SWANA 2009 AWARDS
Public Education
Excellence Award Application

City of Hamilton
Central Composting Facility (CCF)
Learning Room
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Executive Summary

The City of Hamilton built a ‘Learning Room’ providing an interactive experience for visitors to learn about recycling, composting and landfill. The ‘Room’ is at Hamilton’s award-winning Central Composting Facility where food scraps are processed.

The target audience is elementary school students, although ‘kids’ of all ages enjoy the experience. A tour schedule maximizes the number of visits, making the best use of the resources available.

The ‘Room’ contains exhibits designed to show all aspects of our integrated waste management system in one room in one location:

**Grocery Aisle** - sustainability at point of purchase

**Rooms of the House** - opportunities outside of the kitchen to recycle and compost

**Kitchen** - recycling areas can be set up at home

**Perfect Curb** - setting out waste for collection

**Collection Truck** - students can test their skills at dumping a green cart using a tipping mechanism

**Landfill** - where garbage goes, layering, how the layers change over time

**Sorting Line** - blue box recyclables are hand-sorted

**Recycling Process** - processing and products from recycled materials

**Window Tour** - the composting process for food scraps collected in green carts

**Bigger Picture** - general sustainability practices - energy conservation, water conservation and waste management
1.0 Statement of Intent

The project described in this Excellence Award application describes the City of Hamilton’s ‘Learning Room’ at our Central Composting Facility (CCF).

The ‘Learning Room’ has become an education centre for all residents of Hamilton, with a focus on youth, where visitors can enjoy the benefit of a full-system tour (all of our facilities) in one room.

This project is a direct reference to the criteria required for the Education category of the Communication, Education and Marketing Division Excellence Awards.
2.0 RESEARCH / PLANNING (30 POINTS)

2.1 The Need

Prior to having a curbside collection program for food scraps and a Central Composting Facility, the City of Hamilton did not own a facility that could accommodate a room designated specifically for education purposes.

Given that face-to-face communication is the most effective social marketing tool we have to convey grassroots messages, such as recycling, we try and take as many people as possible on tours of our facilities. The ‘WOW!’ factor of touring our landfill site, hazardous waste processing facility, and materials recycling facility has proven to be far more effective than standing at the front of a room with a PowerPoint presentation. This is especially noted with students at the elementary level.

2.2 The Problem

Hamilton is spread out over a large geographic area. It takes seven (7) to eight (8) hours to tour all of our waste management facilities including the time it takes to drive between them. This means that to maximize the ‘WOW!’ factor and most effectively change behaviour we needed to look at a project that would allow people access to a full-system tour, without the time and resources needed for a full-system tour. Minimizing safety risks was also in the front of our minds.

2.3 The Research

We brainstormed as a group and shared our past experiences with tours, presentations and other events and agreed that the vast majority of people we come into contact with, whether during presentations, or at other community-oriented events, are most likely to say they ‘get it’ only after seeing for themselves the landfill, the recycling facility, or other facilities. While presentations allow you to convey information to a large group of people, they struggle to truly showcase the impact we have at the curb each week.

We had to wrap our heads around the task of providing a ‘WOW!’ factor experience in a more accessible way.

We also talked to other municipalities and visited them to see what they offered for educational opportunities. Nowadays, it is not uncommon to see recycling and composting facilities designed to accommodate tours without all the health and safety requirements - for example, with enclosed catwalks above the operational portion of a facility. This feature was part of the Design and Build specifications for our Central Composting Facility but was cut during the process due to budget constraints.

We needed an alternative solution.

We came up with the concept of a ‘Learning Room’ that would have windows looking onto the composting operation. We decided to make the most of this room and expand the educational opportunities beyond composting.

Knowing that a full-system tour is the most effective tool for us to change behaviour, and knowing that we wanted more than a window tour as some municipalities have, we concluded that we needed to design something that would mimic a full-system tour, all within the confines of about 600 square feet.
2.4 Previous Materials
Prior to this project we did not have a formal facility tour opportunity for schools. We were unable to accommodate requests from school groups due to resource constraints, time constraints, and health and safety requirements. Instead of having schools come to us, we went to them with presentations that taught students about recycling and composting.

2.5 Target Audience
Our ‘Learning Room’ is designed for people of all ages, with a target audience of students in elementary school, with the ideal group being Grade 4 classes.

It fits best with this age group because it is aligned with curriculum legislated by the Province of Ontario. Grade 4 teachers are the most likely to contact us, and Grade 4 students tend to give us the warmest reception when we interact with them.

The tour script has been developed for a broad range of audiences so it is easy to adapt to any group that comes through the doors.

2.6 Goals of the Project
The main goal of the project was to develop a hands-on learning experience for people of all ages that simulates the experience of being on a tour of Hamilton’s waste management facilities.

A secondary goal of the project was to provide a place for schools to come and learn about waste management programs in Hamilton.

We did not set specific targets regarding the number of schools we wanted to come and visit each year. In the past we were able to meet demand so we knew we wanted to increase the number of people we interact with but we didn’t have an accurate calculation to set a specific target. Since opening the ‘Learning Room’ up for tours, the number of requests has far exceeded our expectations, and we are now able to set targets that coincide with resource availability.

2.7 Anticipated Obstacles
There were two (2):

1) Budget to complete the project. We submitted a proposal to invest a significant amount of money into this project to ‘get it right’. It is designed to replace full day tours of our facilities that consumed both time and money on an on-going basis. We pitched the concept and budget early on in the process to ensure all stakeholders were on board. We received approval and began design to coincide with the opening of the CCF.

2) Low uptake on the tours. We weren’t sure how schools would feel about having to come to us, versus us going to them, as we had been doing. We also weren’t sure how schools would get to us. Transportation comes at a cost to the school, so eventually we worked something out with our public transit partners in the Public Works Department to shuttle school groups to the ‘Learning Room’, with no cost being passed on to the school.

The numbers speak for themselves. Currently, we cannot keep up with the demand!
3.0 IMPLEMENTATION / EXECUTION (35 POINTS)

3.1 Timeline of Events

<table>
<thead>
<tr>
<th>Year</th>
<th>Events</th>
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<tbody>
<tr>
<td>Pre-2000</td>
<td>- The City of Hamilton, then the Region of Hamilton-Wentworth, had an informal education program, focusing mainly on Earth Week and Waste Reduction Week activities organized by external agencies</td>
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</tbody>
</table>
| 2000 to 2001 | - Approximately twelve (12) in-school presentations per year  
- Hamilton’s integrated waste management system begins to change |
| 2001 to 2004 | - Number of in-school presentations increase gradually each year |
| 2005 | - Research begins to explore the possibility of constructing interactive exhibits at one of our facilities  
- Site visits to the Royal Ontario Museum, Ontario Place, Canadian Marine Discovery Centre to brush up on exhibit technology and educational techniques  
- Request for Proposals (RFP) issued  
- RFP awarded to House of Kevin  
- Design Phase begins |
| 2006 | - Construction of exhibits begin  
- Central Composting Facility opens  
- ‘Learning Room’ nears completion |
| September 2006 | - ‘Learning Room’ opens with a Facility Open House and media event  
- 3 groups visit from September to December |
| 2007 | - Program grows  
- 102 groups visit throughout the year |
| 2008 | - Program formalized to include transportation  
- Tour days streamlined to a set schedule  
- 148 groups visit throughout the year |

3.2 Project Budget

The original specifications in the Request for Proposals (RFP) set the budget at $60,000. This was based on preliminary discussions with potential vendors regarding our requirements.

Following award of the RFP, the successful vendor put forth an ‘enhanced’ proposal worth an additional $30,000 that the City agreed to.

The project was funded by capital funding approved by Hamilton City Council to build a Central Composting Facility (CCF). The CCF was jointly funded by the City of Hamilton, the Province of Ontario, and the Government of Canada.

We budget for $5,000 worth of improvements to the exhibits in each fiscal year to ensure we can make updates as our programs change and new exhibit technologies are discovered.
3.3 **Partnerships / Collaborations**
The City of Hamilton’s Waste Management Division took the lead on this project, however, consulted with a wide variety of experts to ensure accuracy:

1) Teachers in the community to provide age / grade level-appropriate information;
2) Waste collection operators to provide information on how they do their job;
3) Health and safety representatives to ensure all exhibits meet health and safety requirements;
4) Other Public Works Divisions within the City of Hamilton (Water/Wastewater Division, Hamilton Street Railway, Office of Energy Efficiency) to develop broader, sustainability messaging;
5) Recycled material processors such as plastic buyers to obtain samples of chipped plastic bottles, shredded plastic, and plastic pellets; and
6) Recycled material manufacturers to obtain samples of materials made from recycled products and to gain an understanding for the process.

![Image of exhibit]

3.4 **Planning Phase Accomplishments**
The planning phase was carried out diligently so that any hurdles during implementation were minor and easily overcome. We constructed exactly what we designed in the planning phase of the project.

3.5 **Creativity**
There are five (5) creative elements of this project that are both unique and an improvement over similar projects:

1) The exhibits developed are not standard table top displays. Visitors to our ‘Learning Room’ engage in **hands-on exercises** that include tipping a green cart on a collection truck, sorting waste throughout rooms of the house, and walking through the aisle of a grocery store to practice sustainable purchasing.

2) Our exhibits encompass the ‘lifecycle of environmental stewardship’ - visitors start from the time they make purchasing decisions at the grocery store, to being at home, to putting waste at the curb, to seeing where it goes, how it is recycled, what it becomes, and how it ends up back on the grocery shelf.

![Image of exhibits and lifecycle]

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3) Our experience understands that recycling is only one aspect of sustainable living and as such provides an experience that looks at the broader picture of water conservation, energy conservation, and clean air.

4) When schools book a visit to our ‘Learning Room’, they receive door-to-door service - an electric hybrid public transit bus picks them up, brings them to our facility, and takes them back to school following their visit - thereby showcasing another aspect of sustainability in public transit - all at NO COST to the school!

5) The experience is so good that it speaks for itself. We’ve gone from twelve (12) presentations a year in 2001 to 2002 to over two (2) presentations a week in 2008! No newspaper inserts. No flyers. No internet promotion. No ad budget. Just teachers and students spreading the word to other teachers and students - the most powerful form of advertising available - word-of-mouth.
4.0 RESULTS / EVALUATION (30 POINTS)

4.1 Participation and Reactions

The target audience, while broadly defined as students from Kindergarten to Grade 12, is more specifically defined as Grades 3 to 6. This is the age range the majority of our visitors fit into.

The reaction has been overwhelming - as the numbers show - from twelve (12) presentations a year to more than two (2) a week - even in the summer when students are out of school!

Demand is so high in 2009 that we were completely booked from January to June by the end of January and we currently have thirty-five (35) classrooms on the waiting list for September.

4.2 Success Measurements

Success is measured by the number of tours given. To determine effectiveness, the number of tours given is related to the number of tour slots available.

<table>
<thead>
<tr>
<th>Year</th>
<th># of tours given</th>
<th># of tour slots available</th>
<th>Effectiveness</th>
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<tbody>
<tr>
<td>2007</td>
<td>102</td>
<td>104</td>
<td>98%</td>
</tr>
<tr>
<td>2008</td>
<td>148</td>
<td>104</td>
<td>142%</td>
</tr>
<tr>
<td>2009</td>
<td>31</td>
<td>24</td>
<td>129%</td>
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2009

# of tour requests so far in 2009: 215

Request: tours available ratio: 215 : 104

This means to date we have received 207% of the requests we can manage!
4.3 Improvement
There are two (2) aspects of the ‘Learning Room’ that are currently being discussed as improvements:

1) Adding more tour slots - this means finding additional resources or shifting current resources around to accommodate tour requests. We could easily add two (2) more tours per week to potentially keep up with demand.

2) On-going exhibit improvements - kids are tough on fun! So there are some repairs that will need to be made, as well as exploring the industry to ensure we are ‘current’ with our ideas and activities.

4.4 Replicability
Absolutely! The concept of hands-on experiences, scaled-down versions of waste management facility tours, and promoting environmental sustainability practices can take on many forms. The ‘going the extra mile’ or ‘total package’ aspects like providing transportation and broadening the message are important aspects of what we do that should not be overlooked and can easily be adapted by others wishing to implement a project such as this.