



Photo: Simon Chen

Vancouver 2016 Post-Event Report

Hosted by

GOAL12

**OPEN
SOURCE CIRCULAR
ECONOMY** days

Introduction

A Circular Economy is the concept of a truly sustainable economy that works without waste, saves resources and is in synergy with the biosphere.

- Open Source Circular Economy Days Mission

On June 11, over 70 innovators, enthusiasts, changemakers, and experts came together for the inaugural Open Source Circular Economy Days (OSCEdays) hackathon event in the Greater Vancouver Area as a partner event of the annual Startup City: Impact! week.

OSCEdays is an open, distributed and globally connected event. As a member of this global network, OSCEdays Vancouver contributed to an online exchange of ideas and solutions with 72 other cities around the world – prototyping systems, products and designs for an Open Source Circular Economy.

Participants of OSCEdays Vancouver took a hands-on approach to creating and sharing practical solutions in an interactive workshop setting. This year, we worked on 13 circular economy challenges that ranged from specific problems to solve for start-up businesses like “how should my zero waste grocery store be organized?”, to big picture questions on system concepts and policy changes e.g. “how do we eliminate single use disposables?”. Supporting the participants through the process was a team of mentors and experts with diverse backgrounds in social entrepreneurship, environmental justice, systems change, strategic planning, design thinking, and sustainable consumption and production.



This work is licensed under the Creative Commons Attribution 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA. Written and edited by Belinda Li, Melissa Nielsen, and Emily McGill. August 2016.

Circular Economy Challenges



Photo: Joseph Hsu

This year, OSCEdays Vancouver worked on the following circular economy challenges:

Bicycle Trailerism: Using an open source approach to building bike trailers with reused/recycled materials and using them in the community.

Closed-Loop Farming: Achieving food security while reducing agriculture's environmental footprint through a closed-loop agricultural model where waste and byproducts (outputs) are reintroduced into the food system as feed, nutrients and energy (inputs).

Deconstruction Hub: Exploring the business case for a centralized location to receive, sort, aggregate, re-sell and re-distribute construction materials, incorporating job training for marginalized citizens.

Designing The Circular Economy Multi-Stakeholder Game: Creating a face-to-face experiential game to become more aware of dynamics between stakeholders in creating a circular economy.

Eliminating Single-Use Products: Identifying where and how we can effectively overcome the social and political barriers to eliminating single-use products.



Photo: Sonam Bajwa

Heilu - Marketing Sustainable Protein for Human Consumption: Increasing people's willingness to eat nutritious food from insects.

Open Source Plastic Recycling Machines: To build and use the plastic recycling equipment open-source blueprinted by Precious Plastic. The first machine being attempted is the shredder.

Pathways to the Circular Economy: Workshopping ways to use recovered lumber for trail making.

Single-Use Compostable Products Need Clean Compost: Compost facilities #1 problem is contamination, which prevents acceptance of truly compostable products. Goal - breaking down barriers to using compostable containers by educating the public.

The Mesh Exchange: Troubleshooting an innovative online marketplace to help match surplus commercial food with those who need it.

Waste Ownership in Shared Spaces: Changing the current "not my problem" paradigm by encouraging individuals to take ownership of the waste they produce.

Wearable Technology: Could wearable technology support the Circular Economy by carrying information on 'what the fabrics are made from', 'how to dismantle the garment' or 'where to send it for recycling'?

Zero Waste Market - Efficiencies in Store Design: Ways to design an efficient zero waste store, from bulk bin organization to check out processes.



Photo: Simon Chen



Photo: Joseph Hsu

Please visit community.oscedays.org/tags/city-vancouver for more on the OSCEdays Vancouver challenges!

Case Study: Eliminating Single-Use Products

This challenge started as: Breaking down barriers to eliminate single-use, disposable products

This challenge ended as: Three main questions for further exploration emerged from the overall challenge:

- *What would a mandatory deposit system for reusable products that replace single use products look like?*
- *How might we encourage individuals to be more responsible for their waste?*
- *How to continue to package in glass while eliminating the need to recycle or overly upgrade?*



Photo: Simon Chen

Describe the evolution of your group's thought process: Following the facilitation format of the Pro-Action Cafe, 12+ participants took each idea through four stages of questioning; (1) what's the real goal here, (2) what's missing, (3) what help do we need, and (4) what next steps we will take. By keeping an immovable 'idea host' and allowing the other participants to rotate tables through the stages of questioning, we were able to gather diverse perspectives and accelerate the evolution from idea to actionable items.

Key things you learned: One of the key concepts universal to all three ideas is that we need to change public perception that disposable products are "cheap and convenient" to "costly and wasteful". This change will not happen immediately, so we need a transition strategy that starts with voluntary programs incentivizing reuse with early adopters (e.g. green businesses, large institutions, schools). After testing these ideas to show proof of concept, then we can influence policy for mandatory programs or legislation that are applicable regionally or provincially. To build a business case for this approach, it is important to factor in the true and full costs of disposable products (e.g. production, shipping, pick-up, disposal, ecological costs, eliminating subsidies for fossil fuels).

What elements did you decide to: Pursue, pivot, purge, pause? Pursue pilot projects for deposit system for reusable containers and identifying a method to hold individuals accountable for their waste.

Where are they now? Following OSCEdays, we shared our notes with the City of Vancouver as input on their community engagement process for the post-2020 Zero Waste Strategy. Through the connections made at OSCEdays, some of the participants are now working on Surfrider Vancouver's Straws Suck campaign, which aims to stop the use of plastic straws and other single-use disposable items through raising awareness of the environmental impacts of plastic waste and help businesses switch to more sustainable practices.

Case Study: Zero Waste Market - Efficiencies in Store Design

This challenge started as: Troubleshooting the soon-to-open Zero Waste Market's main challenges with customer flow through and product labeling.

This challenge ended as: Creating a *zero waste product coding and labeling system* that is scalable to other stores. We scored the options below out of 5 points for each of: cost, in-store ease of use, customer experience, sustainability and scalability, with three winners! Compostable stickers, magic chalk pen tag, and digital swipe cards. We could also consider a combination for different kinds of products and storage systems.

Wooden token with a hole punch and elastic band through it	17/30	Digital bin	14/30
Color coding and token/sticker	16/30	Digital swipe card	17/30
Magic chalk pen tag	18/30	App	14/30
Compostable sticker	19/30		

Describe the evolution of your group's thought process, what you did during the day: We discussed a myriad of the Zero Waste Market's main challenges, then narrowed in on product coding/labeling to optimize the checkout and tare system. Other challenges identified by the group included:

- Establishing minimum quantities and serving quantities
- How to select and log standard container sizes, e.g. with funnel-type scoops
- How to measure before reaching checkout, e.g. smart cards instead of codes
- Displaying 'waste diverted' calculator; loyalty cards track common buys
- Optimizing bin placement or 'flow': design to make a complete meal/recipe, e.g. "Routific"-like app
- Combined warehouse/retail with pick list or catalogue
- Automated bins like purchasing gas that are priced immediately
- Managing expiry dates of dairy and fresh produce
- Assessing % revenue per square foot

Key things you learned: Rating by different criteria was informative. We now have a clearer idea of how things will look, and this activity was helpful for figuring out logistics.

The practical outcome of this challenge is: Ideas to pilot test with fruit, produce, and dry goods. The choice is to use a resource intensive process swipe card system that makes shopping intuitive and easy, or a simple sticker label that's less convenient. Our future product goals are to sell olive oil, coconut water, maple syrup, vinegars.

What elements did you decide to: pursue, pivot, purge, pause? Pursuing testing of digital swipe system, compostable sticker labels and magic chalk pen tags. Purging digital bins - they're too costly.

Case Study: Closed-Loop Farming

This challenge started as: Creating a closed-loop agricultural model. We began discussing the inputs and outputs of a typical farm in Vancouver and tried to determine how extra outputs that may become waste could be channeled back into the process.

This challenge ended as: Three different solutions to closing the loop on agriculture: a closed-loop community farm, sharing platform for farmers to build connections on closed-loop farming, and processing ugly produce into value-added products.

Describe the evolution of your group's thought process: We debated creating a closed-loop farm system that could create sufficient nutritious food to feed a small community. The focus would be on nutritionally dense food, since the industry often worries more about production than nutritional value. We thought it would be challenging to scale this initiative, and it would work best in a small scale urban setting.

Our next idea was to create a farmer's sharing platform to build connections that help them close the loop on farming. We found a need for financial incentives for farmers to make changes to a traditional linear system and consider economies of scale. The platform could provide farmers with useful ways to use waste outputs to save money, a la industrial symbiosis whereby the outputs of one farmer become the inputs of another. It could also enable a farmer's co-op for sharing farm equipment that may be too expensive for one farm to invest in. It could also link farmers with practical tips from academic research, as this gap is often significant.

We also discussed the immense systemic waste of "ugly" vegetables. We debated starting a company that buys "ugly" produce and expands it into a secondary market, like processed jams or soups. It could be linked with school systems to teach children to cook with them, or it could function as a catering company.



Photo: Joseph Hsu

Key things you learned: For the farmer's platform we received the feedback that we should narrow down on a portion of the platform and focus on one sell initially for implementation. We also got recommendations for a number of resources on work already being done similar to our idea of a community closed-loop farm.

What elements did you decide to: pursue, pivot, purge, pause? Pause, as there are a lot of similar developments happening right now and these ideas are just starting out. It would be good to wait, see and learn from what the other projects do, and then identify the gaps in their approaches.

Event Evaluation

OSCEdays Vancouver thrives on transparency and maximizing learning. As part of the learning process for this event, we asked participants to complete an event evaluation and had a 50% response rate. Participants ranked their overall enjoyment of the event an average 4.5 out of 5 stars, and 96% said they would come to another OSCEdays event, and would bring a friend.

Participants were most excited about the diversity of participants and enthusiastic collaboration environment that brought together people who would otherwise not interact with each other. We learned from the evaluations that when planning future events to be clearer about the role of mentors and to add more structure/facilitation to help streamline conversations.

What did our participants have to say?

"A great start to a new movement... I would love to see what happens next."

"[The best part was the] diversity of expertise, passion and ideas. Diversity of challenges to be hacked."

"Had no idea what to expect. Really fun and thought provoking event. Made some good connections."

"I really liked the 'law of two feet' shared value. I felt more comfortable knowing I wasn't "married" to the challenge I first chose and learned a lot travelling from group to group."

"This event was SOO well organized! I love that it was free... I really enjoyed it and learned a lot!"

"Great gathering of great minds for brainstorming, but how do we keep momentum going and actively work towards solving these challenges?"

What's next?



Photo: Joseph Hsu

GOAL12 is an exciting new non-profit founded in Vancouver, and was the organizing host of this year's OSCEdays Vancouver. GOAL12 was founded with the intent to help fulfill the UN's Sustainable Development Goal 12: Sustainable Consumption and Production. They've identified a gap in the Vancouver zero waste landscape of gatherings and conventions to troubleshoot shared problems with actionable results.

OSCEdays was a natural marriage, and GOAL12 intends to continue organizing or facilitating annual OSCEdays in the Greater Vancouver Area as well as hosting other inspiring and open-source events in the region.

GOAL12 practices open-source sharing of documentation and resources related to hosting events using innovative and open collaboration approaches. Those who are interested in hosting similar events in Vancouver are welcome to contact GOAL12 at info@goal12.org.

Financial Report

OSCEdays Vancouver was funded through sponsorships and donations to cover the direct costs of running the event. The following tables summarize the income, expense, and estimated value of in-kind donations.

Income

Sponsorship	\$1,800.00
Lunch Donations	\$206.35
Total	\$2,006.35

Expense

Event Venue	\$945.00
Food	\$808.75
Volunteer Appreciation	\$82.53
Carryover for Future Events	\$170.07
Total	\$2,006.35

In-Kind Donations (Approximate Value)

Prizes	\$2,820.00
Food	\$40.00
Supplies	\$150.00
Web design and hosting	\$100.00
Communications and media	\$1,000.00
Total	\$4,110.00

Thank You

OSCEdays Vancouver would not have been possible without the dedication of our volunteers. This event is a passion project, powered 100% by their efforts. We would also like to thank the following sponsors and supporters that have helped make OSCEdays a reality in Vancouver.

We gratefully acknowledge that OSCEdays Vancouver 2016 was held on unceded Indigenous land belonging to the Coast Salish peoples, including the territories of the xʷməθkwəy̓əm (Musqueam), Skwxwú7mesh (Squamish), Stó:lō and Səlilwətaʔ/Selilwitulh (Tsleil-Waututh) Nations.

