the display, which attracted families and anyone using the facility. [https://www.youtube.com/watch?v=ZAaKCb_-Ys4](https://www.youtube.com/watch?v=ZAaKCb_-Ys4)

Image left: STR LEGO truck

The Nanaimo Recycles App (May – December)
The app was being developed in advance of this campaign and was not branded with SORT TOSS ROLL, but it was promoted along with materials in the campaign, such as on the door hanger, in the guide and online. The app went hand-in-hand with the awareness campaign because it helped to make things easier for residents in terms of finding out what goes in each cart and when their collection days are. [https://www.youtube.com/watch?v=eHhWmXtlk8](https://www.youtube.com/watch?v=eHhWmXtlk8)

Image above: ad for app on several promo pieces

Naming the Trucks (September)
1,500 people submitted names for the new automated trucks. The names ‘Mommy’ and ‘Trash-O-Saurus Rex’ were selected in a second round of voting by the residents of Nanaimo. Two young Nanaimo residents submitted the winning names; Nathan aged 4 and Hudson aged 2. The competition winners along with their families were invited to the Public Works yard for the official naming ceremony. This initiative invited the public to get to know the trucks in a fun and friendly way, and to create a buzz throughout the community. [https://www.nanaimo.ca/city-services/garbage-recycling/sort-toss-roll---automated-curbside-pickup/name-the-garbage-trucks](https://www.nanaimo.ca/city-services/garbage-recycling/sort-toss-roll---automated-curbside-pickup/name-the-garbage-trucks)

ACTUAL BUDGET

The total budget for the awareness campaign and CEM tool development and marketing was $75,000. However, once the campaign was rolling, additional opportunities were taken advantage of and this increased the cost by $14,835.62. This included all items identified in the chart below.
Implementation Elements | Budget
--- | ---
Wages (events, during roll out and cart swap) | $5,000
Contracted services – Woodgrove display, door hanger delivery, custom letter print/delivery, ambassador program | $36,133.79
Other services/printing including newspaper advertising, radio, brochure printing, fact sheet printing, Guide printing etc. | $41,745.38
COOP student phone | $388.41
Expenses (branded t-shirts, volunteer/staff food) | $646.69
Materials and supplies | $5,921.35
**Total** | **$89,835.62**

**Implementation costs** – The cost for implementation were $14,835.62 over the anticipated budget, the additional funds were leveraged from our regular annual 3Rs campaign. This was acceptable since the 3 Rs campaign was promoted throughout the STR roll out and as part of the many printed materials.

**RESULTS**

The CEM tools developed during phase one were effective.

**GOAL 1 ACHIEVED:** There were very few calls/emails regarding when a specific person would be getting their carts. The majority of residents viewed the web information regarding the phase one area before calling in.

**GOAL 2 ACHIEVED:** Besides a few residents concerned about not being consulted as to where their tax dollars were going, the majority of residents talked to at events, in person and through the STR hotline were satisfied with the reasons for implementing the program.

**GOAL 3 ACHIEVED:** Every person that received carts during our phase one was aware of the program. Not only that, the majority of those who did call in had very specific questions or were wondering when the rest of their carts were coming, meaning all general questions were answered within the communication tools delivered before or during the campaign. City staff spent 326 hours at public events and locations providing public outreach and education.

Campaign results for all goals were measured together, since it was difficult to separate by goal and we have not conducted a satisfaction survey yet. Overall awareness campaign results are as follows:

- Over 1,500 entries for the naming of the truck, and two winners present during naming ceremony.
- Over 7,000 views of sponsored posts on Facebook.
- 16,350 views of videos between Facebook and You Tube.
- Staffing was increased by 50% for 3 months to take phone calls (number of calls was not measured).
- 317 residents contacted Public Works through the Sort Toss Roll email hotline.
- 14 different radio messages played 552 times between June and December.
The communications tools used in the SORT TOSS ROLL awareness campaign were successful, in particular, the door hangers got program information directly to the homes within the phase one area, and the Woodgrove Centre display attracted residents from all over the city to learn about the program.

The major lessons learned during the awareness campaign from phase one have become recommendations for the implementation of phase two. The lessons learned that affect the awareness campaign are as follows:

1. **Mail outs:** For large mailings such as collection schedules, use a mailing house or printer with in-house addressing equipment.

2. **Double booklets:** Provide two educational booklets on the cart to homes with a suite, rather than one booklet, ensuring both suites receive all program information.

3. **Publicize delivery cart schedule:** Post the delivery schedule on the City’s Sort-Toss-Roll webpage so residents know when to expect their delivery and when their new carts will be used for the first time. Publicize that the webpage will be kept up to date so residents know where to look for updated information before calling the hotline.

4. **Add ‘what to do with resident’s old garbage and organics containers’ in the FAQ:** This question was asked more than anticipated. Boost awareness of where to take old containers in advance of phase two.

5. **Complete a satisfaction service after phase two** to identify which CEM tools were most effective.

**TIPS FOR OTHER COMMUNITIES**

We pulled successful examples from other North American communities to create our CEM tools and hope that those implementing a similar program will look to us as a successful example. Here are the biggest take aways:

We strongly recommend communities build a ReCollect app and launch it with any campaign regarding changes to waste collection.

**Having permanent and event-based branded public displays** played a major role in raising awareness because people could see and touch the carts, meet the trucks and have all their questions answered.

**The best tool since implementation has been the “oops” postcards** because we are able to quickly deal with any contamination issues by having the automated truck computer issue a postcard on the spot. This has quickly and effectively dealt with any potential increases in contamination.