

LIDD INSIDER

News & Insights for Supply

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Supply Chain Insights

Food Insecurity and Food Waste

Food waste and food insecurity are large environmental and social problems, yet the number of food-insecure people in North America continues to rise, even as vast amounts of edible food go to waste across the supply chain. The core issue is that despite the abundance of available food, this surplus often cannot reach those who are hungry because it is in the wrong place or the wrong format.

This quarter's issue of the LIDD Insider explores LIDD's work to improve supply chains in ways that address both of these problems. We help food banks and other charities that distribute food to improve their supply chain infrastructure so they can support more food insecure families in their communities. We work with environmental organizations to research food waste and understand what solutions could reduce loss along the supply chain.

Food Banks Canada (FBC) supports a network addressing a massive need, with over 2 million Canadians visiting a food bank monthly. LIDD works with FBC at the national level and with member food banks. We develop essential supply chain infrastructure by creating roadmaps for logistics and technology and provide technical support for new or expanded facilities.







Thought Leadership

Supply Chain Infrastructure is the Missing Link Connecting Food Insecurity and Food Waste

Success Story

Canadian Food Bank Lays the Foundation for Long-Term Growth and Community Impact **LIDD** Insights

Supply Chain Infrastructure is the Missing Link Connecting Food Insecurity and Food Waste

Open up almost any webpage for a food rescue organization and you'll find the same frustrated question: How can it be that so much food goes to waste when there are hungry people who need more to eat? Excess food and empty plates are part of the same problem.

Unfortunately food loss & waste occurs all across the supply chain, from farms, to manufacturing to retail and foodservice. And we know that the number of food insecure people in the US and Canada has been rising since the COVID-19 pandemic, and continues to increase in the face of inflation, rising unemployment, and (in the US) reduced government support.

The problem is that surplus, edible food is often in the wrong place or the wrong format. It exists, but it cannot easily reach people who are hungry. Surplus might be at a farm, factory or warehouse, far from people who could eat it. Or surplus is in huge bulk quantities that cannot be moved or consumed without being further processed into units suitable for a household level.







Moving and transforming this surplus food is necessary, just as the "main" food supply chain requires many layers of moving and transforming food to get raw materials onto plates and into stomachs. But the world of food rescue organizations, including food banks and pantries, often lacks this "connective tissue" – the infrastructure that enables food to move through the supply chain.

Running supply chains, whether for-profit or non-profit, requires warehouses to store food, production lines for sorting, portioning, and packaging, and kitchens to transform food from its raw or bulk form into units that can be moved and consumed by people. There needs to be software systems to track inventory and movements, and let all the players in the supply chain know what they need to do.

Due to ever-growing demand, more and more we are seeing an interest in investing in supply chain infrastructure in food rescue and emergency food distribution. Food Banks Canada, for instance, has itself and through its members studied a number of promising opportunities across Canada related to repurposing available agricultural surplus. In some regions of the country there are large amounts of food that could be donated at the agricultural level and transformed into frozen or shelf-stable products to be distributed through the food bank network.

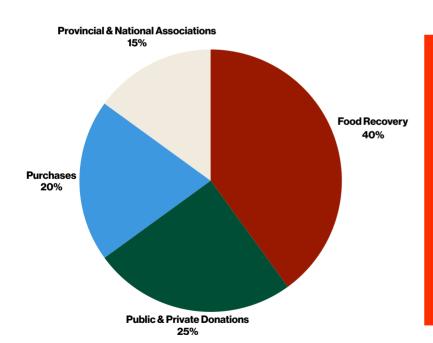
LIDD has studied some of these opportunities, looking at the proper match of commodity to production process, the economic viability of new or expanded facilities, and the involvement of volunteers in operations, among other topics. Our hope is to see some of this capacity come online in the coming years, helping connect food that would have gone to waste with people who need it.

Food Banks are an Integral Part of Food Supply Chains in North America

Food banking in North America began in the 1970s and 80s* as an emergency response to hunger. Early food bank founders may have thought that their efforts were temporary, stop-gap measures to support neighbours in acute need. But the system of food banks serving communities in Canada and the United States grew and grew, becoming enmeshed in society. Today, there are hundreds of large food banks and thousands of smaller food pantries serving millions of people across North America. These organizations are definitely not going anywhere anytime soon, much as everyone would like to end hunger.

You might think that most of the food at food banks comes from food drives – big containers placed at schools, grocery stores, houses of worship and the like, which individuals fill with canned and boxed goods. It is true that these public food drives are a source for food banks, but they hardly provide the majority of supply. At LIDD, we provide consulting and engineering services to many food banks, so we have an inside look at where their supplies come from. Based on data from our work with Canadian food banks, we found the following:

Food Bank Supply Sources in Canada **



Food banks in Canada draw from four sources: food recovery (surplus from farms, stores, and foodservice), public & private donations from individuals, purchases from suppliers, and network supply from provincially or nationally coordinated purchases and donations.

Together, these sources show food banks aren't small, local operations—they're integrated actors in Canada's food system, moving food across regions and meeting needs at a scale far larger than most people realize.

^{*}Feeding America, "Our History," https://www.feedingamerica.org/about-us/our-history **LIDD Survey of selected Canadian Food Banks, 2023

Over the last few decades, food banks have grown to become an embedded part of food supply chains. For upstream actors, food banks provide a release valve of sorts – a place for excess product to go when supply exceeds demand in their primary markets. It is also a place to send food that is edible but slightly below sellable grade, perhaps for cosmetic reasons or mislabeling.

Emergency food organizations are subject to changes in supply that can be abrupt and striking. For example, in the United States, USDA was until recently a major buyer of farm commodities which it directed to domestic food banks as a method of both price supports to farmers and to aid food insecure people. This program provided very large amounts of food to many US food banks. Ending the program will no doubt create major changes in American food banks, unfortunately at a time of great need.

Food banks are here to stay, and at LIDD we are pleased to be able to help them with facility design and software improvements that make them more efficient operators who can serve a growing need. While the overall need for access to food banks is lamentable in society, we are grateful that these organizations exist and that we can support them.



Canadian Food Bank Lays the Foundation for Long-Term Growth and Community Impact



Context

This community-based, not-for-profit organization supports the provincial food bank network, distributing over 13 million pounds of food each year to nourish lives and strengthen communities. As food insecurity grows, they saw the need to modernize and expand their ability to capture and redistribute surplus food from producers. This effort is about more than logistics—it's about giving them the chance to better act on their mission of reaching more families, and remote communities, while helping preserve dignity for those they serve. With limited space and increasing staff needs, even core teams lacked the room to perform essential work.

After a feasibility study for a Food Transformation Centre, the food bank partnered with LIDD to upgrade capacity, optimize processes, and plan facilities for expansion or a new build. The goal: to create infrastructure that meets future demand while staying true to their purpose—feeding people and fostering resilience across the province.

Customer Challenge

- The food bank's facilities were above capacity across all temperature zones, necessitating the use of off-site storage and third-party providers.
- Limited dock access, uneven building elevations, and congestion caused bottlenecks and inefficiencies that increased labor costs.
- Underused technology offered little visibility into inventory or food movement.
- Rising demand—expected to grow 5-7% annually—and new initiatives like school meal programs, a central kitchen, and expanded outreach couldn't be supported within the existing footprint.

They needed a scalable infrastructure roadmap to improve efficiency, reduce costs, and build long-term resilience in its operations.

Our Approach

To support this operational transformation, LIDD led a comprehensive three-phase engagement:



Discover

Conducted site visits, workshops, and stakeholder interviews to gather insights into the food bank's operations, constraints, and future program requirements.



Evaluate

Analyzed current infrastructure and modeled multiple growth and capacity scenarios to identify infrastructure gaps and long-term opportunities.



Recommend

Developed and compared three facility strategies—current-site expansion, phased retrofit, and full new build—to determine the optimal path for growth based on operational, financial, and community needs.

Key Recommendations & Outcomes

LIDD's three-phased engagement highlighted the following key areas of focus:

	Infrastructure & Efficiency Optimization	Phased facility expansion with improved flow and cold storage will boost capacity, streamline operations, and reduce costs for long-term sustainability.
	Volunteer Productivity Enhancement	Thorough analysis of transformation activities and recommendation of improvements such as the rotating conveyor system and an automated potato gleaning line
	Operational Consolidation	Integration of warehouse, volunteer, and transformation areas into a single, optimized footprint.
000	Scalable Growth	Flexible facility layout allows phased expansion as demand grows, avoiding overbuilding or underutilization risks.
	Financial Viability	Phased approach generates a positive Net Present Value (NPV), outperforming other scenarios and meeting future projections.

Solution

Based on its findings, LIDD recommended a phased approach that allows the food bank to scale efficiently over time while reducing operational costs. This strategy provides their leadership with a clear, data-backed roadmap for expansion, ensuring long-term sustainability and community impact.

Future Impacts

Achieve

target facility utilization

Increase

efficiency and capacity to redistribute food

Reduce

off-site storage, boosting responsiveness

Looking Ahead

The food bank is now working with real estate partners to identify potential new sites for relocation or retrofit—an exciting next step in building a facility that truly reflects the scale and spirit of their mission. With LIDD's continued support in test fits, operational planning, and transition strategy, the organization is laying the groundwork for a modern, efficient, and community-focused operation.

This transformation is the first stepping stone in empowering them to reach more families, nourish more lives, and extend dignity and care to communities across the province. Every square foot of the new facility will be a space where purpose meets impact, helping them fulfill its vision of a province where no one goes hungry.

Working with Food Banks Canada

Food Banks Canada (FBC) is a national organization that serves its members - provincial associations representing thousands of food banks across Canada. This network serves a growing need across the country. In 2024, over 2 million Canadians visited a food bank each month, a 90% increase since 2019.

LIDD's work helps develop the supply chain infrastructure the network needs to support growing demand across the country. Our team works with both FBC at the national level and with many member food banks.





At the national level, LIDD has created roadmaps regarding infrastructure for logistics, food processing, and technology that help guide choices about where to invest to bolster the network. We advise on how to better knit together food banks and provincial associations in many regions into more efficient networks.



At the member level, LIDD has provided technical support to many Canadian food banks in nearly every province and territory. These projects help members conceive of new or expanded facilities to meet their needs and then develop the details necessary to bring new capacity online.

How You Can Help



Philanthropic gifts help meet urgent needs in communities across Canada





Corporate Partnerships

Team up with Food Banks Canada to create lasting, scalable impact through your organization





Find a Food Bank

Use FBC's website's locator to connect with a local food bank and support people in your area































About LIDD

LIDD Supply Chain Consulting

LIDD is a full service, global operations and supply-chain consulting firm. Our industry leading team of design, strategy, and technology experts optimize operations, enhance productivity, and build intelligent infrastructure for sustainable business growth.



Supply Chain Strategy Consulting

We carefully consider your entire organizational structure. Our data-driven solutions are tailored to your specific business challenges, change management requirements, and future needs.



Supply Chain Technology

We select, implement, integrate, and support business management and supply chain execution software.



Distribution Center Design

Whether you're running out of space, operating inefficiently, or struggling with labour costs, we can help you reconfigure or automate your location to drive efficiencies.



Facility Implementation

Build ready-to-use facilities on time and on budget. We handle the entire transition process from RFP to equipment selection and implementation.



Our Team

LIDD's office serves as a hub of supply chain expertise, delivering innovative solutions to businesses and organizations across North America. This quarter's newsletter was created through the concerted efforts of LIDD's dedicated Food Insecurity & Food Waste team.



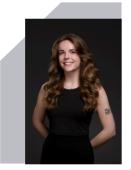
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