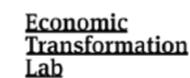




Peeling Back the Layers:

Learnings from the Circular Food Innovation Lab

Final Report - April 2023



Executive Summary

The current dominant economic structure is stuck in a linear pattern of ‘extract-produce-consume-dispose’. As our world’s biggest challenges grow increasingly complex, circularity poses promising pathways to ecological and social transformation. A major barrier to achieving a circular economy of food is the persistence of practices within the food industry that are so widespread and familiar they have essentially become invisible. In order to shift our food system, our mindsets and practices need to shift throughout the food sector, from production and operations to consumption and waste.

This report is a synthesis of the insights and learnings from the Circular Food Innovation Lab (CFIL), which undertook an innovation process to more deeply understand and experiment around the complex challenge of reducing wasted food and increasing circularity in Vancouver’s food sector.

About CFIL

The Circular Food Innovation Lab (CFIL) was a project co-led by the City of Vancouver, the Vancouver Economic Commission’s (VEC) Economic Transformation Lab, Emily Carr University of Art + Design, and 18 Vancouver-based businesses and organizations working in the food system. For 10 months, participants worked alongside design researchers from Emily Carr University to co-design and prototype potential solutions to reduce and prevent wasted food, and increase circularity.

The Circular Food Innovation Lab took place on the unceded, unsundered, and ancestral homelands of the Hə́n̓q̓əmiḥə́m and Sk̓wxwú7mesh Sníichim speaking peoples of the xwməθkwəyá̓m (Musqueam), Sk̓wxwú7mesh Úxwumixw (Squamish Nation) and səilwətaʔ (Tseil-Waututh) peoples. CFIL was funded by the Carbon Neutral Cities Alliance and Mitacs.

Stuck patterns

A key idea in working with systems is that durable and effective systems change is only possible if deeply embedded patterns can be made visible and then shifted.¹ Through systems mapping, action research and design approaches, CFIL participants identified and attempted to intervene on the following stuck patterns, among others detailed in the report:

- Across the system, actors place responsibility and fault of wasted food on one another rather than taking responsibility for what they can do
- “Shrink” (or loss of inventory) is accepted as part of doing business
- Our ways of thinking and language are so entrenched in linear thinking that it is difficult to imagine circularity
- Consumers expect perfection and overabundance of choice when it comes to food, and businesses comply

¹ Meadows, D. H., & Wright, D. (2009). Thinking in systems. Earthscan.

Prototyping: Peeling back the layers

The more we experimented, the more we were able to peel back the layers to gain deeper insights into the mindsets and structures that perpetuate the current problem, and to identify promising, high-impact interventions. We developed and iterated **9 prototypes of potential solutions**. The report provides a recap of the key learnings, insights and significant shifts that occurred from these prototypes:

1. Nourishing Staff Engagement: Collaborating to explore circular solutions and shift work culture
2. Circular Entrepreneurship: Innovating with spent grain
3. Reframe: Changing our lenses to make different choices
4. Measure What Matters: Changing actions to change values
5. Peer to Peer Network: A community, driven by purpose
6. Co-Creating Collaborative Responsibility: Shared accountability across the food system
7. Learning Journey: Place-based sensing of the system and circularity
8. Last Call: Shifting culture and practices to prevent surplus
9. Tracing Foodsteps: Improving food sorting procedures in the back-of-house

Executive Summary

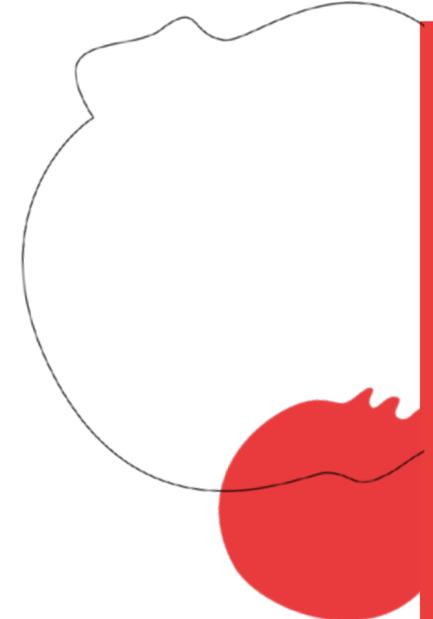
Outcomes

From prototyping:

- Businesses are now taking initiative to reframe customers' expectations of overabundance and perfection.
- Frontline food staff are innovating and building their leadership in circularity.
- New relationships have formed between businesses to further explore circular solutions.
- Businesses are making it easier for their food recovery partners to pick up donations by placing more attention and care into their food-sorting practices and spaces.
- Development of the CFIL Prototype Collection, a set of promising tools and practices for reducing wasted food and increasing circularity.

From the overall lab:

- Connecting the dots in the system by bringing businesses and government together, which not only revealed patterns in what actors had experienced as discrete unconnected causes for food wastage, but also shifted some of these patterns and assumptions.
- Illuminating roles for city governments and institutions in enabling transformation and incentivizing circularity, including policy creation and investing resources to create space for collaborative discussions, innovation and learning to happen.



[Access the CFIL Prototype Collection](#)

Includes helpful tools such as:

- **Informative display signage** to educate customers on re-valuing imperfect produce and food preservation
- **Interactive materials for increasing seasonal awareness** for staff and customers
- **Decision-making and spatial organization suggestions** for sorting unsold food
- **Measurement activities** to increase transparency and attention on measuring wasted food
- **Workshop template** to collaborate with staff to explore circular solutions

Next steps

Many participants are identifying how to scale these interventions in the form of more formalized practices and operations, as well as deeper shifts in personal mindsets and workplace culture, for both their own contexts as well as others. Some businesses continue to do higher fidelity prototyping, testing more components of these potential solutions over a longer term.

The City of Vancouver, the Vancouver Economic Commission and many of the business collaborators are continuing to shape a network focused on growing the circular economy of food in Vancouver. The network hopes to set new industry standards, continue to learn together and contribute to shifting the current culture and paradigms that perpetuate the challenge of wasted food.

An invitation: Re-patterning

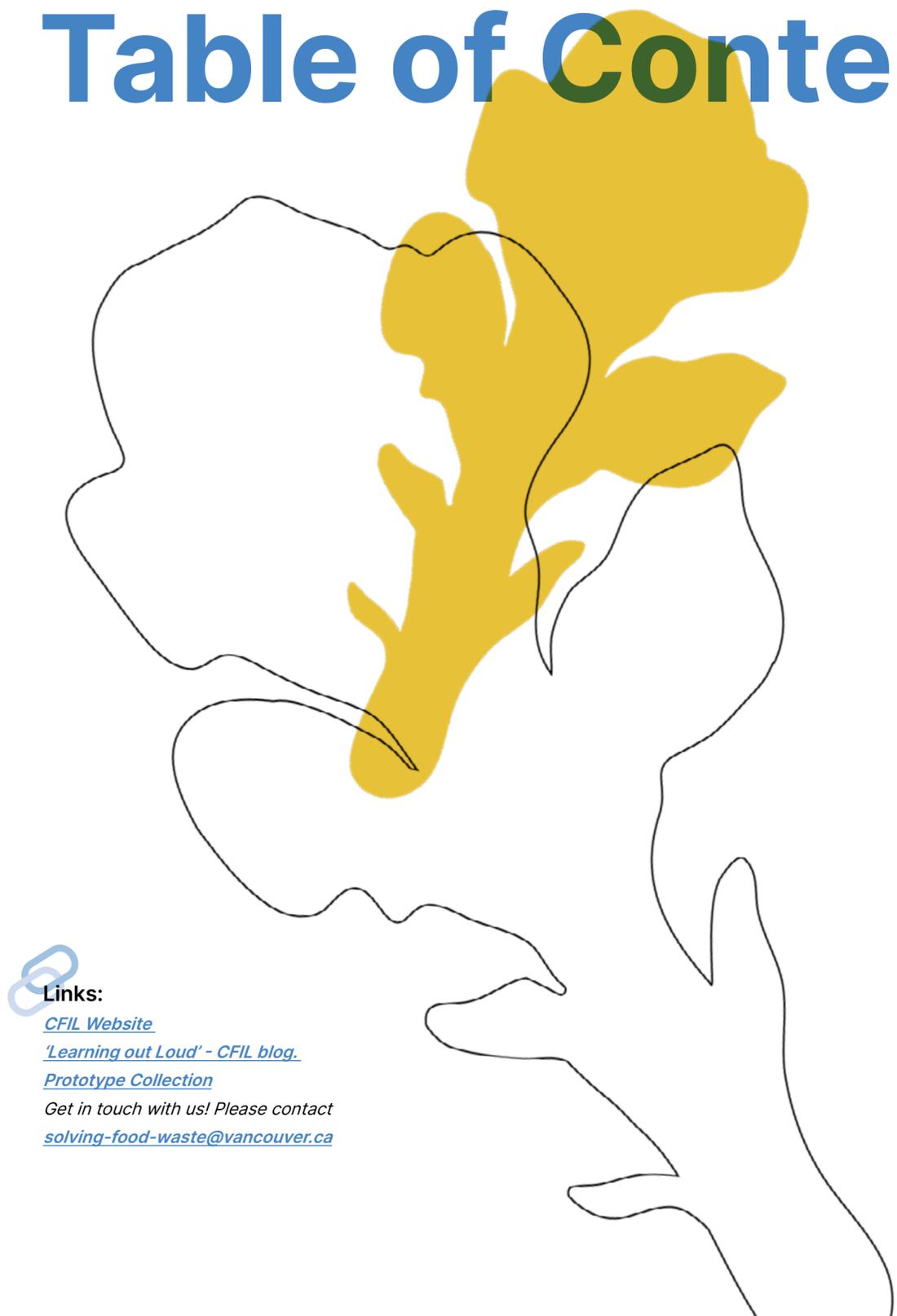
Since our food system exists by design, it can be re-designed. Intervening on stuck patterns requires ongoing effort, and the report details calls to action for creating deep impact:

- Revamp work culture by building leadership, responsibility and accountability for sustainability and circularity. Embed these values in operations, products, team structure, ownership models, and so forth

- Relate to land and food as kin, treating food as a gift to be conserved, with leadership and guidance from Indigenous knowledge-keepers, other beings, and people working hands-on with food
- Celebrate and amplify what's working well, by cultivating reciprocity, ease, joy, collective experiences, care and readiness for systems change
- Embrace small and meaningful actions, which all make a huge impact in the greater picture
- Take action that connects circularity to the food recovery industry, preservation of industrial and agricultural lands, housing security, a livable wage, and other interrelated issues
- Practice seeing the system, observing how we and others are showing up to our work, what choices we are making, mapping connections, challenging assumptions (including our own), and stretching our ability to imagine something different

We invite everyone in the food system, from individual consumers to government practitioners, business owners to researchers, farmers to line cooks, produce managers to food rescuers, to see themselves as a part of the system, and therefore a part of being able to transform it. The time is now for us to collaborate, co-create, try new things, take some risks, and make an impact. So let's dig in.

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Get in touch with us! Please contact

solving-food-waste@vancouver.ca

Setting the Table



Welcome!

We're so pleased to share with you the "final" report of the Circular Food Innovation Lab. There is much to be said about this challenging, fruitful and exciting journey, and we have done our best to share as much of it here, knowing that there is always more to say, and that the work is far from over.

We wrote this report with a few different audiences in mind. You are probably interested in this report if you:

- Are a sustainability practitioner or public sector innovator looking to set up a similar co-creative process for addressing wasted food and increasing circularity (or perhaps another complex challenge) in your city or region.
- Work in the food industry and are looking for inspiration for how to solve wasted food challenges and adopt circularity practices and principles in your operations, networks, or communities.
- Were a part of the Circular Food Innovation Lab, and may want to come back to this report for seeds of inspiration as you carry the work forward.

We hope that reading about what we've learned through trying, failing, pivoting and coming together around this deeply **complex challenge** will invite different ways of thinking and practice. We hope that you see yourself as a part of this challenge space, and therefore part of finding solutions that will transform our food systems. The time is now for us to collaborate, co-create, try new things, take some risks, and make an impact. So let's dig in.

complex challenges

are unpredictable, have competing ideas and no right answers; there are unknown unknowns.

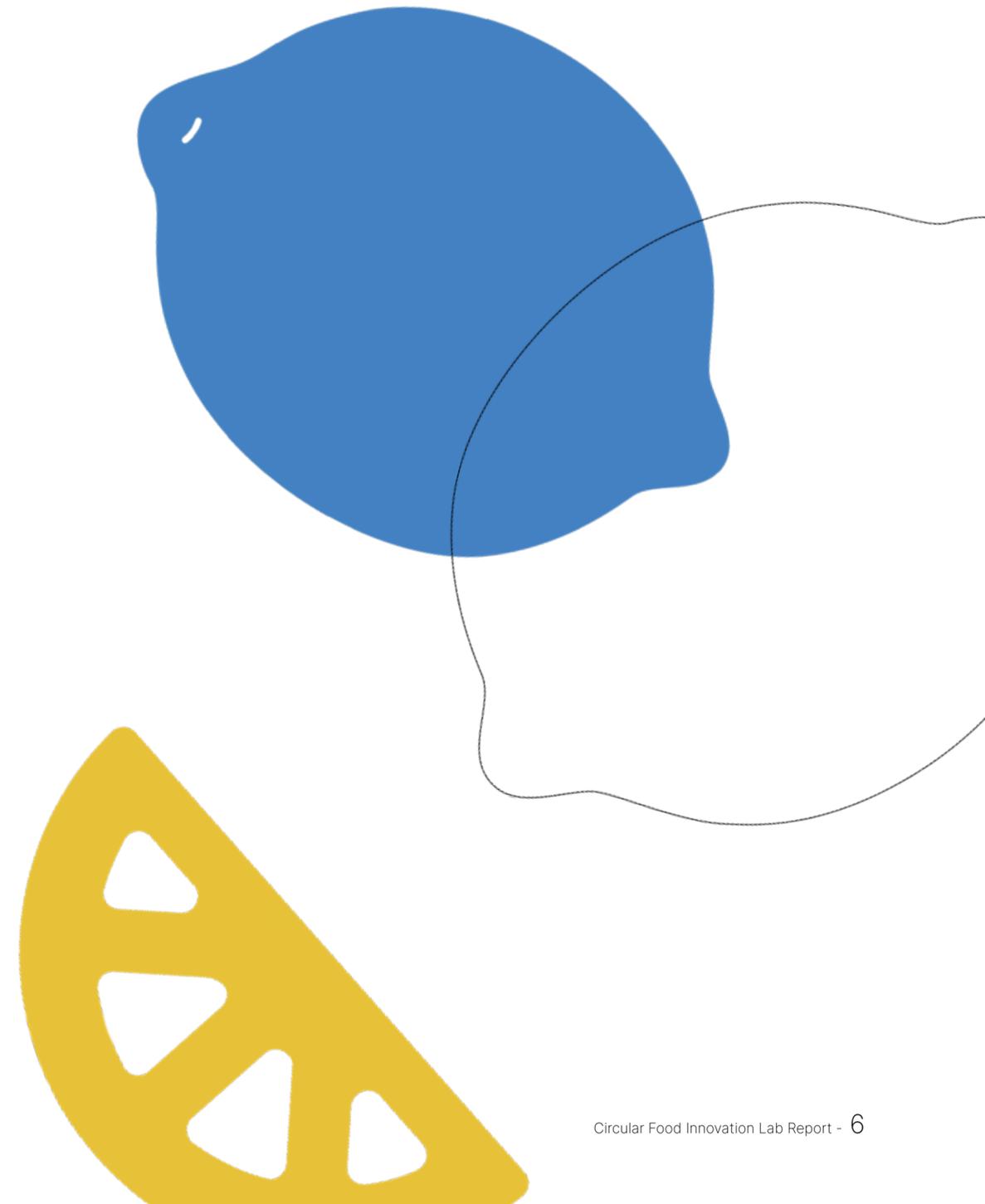
A clear example of a complex challenge is raising kids - there is no clear guidebook, you might try an approach that totally backfires, and what worked at one point in time often won't work in the next.

A note on language

A fractal 'we': There are many different perspectives and experiences interwoven throughout this document. Therefore, there are many 'We's' here, from the perspective of the lab team, the project partners, participating businesses, humans alive at this time, etc. As much as possible, we, the writers, have tried to specify which 'we' we are referring to.

New mindsets, new vocabulary.

Throughout this project we have tried to confront the mindsets, paradigms and cultural norms that keep us stuck from creating change. Part of what we found was that the way we talk about food, waste and circularity (in English) is making it difficult for us to see the problem, and imagine and enact new possibilities. To counter that, the lab has adopted some new ways of thinking, being and talking. In the pages ahead you'll find **words bolder blue** with some further explanation. We've gathered up all the terms in a glossary in Appendix A.



About Us



The Circular Food Innovation Lab (CFIL) was a project co-led by the City of Vancouver, the Vancouver Economic Commission (VEC), Economic Transformation Lab, Emily Carr University of Art + Design, and 18 Vancouver-based businesses and organizations working in the food system. For 10 months between April 2022 and February 2023, this project took place within the setting of a **public sector innovation lab** and used **systemic design, action research** and co-creative processes to work towards the transformation of Vancouver's food system. We experimented with ways to intervene on systems, structures and behaviours to prevent and reduce **wasted food**, and create enabling conditions for circularity in and between food businesses and organizations.

CFIL was funded by the Carbon Neutral Cities Alliance (CNCA)'s Game Changer Initiative and Mitacs Accelerate. The Game Changer grants are intended to mobilize the development, adoption and implementation of game-changing climate policies in cities around the world. MITACS funds partner-based work between post-secondary institutions and the public, non-profit, and private sectors, facilitating applied and innovative research. The learnings generated through CFIL will be applicable and adaptable for use in other cities worldwide.

The Circular Food Innovation Lab took place on the unceded, unsundered, and ancestral homelands of the Hə́łqə́míɬə́m and Sḵwxwú7mesh Sníchim speaking peoples of the xwməθkwəyəm (Musqueam), Sḵwxwú7mesh Úxwumíxw (Squamish Nation) and sə́lilwə́tə́ł (Tseil-Waututh) peoples. We are working to innovate within colonial institutions, and are particularly grateful for the gifts of knowledge about Indigenous ways of thinking, being, knowing, and doing that we have received, and are working to integrate into ourselves and practices each day.

public sector innovation lab
- A space to question, experiment, learn and collaborate around complex challenges with many different possible solutions.

action research - Unlike a conventional research project where a researcher is performing research on a subject, in action research stakeholders and researchers co-exist as co-creators to generate knowledge and action with one another.

systems thinking and systemic design - Systems thinking helps us to see the diverse and dynamic relationships between the challenges that we work on and the broader contexts within which they are situated. When we act systemically, we are looking for the greatest leverage points for change, which involves getting below the surface to look at mindsets, paradigms, behaviours and structures that reinforce the current system.

wasted food - We use the term "wasted food" instead of "food waste" for food that was not used for its intended purpose because it conveys that a valuable resource is being wasted. "Food waste" implies that the food no longer has value and needs to be managed as waste.

Context

About Vancouver / K'emk'emeláy²

Population: 631,486³ Land area: 114 square kilometres

The City of Vancouver is a coastal, seaport city on the mainland of British Columbia. There is limited agricultural land within the city, with food coming from surrounding agricultural regions as well as imported. In addition to the port, some major industries include transportation, hospitality, tourism, green building and construction, film and clean tech. Small businesses (50 employees or less) comprise 98% of businesses in Vancouver.⁴ The Greater Vancouver metropolitan area (also known as Metro Vancouver) is 2,883 km² and a federation of 21 municipalities, one electoral area and one treaty First Nation.

This plan contributes to the priorities outlined in City of Vancouver's Zero Waste 2040 Strategic Plan, approved by Vancouver City Council in 2018, as a long term strategic vision for Vancouver to become a zero waste community. This Plan recognizes the requirement of tackling such a complex issue as a collective, emphasizing greater communication and collaboration between stakeholders. As such, the City is expected to play a stronger supportive and enabling role within the community, expanding beyond its historical role of collecting and transporting materials for processing and waste for disposal. It also contributes to the Vancouver Economic Commission's efforts to amplify Vancouver's emerging circular economy.

² K'emk'emeláy K'emk'emeláy was once a thriving seasonal village for Skwxwú7mesh, Selilwitulh (Tseil-Waututh) and x^wməθk^wəyəm (Musqueam) peoples for gathering and harvesting seafood. Kemk'emeláy means 'the place of many maple trees' in Skwxwú7mesh Snichim.

³ According to the 2016 Census of Population.

⁴ City of Vancouver (2020). [Employment Lands and Economy Review](#)

The challenge

The current dominant economic structure is stuck in a linear pattern of 'extract-produce-consume-dispose'. As our world's biggest challenges grow increasingly complex, circularity poses promising pathways to transformation. In a circular economy, we use what we already have. Our resources stay in continuous movement; products and materials are used again and again. When it comes to food circularity, rather than going directly to landfill, compost or animal feed, unsold edible food is repurposed into a different form for consumption or use, or if inedible, redirected to contribute to the regeneration of other elements of our ecosystems. Taking measures to prevent the potential for food to go unsold in the first place is a top priority.

A major barrier to achieving a circular economy of food is the persistence of practices within the food industry that are so widespread and familiar they have essentially become invisible. In order to shift our food system, our mindsets and practices need to shift throughout the food sector, from production and operations to consumption and waste. In the following section, we describe how working in a lab helped us to get at these shifts.

Wasted Food - Some Facts

- At the same time that so much food is wasted in our food system, so many people are hungry in our food system, both locally and globally. Based on the most recent data from Statistic Canada's Canadian Income Survey, almost 1 in 6 people in the ten provinces lived in a food-insecure household in 2021.⁵
- In Canada, 11.17 million tonnes of edible food are wasted each year at a value of \$49.46 billion. In Canada alone, food waste creates 56.6 million tonnes of carbon dioxide-equivalent emissions every year.⁶
- For every \$1.00 USD spent by a food business to reduce food wastage results in \$14.00 USD worth of savings. An estimated \$195 million dollars of annual sales and/or cost savings⁷ are achievable in Metro Vancouver by adopting circular economic practices across the agri-food value chain.⁸
- Agriculture uses 70% of the planet's extracted fresh water and 1.4 billion hectares of land is used annually for food that is never eaten.⁹

⁵ PROOF (2022). [Food insecurity: A problem of inadequate income, not solved by food](#). Factsheet. University of Toronto.

⁶ Second Harvest (2019). [The Avoidable Crisis of Food Waste, Technical Report](#).

⁷ World Resources Institute (WRI) (2017): [RELEASE: New Research Finds Companies Saved \\$14 for Every \\$1 Invested in Reducing Food Waste](#)

⁸ [Batistatos, D. \(2019\): Measuring the Value of Vancouver's Circular Economy of Food](#). Prepared for the Vancouver Economic Commission. University of British Columbia Sustainability Scholars Report.

⁹ The World Bank (2020). [Water in Agriculture](#).

Shaping the Lab Journey



Lab Overview

Convening questions These are questions that frame the problem and point to the “north star”, a future state that guides the kinds of solutions we are trying to test. They are made up of the following ingredients: How might we [action] for [main users/beneficiaries] so that [goal/vision/intention].

Our **convening question**: this is the main overarching question the lab gathered around.

How might we: **work together to increase**
(action)
circularity in Vancouver’s food system so that: **food**
is not lost or wasted; access to food is nourishing,
(goal, vision, intention)
equitable, and culturally resonant; and habitats are
protected for current and future generations of
(the main actors)
humans and beyond-humans

Why a lab?

More than ever the challenge of addressing wasted food is impacted by the complexity of food systems from farm and ocean to table. Actors in the food system, including businesses, need new ways of thinking and doing in order to conserve food while weathering increasingly complex and unpredictable conditions. Below are some benefits we have found from working in a lab setting:

- It creates **dedicated space and time** to deeply understand and experiment around complex challenges such as this one
- It gives us **permission to take risks** through trying and learning in a safe-to-fail environment
- It **enables like-minded people** who care about, are committed to and curious about businesses’ role in transformation to find one another and explore new edges together
- It invites people to **bring their whole self** into the lab, and allowed us to be kind and gentle to one another

The challenges of wasted food are nested within a larger complex system that is rooted in capitalism, exploitation and colonization.¹⁰ In this lab, we deliberately focused on transforming the dominant status quo system by intervening on stuck patterns and mindsets at the personal, organizational and systemic level. We’ve laid out some of these stuck patterns in the following section.

¹⁰ brown, a.m. Emergent strategy: Shaping change, changing worlds. (Chico, CA, AK Press, 2017).

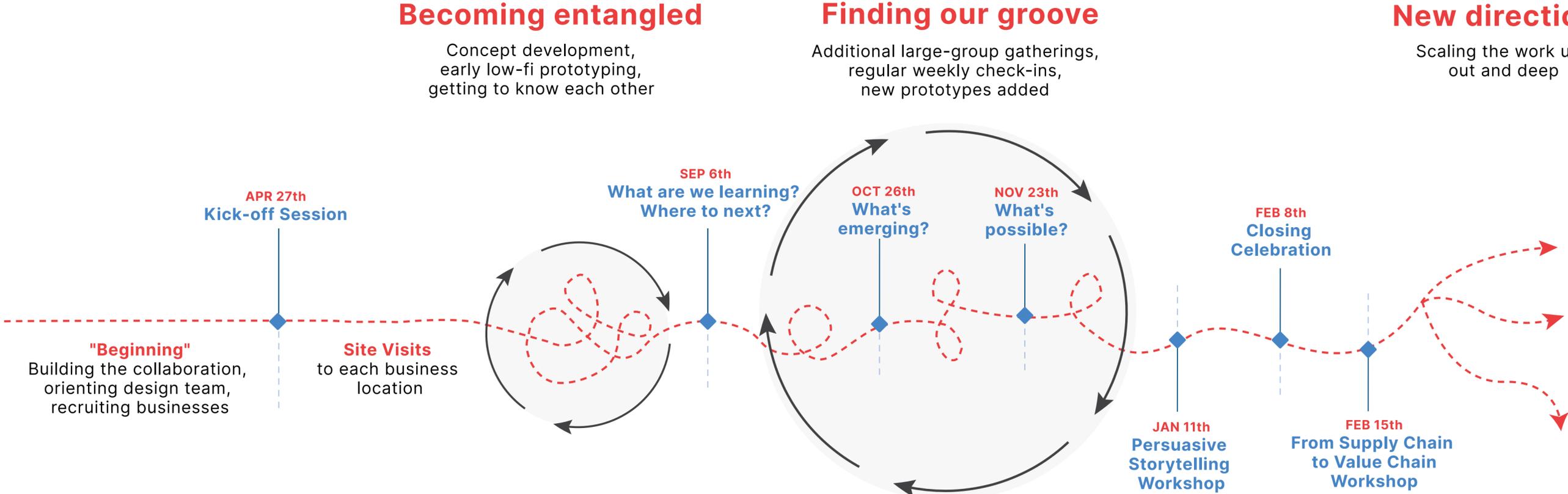
CFIL Principles

Committing to a new process meant that we would need to shift away from old ways of working that only serve to reinforce the status quo. The project partners collectively developed these principles to help guide our work together, and remind us of the kind of transformation we were working towards.

- Move through reciprocity. What can others (human and non-human) provide? How do we care for them and what can we offer in return?
- Live lightly on the land and water. Embrace small and local.
- Move away from competitive, “ownership” and profit-driven ideologies to shared solutions for the future.
- Sustainability + equity are the same and interwoven. Humans’ well-being is the Earth’s well-being.
- ‘What is’ and ‘what has been’ doesn’t need to define what might be possible, desired and/or imaginable.
- Make decisions collaboratively within this space and at its edges.
- Work quickly and be unattached to perfect solutions.
- Center the experiences and wisdom of the work of actors on the ground, and what the larger, more complex system can learn from them.
- Focus on resiliency (productive redundancy) instead of efficient supply chains.
- Practice abundance and inclusion in co-creation, disrupting constructed roles, constraints and scarcity.

Process Map

This process had many beginnings, and many iterations. Typical of a creative process, we started off in one direction and ended up going in another. Our time together consisted of large group gatherings for reflection, determining next steps and connecting with one another; and smaller teams of designers and business collaborators for prototyping. We also had a variety of events and workshops to create many ways of being involved. We wound down the experience by celebrating where we have been, and illuminating the new possible directions for growing this work.



* for workshop descriptions, see Appendix C.

What We Tried



Peeling Back the Layers

When we say **pattern**, we mean the habits, behaviours, procedures and mindsets that help a system function.

A key idea in working with systems is that durable and effective systems change is only possible if deeply embedded **patterns** can be made visible and then shifted.¹¹ Working in the lab helped us peel back the layers of the system to understand the deeper reasons of why wasted food persists, and uncover where in the system the highest impact solutions might occur for nurturing circularity.

The following pages share what we tried and learned, organized like layers of an onion. We start at the outermost layer with stuck patterns at the

surface, which emerged during early systems mapping and action research as a group. The next layer describes how we used prototyping to intervene on these stuck patterns, sharing key learnings and insights from the nine prototypes we tested during the lab. The third layer describes some of the major outcomes across the prototypes and for the lab as a whole. The fourth and innermost layer, details new directions following the lab and invitations to nurture promising patterns for high impact transformation.

¹¹ Meadows, D. H., & Wright, D. (2009). Thinking in systems. Earthscan.

Stuck Patterns at the Surface

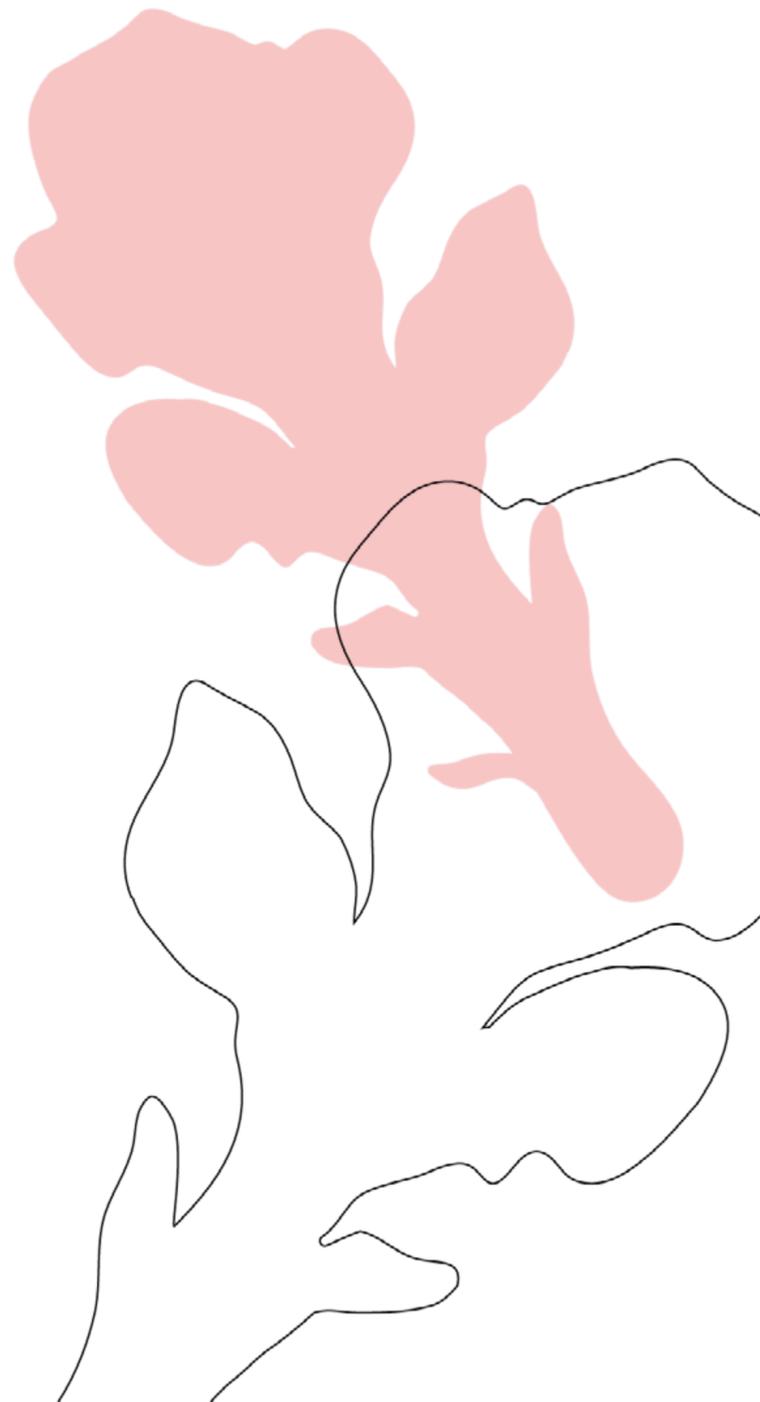
Intervening: Prototypes + Insights

What Shifted: Outcomes

What's Next: New directions + Re-patterning for High Impact



Stuck Patterns at the Surface



This first layer describes where things are stuck. Habits and practices around how we treat food are so deeply seated that we don't realize there's a problem. We're noticing, paying attention to, and trying to shift patterns, because that is where the highest leverage exists to transform our food system.

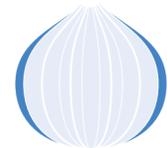
There are many ways to see patterns, and having more perspectives involved adds to the richness of the complexity that make up these systems. Below is a gathering-up of some - certainly not all - of the stuck patterns in the dominant system that we were noticing and paying attention to at the beginning of the lab. These informed how we developed prototypes to innovate around, detailed in the following section. For a larger collection of the patterns we identified, visualized as feedback loops, visit Appendix B.

It's difficult to imagine circularity. Linear ways of thinking are so embedded in our culture that it is difficult to imagine what circularity looks, feels or sounds like. The language of the food sector provides clues about the way we perceive and value food products, and terms such as expiration date, "best-before", and spoilage imply a cresting of value that degrades over time. The implicit linearity is itself a pattern that limits our imagination for circular practices. In this lab, at the beginning it was easier to focus on "reduction of waste", rather than what it meant to "increase circularity" or create circular flows of resources.

Actors across the system place responsibility and fault of wasted food on one another rather than taking responsibility for what they can do. Culturally speaking, wasted food is a vulnerable and touchy subject. Throughout this project, we noticed many different actors shift the "blame" onto other actors. People from businesses pointed to the government or consumers, while local government pointed to industry associations and businesses to take the lead. This kind of finger-pointing pattern happens across many issues, such as climate change, disasters, and so forth, and undermines the potential for solidarity and collaboration on these shared challenges.

Infrastructure and resources for circular food entrepreneurs are hard to access and afford. Despite circularity happening in small niches in Vancouver, there are minimal supports for those leading the way. Those who are practicing it, or who would like to, are largely running on passion and are at risk of burnout.

"Shrink" (or loss of inventory) is a part of doing business. In the food sector, there is an acceptable standard of "shrink" or inventory loss, and the reasons for loss of inventory may vary widely. Typically, shrink is calculated using percentages, which can mask the often very large physical amount of actual food being wasted especially when it comes to large-scale companies.



Stuck Patterns at the Surface



Food surplus donation programs are providing partial solutions for food businesses, meanwhile over-ordering of food persists. Rather than going to compost, edible food that is unsold will often end up being donated. Food businesses feel good about making a charitable contribution and reducing the impacts of food insecurity. Food surplus is then community organizations' responsibility to handle or make use of, meanwhile businesses continue to order the same amounts and rely on the donation option for whatever is unsold.

Frontline food staff aren't set up to do problem-solving around wasted food. Something we heard from many lab participants was that it was difficult for staff to be engaged in finding solutions to wasted food. The structure of many food industry jobs is that they are often part-time, fall under rigid hierarchies, and are characterized by high-turnover which has only been exacerbated by the pandemic. Such conditions, along with work culture, provide little incentive for staff who work most closely with food to be on board with trying different approaches, when nothing else about their work changes.

Consumers expect perfection and overabundance of choice, and businesses comply. Especially in our cultural context, consumers have grown to expect food displays that show an overabundance of options and quantity, and perfect-looking food. If businesses were to display a smaller selection and include more natural looking produce, they might be perceived by customers as a cheap "discount brand", having a limited selection or having poor quality.



Intervening: Prototypes + Insights

Treating this as a jumping off point, all the prototypes in combination will help with the bigger picture.”

- Emily, CFIL Business Collaborator

When faced with complexity, it's easy to remain stuck in thinking and analyzing how we got here in the first place. Tools like prototyping can be a way to navigate our way through the complexity. In this section we recap the different areas where we experimented and tried to intervene on stuck patterns in the system. We provide a quick description of prototyping and how we used it, then present each of our nine concepts that we developed and prototyped within the lab.

What is a prototype?

A prototype is a tangible or experiential representation of an idea. Prototyping involves taking small risks and invites micro-failures as a way to learn, and to make smart and informed decisions when it comes time to invest more resources or scale a solution.

Practicing prototyping looks like building low-resource “mock-ups” of potential solutions and testing them with users to answer early questions about whether or not an idea is promising, and what kinds of roles or interactions might be involved in this solution if it were scaled. Two guiding questions that have helped us in discerning whether or not we have a prototype are: 1) What are users of this solution interacting with?; and 2) How are we making the concept real for them?

Why prototype around wasted food and circularity?

- **It helps us learn more about the system.** Seeing the system can be so daunting and overwhelming. Prototyping can be a way to break it down into smaller, manageable parts to work on.
- Since prototyping is hands-on and requires experiential and embodied actions from those involved in testing, **it is a useful way to shift from thinking into doing.**
- **Prototyping gives us permission to try, learn and fail before we've poured all our resources into a solution.** For professionals who largely draw on typical project management tools, policy analysis and planning processes, practicing experimentation can be a highly useful tool for identifying early on important considerations for a conceived solution. In some cases, prototyping reveals that an idea is not at all a direction we should be pursuing.

In prototyping, the solution doesn't have to work on the first try! That relieves so much pressure.”

- Bianca, CFIL Designer

Our 9 Prototypes

In CFIL, prototyping surfaced new insights and patterns in the system, and helped us to navigate the entangled messy parts of the problems we were trying to solve. As much as possible, we tried to make sure we were prototyping systemically, meaning that we tried to ensure that our experiments still served the purpose of intervening on deeper levels of the system.

Each of the prototypes is described over two pages, and includes:

- An overview describing the stuck patterns that the prototype tried to intervene on
- The convening / “How Might We” question guiding our learning
- Key moments + Learnings that emerged from the prototype that led to deeper insights about the patterns, and in some cases promising new directions

Some of our prototypes led to some promising tools that could be tested and scaled in other contexts. These are compiled in our companion [Prototype Collection](#), and indicated in the following pages.



1

Nourishing Staff Engagement

Collaborating to explore circular solutions and shift work culture

Testing context:
Franchise grocery store;
Hotel kitchen



2

Circular Entrepreneurship

Innovating with spent grain

Testing context:
Craft brewing industry



3

Reframe

Changing our lenses to make different choices

Testing context 1: Changing customer mindsets on imperfect produce in a large chain grocery store
Testing context 2: Farmers and vendor community, local farmer's market organization



4

Measure What Matters

Changing actions to change values

Testing context:
Franchise grocery store



5

Peer to Peer Network

A community, driven by purpose

Testing context:
The CFIL community



6

Co-Creating Collaborative Responsibility

Shared accountability across the food system

Testing context: Collective action from the City's Solid Waste Strategic Services branch, a franchise grocer retailer and food marketer.



7

Learning Journey

Place-based sensing of the system and circularity

Testing context: Various sites in the local food system; Circularity practitioners



8

Last Call

Shifting culture and practices to prevent surplus

Testing context: Franchise grocery store; Regional produce distributor



9

Tracing Foodsteps

Improving food sorting procedures in the back-of-house

Testing context:
Delivery-model sustainable grocery warehouse



1-Nourishing Staff Engagement

Collaborating to explore circular solutions and shift work culture

***"If I suggest an idea,
it means more
work for me."***

- Grocery Store Staff Member

Prototype Team

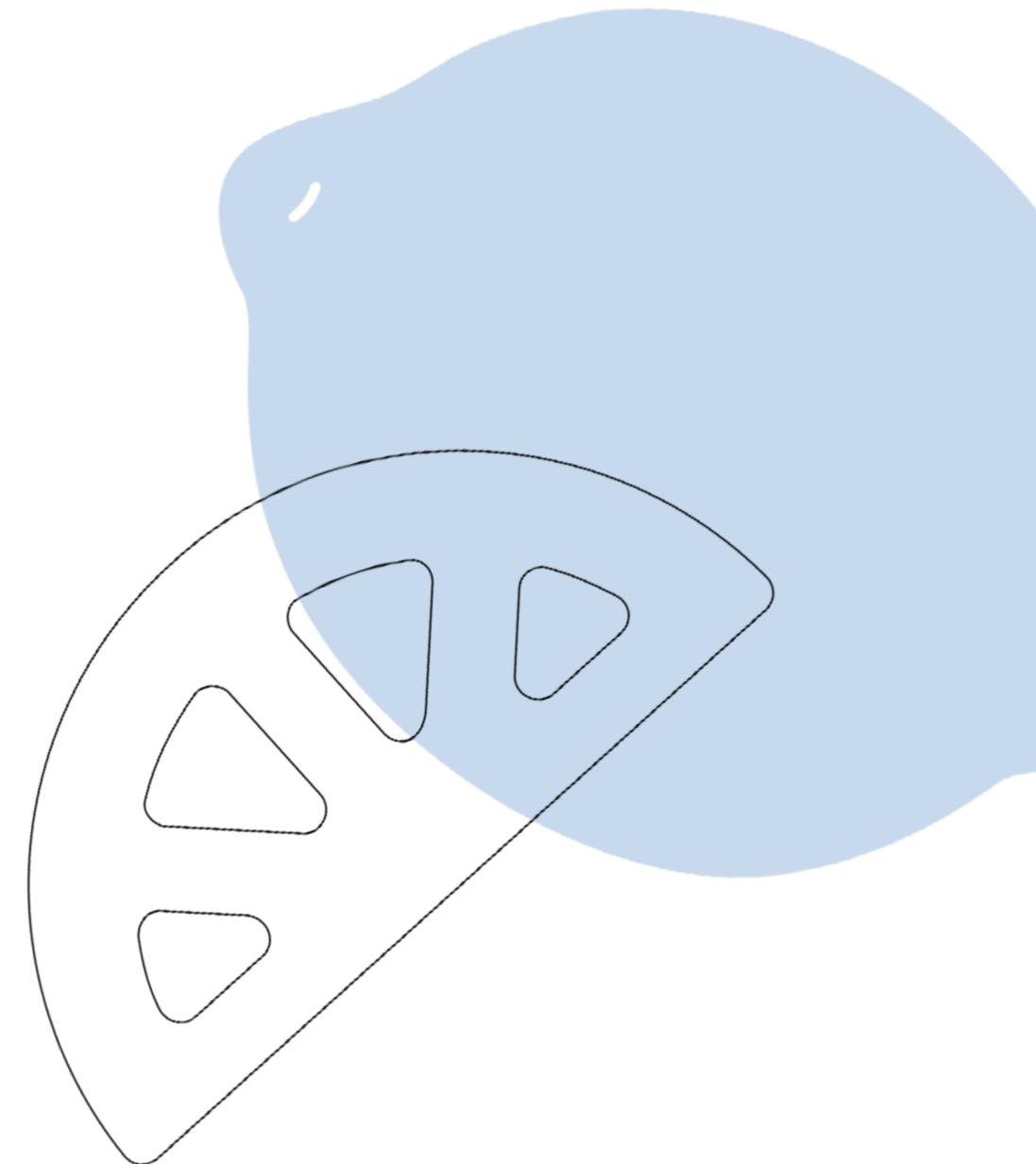
Chefs + cooks from JW Marriott
Staff and department managers from IGA Robson
Anthony Sullivan (IGA Robson)
Nicholas Czekurlon (JW Marriott)
Hunter Milroy (CFIL Design Team)
Marcia Higuchi (CFIL Design Team)

Overview

Businesses mentioned early-on of their challenges with engaging staff. High turnover and the part-time nature of many food industry positions doesn't help. Site visits and early conversations with business collaborators and staff at different locations revealed that even if there were opportunities for staff to provide input or ideas, they were not resourced, encouraged or incentivized to implement these changes. Most approaches to problem-solving meant extra work for staff, still served a "top down" structure of businesses, and rarely recognized staff knowledge, skill and experience. In an effort to intervene on hierarchical frameworks and acknowledge the expertise of staff, we prototyped a workshop that would serve to bring staff and supervisors together in a different way to address the challenge of wasted food.

How might we: **enable frontline food staff to be a**
(action)
part of growing circularity in the workplace

so that: **livelihoods are supported while shifting to**
(goal, vision, intention)
a circular food system





Key Moments + Learnings **Nourishing Staff Engagement**

Pre-workshop Primer: Building a foundation of reciprocity

The prototype team sent a pre-workshop primer to staff in order to test their level of engagement and capacity for reflection/awareness. Receiving short, surface level responses to the primer made us realize that we simply cannot expect the staff to deliver their knowledge and insight upon request. The exchange needs to be reciprocal, and requires more care.

Reframing 'expertise', centering collaboration

The folks stocking, cooking, serving, and disposing of our food everyday are the experts in this system, and part of working towards circularity is truly listening to what they have to add. When we are listened to and involved in our work, when we care about what we are doing, work becomes more meaningful. Ideally, what's next is a shift away from hierarchical work culture and structure towards collaborative opportunities on our journey towards an equitable food system.

Food intimacy

We noticed that chefs and cooks who work in a collaborative environment and are trained to work tangibly with food to touch, feel, cut, cook and serve it, talked about food with care and passion. This prompted us to reflect on how elements such as work structure and culture, seeing one's relationship to food as co-creative (producing something together), rather than commodifying can have an impact on how much we care about what happens to it.

Realizing staff's ideas

We synthesized workshop insights, and business collaborators chose which ideas they will work to push forward. The workshop led to insights about the need for a clear mission that the staff can get behind. Attempting to advance ideas without a larger sense of direction would be a disservice to the work of the staff.



Tested and improved by staff, the prototype team ended up with a versatile workshop that pushes boundaries of how we understand the problem of wasted food and how to address it from different angles within the system.



**Nourishing Staff Engagement
Workshop Guide**

[Access the workshop instructions in the Prototype Collection](#)



2-Circular Entrepreneurship

Innovating with spent grain

“Supporting existing programs and initiatives that work but lack support, will expand people’s knowledge of what’s out there and already available.”

-Diana, CFIL Business Collaborator

Prototype Team

- Diana McKenzie (Callister Brewing Co.)
- Biana del Rio Kodato (CFIL Design Team)
- Christa Clay (CFIL Design Team)
- Darren Bennett (Mycelium Research, Emily Carr University)

Overview

Circularity has already been happening in small niches in Vancouver. There is a lack of support, reward or incentives to run or scale up circular businesses, or operationalize circular practices, in existing businesses. Those leading circular initiatives are largely running on passion, and may have minimal resources. A risk of burnout means slow growth for the circular economy, which would perpetuate the broken system.

The Circular Entrepreneurship prototype emerged from the recognition of the need to support connections between Vancouver businesses practicing circularity, for knowledge-sharing and generating new opportunities, so that those who are doing it, continue doing it, and those who aren’t, join in. Based on the business who chose to participate in this prototype, as a group we focused on spent grain, a by-product of beer making, from breweries.

How might we: incentivize and support people to build
(action)
relationships, partnerships and support networks
 so that: entrepreneurs can spend their time solving problems
(goal, vision, intention)
through deep systems work while creating a livelihood





Key Moments + Learnings **Circular Entrepreneurship**

Figuring out our scope

In the beginning of the project, we reached out and connected with entrepreneurs and innovators outside of the CFIL project who are involved in the spent grain industry, to chat, share, and learn together. The meeting surfaced a few possible opportunities for growing this industry.

Hitting a wall

Following this initial meeting, things lagged. It wasn't clear what we could prototype at a small scale, and it took a while for the team to meet. When people are already so busy with their existing schedules and responsibilities, how do we turn a 'side-of-desk' passion-driven activity into a significant and sustained priority? We spent a lot of time trying to find a tangible solution to test, but nothing seemed promising.

Taking a step back: Getting a broader view of the challenge

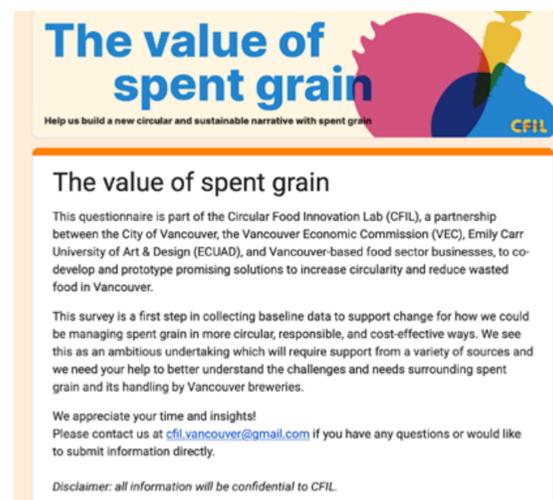
We reframed our approach and took time to better understand other breweries' challenges when dealing with spent grain disposal and their interest in upcycling + changing current brewing processes to more sustainable and circular possibilities. This included sending a survey to 26 breweries in Vancouver with 15 responses. Some key insights from the survey include:

- Most respondents have their spent grain picked up by farmers for animal feed
- Most respondents are small breweries (producing <2,000HL/yr)
- 93.3% of respondents are interested in upcycling their spent and finding a better, cohesive, industry-wide solution

Testing unique collaborations and new industry opportunities

The prototype team connected a brewery with a design student developing - a new bio-material made out of mycelium. Together we developed a proof of concept demonstrating how we can repurpose spent grain to grow mushrooms.

At the time of writing this, we are planning a follow-up gathering for breweries who responded to the survey. This will be a space to imagine sustainable and innovative solutions for upcycling spent grain, and also test out new roles for collaboration between the City and the brewery community.



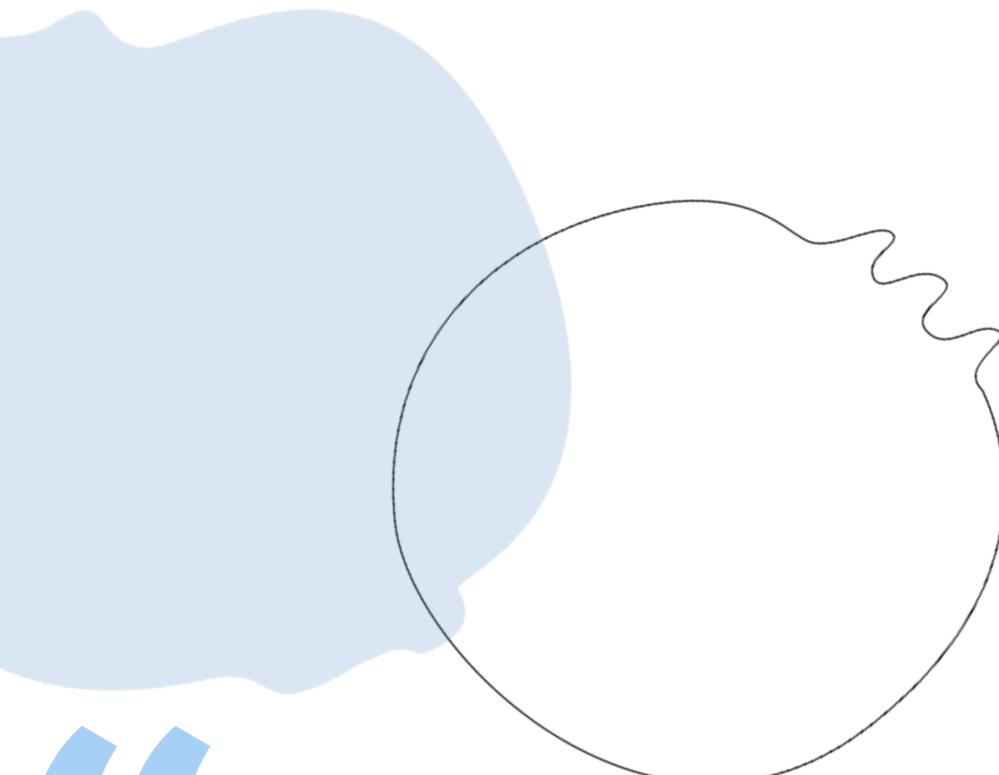
Screenshot of survey



Mycelium



Mushrooms grown using spent grain from Callister Brewing Co.



“It’s very easy to feel isolated on issues like this. I think participating with the team and having the City of Vancouver involved makes me feel like, instead of having a giant brick wall in front of me, that wall is maybe made of straw now.”

-Diana, CFIL Business Collaborator



3-Reframe

Changing our lenses to make different choices

Sometimes the best tasting strawberries look the worst.

- Farmers Market Vendor

Prototype Team

Miguel Santos (Save-On-Foods)

Laura Smit (Vancouver Farmers Market)

Monika Chowdhry (Vancouver Farmers Market)

Marcia Higuchi (CFIL Design Team)

Yejin Eun (CFIL Design Team)

Soumya (CFIL Design Team)

Overview

Many business collaborators shared about the pressure to keep up with customer demand and expectations for “perfect-looking food” and an overabundance of choice in their shopping experience. Grocers and vendors avoid displaying and selling imperfect and less fresh food, which then gets wasted, perpetuating an “out of sight, out of mind” habit.

Initially the prototype attempted to disrupt this pattern, asking what if businesses could change customers’ perceptions through things like signage, displays and new products?

This concept was prototyped in two different contexts: A large grocery store chain and the local farmer’s market.

How might we: reframe the value of all

(action)

foods through transparency to customers regarding

the journey of food, how much energy went into its

production so that: customers are encouraged to

(goal, vision, intention)

choose less perfect and less fresh food that is still

edible and nutritious



“Who cares about circularity, as in, circularity defined? Through prototyping we were finding that circularity required a lot of interpreting for the vendor community or for our shopper community. It’s a term that we can pay attention to as organizers. But how does it translate? I think there are so many places and ways in which our shoppers and our vendors care about circularity, but don’t call it that.”

- Laura, CFIL Business Collaborator



Key Moments + Learnings **Reframe**

Farmer's Market

Getting it 'Wrong': The Surprise / Soup Bag

An early question we had was whether farmers would bring their imperfect produce to the market if there were a guaranteed sale. The "Surprise and Soup Bag" would be a farmer's market product that customers could buy without having their choice of produce. Farmers were very resistant to this prototype. They let us know that we weren't seeing how they were already practicing circularity, and they didn't see unsold produce as "waste", but rather as nutrients for the soil.



The surprise / soup bag low-fi prototype

Mindset Pivot: From "asking for more" to "celebrating and learning with"

The early failed prototype made us realize that we needed to reframe how we were seeing the problem. Farmers didn't want to answer another survey or questionnaire, they wanted to be acknowledged for the regenerative and circular practices they were already doing as part of farming operations. Co-designed with a farmer, the next iteration was a social media campaign to celebrate their pre-existing knowledge.



Celebrating Circularity social media campaign

 **Celebrating Circularity
Storytelling Campaign**
[Access the social media template in
our Prototype Collection.](#)

Grocery Store

A long approval process

We faced an extensive approval process considering we were doing rapid prototyping. This surfaced a key reflection about larger companies' ability to adopt the quick and nimble practices of rapid prototyping in order to innovate around circularity.

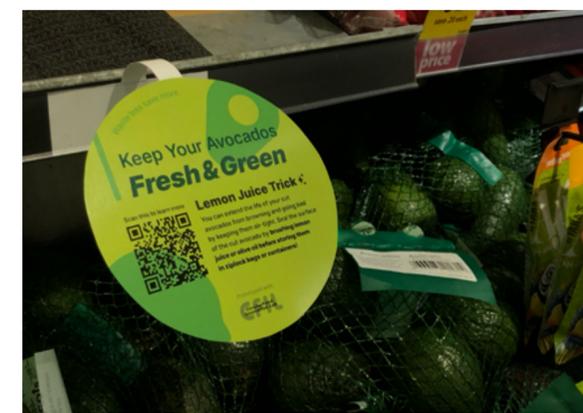
Finding each stakeholder's ROI

There were a lot of stakeholders involved in the prototype, including corporate decision-makers, customers, store management and staff. We needed to find the right way to communicate the value of this concept in ways that would resonate with each of these groups.

The small but mighty danglers

We designed danglers, as pictured, that communicated tips for keeping food fresh for longer, as well as different ways of thinking about imperfect and beyond-peak-condition produce. We've learned that even a small and simple intervention like a dangler, primarily designed to educate customers, can also inspire and spark important conversations at the store level, between managers and staff, as well as within corporate approval processes.

 **Reframe Danglers for educating
customers in grocery stores.**
[Access the templates here in
our Prototype Collection](#)



"Waste less, Save more" campaign at the grocery store

Making it bite-sized was crucial for getting support at different stages.

- Miguel, CFIL Business Collaborator



4-Measure What Matters

Changing actions to change values

We were not doing a good job measuring, we thought we had a hold on it but we didn't.

- Anthony, CFIL Business Collaborator

Prototype Team

Anthony Sullivan (IGA Robson)

TJ Conwi (Ono Vancouver)

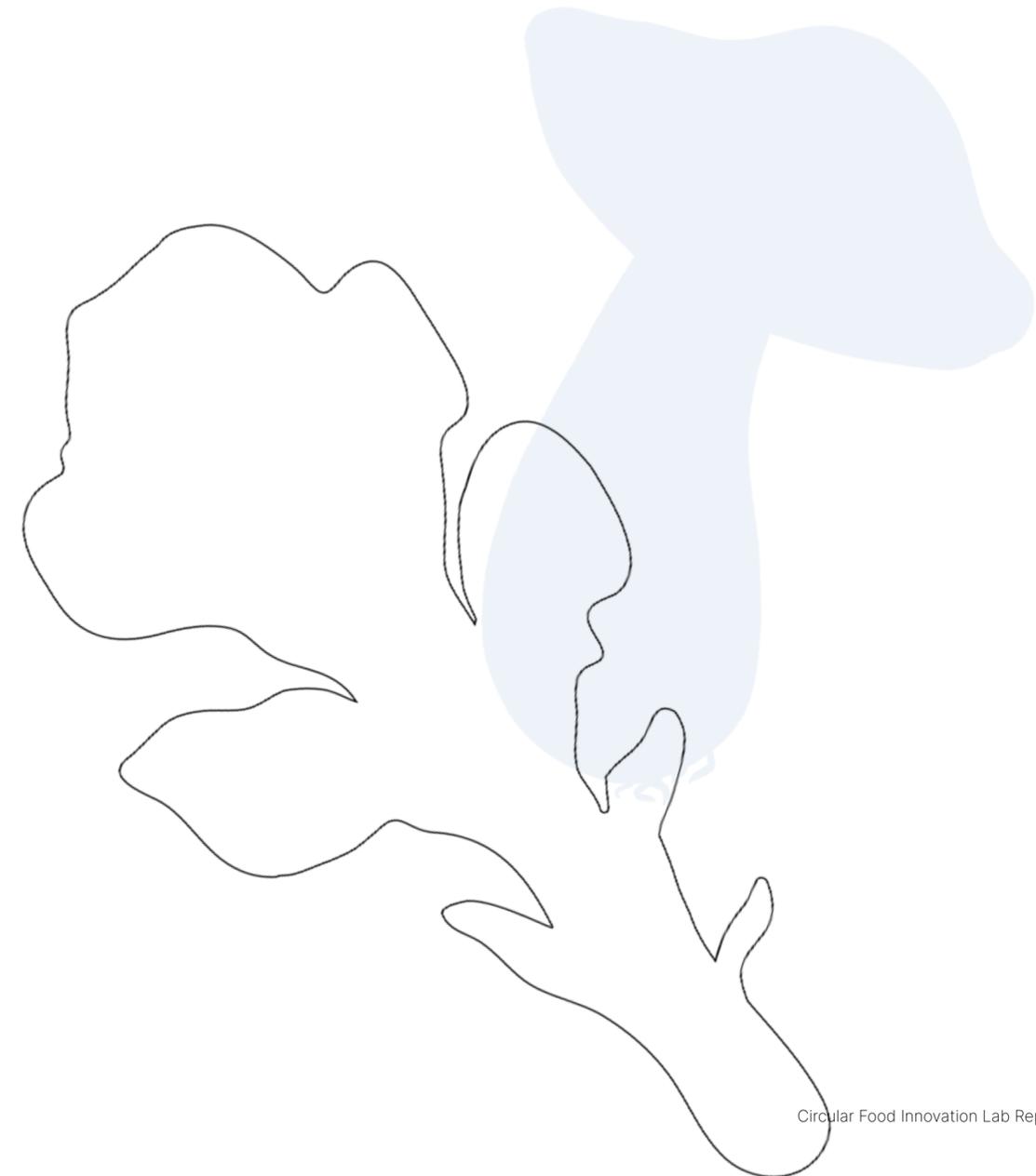
Bianca del Rio Kodato (CFIL Design Team)

Sheyda Rashidi (CFIL Design Team)

Overview

Measurement around wasted food typically are calculated as a percentage of lost profit, or 'shrink', rather than the the physical amount of food being lost. Without measuring actual wasted food, we cannot understand the magnitude or origins of the problem. Navigating the pressures of guilt and the tendency to dodge and deflect revealing how much is being wasted, the Measure What Matters prototype aimed to promote a more transparent and sustainable food system in Vancouver by encouraging businesses to measure their unsold food and collectively set targets to reduce wasted food.

How might we: utilize existing measurement frameworks and platforms for measuring wasted food (action) so that: livelihoods are supported while shifting to a circular food system (goal, vision, intention)





Key Moments + Learnings **Measure What Matters**

What actually matters, and to whom?

Participation from a diverse range of businesses in this prototype highlighted that there are different priorities of what to measure depending on the impact that they are trying to focus on. One of the business collaborators was a food rescuer, so for him measuring how much food was saved rather than wasted was a more significant indicator. This invited us to question what kinds of indicators were important to measure, and who gets to decide that.

“Shrink percentage is pretty meaningless when you compare it to multiple bags of food that you have in your hand.”

- Anthony, CFIL Business Collaborator

Getting to root causes

When trying to do the initial measurement experiment with little success, we noticed that a barrier to measurement was the food industry's workforce structure. It was difficult for business collaborators to implement prototypes when staff's activities were already programmed, especially amidst conditions of high turnover and labour shortages. While we hoped that staff would voluntarily be a part of testing the challenge, we learned that being asked to implement these changes without anything else about their work changing was not a big enough incentive for staff.

The pivot: A rallying cry

The prototype shifted from relying on voluntary uptake of interventions to testing other levers for accountability by designing a measurement challenge framed as an experiment led by the City to inform municipality-wide policy. Demonstrating to staff that the impact would reach beyond the grocery store and potentially make a difference for City-wide action around wasted food proved to be a significant driver of participation in the challenge. By reframing the *For The Love of Food Challenge* as an undertaking that the store had committed to, rather than something they are volunteering for, we garnered more acceptance and excitement for the activity.



The For The Love of Food Challenge: This challenge was designed to run for two weeks and asked the different departments of a grocery store to record, measure, and report their food handling weekly.

Food Measurement: A focusing exercise For the Love of Food Challenge instructions

[Access in the Prototype Collection](#)

Big shifts in under two weeks

The *For the Love of Food Challenge* yielded high-impact shifts in a short amount of time:

- Streamlined donation pick-up area to make it easier for charity partners
- Retrained produce + deli departments to work better together
- Staff started voluntarily creating value-added products like repurposing unsold fruit in the deli, selling fruit cups
- Creation of a new role in the grocery store: Sustainability Manager

5-Peer to Peer Network

A community, driven by purpose

“This prototype gives another avenue to be more extroverted, and actually talk and develop your skills in communication with other people. Normally I’m an introvert, but it kind of forces you to kind of grow as a person. So I’m very grateful for that opportunity.”

- Mike, CFIL Business Collaborator

Prototype Team

- Don McGinn (Uprising Breads Bakery)
- Mike Ngsee (Stong’s Market, Dunbar)
- Hugo Mak (Pacific Fresh Produce)
- TJ Conwi (Ono Vancouver)
- Christa Clay (Vancouver Economic Commission)

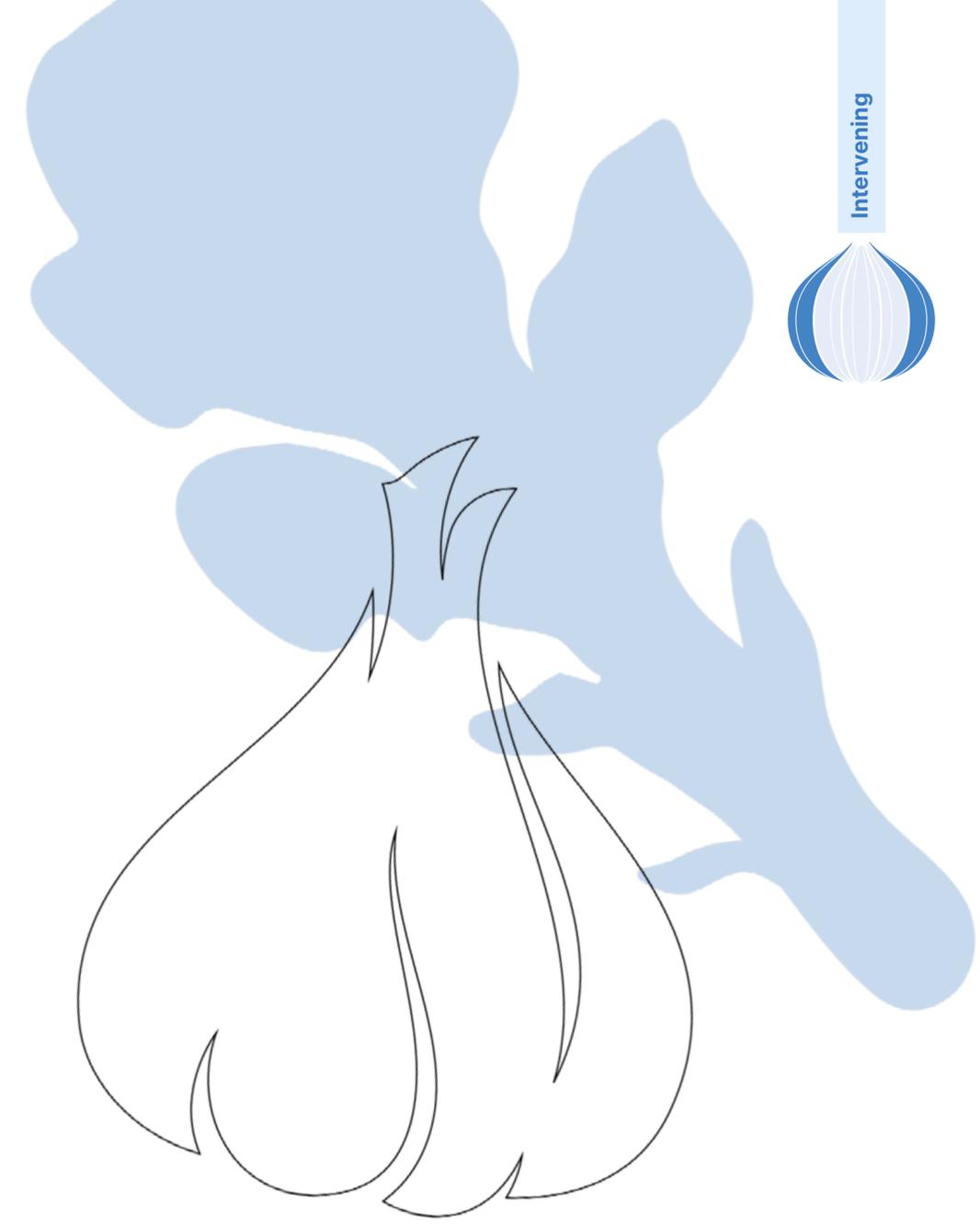
Overview

Practicing circularity in a food business is challenging as you are surrounded by an industry that is stuck in its business-as-usual approach, on top of the challenges amplified by the Covid-19 pandemic. As this work is systemic, endeavoring to challenge it alone is isolating. There are a number of champions for this work throughout our community that are not always easy to find, connect with, or even know about in the first place.

This prototype tested how/whether formalized peer networks amongst food businesses, that are modeling or looking to adopt circular economy of food practices, might strengthen collective efforts. It was about finding promising ways to share emergent practices, resources, and opportunities with each other in community to build a better, more resilient system together.

How might we: **continue to support and grow this network of actors in our food system**

so that: **collaboration, sharing, and implementation of promising practices is fostered**





Key Moments + Learnings Peer to Peer Network

Using the lab itself as a learning ground about peer networks

Given that the lab itself was a peer-to-peer network, and that we could learn a lot based on what was bringing people back to each session, the CFIL team made sure to intentionally connect learnings from convening the larger group to this prototype. We used some of our all-group gatherings to build relationships and test different functions of the network, including crowd-sourcing for ideas or solutions to waste/circularity challenges.

Following through is challenging

Business collaborators in this prototype acknowledged that it's hard to initiate relationship-building on their own and in between larger lab sessions. It's difficult to make the aspirational work a priority amidst the day-to-day tasks to keep operations going. This posed a larger reflection on the need for strong leadership and facilitation to support network-building.



We ran some exercises in-person with the group to see how everyone might crowdsource some solutions or feedback on questions that they hold in their quest for circularity.

How formalized should this network be? Who should lead this work?

We wrestled with to what extent we should be formally coordinating and connecting people, compared to letting it happen organically. Building relationships is something that can't be forced, and at the same time it is easy to lose momentum or interest in connecting if the right structure is not in place.

Ingredients for movement-building

We initially thought we were testing what a networking platform might look like, what purpose it might serve, whether it would be digital. While the nuts and bolts of a network are important, the important glue for movement building happens through relationships, through being excited by a topic and wanting to share it outwardly, and through trusting others enough to rely on them for support.

Planting seeds for continued collaboration

The CFIL team is motivated by the willingness of the lab community to continue this work, and the trust that has been built over the course of the 10-month period. We are still learning, iterating, and adjusting how an ongoing network might look, still trying to find out how to best negotiate time, accountability, and ownership. This will continue to be navigated in the coming months and years, as our commitments continue to lie with the CFIL community we have been building and growing, and with the connections and investments that each of us has within the larger system.

“The whole CFIL thing ended up tackling a bigger problem than the smaller issue I thought we were going in with. It changed my reasoning for being part of it.”

- Don, CFIL Business Collaborator



6-Co-creating Collaborative Responsibility

Shared accountability across the food system

Overview

As mentioned in the previous section, one of the stuck patterns that came up in early conversations was around the tendency to place responsibility for wasted food on different actors in the system. Co-creating Collaborative Responsibility attempted to intervene on this pattern by fostering collaboration and collective accountability between various stakeholders, such as business participants and representatives from the City of Vancouver. Since there was a lot of discussion at the beginning of the lab about businesses' need for direction and incentives through policies around managing food waste, we were interested in testing what it would look like to develop effective policies for the food system as a way to build collaborative responsibility.

How might we: **co-imagine and co-create policy and/**

or regulatory interventions to grow a sense of shared

(action)

responsibility and accountability between businesses,

industry associations, and government partners

so that: **we can achieve goals around preventing wasted**

food and directing food where it is most needed

(goal, vision, intention)

Prototype Team

Anthony Sullivan (IGA Robson)

Craig Sheridan (Legends Haul)

Erin Nichols (CFIL, City of Vancouver)

Sheyda Rashidi (CFIL Design Team)

Garima Sood (CFIL Design Team)



Key Moments + Learnings **Co-creating Collaborative Responsibility**

Getting on the same page

CFIL designers hosted collaborative workshops between a business collaborator and the City of Vancouver project partner to understand where there is potential to co-create policies together. A few different levers were explored, including what it would take to create a baseline for measurement of wasted food, mandating food donations, and other enabling conditions beyond policy, such as the possibility of creating new funding streams or incentives for adopting circular practices in food operations.

Falling through the cracks

For a variety of reasons, this prototype lost momentum. Following the initial workshops, the prototype team got lost on where to go from there and what could actually be tested. There wasn't a shared understanding of who has what kind of agency to do or try something. Amidst the transition we lost touch with the one business collaborator who was interested in this prototype. Changes to our team's makeup also strained our team's capacity.

Lack of readiness, a daunting undertaking

One thing we heard from a few lab participants was that this prototype seemed really daunting. It was difficult to imagine businesses and government coming together to collectively address this issue. That said, there was a real shared interest and naming of this as a problem, which raised questions about readiness to come together to problem-solve at the structural level on a city-wide scale. Maybe we didn't have the right championship, enabling conditions or framing of the problem in place to explore this prototype properly, and that there are others beyond the lab who have more particular interest/stake in co-designing policy and other levers that can be pulled when it comes to collective responsibility.

What's promising: Demonstrating broader impact

We merged the prototype with the Measure What Matters challenge experiment. Having learned that voluntary participation was not promising in the particular contexts we were working in, our second iteration of the "For the Love of Food Challenge" aimed to test if framing the challenge as an undertaking that could contribute to collective city-wide efforts would inspire greater motivation.



Framing the Love of Food Challenge as having the potential to influence policy was just the little nudge our team needed to motivate us to track our food handling practices."

- Anthony, CFIL Business Collaborator



7-Learning Journey

Sensing the system and circularity in place

A **learning journey** is more than a field trip or interview - it's a sensing experience. It is used to break through patterns of seeing, listening and knowing by stepping into different, sometimes uncomfortable, and relevant experiences and perspectives. It also serves to build the capacities of the team to see and work from the whole system, and to use this to generate new ideas.

Prototype Team

Various attendees from CFIL and the general public
Bianca Del Rio Kodato (CFIL Design Team)
Lily Raphael (CFIL Design Team)

Learning Journey Sites

[Food Stash Foundation](#)

[Chérchenstway Indigenous Healing Garden](#)

[Recycling Alternative](#) and the Green Industrial Innovation District (GrIID™)

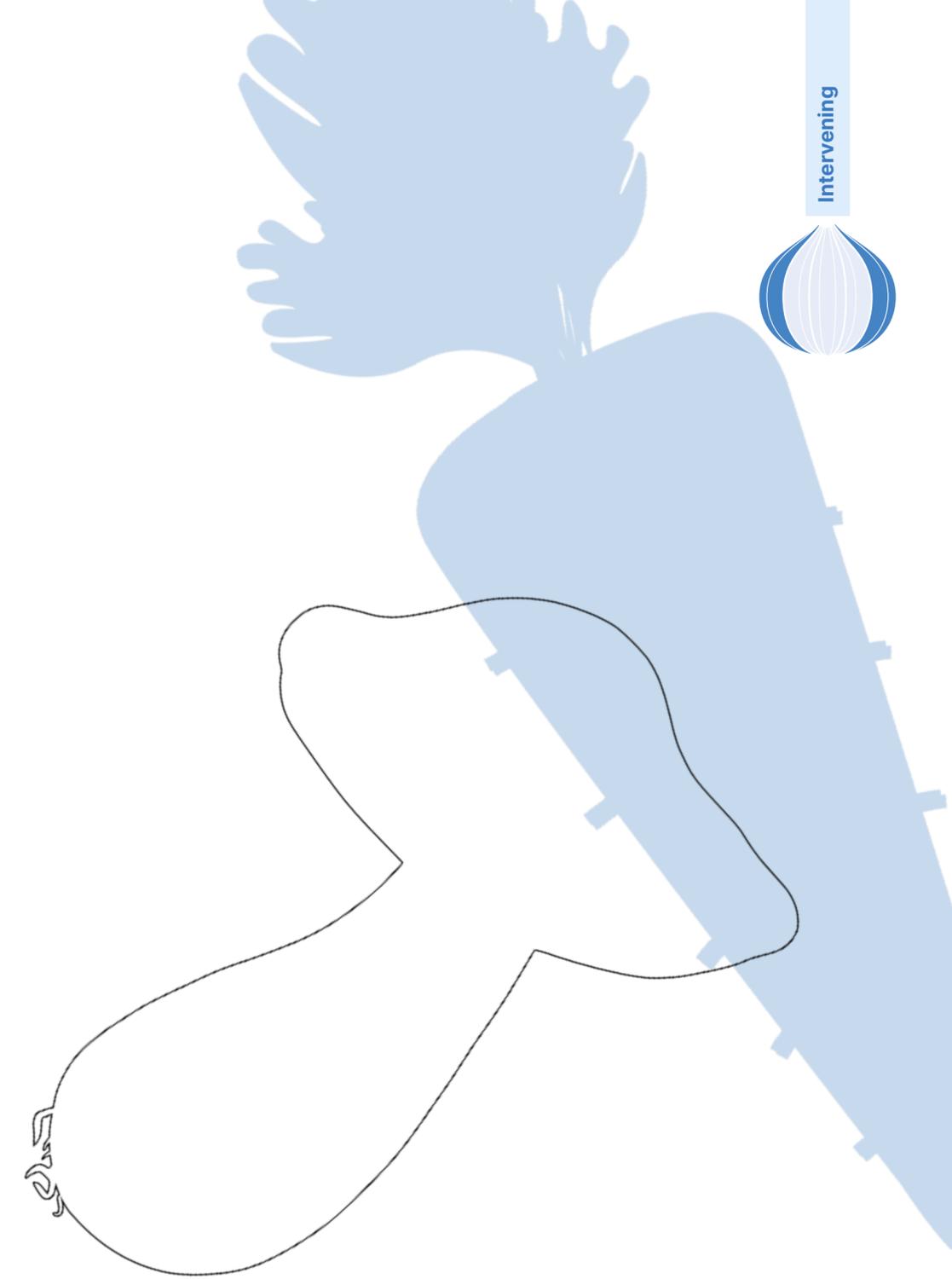
[Susgrainable](#) (upcycling spent grain), hosted at Callister Brewing Co.

Overview

By the end of Phase 1, it was difficult to tell whether learning was happening for lab participants aside from the design team. Our meetings had fallen into a pattern of “updating” rather than co-creating. The CFIL Team also realized it was difficult to identify and understand circularity, because framing of the challenge largely focused on waste for the first portion of the lab.

Through the **learning journey**, we hoped to encourage self-driven learning with peers around circularity to inspire new ways of seeing the challenge and new practices. We also wanted to make different aspects of the system more visible, so that deeper understanding could inspire taking action for changing the system. We hoped that through these learning journeys, deeper relationships would also be fostered.

How might we: **leverage field visits and outings**
(action)
to learn about our food system and circularity in our region so that: **the lab experience centers business participants as learners and co-creators, and we find new sources of inspiration to shape future choices and practices**
(goal, vision, intention)





Key Moments + Learnings **Learning Journey**

Cultivating joy

Developing the learning journey materials and designing the experience felt really great, and was a way for us to model a different way of showing up. We made everything, from hand-folded envelopes to hand-sewn journals, and created small elements of surprise, like inviting people to put their own gifts in thank-you envelopes for the first few journeys. It was also an opportunity to call upon the close relationships the CFIL team had with different actors in the food sector to increase participants' exposure to some promising practices already happening in the city.

What, where and how we learned

Learning in place is a multi-sensory experience and invites us to bring our whole selves to the experience. Learning journey attendees sat in a circle beneath a maple tree at the Chéhchenstway Indigenous healing garden while we learned from CFIL Indigenous Advisor and co-creator of the Vancouver Urban Food Forest Foundation, Leona Brown about the interconnectedness of everything: from housing instability, to Missing Murdered and Indigenous Women and Girls, to healing through the land. We sorted rescued food for Food Stash Foundation alongside volunteers who do this work daily, while learning about the many gaps in the system that this group and others working in food recovery are trying to fill with dignity and care. We walked through the co-located recovery enterprises in the Green Industrial Innovation District, seeing first hand the repurposing of old tried and tested technologies to solve today's urban challenges. We ate full-circle pretzels made using flour from upcycled spent grain, while we learned about what it takes to start and scale new businesses committed to circularity and sustainability.



Learning journey journal and reflection materials.

“We get back what we put out in the world.”

- Leona Brown (Gitxsan & Nisga'a), CFIL Indigenous Advisor

The emergence of principles for organizing the learning journeys

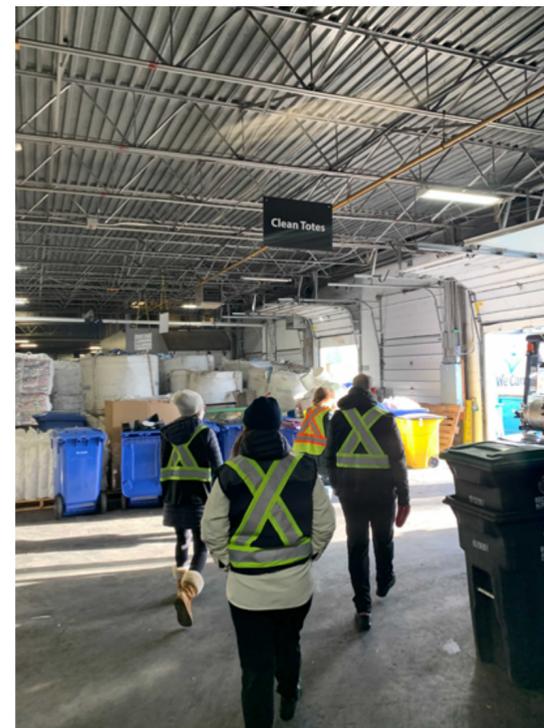
Through the iterations of this journey a few key principles showed up:

- This is a labour of love. Use different currencies aside from money (time, love, relationships, etc.)
- Create accountability to each other. Showing up to learn from one another.
- Embodied awareness of the system. Hands-on experiences of the system in new contexts.
- Reuse materials, create your own circular systems. Every moment is an opportunity to enact the future you imagine.
- Incorporate an element of intrigue. Give gifts. Intrigue people. Allow for joy to preside.
- Challenge hierarchies/siloes. Everyone is an expert of their own experience.

[Learning Journey guide and materials](#)



Chéhchenstway Indigenous Healing Garden



“It’s not waste, it’s urban resources.”

- Louise Schwarz, Recycling Alternative

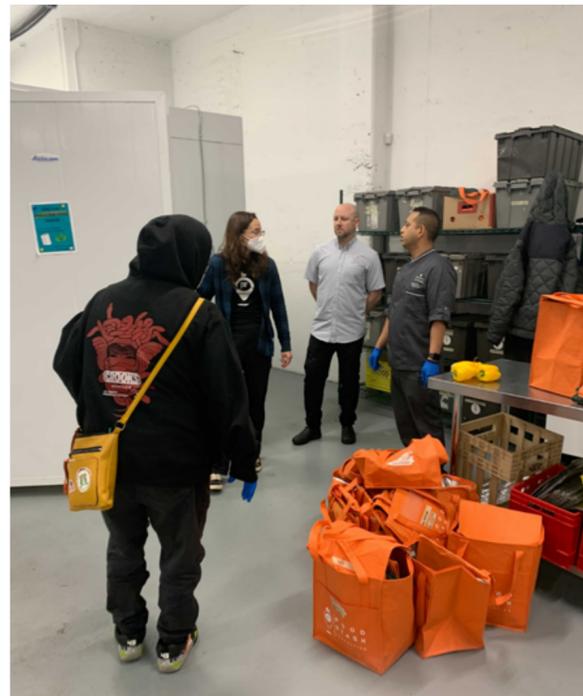
Touring the Green Industrial Innovation District (GRID™)



Sorting rescued food at Food Stash Foundation

We’re just a band-aid in a broken system

- Carla Pellegrini, Food Stash Foundation



Learning about upcycled spent grain with co-founder of Susgrainable, Marc Wandler



8-Last Call

Shifting culture and practices to prevent surplus

"I see an opportunity to further nudge the culture here in the store to have food waste as a topic that's front of mind."

-Anthony, CFIL Business Collaborator

Prototype Team

Anthony Sullivan (IGA Robson)
Emily Ko (Berrymobile Fruit Distribution)
Hunter Milroy (CFIL Design Team)
Yejin Eun (CFIL Design Team)
Soumya (CFIL Design Team)

Overview

Last Call centered around ways to encourage creative solutions for surplus food and taking responsibility for food at every stage in its lifecycle.

The prototype team initially tried to intervene on food businesses' reliance on donations as a solution to surplus food. Our goal is not to discredit all the positive impacts food donation has brought and is bringing as a vital solution for community members facing food insecurity, but to illuminate that relying on it allows for the persistence of over-ordering. Through this prototype we tested different roles that businesses can take in addressing this aspect of how we treat food, including opportunities for creating value-added products for them to sell.

How might we: **re-purpose food at the end of day**

(action)

in stores so that: **we create a market that...**

1. encourages creative food use;

(goal, vision, intention)

2. supplements donations;

3. and stimulates community connection





Key Moments + Learnings **Last Call**

Ambitions for community engagement

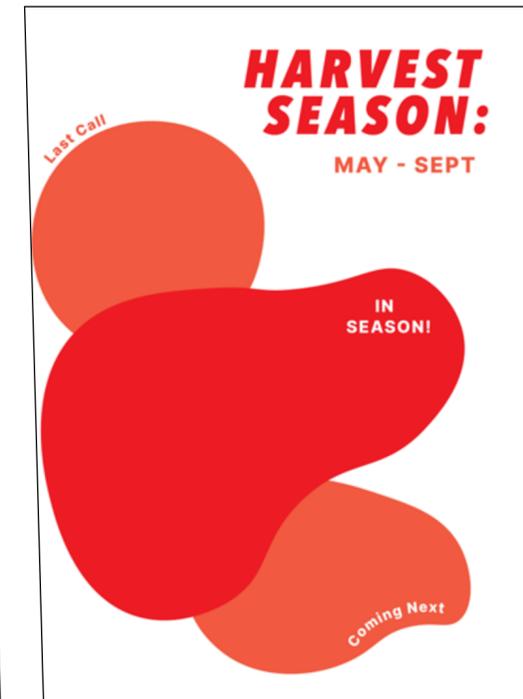
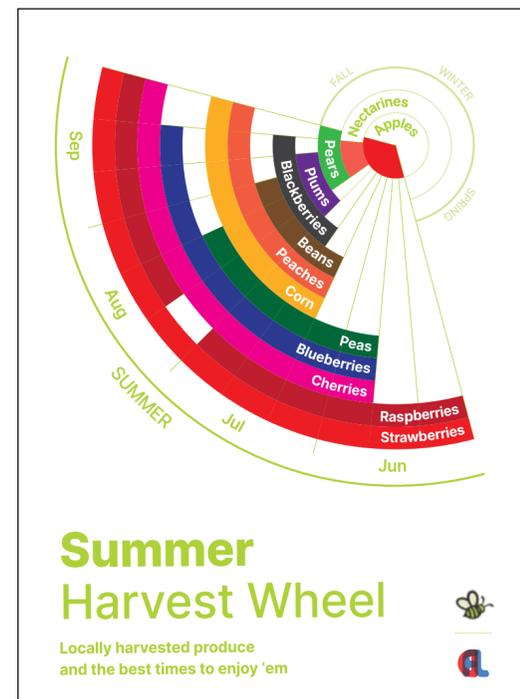
An early idea for this concept included community-oriented activities to rescue food that wouldn't be sold in grocery stores. This included events like cooking classes taught by chefs using food that would otherwise be culled at the end of the day, destined for compost or donation. Finding a way to spatially test this was challenging, and showed us what kind of testing was within each participant's scope and operational capacity.

Testing value-added products: Apple Chips

We shifted from testing community connections to testing specific value-added products from food that typically has a high volume of surplus. This included providing instructions for making apple chips and following up with the grocery store. Apple chips proved to be a lot of effort for little reward for business collaborators.

Deeper paradigm shifts: What eating in season really means

The next iteration aimed to create some cohesion between distributors and grocers. Local berry distributors end up with surplus berries in the fall because of poor communications and retail marketing strategies tend to simplify the produce seasons: berries are meant for summer, and produce like apples and squash are meant for autumn. In an attempt to highlight the shoulder seasons and minimize the waste that happens due to the lack of timely communications and actions, the prototype team developed a series of educational materials about what eating in season means. As **higher-fidelity** testing continues, we hope to learn how food businesses can be a part of creating cultural shifts around how our eating habits relate to the seasons.



Last Call's exploration of ways to communicate seasonal information is a stepping stone towards a more transparent and aware food system.

Summer Harvest Wheel postcards
Harvest Chart magnetic display board
Apple Chip recipe

[Access in the Prototype Collection](#)

A **higher-fidelity** prototype is more developed than early prototyping. After more things have been learned, tried and figured out, high-fidelity tests might take place over a longer-term and with more components.



9-Tracing Foodsteps

Improving food sorting procedures in the back-of-house

“Awareness is the only thing that can help the team to take action properly and efficiently.”

- Warehouse Employee

Prototype Team

Richard Hachey (SPUD)
 Sheyda Rashidi (CFIL Design Team)
 Bianca Del Rio Kodato (CFIL Design Team)
 Yejin Eun (CFIL Design Team)

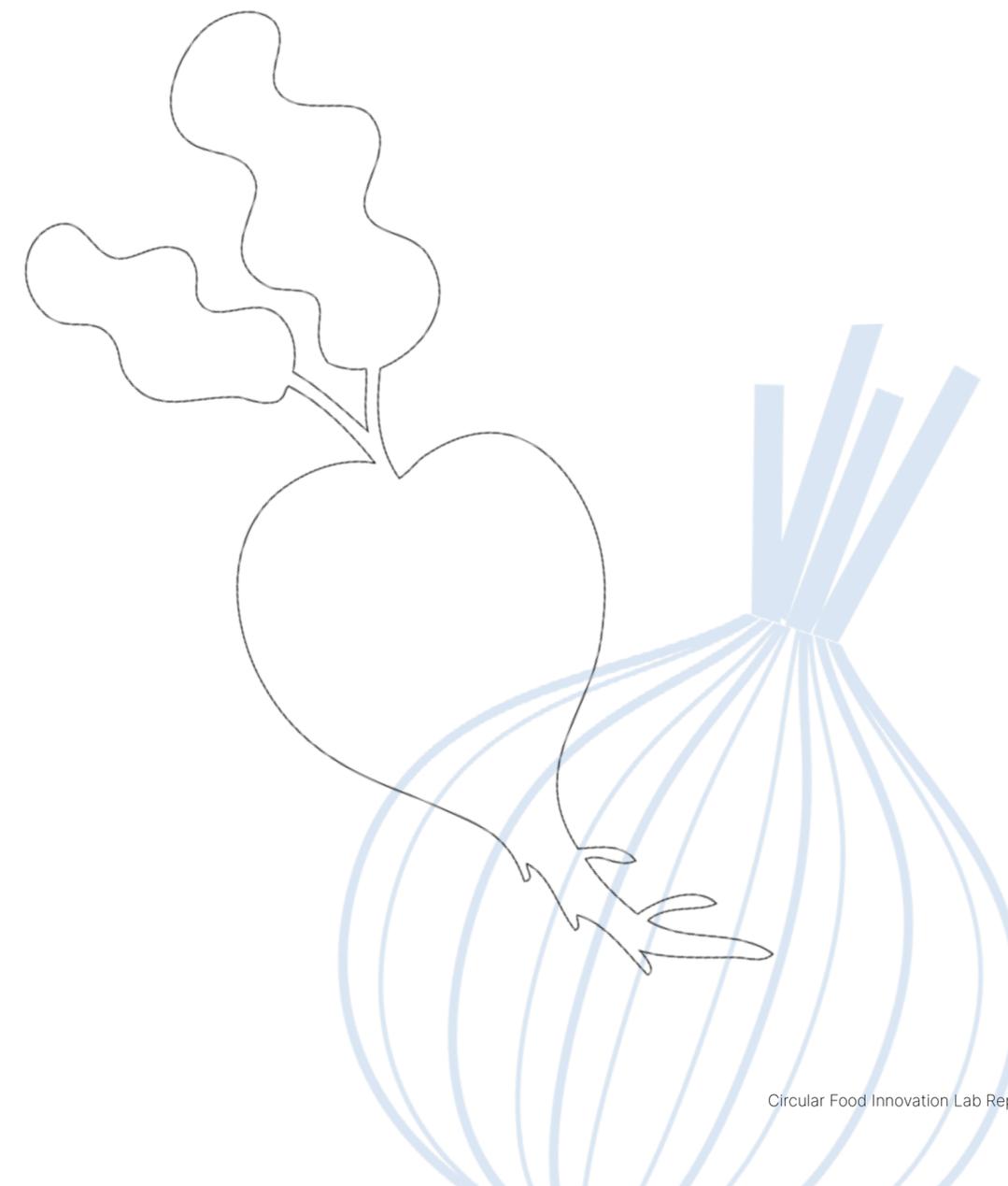
Overview

Tracing Foodsteps emerged later in the lab journey, drawing inspiration from the concepts Measure What Matters, Last Call and Nourishing Staff Engagement. One business collaborator was looking specifically to increase their warehouse staff's ability to make decisions about how to handle unsold food. This would enable greater visibility of what is happening to food, and stronger team collaboration.

How might we: **strengthen back-of-house**
(action)
procedures around sorting unsold food

so that: **there is greater visibility and decision-**
(goal, vision, intention)

making power amongst staff around what is
happening to food



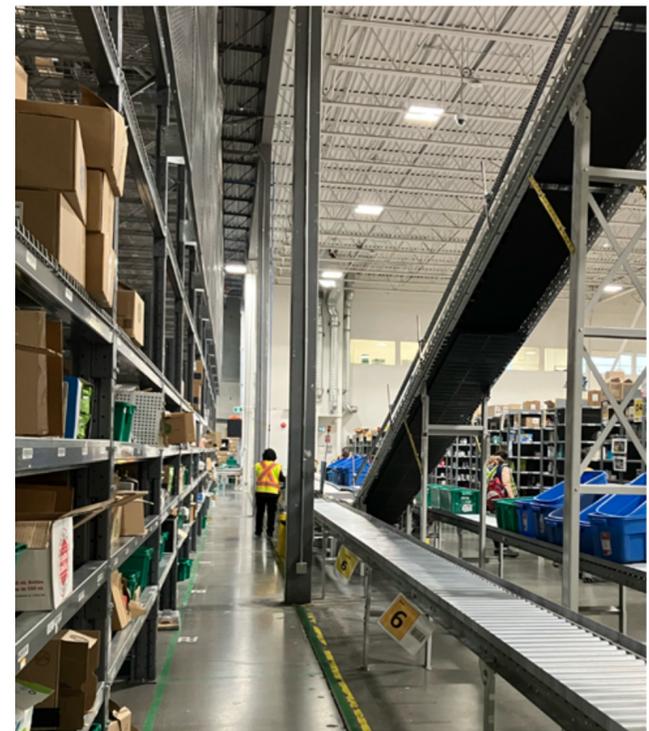
Key Moments + Learnings **Tracing Foodsteps**

Challenges to properly attending to food

In an initial survey, staff working at the warehouse provided important insights around the lack of communication and time pressures they are under. The day-to-day responsibilities can pile up, making it difficult to pay close attention in the time window that food requires. Non-optimal spatial organization can cause mixing of inedible food meant for compost and edible food meant for donation pick-ups.

Clarifying the term “expired food”

There is widespread confusion around the use of “expiry dates” when it comes to food. An expiration date is not the same as a best-before date. In Canada, expiration dates are required only on certain food products like baby formula or nutritional supplements that have strict compositional and nutritional qualities, which might not be met after the expiration date. Instead of describing food as expired, we use terms like “past peak condition”, “past-sell date” or “past best-before-date”. This creates for more accurate descriptions and assessments of food throughout its lifecycle.

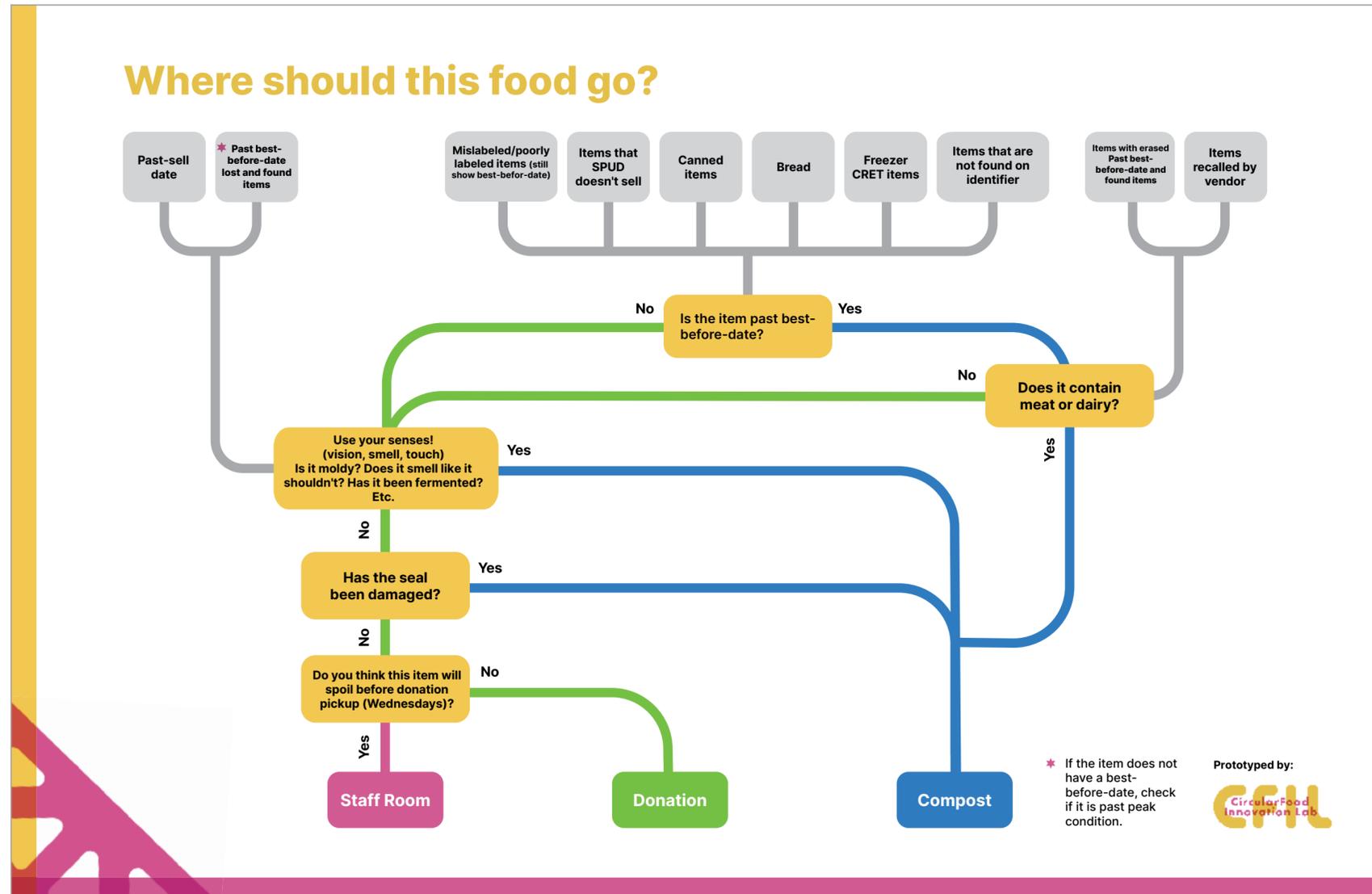


“What to do with food pulled from our inventory has always been a nebulous task. It’s been really interesting to see it’s actually possible to have this mapped out in a way that’s reasonably straightforward to follow along.”

- Richard, CFIL Business Collaborator



Key Moments + Learnings **Tracing Foodsteps**



Judgment Guide Map for sorting unsold food.

SPUD PALLET ARRANGEMENT BOOKLET

Prototype Tracing Foodsteps

What is this?
A compilation of suggestions for arranging your donation/compost pallets in a more intuitive, time efficient, and clear communicative way.

How to use:
These suggestions can be implemented by themselves or can be added to one another. Feel free to alter them to best fit your needs and spacial restrictions.

Caption

Cooler area

Pallet **Bin**

Suggestions for different spatial arrangements for food sorting area.

Judgment Guide Map for sorting unsold food
Spatial Organization Guidebook for handling unsold food
[Access in the Prototype Collection](#)



What Shifted: Outcomes

“You need to work with the people who are committed and interested.”

- Diana, CFIL Business Collaborator

From prototyping:

Below are 5 of the most significant shifts based on what we learned and tried across the 9 prototypes.

1. Frontline food staff are innovating and building their leadership in circularity

Recognition of the expertise of those working most closely with food is essential to creating significant systemic shifts. By experimenting with new practices and creating new conditions for staff to more deeply focus on this challenge, new ideas and roles related to circularity have emerged. During the Measure What Matters prototype, staff started creating value-added products like repurposing unsold fruit in the deli and selling fruit cups. This has led to a new role for a frontline staff person to tend to this issue, Sustainability Manager.

2. Shared responsibility for food recovery and circularity

New relationships are forming between CFIL businesses to further explore circular solutions, and between food recovery actors to strengthen collective efforts towards addressing food insecurity. Businesses are making it easier for their food recovery partners to pick up donations by placing more attention and care into their food-sorting practices and spatial organization.

3. Shifting the culture for staff and customers to challenge overabundance

Participating businesses are taking initiative to reframe customers' expectations of overabundance and perfection. From signage that re-values imperfect produce and educates customers about food preservation techniques, to interactive harvest charts that have the potential to increase seasonal awareness for both staff and customers, businesses are creating different experiences that challenge cultural and social norms around interacting with the food we buy and eat.

4. Scaling out for industry-wide problem-solving

The prototypes have sparked new conversations. Grocery chains are discussing how they might replicate the Reframe and Last Call interventions across other locations. The work to support innovation for spent grain has evolved to include other local craft breweries who are meeting to identify solution concepts related to new market possibilities, collection and processing infrastructure, and local government support for upcycling spent grain.

5. Promising Tools and Practices: [The Prototype Collection](#)

While not all prototyping leads to guaranteed viable solutions, some of the interventions we tested in the lab have led to the development of promising tools and practices for reducing wasted food and increasing circularity. These can be accessed for use or adaptation in the Prototype Collection, a companion document to this report. The collection includes:

- **Informative display signage** to educate partners and customers on re-valuing imperfect produce and food preservation techniques
- **Celebrating Circularity Storytelling Campaign** to amplify the work that organic and regenerative farmers and other circular practitioners are already doing
- **Harvest Chart postcards and interactive magnets** for increasing seasonal awareness for staff and customers
- **Apple Chip recipe** for a value-added food product made from surplus produce
- **Judgment Guide Map and Spatial + Organizational Suggestions booklet** for improving back-of-house procedures for sorting unsold food
- **Food Measurement: A Focusing Exercise and For the Love of Food Challenge activity** to increase transparency and attention on measuring wasted food
- **Nourishing Staff Engagement Workshop** to collaborate with staff to explore circular solutions
- **Learning Journey activity** to deepen understanding of the food system in one's context





What Shifted: **Outcomes**

From overall lab:

The lab itself was an intervention to consider what other ways of navigating this challenge might be possible. Below are some of the larger learnings and outcomes from prototyping a lab and emergent process.

New skills and tools for navigating complex challenges

The lab created a learning container in which participants shared and practiced new tools and approaches together. These included design and innovation tools such as action research, systems mapping, brainstorming, and rapid prototyping, as well as tools related to Value Chain Management and Persuasive Storytelling (see Appendix C).

Connecting the dots in the system

While government looks to industry for ownership of issues like wasted food, individual businesses are in many ways isolated from “industry” and are at the mercy of global food supply chain norms. Bringing businesses and government together provided a systems perspective which not only revealed patterns in what actors had experienced as discrete unconnected causes for food wastage, but also shifted some of these patterns and assumptions.

Adding value through design

In this process, design was a differentiating factor to establishing good energy and supporting relationship-building. Rich imagery, playful use of materials, and strong legibility also helped bring curiosity and clarity to a complex process that could easily tip into feelings of chaos or overwhelm. There is a distinct boost to our collective self-esteem from seeing our work reflected back to us through strong visual mapping, rapid prototyping efforts, and considered communication design.

Cultivating deep, trusting relationships: A strong foundation for movement-building

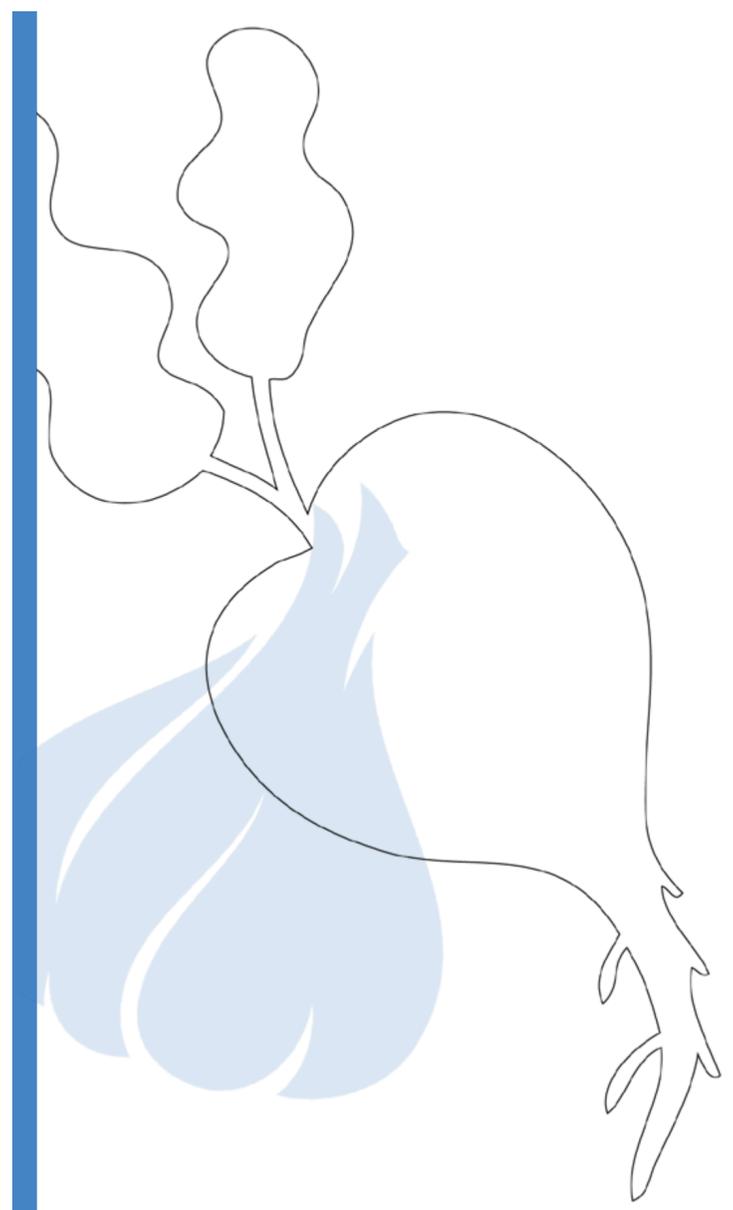
With many unknown unknowns throughout the process, navigating this complex challenge and embracing innovation meant becoming lost. Lab participants chose to trust the process despite ambiguity and discomfort, and developed strong relationships with one another, which laid important groundwork for amplifying circularity in Vancouver.

Illuminating roles for city governments and institutions in enabling transformation

As mentioned throughout the report, we cannot continue to work in the same way if we want transformative outcomes. This includes transforming habitual procedures, approaches and ways of thinking for decision-making institutions at the personal, organization and systemic level. The collaboration between the businesses, the City of Vancouver, the Vancouver Economic Commission and Emily Carr University has identified where different forms of support might be needed to incentivize circularity, including policy creation and investing resources to create space for collaborative discussions, innovation and learning to happen.

“Ambiguity is where change happens.”

- Sheyda, CFIL Designer



What's Next: New Directions + Re-patterning

We're now at the innermost part of the onion, where new growth sprouts. As the bud and stem develop and extend upward, the roots of the onion grow deeper. This section describes next steps and new patterns to nurture for durable and lasting systems change.

Next steps

For lab participants, relationships continue to form and deepen. Many participants are identifying how to scale these interventions upwards as more formalized practices and operations, outwards to other locations and contexts, and deeper to shift personal, workplace and network mindsets and culture. Some businesses continue to do higher fidelity prototyping, testing more components of these potential solutions over a longer term.

Continuing to grow a circular economy of food in Vancouver

As CFIL came to a close, many participants expressed interest and motivation in continuing to cultivate a network focused on the circular economy of food in Vancouver. The City of Vancouver, the Vancouver Economic Commission and many of the business collaborators have continued to meet to explore how this emergent network could take shape. The network, although not yet named, hopes to serve as a longer-term community of collective action with ambitions to set new industry standards, continue to learn together and contribute to shifting the current culture and paradigms that perpetuate the challenge of wasted food.

Invitations: Re-patterning for high impact

Since our food system exists by design, it can be re-designed. We can intervene on stuck patterns to reverse, re-direct or unfreeze them, but doing so requires ongoing effort. Based on what lab participants learned through this experience, below is a gathering-up of the nurturing patterns that have promising high impact for durable systems change. These are invitations for everyone in the food system, from individual consumers to circularity practitioners, business owners to researchers, farmers to line cooks, produce managers to food rescuers, and so on.

Revamp work culture.

Amplify leadership, responsibility and accountability for sustainability and circularity. Embed these values in operations, products, team structure, ownership models, and so forth.

Relate to land and food as kin, treating food as a gift to be conserved.

Food and humans belong to each other, just as humans belong to the land. Learning from and co-creating with Indigenous knowledge keepers, land and water, other species, and people working hands-on with food will help us find our way.

Celebrate and amplify what's working well.

This was by no means an easy journey, and yet there is so much that we can celebrate. Focusing our attention on cultivating reciprocity, ease, joy, collective experiences, care and readiness for systems change will help to foster transformative action.

Embrace small, meaningful actions.

There is a part for each of us to play in this work, they all make a huge impact in the greater picture.

Find ways to connect what's stuck in this challenge with other adjacent challenges.

Connect the conversation of circularity to the food recovery industry, preservation of industrial and agricultural lands, housing security, a livable wage, etc.

Practice seeing the system.

The more we can see the system, the more we can change our relationship to it. Finding patterns and peeling back the layers is truly a practice. It requires developing muscle memory for observing how we and others are showing up to our work, mapping connections, challenging assumptions (including our own), and stretching our ability to imagine something different.

We need to ingrain social and ecological impact in our work culture before doing anything else."

- TJ, CFIL Business Collaborator



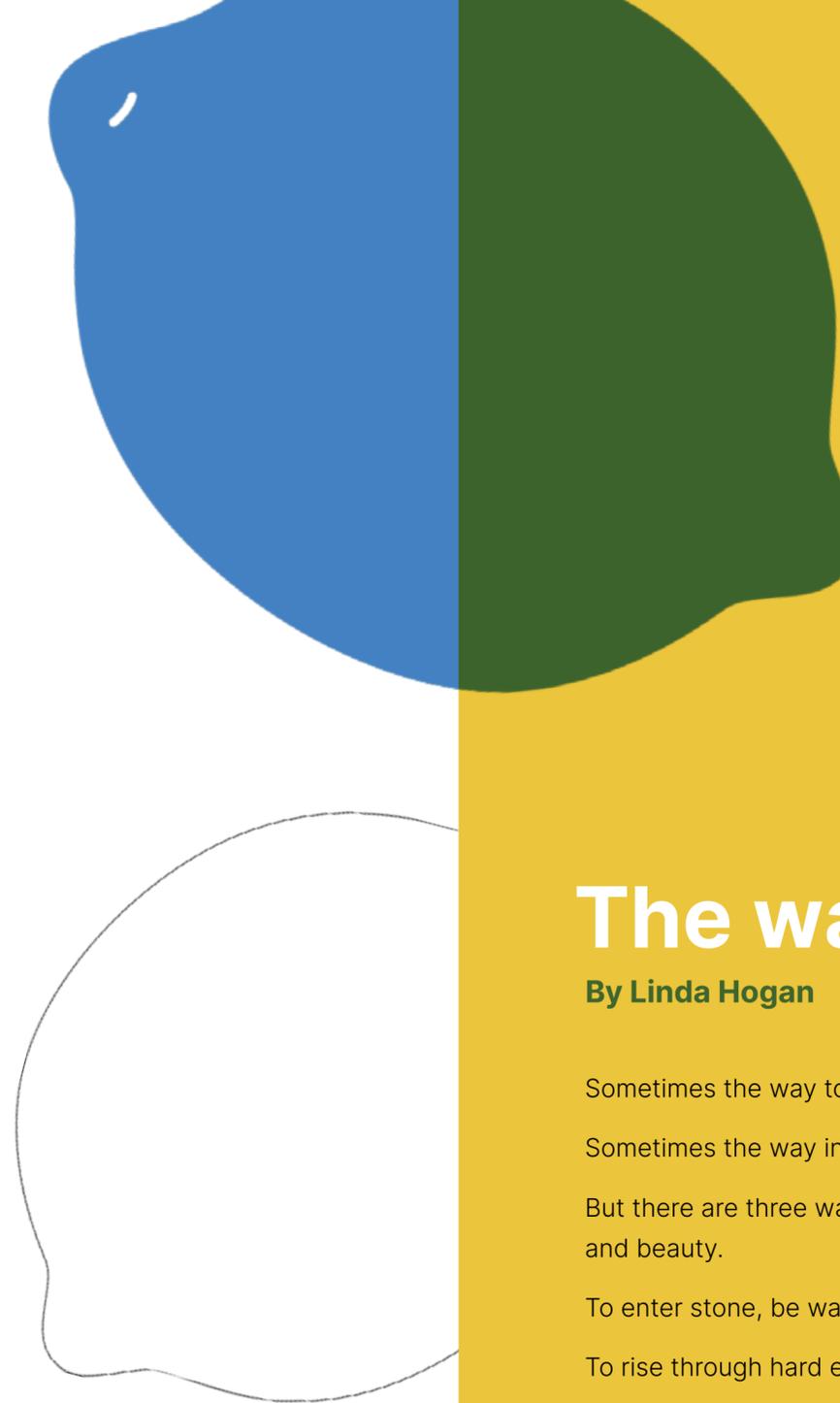
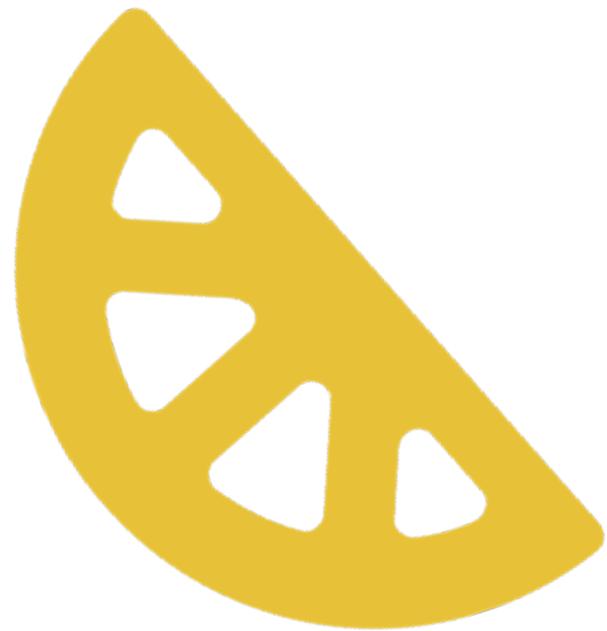
In Closing

May we continue to experiment our way to the food futures we imagine.

May we continue to peel back more and more layers, to see the complexity of our system and be able to dance with it.

May we continue to see ourselves in the system, challenge our assumptions, and take accountability for where we have agency to do something bold and different.

May we embrace new practices and processes that fuel creativity and connection to each other, food and land.



The way in

By Linda Hogan

Sometimes the way to milk and honey is through the body.

Sometimes the way in is a song.

But there are three ways in the world: dangerous, wounding, and beauty.

To enter stone, be water.

To rise through hard earth, be plant
desiring sunlight, believing in water.

To enter fire, be dry.

To enter life, be food.

Imagining Circular Food Futures

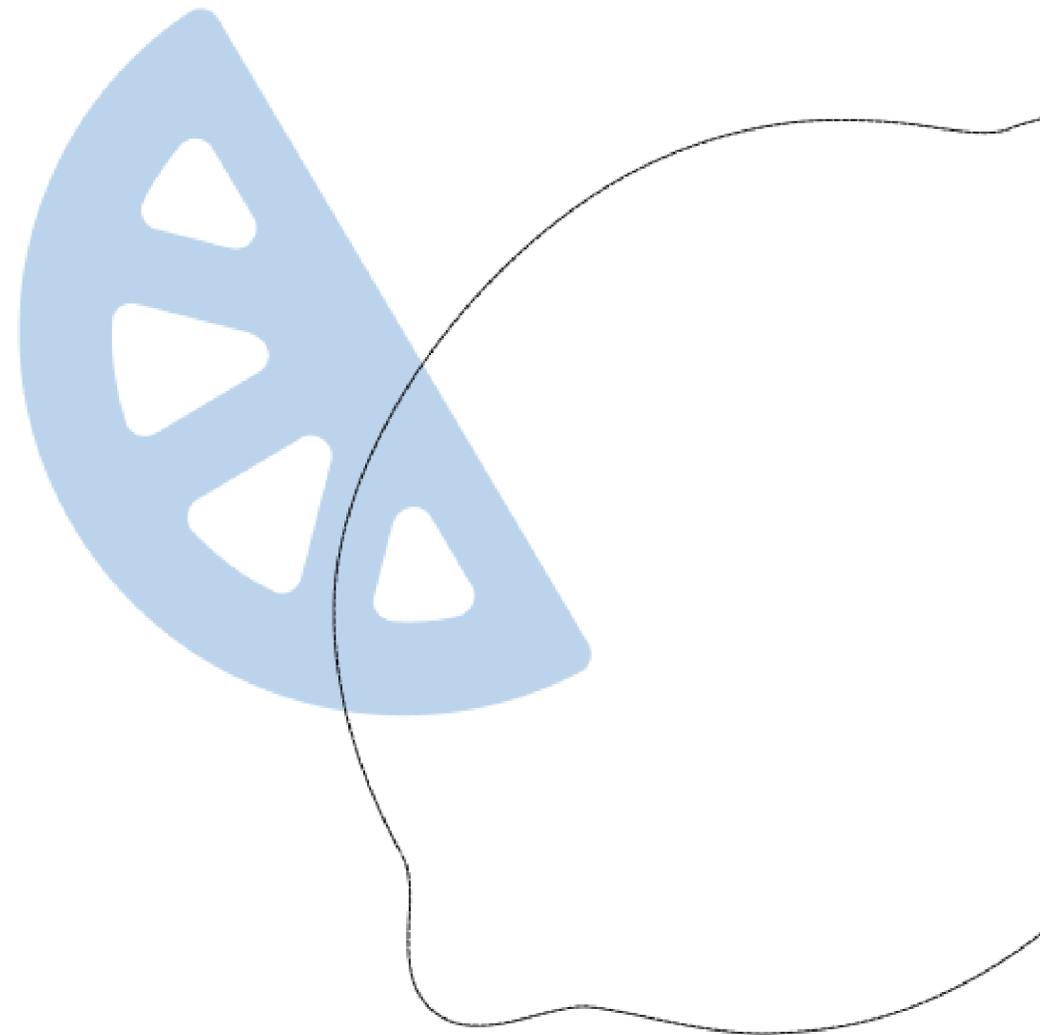


The future is ours to shape.

This section offers some speculative fragments that offer glimpses into how different CFIL participants imagine a circular food future. These are written from the personal perspectives of CFIL participants, informed by their time in the lab.

Letter to the Future

by David Speight, UBC Open Kitchen



Hello,

I hope we've done enough and I wish we could have done more to improve the circular food economy. When I look back I realize that so much has changed for the better. When I began my career everything from the kitchens (except cardboard) went to the landfill. We received seafood in styrofoam containers and then threw them in the trash after one use. We celebrated meat, poultry, dairy, etc. and plant-based dishes were an afterthought. So much has changed since then. We now operate zero waste kitchens and our food waste has been eliminated. Every input has been transitioned into a re-usable, circular process. Our society has made the transition alongside the businesses and has led the change.

We all participate in this process.
I only wish we moved faster!

Future Food System

by **Sheyda Rashidi**, Designer

Future... this mysterious journey to the unknown holds numerous possibilities for us, the modern citizens of the 21st century. In the blink of an eye, our cities, societies, cultures, and even our paradigms have drastically changed during the ongoing information era, and no one knows where it is headed now. However, in the millions of possibilities, I would like to illustrate two contrasting prospects. One might excite you and keep you on your toes for the next few decades, and the other not so much. You are the protagonist of these stories, and I will leave it up to you to decide where we should turn next.

The Utopia

The smell of baked goods makes your belly rumble, waking you up in your room at the Communal Living Centre (CLC). You get ready and head out to the common area where the kitchen is located. Since the Global Revival movement, cities have become more community reliant by changing the urban design to empower communities. Each city is made up of distinct communities that support various modes of living based on community members' collective decisions. The only city-wide policy is about enforcing zero carbon footprint in each community. This has supported each group in coming up with several lifestyle possibilities, making your city diverse and inclusive.

You assume it's your next-door neighbor that is baking the pastries with the fresh apples from the CLC garden in the communal kitchen. He always shares it with everyone. The garden can't produce enough yield to provide all CLC residents with needed nutrients, but it has been a great place for families to spend quality time with their kids and encourage them to unleash their curiosity. The rest of the required food is produced in permaculture farms outside the city in the jungles on the re-wilded lands. Almost all of your city's food is grown only a few miles away, and there are very few out-of-season options available in the market. Of course, you find it super annoying when you can't taste watermelons during the winter, but you've realized how much more you appreciate the first bite of the first summer watermelon you taste.

After a full breakfast with your neighbors, you start working on your recent project designing faster information flows to the public. You work for a high-tech company that supports the food system by connecting food producers to consumers making more precise estimates of the food market demand. Restaurants, supermarkets, and other food organizations in the industry have a key role in connecting the communities' voices to the producers and vice versa. Free access to information for all has become a worldwide phenomenon, and it has been shown to support managing business monopolies and the accumulation of wealth. In other words, the public's free access to information has empowered them to realize equity in society.

In the post-Revival era, the food system is transformed to support everyone by providing nutritious, equitable, and culturally appropriate food for all. It encourages an abundance mindset that encourages collaboration between businesses. It runs more smoothly and with fewer errors as everyone knows their role and responsibilities in their job and everyone else's roles and responsibilities in the chain. This has made it significantly easier to hold everyone accountable for their actions and fostered trust and mutual growth mindsets in society.

The Dystopia

You open your eyes, in your studio apartment, to an elevated city coming alive with shimmering lights, a mobile and active society, and millions of new technologies at your fingertips. Sure, there are some annoying measures you need to take every day to nourish and sustain your body, but hey, that's the price of living in this dynamic metropolis, you are willing to pay. You wear your trendy new respirator, put on your smog binoculars on the same old imprinted pale spot in your face and go to the Synthetic Food manufacturer where you work as a scientist. This company, owned by a business giant living on Planet S65W48, allegedly turns all CO2 emissions of the Holding into carbohydrate powders.

Your job is to find new ways of refining this powder to reduce the pollutants and reach 100% purity. Of course, you don't want anyone consuming impure

food, but you find peace knowing the fact that you are fighting against massive and devastating starvation in underdeveloped countries. Droughts and natural disasters have led to farmland erosion beyond repair in those lands that once fulfilled the worldwide palm oil demand. Having no other choice, the farmers left the land and now depend on government-provided food rations and support for their livelihoods. Your work helps these communities survive in the changed climate era.

There is still hope for a few hundred extant species left on earth, including some wheat varieties that are cultivated in high-tech facilities. They are the few remaining edible living plants, and their yield is reserved for high-profile people living on planet S65W48. The leftover byproducts, however, make up most of the required food for the citizens in your city. You are not exactly sure how this system works and why the public can't access the crop in the free market, but you've heard stories of their trade in the black market for unbelievable prices. It doesn't really matter to you; you feel perfectly fine with the packaged food they make with the byproducts; they have all the nutrients you need to survive.

In the post-climate change era, the food systems monopoly has become uncontrollable as the control of the system is held in the hands of a few instead of the masses. You can never know what is going on behind closed doors unless they choose to share it with you. Social inequity has led to hierarchical access to food decided based on social status that involves many factors beyond your control. You don't feel empowered to change your life, your options are limited, and even though you are trying to make a positive change in the world, you end up unintentionally reinforcing the inequitable system.

What is your next move?

Realizing each scenario depends on our individual decisions and actions. We only can benefit from our collective agency when we individually acknowledge our own. You don't have to carry the weight of the world on your shoulders, but you can pay closer attention to your daily mundane decisions. So, which way should we go?

Village Twenty Eighty-four

by **Erin Nichols**, CFIL Participant

Food touches on everything. The future of food and our relationship with it will naturally be part of a much larger cultural shift. Here is a glimpse at what 2084 might look like.

As you cycle along creek-side paths in K'emk'emeláy, once known as Vancouver, you follow the salmon waterways and wind through a network of wild places and semi-urban villages. Each village includes areas for farmers' fields, market spaces, and multi-use mid-rises with verdant living exteriors and rooftops. Each balcony is alive with plants and flowers, helping to cool homes and offices in the summer while providing places for social gatherings or quiet contemplation. At the rooftop and ground level water and snow, melted geothermally, flow into water capture systems to be stored in cisterns for daily use and for use during the dry season. Your own condo is located in the same mid-rise building as a yoga studio and a neighbourhood health services collaborative. On the other side of the path you can see more residences, layered floor by floor with office spaces, and beyond the wilderness buffer shading the path, a series of vertical farms and **manu-repurposing centres**. Sound proof construction, wilderness buffers and electric vehicles have allowed a variety of activities to co-exist in close proximity.

You turn left towards the nearest village plaza as you continue your way to pick up groceries and a few extras for tomorrow's harvest celebrations. The path is busy with pedestrians and cyclists returning to work after their midday meal. Birdsong and chattering squirrels mix with the sounds of urban activity. You've lived in this village the longest and know many of the people you see. In the plaza, as you pass by Haisla the owner of a bakery shop, you hear her laughing and cutting a deal with Jung the grocer. Jung's produce cart has a few apple cases and a basket of assorted squashes that he's wanting to sell. Apple pie? Your thoughts turn

to possibilities for tomorrow's open air celebration where Haisla will no doubt have a table.

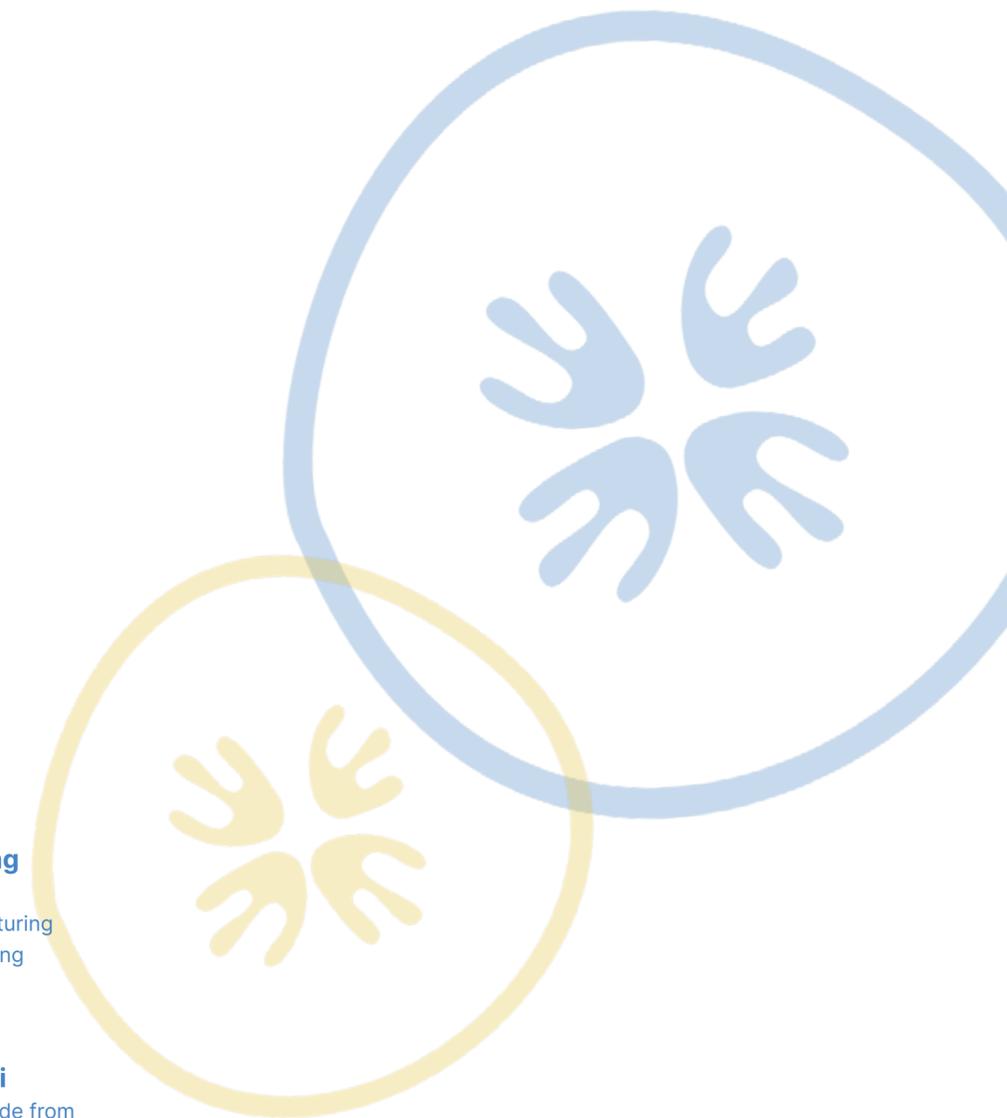
Cycling towards Jung's grocery store you see the sign for Rerun Shoes and remember that you should really trade in your sneakers for refurbished ones. You continue on your way. Next to the Skytrain station entrance the cargo gate opens and an electric mini-hauler rolls out with cargo. Stacked and strapped on the trailer are standardised temperature controlled cases with food and beverage orders from the local online exchange. You wave to Harriet as she drives the mini-hauler out from the station and into the plaza to make her deliveries.

The Skytrain originally only moved people, but now it's also the main transportation for light cargo within and between villages and the neighbouring cities. Used textiles to textile centres; food to village plazas and neighbourhood food centres.

You park your bike. The door of the grocery store opens and you head inside. At the front you exchange your ClearVu reusable packages for clean ones and start to shop. For tonight's pizza, **banana peeliperoni** and a spent grain pizza shell. Next you head to the produce section where you pick up a variety of district-grown carrots, a few lettuce plants you can water and harvest from over the next few weeks, and ripe avocados from the cooler. As it's no longer berry season you decide on frozen wild thimbleberries, pre-packaged in ClearVu. All the while you've been shopping, you've been bumping into neighbours and talking about the harvest festival. As you leave the store you're thankful that things are different than they were in the 2020s. Everyone has what they need and quite a bit of what they want. The plaza is now busy with kids and elders from the school. You see Barry whose community plot is just down the hill from yours. You nod to him and turn towards home.

manu-repurposing centres
joint manufacturing and repurposing facilities

banana peeliperoni
pepperoni made from banana peels!



In the Not-so-distant Future...

by **Christa Clay**, CFIL Participant and **Mariya Chugay**, CFIL Participant



Stepping out of the house on a sunny day, late summer in full swing. I almost forget my empty grocery containers, and hurry back up the stairs to get them, so that I can fill them with fresh and dried goods at the market. I check out one of the available grocery carts from my building. The carts make the 15-minute walk back a lot easier on my back than when we were all still using canvas totes. I walk by soaring trees, bountiful gardens, and buildings covered in solar panels. Busy bikers zoom by with carts attached, loaded with items. Although it is a warm sunny day, it is cool under the blanket of the trees.

Since cars transitioned out of the city core, the bike and pedestrian lanes have grown, ensuring there is ample space for us to travel with our carts. I find a tomato on the ground that's fallen off a nearby trellis and put it into one of the two buckets nearby, the one labeled for the garden rescuers to come and take where it best be used. I wonder if it will make it into Pepino's pasta special this week, or be dried and stored for winter use later.

When I make it to the market square of the Snaug borough, I beeline to the menu to see what is available for the week. I'm excited to see the overripe freestone peaches are in, which I stock up on to can and last me through the fall. I fill one of my empty containers full with peaches. The camas bulbs are in this week from the meadows, and as only a third is harvested, we are careful to prepare them, savour and share what we are able to receive with those in our community who have been stewarding the camas since time immemorial.

Ever since we have been more mindful of what we take from the earth, and how we care for the land as our kin, so much more life has abounded. The salmon have recovered, as we have left them alone to return to their ancient ways of moving through their waters. Our First Nations government is fully

accredited to the reharmonization and restoration of these habitats, and we are all so grateful for their leadership. The fires and floods, so common in the twenties, are now few and far between. The land has settled and emits a sense of peace.

Before K'emk'emeláy Circular Economy Act, I was a part of the linear food system that was reliant on excess to maintain competitiveness in our food industry. Now that we have the data to know how much food we need to nourish our community, and the quotas have been set for how food items cycle through each of the food hubs, whatever is not eaten or preserved feeds another part of the system. The transition was not easy or simple, but we all eventually came to acknowledge that this was the only path forward.

It's 4 o'clock and the market offerings are dwindling. All the young and elderly were allowed to shop first in the day, and all that remains will be fully distributed by market close at eight. A 24-hour team is on standby if anyone missed their turn to shop, though I have thankfully never known anyone to have needed to call them. As cost is no longer an issue with food, we all often share freely what we have.

Before I go home, I stop by the last call stand and see what others have offered up to share. The pickled radish and fresh pasta scraps look good, and I can easily incorporate those into my dinner, so I take a small portion of each. I see some dried apple chips that my 6-year old neighbor would love, and I gather a handful for her as a gift.

I look forward to my trip on the Canada Line to the city's Food Innovation Centre, where me and my business partner travel monthly to see what bulk second-life food items we can get our hands on to make another market and community-ready product. I wonder what the folks down at the neighboring food hub are preparing...

Project Participants

Lab Team

Lily Raphael, Solutions Lab, seconded to Solid Waste Strategic Services - City of Vancouver

Erin Nichols, Solid Waste Strategic Services - City of Vancouver

Lindsay Cole, Solutions Lab - City of Vancouver

Meg O'Shea, Vancouver Economic Commission

Mariya Chugay, Vancouver Economic Commission

Christa Clay, Vancouver Economic Commission, Design Team

Laura Kozak, Shumka Centre - Emily Carr University of Art & Design

Marcia Higuchi, Design Team

Hunter Milroy, Design Team

Sheyda Rashidi, Design Team

Yejin Eun, Design Team

Bianca Del Rio Kodato, Design Team

Garima Sood, Design Team

Soumya, Design Team

Leona Brown (Gitksan & Nisga'a), CFIL Indigenous advisor

Report credits:

Written and assembled by Lily Raphael;
Designed by Marcia Higuchi

Special thanks to Yutaan Lin for select photos.

Business Participants

Don McGinn, Uprising Breads Bakery Café

TJ Conwi, Ono Vancouver / ReRoot Klitchen

Hilary Angus, ReRoot Kitchen

Anthony Sullivan, IGA Robson

Craig Sheridan, Legends Haul

Emily Ko, Berrymobile Fruit Distribution

Miguel Santos, Save-On-Foods

Kendall Owen, TurF Kitslano

Andrea Scott, SPUD

Stephen Byrne, SPUD

Richard Hachey, SPUD

Mike Ngsee, Stong's Market, Dunbar

David Speight, UBC Open Kitchen

Laura Smit, Vancouver Farmers Market

Monika Chowdhry, Vancouver Farmers Market

Andrea Cárdenas, Vancouver Farmers Market

Diana McKenzie, Callister Brewing Co.

Kelly Chow, Dollar Food Manufacturing

Bryan Wong, Pacific Fresh Produce

Hugo Mak, Pacific Fresh Produce

Chef Kunal Dighe, JW Marriott

Nicholas Czekurlon, JW Marriott

Learning Journey Hosts

Louise Schwarz, Recycling Alternative

Carla Pellegrini, Food Stash Foundation

Marc Wandler, Susgrainable

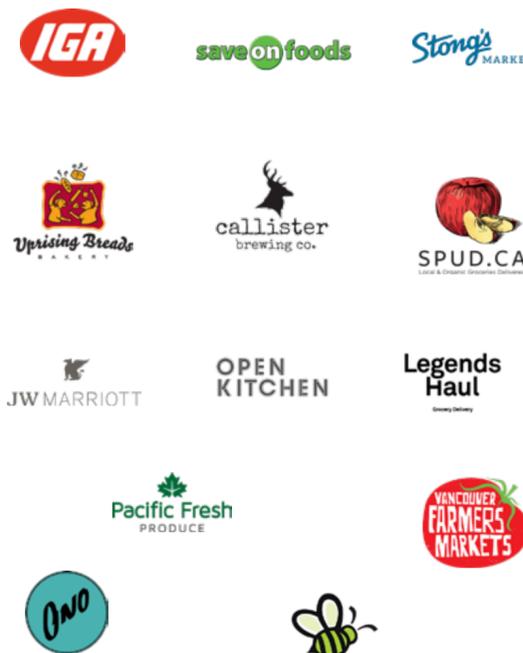
Leona Brown, Chéhchenstway Healing Garden

Guest Facilitators

Naomi Devine, Persuasive Storytelling Workshop

Martin Gooch, Value Chain Management International, Value Chain Management Workshop

Keith Renfrey, CSH Projects, Value Chain Management Workshop



Project Partners

The City of Vancouver, Solid Waste Strategic Services

Solid Waste Strategic Services (SWSS) is a branch of Solid Waste Management and Green Operations at the City of Vancouver. SWSS creates policy, plans and programs, and manages major projects supporting Transfer & Landfill Operations and the City's, [Zero Waste 2040 strategic plan](#)

The branch works closely with Metro Vancouver on long-range planning for effective solid waste management in the region, and engages with other levels of government on zero waste policy and regulation.

City of Vancouver, Solutions Lab

The [Solutions Lab \(SLab\)](#) is a public sector social innovation lab inside the City of Vancouver that began in 2016. We work with greenest city, healthy city, climate emergency, reconciliation, and equity policies and programs. Our approach draws from design, social innovation, systems thinking, and visionary futures. We bring City staff and community collaborators together in creative, experimental, and learning-oriented processes to seek transformative solutions to some of the most complex challenges facing Vancouver.

Emily Carr University of Art + Design, The Shumka Centre for Creative Entrepreneurship

The [Shumka Centre for Creative Entrepreneurship](#) creates programs and partnerships that help artists and designers realize their ideas in the world. Since its inception in 2018, the Shumka Centre has a history of producing major social innovation and partnered research projects, including Fibreshed Fieldschool (2020-2021), the Art Apprenticeship Network (2019 - 2022) and the Circular Economies and Local Ecologies Project (2021 - 2022).

The Vancouver Economic Commission, Economic Transformation Lab

The Vancouver Economic Commission's (VEC) [Economic Transformation Lab \(ETL\)](#) is a research program developed by the VEC to prepare Vancouver's economy for global trends anticipated to impact the region within the next 15 years. By leveraging academic and industry collaborations, ETL aims to produce research that results in actionable goals, best practices, and insights that inform policy advocacy or programs to build Vancouver's economic resilience.

Gratitudes

A stylized illustration on the left side of the page. It features a large, thin-lined hand holding a globe. Inside the globe, there are four smaller, solid yellow hands arranged in a cross pattern. The globe is partially obscured by the hand holding it.

Thank you to the land and kin.

for your nourishment, shelter, teachings, curiosity and joy. Thank you to Indigenous knowledge and cultural keepers and land/water protectors who are safeguarding and reviving food systems rooted in circularity, care and well-being for all beings.

Thank you to food.

It isn't an overstatement to say that nothing would be possible without food. Thank you for fueling life, for creating togetherness, for your generosity.

Thank you to participating businesses

for your patience, for trusting us, for making time to try something new, for venturing into the unknown, for your brilliant ideas and enthusiasm.

Thank you to the project partners

for making this lab happen. Thank you for staying with it, for your openness to discomfort and growth, for your commitment to the greater good.

Thank you to the Design Team

for your courage, your openness. Thank you for showing up with a different kind of leadership, fueled by curiosity, persistence, imagination and joy.

Thank you to our funders

the Carbon Neutral Cities Alliance (CNCA) and Mitacs, whose commitments to transformative climate action and to funding innovative research enabled this work.

Appendices

Appendix A: Glossary

This is a gathering up of the terms used throughout the report.

action research - unlike a conventional research project where a researcher is performing research on a subject, in action research stakeholders and researchers co-exist as co-creators to generate knowledge and action with one another.

banana peeliperoni - pepperoni made from banana peels

complex challenges - unpredictable, have competing ideas and no right answers; there are unknown unknowns. A clear example of a complex challenge is raising kids - there is no clear guidebook, you might try an approach that totally backfires, and what worked at one point in time often won't work in the next.

convening questions - questions that frame the problem and guide the north star for the kinds of solutions we are trying to test. They are made up of the following

ingredients: How might we [action] for [main users/beneficiaries] so that [goal/vision/intention].

food conservation - includes the ideas of preventing and reducing wasted food, it also includes food's intrinsic nutritive, social and emotional value. A value beyond being a commodity or resource.

higher-fidelity prototype - more developed than early prototyping. After more things have been learned, tried and figured out, high-fidelity tests might take place over a longer-term and with more components.

learning journey - more than a field trip or interview - it's a sensing experience. It is used to break through patterns of seeing, listening and knowing by stepping into different, sometimes uncomfortable, and relevant experiences and perspectives. It also serves to build the capacities of the team to see and work from the whole system, and to use this to generate new ideas.

manu-repurposing centres-joint manufacturing and repurposing facilities

pattern - in this context, patterns refer to the habits, behaviours, procedures and mindsets that help a system function.

prototype and public sector innovation lab - a space to question, experiment, learn and collaborate around complex challenges with many different possible solutions.

systems thinking and systemic design - systems thinking helps us to see the diverse and dynamic relationships between the challenges that we work on and the broader contexts within which they are situated. When we act systemically, we are looking for the greatest leverage points for change, which involves getting below the surface to look at mindsets, paradigms, behaviours and structures that reinforce the current system.

wasted food - We use the term "wasted food" instead of "food waste" for food that was not used for its intended purpose because it conveys that a valuable resource is being wasted. "Food waste" implies that the food no longer has value and needs to be managed as waste.

Appendix B: Feedback Loops

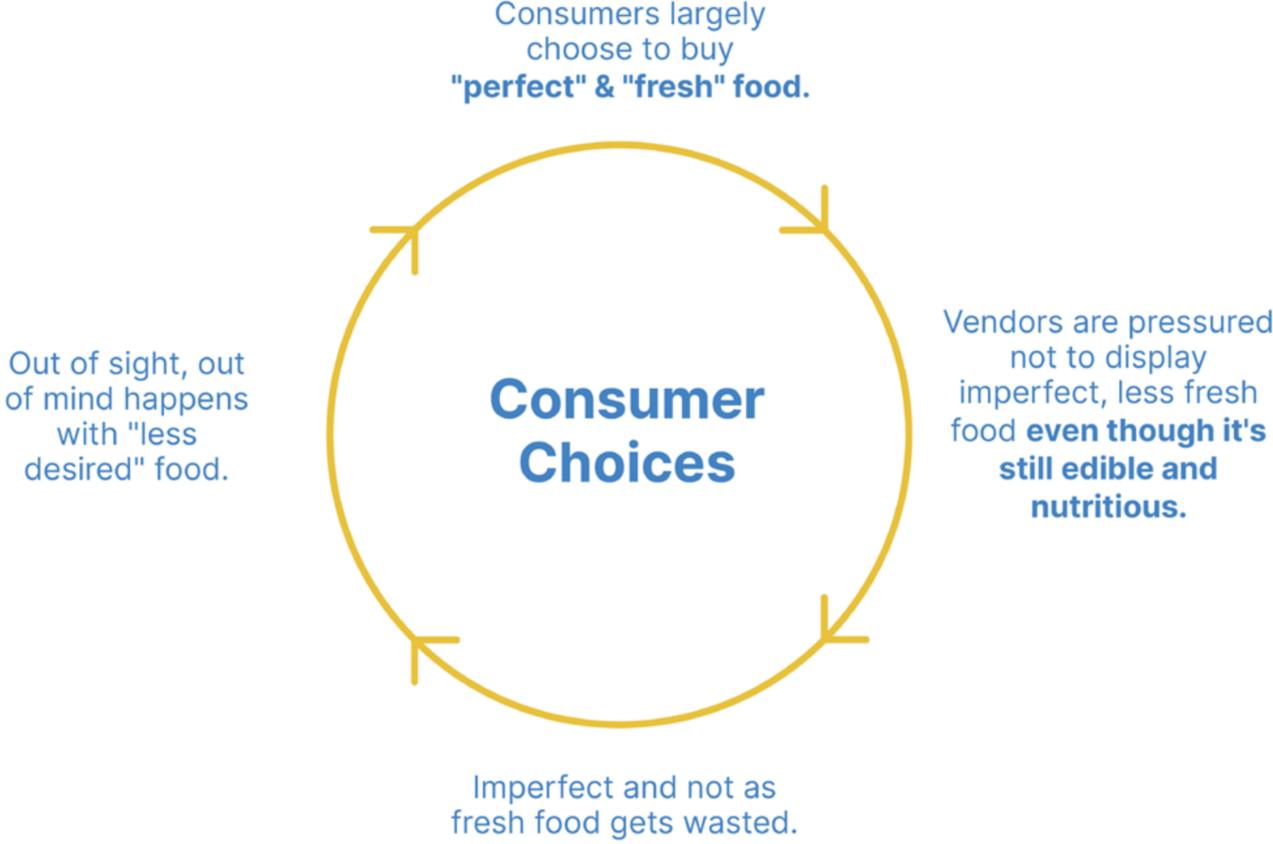
This section expands on the stuck patterns mentioned in the report. Lab participants used systems mapping iteratively and throughout the process to make sense of different systems dynamics at different points in time. In particular, we used Feedback Loops¹² to help us understand patterns and

how they work to uphold the system that we were trying to change. While displayed separately for ease of reading, many elements of these feedback loops are interconnected and intersecting. Patterns occur at personal, interpersonal, organizational and broader cultural levels.



12 Omidyar Group (2017) Systems Practice Workbook. US: Omidyar Group. Retrieved from <https://oecd-opsi.org/toolkits/systems-practice-workbook/>

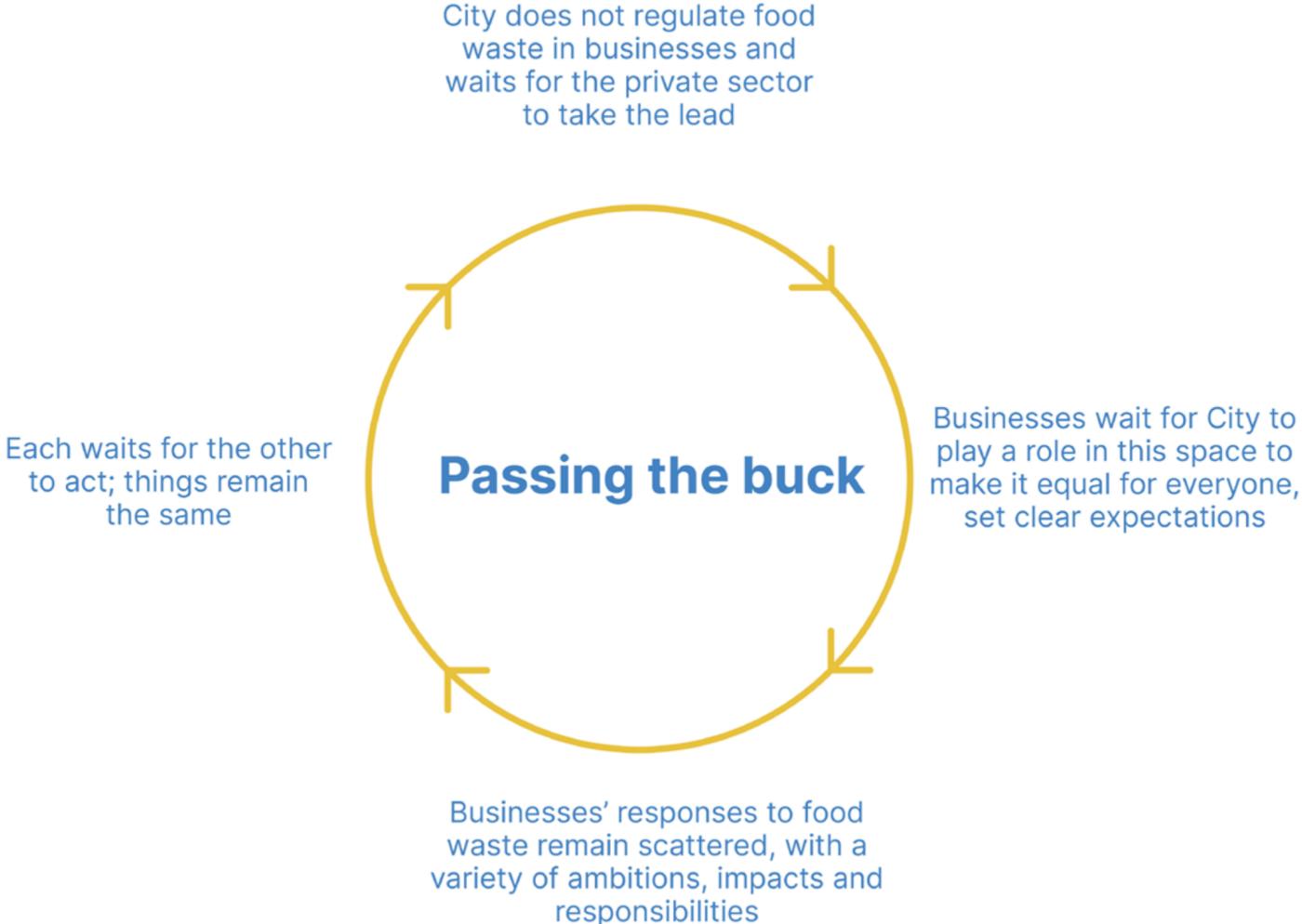
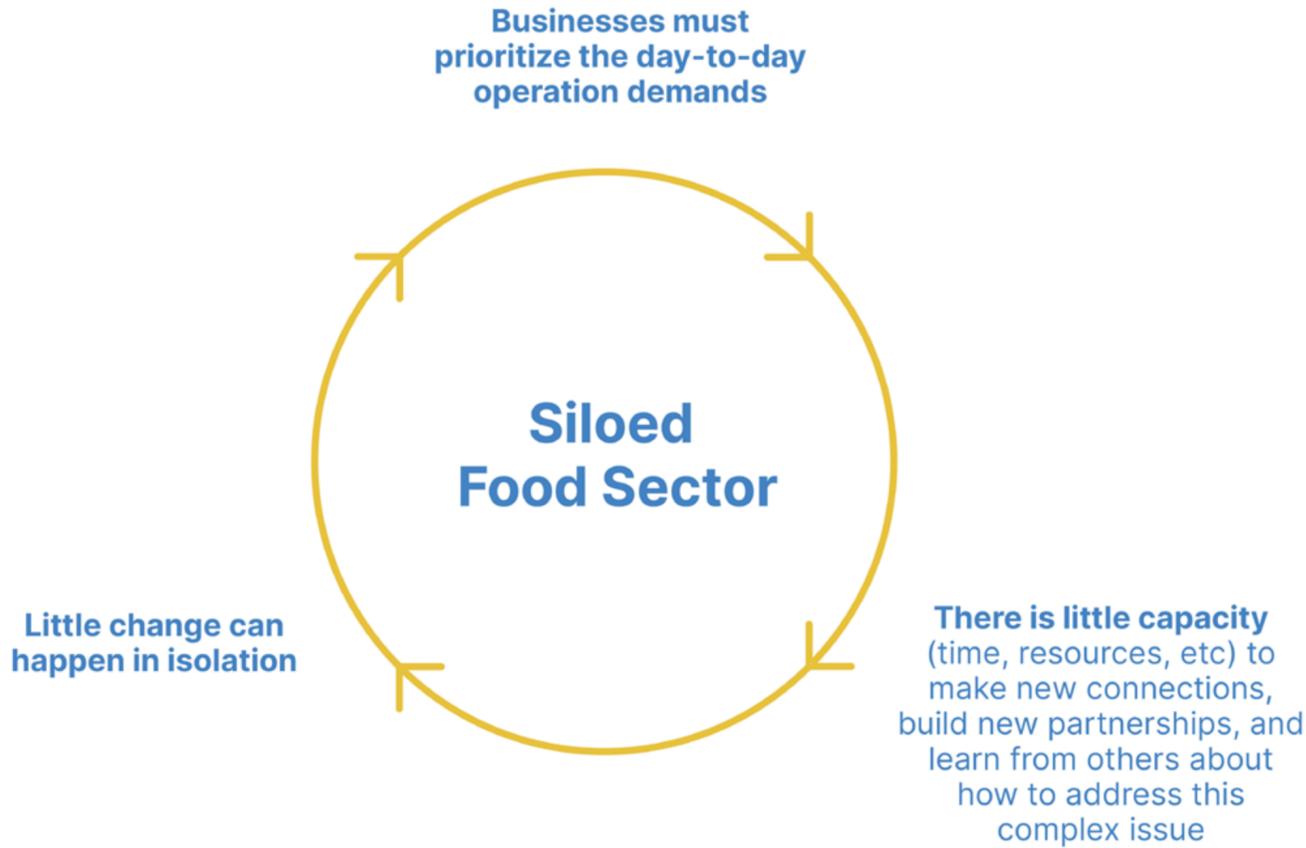
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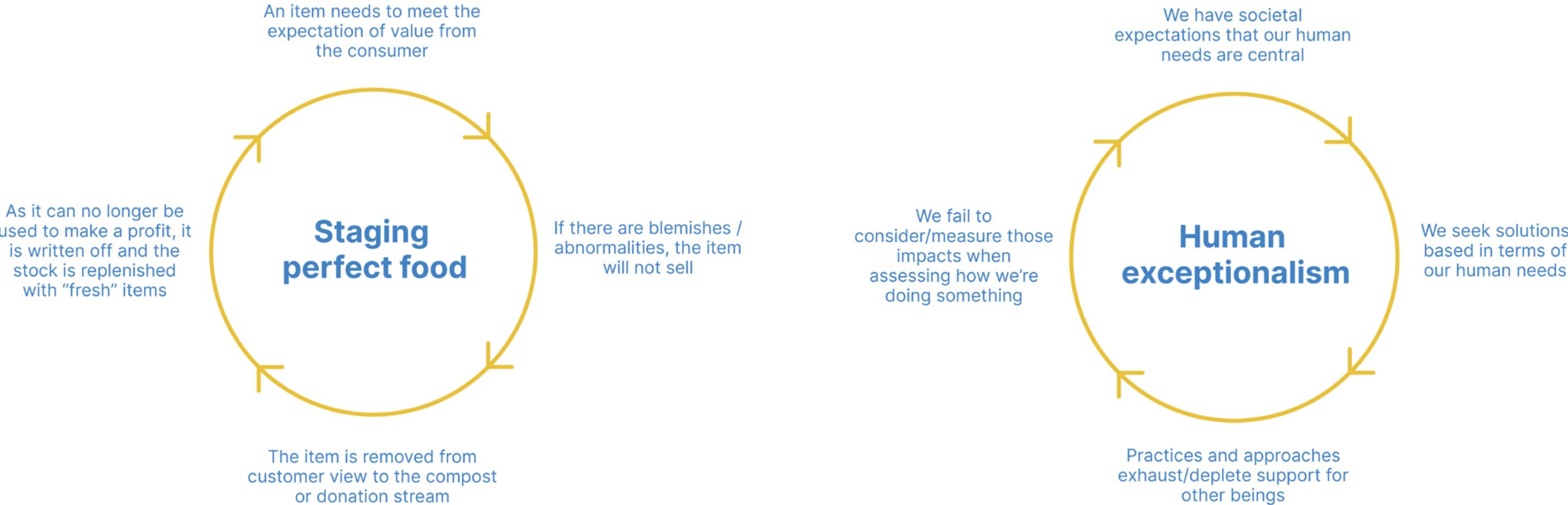
Appendix B: Feedback Loops



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Appendix C: Workshop Descriptions

To complement the experiential learnings from the prototyping process, two workshops took place in the final stages of the CFIL project.



Persuasive Storytelling

with Naomi Devine

From the onset of the lab, sharing the outcomes of the project and bringing associations, other Vancouver food businesses, management and staff into the conversation to address wasted food has been an important next step. There was no shortage of CFIL stories to tell from a variety of perspectives; however, typical presentations are rarely compelling or memorable. The purpose of the Persuasive Storytelling workshop was to provide CFIL participants with both storytelling theory and practical tools to effectively persuade their audiences to action and systems change related to food conservation as well as to communicate their experiences with CFIL.

Naomi Devine's workshop presentation is available as a CFIL resource on the [City of Vancouver webpage](#).

Appendix C: Workshop Descriptions



Value Chain Management

Co-facilitated by Martin Gooch from Value Chain Management International and Keith Renfrey from CSH Projects

A workshop on value chain management, which comes from Lean Six Sigma, provided another systems based perspective to explore the causes of waste. While reducing wasted food has gained increased attention from environmental and social perspectives, the opportunity for businesses to measurably improve their financial performance and competitiveness by reducing waste has gained less attention.

CFIL businesses and the wider Vancouver food business community were invited to a hands-on workshop to learn and use simple value chain management practices.

They learned that most businesses have processes that are in need of improvement — either because they are informal and therefore performed inconsistently, and/or they create rework or shrink, which costs time and money.

The process improvement toolkit, including a workbook divided into easy-to-follow steps is available on the [City of Vancouver webpage](#).

