Building a Sustainable Local Food Supply Chain

in the Capital Region of British Columbia: A Capacity Assessment

Closing the Supply Gap Leaders Collaboration

Research Conducted

by

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Local Food System Capacity Assessment 2022

Acknowledgement

About Closing the Supply Gap

Closing the Supply Gap (CSG) is a collaborative initiative in the Capital Region of British Columbia. It is focused on the short and long term development of the local food system, building the infrastructure and relationships that are required for an economically sound, sustainable, and resilient local food supply chain. CSG comprises food sector leaders from across the region—farming, fishing, primary and secondary food processing, grocery, restaurants, community food organisations and educators, public policy, and investment. The leaders are working collaboratively from a values-based perspective, in a framework of equity, diversity, and inclusivity. The work uses participatory action research methods to democratise knowledge about the regional food system and to create change. The research provides sound information based on knowledge and experience of local food sector business and community leaders and on local food research literature. The initiative is aimed at food system change that will make local food more accessible and bring it into the mainstream of the way we eat. This link provides more information about Closing the Supply Gap https://viurrspace.ca/handle/10613/25299

Closing the Supply Gap work is conducted on unceded territories of Coast Salish peoples. We express our gratitude for their knowledge and stewardship of this place since time immemorial.

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Executive Summary

There is a lot going on in the local food economy generally and in this region specifically, with actions strengthened by the onset of COVID-19**.** Combined with the climate change emergency and our extraordinary dependence on the industrial food supply chain, there is growing awareness of the need to find better ways of feeding ourselves. This report presents an assessment of infrastructure strengths and gaps that are affecting our capacity to build a **robust local food system, one that is based on ecologically regenerative principles and socially just values. What we have learned about the food system during the COVID-19 pandemic and our emerging understanding about the impact of the industrial food system on climate change combine to make food system change at the local level an urgent priority.**

Closing the Supply Gap is a regional collaboration; it is research-based, and change focused. Since its inception, its goal is to organise food system changes based on local food sector knowledge, experience, and expertise in concert with original local research and relevant research literature. Changes are beginning to happen in the food system but we have learned that making **a real shift must include building smart local infrastructure so we can intentionally bring local food into the mainstream of our food purchases and the way we eat.**

This research report takes us into the experiences and knowledge of people who are working in the food sector in the Capital Region of British Columbia. **It is unique in the collection of voices it has tapped into—farmers, fishers, food processors, grocers, restaurateurs, and community organisations—as well as in the diversity of perspectives it includes from across the entire region from the southern Gulf Islands through the Saanich Peninsula and greater Victoria to the western-most communities of Sooke and Port Renfrew on southern Vancouver Island** (see the map in Appendix A).

The report describes and analyses the four surveys and nine key informant interviews we conducted. Its findings provide a foundation of baseline information about the overall **capacity** of our region to create **a supply chain of local food that is sustainable and accessible through reliable systems of production and processing, and cohesive distribution channels across the region.**

First and foremost the system needs to acknowledge the physicality of this region. Its geography and biosphere have the capacity to produce some of the finest food in the world. This capacity has been proven through the hundreds of generations of Indigenous peoples who thrived on the food within this locale. Indigenous and settler agriculture are much respected in

the region. The wild fishery continues to be among the most sought after around the globe with more than 80% of the catch going to offshore exports.

Importantly, Indigenous food knowledge and leadership in this region are linked in what one might call an Indigenous historical supply chain up and down the west coast of our province that was disrupted by colonisation and emergence of the industrial food system.

Today, the region comprises approximately 30 First Nations and 11 reserve lands, 16 provincially-mandated local governments (13 municipalities and three electoral districts) and a section of the Islands Trust territory which is a unique environmentally-based land use legislation that is also a provincially-mandated local government structure. The region encompasses 237,000 hectares of land with a vast coastline, many inland waterways, and a growing population of more than 430,000. The population includes many very knowledgeable farmers, fishers, wild harvesters, food processors, and other food businesses. Food literacy is increasing across the population, supported by a very active program of school gardens in every school district across the region **In total, the region has the physical and socioecological attributes needed to support a strong, place-based local food system.**

What are the gaps in infrastructure that are making it so hard to bring local food into the mainstream of our regional food supply?

Despite all of these attributes it is still the case that the vast majority of our food comes in from outside sources that control the industrial food supply. At the Closing the Supply Gap Local Food Economy Symposium we held in the spring of 2021, participants called for more information about action that will change the system. For example, they asked: what can be done to develop a local food distribution system across the region? In this research we have delved into the question: what are the gaps in infrastructure that are making it so hard to bring local food into the mainstream of our regional food supply? Ninety-six food sector operators responded to the four surveys that we circulated between February and June 2022. And nine participated in key interviews that gathered preliminary information about business-to-business relationships in the local food sector.

This report presents the data that respondents provided to questions on a broad range of topics, such as: their current business infrastructure capacity, geographic scope of sales, access to skilled workers and skills training, use of digital technology, capacity to expand their production and local food sales, capacity to supply a regional school meal program, and their

experience of infrastructure gaps that are limiting the availability of local food. In addition to the Local Food Economy Symposium, specific questions grew out of previous research we have conducted using focus groups, discussion groups/workshops, and a demonstration project.

Key Findings

A major finding in this research is the high level of agreement among respondents about the infrastructure gaps in the local food system. Regardless of their different positioning within the regional food sector, respondents are experiencing the same or similar obstacles that are limiting their capacity to increase production and availability of local food in our region. They reflected a remarkably homogenous understanding of what is needed to address the obstacles. It is not as if one part of the food sector identified obstacles and needs that are different from those needed in other parts of the food sector. Taken together, respondents identified infrastructure that form the core functions of an efficient local food supply chain.

This diagram presents the unity of needs identified in the surveys. It illustrates the primary infrastructure components—hard and soft—that respondents indicated are most important in addressing capacity gaps.
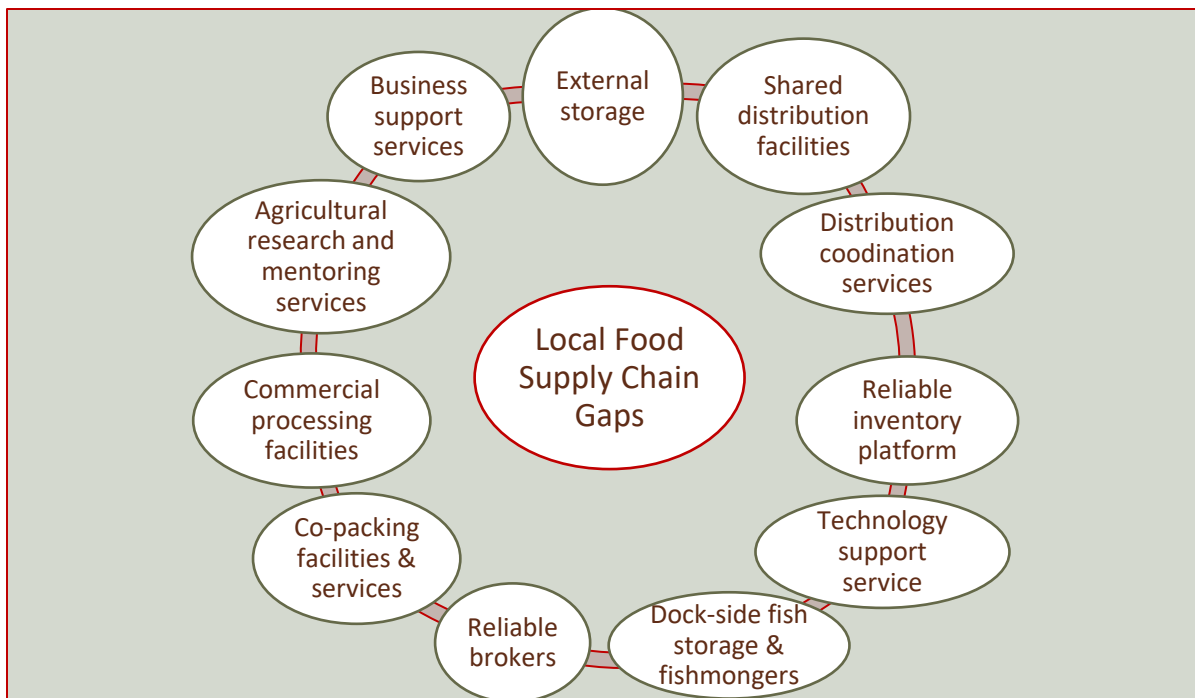
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The report provides a complete discussion of the types of questions we asked and the results. Following is a selection of findings that demonstrate the scope of the study and the respondents' views based on their experiences and perspectives.

❖ A strong majority of the farmers who responded (86%) reported that they own their farmland and almost one-third indicated that they both own and lease farmland. 77% of the farmer respondents said they sell most of their products directly to the public, with 49% also selling at least to some extent to restaurants, and to a few grocers; 21% of the farmers said they sell at least some of their products to caterers. Only 14% of farmers indicated that they sell to processors and 5% said they sell to institutions.

❖ 55% of processors said they own their processing facility. The processing respondents indicated that their businesses span a wide range of processing methods: canning, freezing, meal preparation, product smoking, livestock processing, baking, fermenting, and pasteurizing.

❖ 93% of farmers and processors said they sell within their immediate community; 83% said they do their own deliveries.

❖ 43% of processors said that in addition to selling in their immediate community they also sell throughout the province.

❖ Among the fishers, 60% said they own their fishing licence; the remaining lease a fishing licence. 80% indicated they own their fishing vessel. Only one of them indicated that they own fishing quota.

❖ 75% of the grocers said they source at least some of their products directly from processors and, to a lesser extent, farmers. In contrast, 100% of the grocers indicated that they have very little contact with local fishers although about 20% of the fish they sell is caught locally. None of the fishers indicated direct sales to grocers.

❖ On the demand side, 100% of the grocers agreed strongly or somewhat strongly with the statement that their customers like to buy local foods at their stores; **75% said they have more demand than they can supply and 80% said that demand for local foods is increasing**.

❖ **The need for local food distribution infrastructure (hard and soft) was emphasised by the grocers and most restaurateurs.** One grocer explained that its very hard trying to stock local food. **Another grocer summed it up as needing more supply, consistent and dependable information about what's available, and coordinated delivery**.

❖ The 16 community organisations that responded to the survey covered a range of services: food education, skills development, coordination of rescued food and community meals, coordination of local food sales, business support services, research,

and advocacy. 67% of the community organisations that participated in the survey indicated that they operate only in their local community while 33% said they operate across the whole region. Two of the organisations said their services span the whole province. None indicated having a national scope of service. **80% of the community food organisations that participated in the survey said their physical facilities and operational capacities could not accommodate expansion of their services**.

❖ 39% of farmers and processors said they could accommodate increased production while 61% indicated that their facilities are only marginally adequate for their current production.

❖ **24% of the farming respondents are very interested in supplying a school meal program and an additional 46% said they are somewhat interested, for a total of 70% interest. And, 67% of farmers said they likely could direct some of their production to a school meal program.**

❖ 49% of farmers said their existing digital technology is sufficient to meet their current business needs; 38% said they are not sure if it is meeting their needs and 13% said it is not meeting their needs.

❖ 65% of respondents indicated that they use digital technology to market their products with most of these indicating that they use technology to sell directly to eaters.

❖ 21% of farmers and processors said they use digital technology to interface with a systems network.

❖ 60% of processors indicated that it is not easy for their business to order from local producers.

❖ Consistent with other primary producers, the fishers said they need a more efficient and more coordinated management of delivery services. One fisher specified that this infrastructure needs to be dockside and small scale. Another indicated that this component of the supply chain needs to include fishmongers who can sell the local catch into the local marketplace. **Others echoed that the infrastructure needs to be decentralised and community based.** One fisher said there need to be changes in the owner-operator system for fishers and fairer distribution and cost of quota.

❖ 42% of respondents said they can access training to provide continuous skills development within their business while 41% said they are uncertain if they can find the expertise and skills to ensure their business success; an additional 17% said they cannot find skilled workers.

❖ 55% said that lack of affordable housing is a critical obstacle for the operation of their business and an additional 20% said it is an ongoing challenge that impacts their

business and causes business disruptions. The remainder said it is something they have to manage on a regular basis

From a food system perspective, the study provides preliminary information about the nature of relationships within the food sector—particularly business-to-business relationships. We conducted nine key informant interviews that explored the relationship attributes that are important in building a coherent, resilient, and sustainable local food system. **This study took a step toward creating a body of research locally that may energise the collaborative values of a successful local food supply chain in our region and build the scaffolding for robust operating and governance relationships among local food businesses. A core question is: what are the attributes that manifest reciprocity in business-to-business agreements within a local food supply chain?**

The report concludes with the reminder that a supply chain, by definition, is an interconnected network—a matrix of interdependent functions. It refers back to the driving objective of this work which is not to compete with the industrial food system but rather to establish a food supply chain that resonates with the needs across communities in our region and is based on community-led regenerative principles and values. To that end the local food supply chain more closely resembles a circular economy model with collaborative structures providing the links.

The aim is to build commitment to a food system that will be stronger and more sustainable if it works across the region. The collaboration is an ambitious undertaking, driven by present day necessity and locally grounded leadership. **The report reminds readers that this is not a time for doing nothing—it is time for action.** To this end, it offers a set of priority actions to follow up on the findings of this study within the next few months. The actions focus on conducting sub-regional discussion groups and a regional symposium to share the study results and engage more food sector businesses, organisations, and investors in developing local food supply chain infrastructure.

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This report presents the results of our latest Closing the Supply Gap (CSG) research. The research inquired into capacities and gaps in the local food sector from the perspective of what is needed to build a reliable, coherent, sustainable, and accessible local food system across the Capital Region. The participants were local food businesses and related organisations, all of whom have relevant expertise and experience in the sector. The study grew out of a region-wide Closing the Supply Gap Local Food Economy Symposium that brought together more than 40 people working in the local food sector to share their ideas and experience of gaps in the food system. Among other needs they identified distribution infrastructure as a top priority. They made it clear that we need more information about existing capacities and gaps to address current fragmentation and to leverage foundational food system change. This research report is a step in providing that information. It offers a way forward for region-wide collaboration on setting priorities and taking the next steps.

Setting Up for Success

Assessing the capacity strengths and gaps of our regional food system is **key** to creating a **robust local food economy, one that reduces the region's climate footprint, builds on community values and cultures, and supports local jobs.** There is a lot going on in the local food economy generally and in this region specifically—especially since the onset of COVID-19**.** Combined with the climate change emergency and our extraordinary dependence on the industrial food supply chain, there is growing awareness of the need to find better ways of feeding ourselves.

Through our Closing the Supply Gap collaboration and research it is clear that we need to take a systems approach to local food. **The supply of local food is insufficient and its availability and accessibility are fragmented.** There is limited shared knowledge about **achieving social, ecological, cultural, and equity goals through changes in the food system.** The CSG

Closing the Supply Gap

A regionally-based collaborative initiative in the Capital Region to create food system change and build a strong local food supply chain. **Priority Actions**

❖ a local food system short supply chain across the region that is resilient, promotes diversity, and ensures fair incomes

❖ stronger local food sector relationships that are reciprocal among local food businesses and communities

❖ a food system that embeds and acts on socio-ecological justice values.

collaboration is leading the development of a local food supply chain based on shared sustainability goals and values.

Focusing the Research

Closing the Supply Gap is a regional collaboration; it is research-based, and change focused. Since its inception, its goal is to organise food system changes based on local food sector knowledge, experience, and expertise focusing original local research in a global context. The results of this research—involving food sector businesses and community organisations—affirms, unequivocally, that food sector collaboration is key to meaningful change.

Most significantly it has told us that **increasing the local food supply and creating a more socially and ecologically sound food system** is complex. Planting more seeds and catching more fish are only one part of the picture. Changing the system is dynamic with many moving parts. Changes are beginning to happen in the food system but we have learned that **making a real shift must include building smart local infrastructure** and exploring different business-to-business relationships so we **can intentionally bring local food into the mainstream of our food purchases and the way we eat**.

Using principles of demonstrating value, this research prioritised food system questions we have heard in the sector throughout the pandemic and prior—questions that lead to meaningful information for local food sector businesses and community organisations to take actions that create values-based change. Although the research was not conducted with formal ethical certification through the Tri-Council Panel on Research Ethics, it was conducted as an outcome of Tri-Council approved research (Reichert, 2022) and followed the same ethical standards and used participatory action research methodology.

Supply Chain Need to Know…

❖ What is the capacity of primary producers— farmers, wild fishers, processors—to establish a full-scale supply of local food into the mainstream? What are the obstacles and what are the opportunities?

❖ Is it feasible to expect that we can build a school meal program on local food as the default supply?

❖ What do grocers need in order to source more local food for their stores?

❖ How can the supply chain be changed or adapted so local fishers can sell more of their catch locally?

❖ What is public demand for locally-sourced foods on restaurant menus?

❖ What kind of digital technology do local food businesses need?

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The data we have collected reveals capacity gaps that are invisible from the lens of the dominant industrial food supply chain and have, so far, eluded infrastructure planning and investment.

The findings reveal significant obstacles affecting every point across the food sector from primary production, wild harvest, and processing to distribution of local food. This research is not intended to be the last word on setting priorities. Rather it adds to a foundation of baseline information about the overall **capacity** of our region to create **a supply chain of local food that is sustainable and accessible through increased systems of production and processing, and cohesive distribution channels across the region.**

The surveys we conducted inquired into the adequacy of built infrastructure, use of digital technology, access to training for the food sector workforce, capacity and limitations to increase production and access for local eaters, distribution needs and priorities, and interest and capacity to supply local food to a school meal program—all from the perspectives of people owning businesses and working in the sector. We also conducted selected interviews to enhance our understanding of the dynamic role of relationships within the local food sector.

The words *sustainability* and *accessibility* are loaded terms that denote a range of **community values**. They also indicate the importance of building a body of information and knowledge about what infrastructure—hard and soft—are priorities for targeting resources and expertise that are key for the long term success of the local food system we are building.

Local Food System Values

Closing the Supply Gap leaders have named some values that distinguish this local food system from industrial food production and distribution:

- ❖ Ecologically sound and regenerative
- ❖ A circular economy based on ecosystem principles and no waste
- ❖ Equitable profitability
- ❖ Inclusion and diversity in food accessibility
- ❖ Business-to-business relationships based on trust, respect, and reciprocity.

A Regional Approach

In this initiative, **every part of the region matters:** it is the region as a whole that defines the ecological, environmental, and social capacity to provide food for the population and to establish the foundation for building a sustainable local food system. **First and foremost, a local food system is a physical and ecological entity.**

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These are the foundational local food system attributes of this region: **direct access to world-class fish and other seafood, good farmland—some protected through the Agriculture Land Reserve from other development, a mixed urban-rural population, a temperate climate, strong Indigenous traditional food knowledge, a re-emergence in concert with that knowledge of regenerative practices, innovative food businesses, a skilled workforce, and a strong network of community-based food organisations**.

A Place-Based Food System

The Capital Region, the area in which CSG is situated, is a defined territory (Appendix A is a regional map) that has strong local food system attributes, as noted above. Most significant among these is a long history of feeding people through many generations going back thousands of years. Indigenous traditional food knowledge in this region is still strong, relevant, and well practised. Importantly, Indigenous food knowledge and leadership in this region are linked in what one might call an Indigenous historical supply chain up and down the west coast of our province that was disrupted by colonisation and emergence of the industrial food system.

Today, the region encompasses approximately 30 First Nations and 11 reserve lands, 16 provincially-mandated local governments (13 municipalities and three electoral districts) and a section of the Islands Trust territory which prescribes a unique environmentally-based land use that is also a provincially-mandated local government structure.

The region encompasses 237,000 hectares of land with a vast coastline that stretches across the southern Gulf islands, including Galiano, the Penders, Mayne, Saturna, and Salt Spring Island, through the Saanich Peninsula and greater Victoria to the western coastal communities of Sooke and Port Renfrew. It has a growing population of more than 430,000 people. In total, the region has the physical and ecological attributes needed to support a strong **local food system**[1].

Data Collection

In this study we used two data collection methods: surveys and key informant open interviews. Both the surveys and interviews were targeted specifically to people owning/operating food businesses in the region, and to a selection of sector-based organisations. We based the design of the survey and interview questions on issues and priorities that we identified in previous research conducted in Closing the Supply Gap, and independently. A thorough review of food

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[1] A detailed discussion of local food system attributes is available in: Reichert, P. (2022). Taking Action to Re-localise the Global Food System: If not now, when? https://viurrspace.ca/handle/10613/25299

system research literature provides the basis for understanding food system issues in our region in the global context.

As noted above the need for a capacity assessment was consolidated by the region-wide collaboration of food sector participants in the regional Local Food Economy Symposium we conducted in the spring of 2021. Participants brought clarity to the need for **data that supports an assessment of soft and hard local food supply infrastructure gaps that are barriers to advancing a robust local food supply chain. They informed research into the attributes of business-to-business relationships within the local food sector.**

We conducted four surveys between February and June 2022, targeted to farmers, fishers engaged in wild fishing, food processors, grocers, restaurateurs, and a selection of community food organisations. The surveys were constructed in Survey Monkey; the questions were a mixture of multiple choices, Likert Scale ratings, and open-ended comments.

The survey links were distributed to participants who attended the Closing the Supply Gap Local Food Economy Symposium held in the spring of 2021, and through industry and food sector contact lists. Initially, we created one survey with sub-sections for each of the different food sector categories. On the first circulation of the survey, the response from farmers, processors, and community food organisations was strong but it was weak from grocers, restaurateurs, and wild harvest fishers. Fishers were already on the water, restaurants were just coming back from devastating pandemic-required closures and limited business operations, and grocers were focused on moderating the management of their stock in response to global supply chain issues. To increase responses from those sectors we broke out the sub-sections and distributed separate surveys to each, for a total of four altogether.

The remainder of this report summarises the data and analyses the findings in the current context. It concludes with a discussion of action priorities for consideration.

Survey Results

Table 1 shows that the overall response to the surveys was good with 96 participants from the targeted respondents across the food sector. It shows that farmers comprise the majority of respondents. We recognise that seasonality and COVID impacts were factors in the variability of capacity to respond to the survey at this time. As well, we acknowledge that business demands across the sector can make it difficult to generate survey responses, especially from small to medium scale operations where attention is on the business 24/7. Although the response rate from grocers, restaurateurs, and fishers was low, the quality of responses was generally strong and provides direction for more data gathering in these sectors as our work continues.

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From a sub-regional perspective, Table 1 shows that a majority of respondents are located in the southern Gulf Islands. This strong response signals the success of efforts to ensure the inclusion of Gulf Islands' farmers and processors in the regional collaboration. Within the region, the southern Gulf Islands account for the second largest agricultural food production, next to production on the Saanich Peninsula. These smaller islands are also home to food processing businesses that are significant in terms of uniqueness, size, and regional reach. In previous research, the participants in focus groups and discussion groups tended to be predominantly from the Peninsula. Their responses regarding infrastructure gaps and needs coincide closely with the data collected in this survey.

Table 1 Respondents' sector identification and primary location, April-June 2022

Food Sector	# Respondents	Proportion
Farming	42	44%
Wild fishing and seafood	6	6%
Food Processing	23	24%
Community Organisations	16	17%
Restaurants	4	4%
Grocers	4	4%
Other	1	1%
Total	96	100%
Regional Location		
Western communities	11%	
Greater Victoria + Saanich Peninsula	22%	
Gulf Islands	63%	
Other	4%	

The 16 community organisations that responded to the survey covered a range of services: food education, skills development, coordination of rescued food and community meals, coordination of local food sales, business support services, research, and advocacy. 67% of the community organisations that participated in the survey indicated that they operate only in their local community while 33% said they operate across the whole region. Two of the organisations said their services span the whole province. None indicated having a national scope of service.

Business Ownership
- ❖ Most of the survey respondents (76%) indicated that they own their business.

❖ The majority of farmers reported that they own their farmland and more than 31% indicated that they both own and lease farmland.

❖ 55% of processors said they own their processing facility. The processing respondents indicated that their businesses span a wide range of processing methods: canning, freezing, meal preparation, product smoking, livestock processing, baking, fermenting, and pasteurizing.

❖ Among the fishers, 60% said they own their fishing licence, the remaining lease a fishing licence. 80% indicated they own their fishing vessel. Only one of them indicated that they own fishing quota.

Local Food Sales

❖ 77% of the farmer respondents said they sell most of their products directly to the public, with about 49% also selling at least to some extent to restaurants, and a few to grocers; 21% of the farmers said they sell at least some of their products to caterers. Only 14% of farmers indicated that they sell to processors and 5% said they sell to institutions.

❖ Table 2 shows that almost all farming and processing respondents (93%) sell within their immediate community; 83% of farmers and processors said they do their own deliveries. Only 10% of them said they use a broker. The table shows that the responding processors are more likely than the farmers to distribute their products outside of the region including globally.

❖ 43% of processors said that in addition to selling in their immediate community they sell throughout the province. A small proportion (14%) said they have global clientele. Almost one-half of processors said that in addition to selling directly to the public, they also sell to grocers.

Table 2 Primary Production Scope of Sales, 2022

Geographic scope	Farmers	Processors
Community where they live	93%	79%
Within the region	42%	57%
Throughout the province	24%	43%
In other parts of Canada	12%	14%
Outside Canada	5%	14%

❖ Consistent with the processors' data, the grocers indicated that an estimated 20% of the processed foods they sell are locally sourced. On average they indicated that about 20% or less of the produce they sell is locally grown and two-thirds said 20% of the fish and seafood they sell is locally caught.

❖ 75% of the grocers said they source directly from farmers and processors. In contrast, 100% of the grocers indicated that they have very little contact with local fishers. None of the fishers indicated direct sales to grocers.

❖ Among the small number of restaurant respondents it was indicated that they source between 20-50% of their produce locally.

❖ Table 3 shows that fishers sold to a variety of sources, from their local base, including to offshore buyers and processors. Very few of them said they sell directly to restaurants and, as noted, none indicated selling directly to grocers.

❖ In this survey, we did not ask fishers what proportion of their catch they sold to each type of buyer. In the BC fishery as a whole up to 90% of the catch is sold for export. As is discussed below the fishers in this study are keen to develop the local marketplace; they identify the supply chain infrastructure they require in order to increase their direct local sales.

Table 3 Point of sale reported by fishers, 2022

(This data does not indicate % of sales to each outlet)

Point of sale	Proportion of respondents who use this point of sale
To a local wholesaler	50%
To a local processor	75%
To an offshore buyer	25%
Directly off the dock (& pre-order) to the public	75%
Directly to restaurants	25%
Directly to grocers	0%

❖ One-half of the grocers who responded to the survey indicated that they sell provincially and nationally.

❖ On the demand side, 100% of the grocers agreed strongly or somewhat strongly with the statement that their customers like to buy local foods at their store; **75% said they have more demand than they can supply and 80% said that demand for local foods is increasing**.

Use of Digital Technology

- ❖ 65% of respondents indicated that they use digital technology to market their products with most of these indicating that they use technology to sell directly to eaters.
- ❖ 35% said they use digital technology to purchase from suppliers; 37% said they use it to maintain an inventory of their products.
- ❖ 49% of farmers said their existing digital technology is sufficient to meet their current business needs; 38% said they are not sure if it is meeting their needs and 13% said it is not meeting their needs.
- ❖ 21% of farmers and processors said they use digital technology to interface with a systems network.
- ❖ 60% of processors indicated that it is not easy for their business to order from local producers.

Capacity to Expand Local Food Sector

The survey asked respondents several questions about the capacity of their facilities and business operations to accommodate increased production in the case of primary producers (farmers, fishers, processors) for the local market place or, in the case of grocers their local food sales.

- ❖ 39% of farmers and processors said they could accommodate increased production while 61% indicated that their facilities are only marginally adequate for their current production. In addition, 23% said they were uncertain about increasing production.
- ❖ In the case of the grocers, 50% said their current facilities could accommodate future growth and the remainder said they were not sure. At the same time, 67% of grocers said they have the infrastructure they would need to expand their local food stock.
- ❖ Fishers indicated that the capacity to increase "production" is dependent on a number of factors, most of which are uniquely related to fisheries management, such as licensing and quota regulations, land-based handling facilities for the sector as a whole and ecosystem health.
- ❖ 80% of the community food organisations that participated in the survey said their physical facilities and operational capacities could not accommodate expansion of their services.

Skills Labour Force

The survey asked about the extent that labour force access and trained staff are available for their businesses.

❖ 42% said they can access training to provide continuous skills development within their business while 41% said they are uncertain if they can find the expertise and skills to ensure their business success; an additional 17% said they cannot find skilled workers.

❖ 22% said they cannot find expertise to help with skills development and 36% they are not sure, totalling a majority of the business respondents.

❖ 48% said they are not sure they have the skills to respond to food system changes.

❖ 55% said that lack of affordable housing is a critical obstacle for the operation of their business and an additional 20% said it is an ongoing challenge that impacts their business and causes business disruptions. The remainder said it is something they have to manage on a regular basis.

Addressing Infrastructure Gaps

The survey explored with respondents a range of infrastructure that support the core functions of a supply chain. We know that the industrial food system operates on the basis of a sophisticated configuration of warehouse facilities, transportation networks, technological systems, large-scale automated processing equipment, business services, and industrially-focused research—all designed to meet the needs of large scale production, corporate control of such things as production and distribution lines, big data, financial investment across the system, and concentration of profit.

The breakdown of local food systems decades ago included the loss of local food infrastructure and local food system management. In this survey we asked respondents to assess the importance of a range of infrastructure—hard and soft—that they believe would have to be developed for the effective functioning of a local food short supply chain. (There is not a definitive or single model of a local food supply chain at this time. See Appendix B for an example.)

Respondents were asked to rate the degree of importance of each item in an extensive list of possibilities, using a scale from critically important through to not at all important. The list was derived from system gaps identified in focus groups, discussion groups, and interviews conducted in previous research as part of Closing the Supply Gap, and independently. It included some items identified in the research literature. The core needs they identified include hard infrastructure and services, and were remarkably consistent across all sections of the food sector.

Figure 1 illustrates the items on the list that farmers and processors rated critically important, very important, or important for the development and functioning of an efficient short supply chain. Items with a rating below that level are not included in this chart.

All of the items on the chart are considered key by a majority or strong minority of farmers and processors. It is important to note that these functions in a supply chain do not operate in isolation of each other. When they are all present, the chain is stronger; if one or more is missing in the chain the effectiveness of the whole chain is diminished.

Figure 1 Infrastructure needs identified by farmers and processors, ranked within a range of importance by percent of respndents, 2022
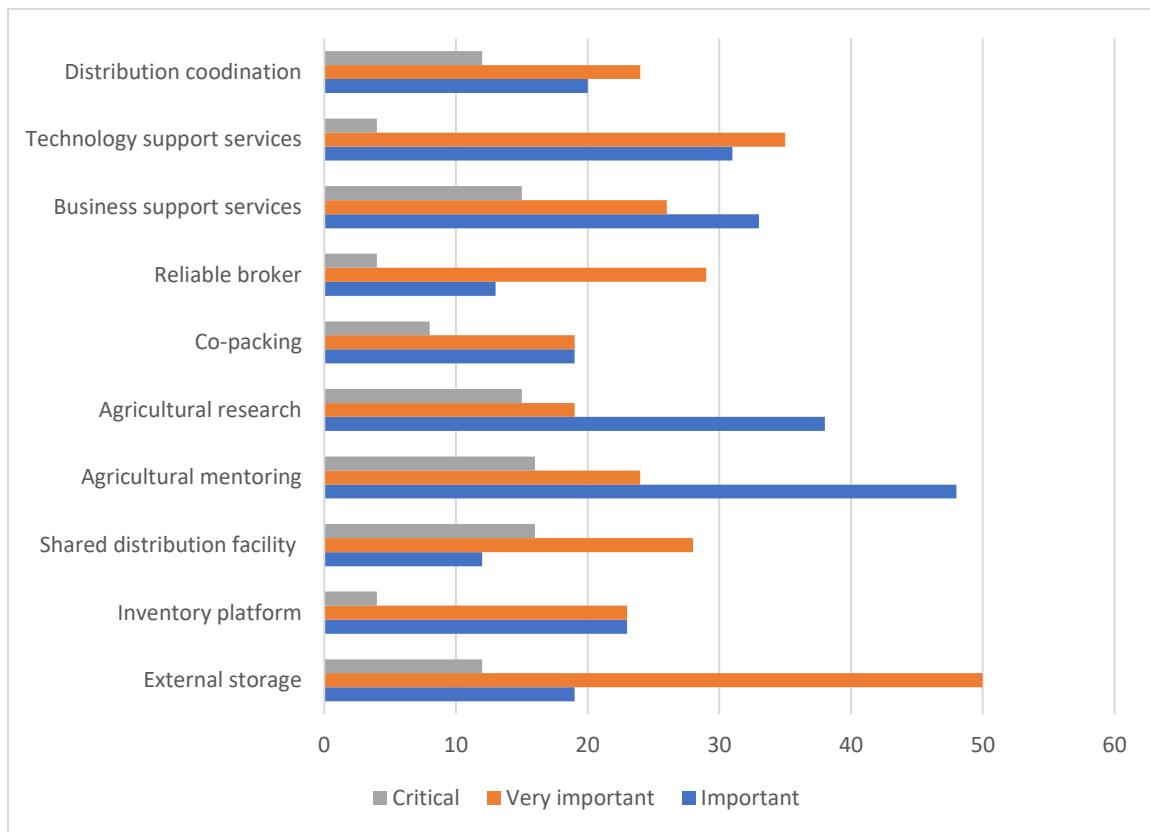
The data from the fishers and grocers supports the data from the farmers and processors. **The fishers strongly indicate that built infrastructure is critical to bringing locally caught fish directly into the local food supply chain. 100% of them indicated that increased local processing and cold storage for their catch are critically important in order for them to function directly within the local food system.**

In addition, consistent with other primary producers, the fishers said they need a more efficient and more coordinated management of local delivery services. One fisher specified that this infrastructure needs to be dockside and small scale. Another indicated that this component of

the supply chain needs to include fishmongers who can sell the local catch into the local marketplace. Others echoed that the infrastructure needs to be decentralised and community-based. One fisher said there need to be changes in the owner-operator system for fishers and fairer distribution and cost of quota.

The need for local food distribution infrastructure (hard and soft) was emphasised by the grocers and restaurateurs. One grocer explained that its very hard trying to stock local food. Another summed it up as needing more supply, consistent and dependable information about what's available, and coordinated delivery. In various ways the grocers and most restaurant responders indicated that coordinated/networked distribution services are critical to increasing access to the supply of local food that their customers are wanting.

Figure 2 illustrates the infrastructure priorities that a majority or strong minority of respondents identified as key missing pieces in their capacity to increase production and make more local food available and accessible in the region.

Figure 2 Most significant gaps in hard and soft infrastructure obstructing local food supply and availability
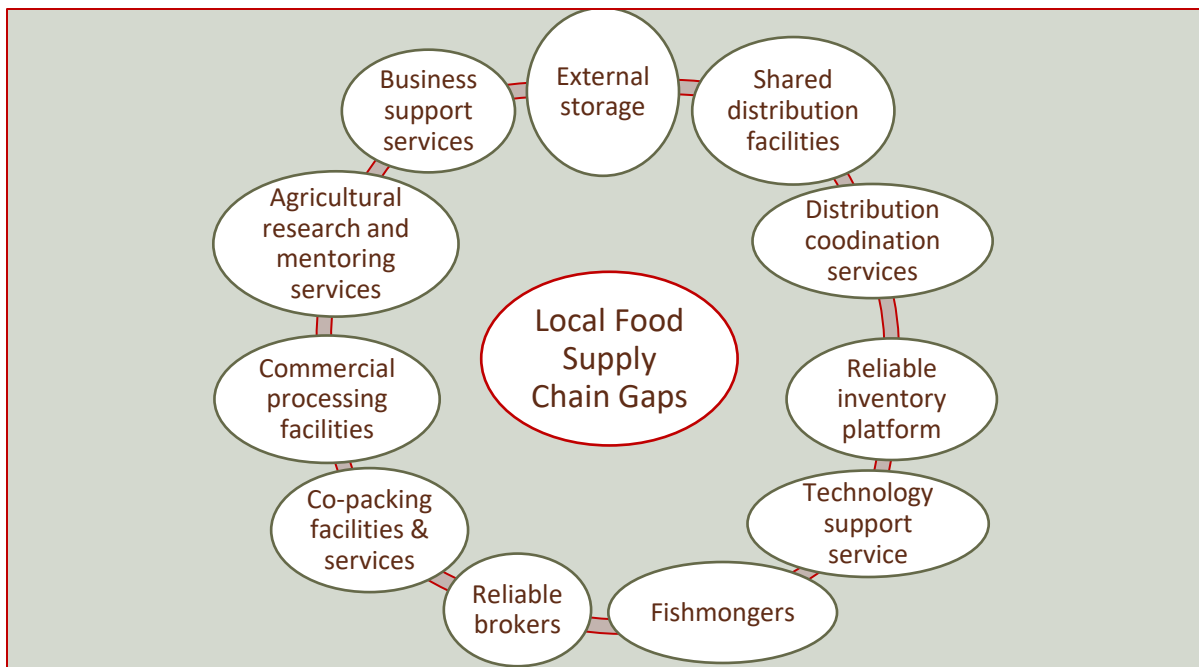
All of the infrastructure included in the diagram—hard and soft—comprise components of an effectively functioning local food supply chain. They do not operate in isolation of each other.

Together, they form an interdependent matrix of key functions in a local food supply chain. It is important to be reminded in this context that 80% of the community organisation respondents indicated that they do not have the capacity to increase their services.

As we discuss in the *What's Next?* section, the local food supply chain and system as a whole requires that all components be addressed in concert across the system. For example, external storage, shared distribution facility, inventory platform, and distribution coordination form a distribution node in a short supply chain, and business support service and digital technology are part of the platform for supply chain operations in contrast to niche market placement. When considering feasibility and sustainability it is important to note that food holds a unique placement in the marketplace as something that all people in the community need and want to access.

School Meal Program Readiness
Like other areas in British Columbia and Canada, the Capital Region is buzzing with community-based action to develop a robust school meal program that achieves multiple educational and community building goals. Foundational to the development of a school meal program is the question of what kind of food would be served in such a program: will the program serve local food to the children?

The development of a school meal program begs several questions for those of us working on food system change and regenerative food production: can a school meal program be the leverage for developing infrastructure that is needed to build a strong, values-based local food supply chain? Can the development of a school meal program help to build a local food system that will also achieve climate action goals and weave new community cultural bonds? With these thoughts in mind, this survey included a small set of questions for farmers and processors about their interest in supplying food to a regional school meal program. The findings are preliminary.

There are four school districts in this region, SD #61, #62, #63, and #64, providing elementary and secondary education for children and youth living in the region. Some of the secondary schools have cafeterias and there are some ad hoc food programs in several schools; there is not, however, a program that ensures all students are able to access nutritious food through the school system (Opportunities for Building Healthier School Food Environments in the Capital Region, Kemshaw, 2021).

A key component of the Kemshaw research, undertaken for the School Food Shift Coalition, is the value of school meal programs in building community. This phenomenon is evident in the

development of school gardens, beginning with the first school garden in the region at the Gulf Islands Secondary School (GISS) on Salt Spring Island and the first locally sourced salad programs served by the cafeteria at GISS. School District (#64) was the first in the region to have a food garden at every school in the district. This work was accomplished through high community involvement. All the school districts are taking up the challenges and benefits of introducing experiential food learning into student's school experience. And many community volunteers as well as school staff are committed to the success of the various initiatives across the region. In short, the population interest in school meal programs and providing student access to local food is built on a sound community and pedagogical foundation. The food literacy program in the region indicates that it addresses core food literacy values.

The benefits of school meal programs described in a report of the National Coalition of Healthy School Food (2018) includes that it reduces the ecological and carbon foot prints while increasing student attitudes and behaviours about environmental sustainability values. The report also points to school meal programs as providing opportunities for economic growth related to local food production.

Our survey found:

- ❖ **24% of the farming respondents are very interested in supplying a school meal program and an additional 46% said they are somewhat interested, for a total of 70% interest.** The remaining 30% of respondents said they are not interested, mostly because they do not have sufficient supply at the present time. The relationship between supply and interest is ambiguous in the survey.
- ❖ Despite the hesitancy about their current capacity to supply a school meal program, as Figure 3 illustrates, a majority of farmer respondents (67%) said they **could definitely or likely redirect some current production to a school meal program**. Many said they would have to do more business planning to make this kind of a change in their operation.
- ❖ 36% of farmers said they would be interested in selling seconds and the majority (64%) said they would not. Several respondents added comments having to do with what would be required and how the program would work.
- ❖ 60% of the processors who responded to the survey indicated that selling to a school meal program is not easily accommodated in their business model at this time. However, some of the processors are already supplying schools. For example, one explained that they have been providing breakfast food to hundreds of students for several years now. And one processor commented that it would be great to supply

schools but in their business it will depend on whether their products fit with the school meal menus.

Figure 3 Farming respondents' capacity to redirect some production to a school meal program, by percentage, 2022
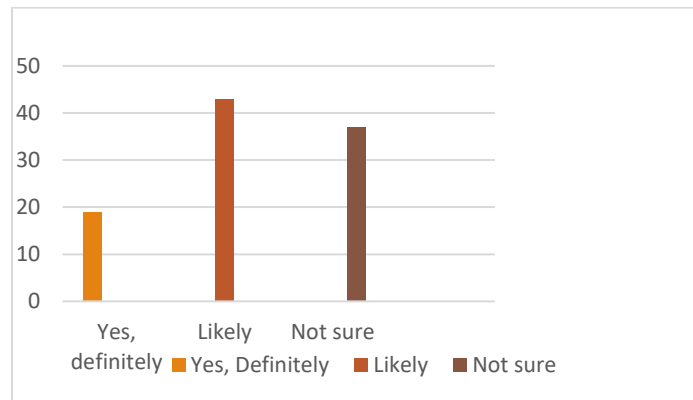
The comments section of the survey helps to inform our understanding of the farmers' and processors' readiness to supply a school meal program. **First, and foremost, it was clear in their responses that they need more information about what is involved and the opportunity to use that information to consider that market stream in their business and strategic planning.**

Local Food Supply Chain is about relationships

❖ How can a local food supply chain embed and act on values of inclusivity, social and economic equity, and ecological justice?
❖ What are the attributes of business-to-business relationships that promote shared values?
❖ How do we support strong, positive relationships in our food economy?

Food Sector Relationships: Interview Findings

In this study we conducted interviews with nine key experts in the local food sector as the first stage in building a body of research about the important attributes that would characterise business and organisational relationships in a local food short supply chain. Research findings in previous Closing the Supply Gap research and more broadly local food research literature indicate that relationships between and among food sector businesses are key to building a robust local food system. There is, however, a gap in the research regarding the key attributes that make the difference in those relationships.

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This component of the study addresses this emerging need to know more about the nature of relationships within the food sector—particularly business-to-business relationships. By definition, a local supply chain implies a network that will build a coherent, resilient, and sustainable local food system. Key to a well functioning local food short supply chain is a sense of interdependence among the myriad of different businesses and organisations that drive the supply chain. Presumably the interdependence prompts the reciprocity that produces mutual benefits.

> **This study is a step in creating a body of research locally and beyond that may energise the collaborative values of a successful local food supply chain in our region and build the scaffolding for core operating and governance relationships. The core question is: what are the attributes that manifest reciprocity?**

In the interviews, our primary aim was to hear how the interviewees described the characteristics of relationships that they believe matter in the food sector and to see if there was commonality and/or divergence across the interviews. It is intended that the results will be used to conduct the next stage of research in support of this key area of local food system development.

We envision that more interviews will be needed to gather more ideas about mutual benefits and, for example, best practice for reciprocal formal and informal business agreements. Applying qualitative analytical research techniques to that data will help us to sort the fundamental relationship attributes that are most meaningful between and among the participants in the localised short supply chain. The outcomes of this research will inform participants across the food sector in the development and management of the short supply chain, and a collaborative governance structure.

The research requires a structured research design and appropriate funding. In our study, we were limited by having insufficient resources to begin the process. Nevertheless we were able to compile the data we gathered from the nine interviews as a starting point for homing in on this wide-open field of study.

We recorded the interviews, transcribed them, and analysed the transcripts to identify the words and phases that the subjects used in various ways to describe the nature of business relationships that are most meaningful to them. Figure 4 illustrates some key descriptive words

directed toward positively describing local food system relationships. It highlights the range of considerations from "community" to "consistency" to "worth". It is important to note that this piece of the food system research for the region is still abstract and preliminary. But we wanted to bring it to you in any case because down the road it will take on concrete ways of doing business that may be different from the model that operates in the industrial food system.

Figure 4 Relationship attributes and indicators for further research, 2022

We learned in the surveys that grocers and processors have at least moderate contact with each other but only low levels of contact with farmers and little to no contact with fishers. **They do, however, all have contact with eaters.** This phenomenon begs the question of how the social contract of local food sector business with eaters could be used to build stronger commercial transactions between and among food businesses.

Is the shared relationship that food businesses have with eaters a foundation for building reciprocal business-to-business relationships as part of their respective roles in a local food supply chain?

There are many more questions to explore about business-to-business relationships in a regenerative local food system: Can business-to-business commercial relationships in a local food short supply chain avoid or circumvent the hierarchical relationships that define the

relationships that define the industrial food system and supply chain? Do local food businesses want to move toward a circular economy model where capacity is managed collaboratively within the supply chain rather than externalising costs, such as environmental degradation, waste, and population hunger?

What are we learning?

This study has produced new data about local food production, fishing, processing, and marketplace infrastructure gaps, needs, and priorities, all from the perspectives of those working in the sector. It is unique in the views it includes from a cross-section of food businesses and key food organisations. It affirms and broadens our understanding of the experience and expertise of those people in our region who are focused on maintaining the local food sector. Through the collaboration we are building in Closing the Supply Gap, they are the ones who are best positioned to guide the food system changes that will regenerate the environment and help us to achieve a flourishing, diverse, and socially just food economy.

Through the voices of farmers, fishers, processors, grocers, restaurateurs, and community food organisations we are learning more about what is required in order to build a robust local food economy and the related supply chain.

This study increases our knowledge of core capacity gaps that are important components for the development of a local food supply chain in the Capital Region. It points to additional research that needs to be conducted and the priorities that need to be sorted in a call to action.

Some Highlights

❖ 39% of farmers and processors said they could accommodate increased production while 61% indicated that their facilities are only marginally adequate for their current production

❖ 67% of grocers said they have the infrastructure they would need to expand their local food stock.

❖ Fishers explained that their capacity to increase "production" is dependent on a number of factors, including licensing and quota regulations, land-based handling facilities for the sector as a whole, and ecosystem health.

❖ 80% of the community food organisations respondents said their physical facilities and operational capacities could not accommodate expansion of their services.

The most immediately accessible thing we learn from this study is that our local food system is full of infrastructure gaps that are key obstacles to creating a robust and accessible local food supply. Respondents identified what is needed to fill the gap in storage and processing facilities, distribution networks, skills development, digital technology, and organisational capacity.

What is new in this data is the clarity respondents bring to the need for a systems approach to filling the gaps. The needs point to community-based storage, processing, and distribution systems that connect primary producers with the marketplace where grocers, restaurants, and community institutions (such as schools) and others are seeking a local, reliable, adequate supply of local foods. We need only to look at the list that their data has provided to know what to do next.

More than 90% of primary producers (farmers, fishers, and processors) are working hard to sell their products within their own community radius. The system lacks strategically placed shared storage, distribution mechanisms, and processing infrastructure that are needed to support increased supply. The survey found that 83% of the primary producers are doing their own deliveries. This finding fits with previous research that identified the organisation and delivery of local food as a core function in the development of a robust local food supply chain.

> **Digital Technology**
> ❖ 65% use digital technology to market their products, primarily directly to eaters.
> ❖ 37% of farmers said they use it to maintain an inventory of their products.
> ❖ 49% of farmers said their existing digital technology is sufficient to meet their current business needs; 38% said they are not sure if it is meeting their needs and 13% it is not meeting their needs
> ❖ A majority of grocers and processors indicated they need reliable, timely access to local food supply availability.

And we heard from grocers and restaurants that they need reliable, regular information about what is available and coordination of its delivery. It follows that 56% of respondents indicated that distribution coordination is an important infrastructure need if we are going to make local food the default, shifting away from industrial food.

In the development of action priorities it is important to consider the question of digital technology in the development of this infrastructure. We know there is a strong global tug of war going on over ownership of technology and data, particularly in the agricultural sector where corporate control of data has the potential of limiting accessibility to local food and food

knowledge. It is incumbent on the local food sector to learn more about how the emerging technology can be used instead to empower local food systems by incorporating development and control of it into local food supply chains.

Skilled Labour Force

❖ 48% said they are not sure they have the skills to respond to food system changes.

❖ 42% of farmers and processors said they can access training to provide continuous skill development within their business while 41% said they are uncertain if they can find the expertise and skills to ensure their business success, and an additional 17% said they cannot find skilled workers.

❖ 22% said they cannot find expertise to help with skills development and 36% they are not sure if they can.

❖ A strong majority of farmers indicated that agricultural mentoring and research are critically important gaps in the local food system.

This study indicates that a majority of respondents have experience using technology to assist them in selling their products but less than one-quarter have experience with inter-operating technology in a systems network. This finding is consistent with research conducted in Ontario which suggests that inter-operable technology may not be readily accessible or affordable for most small to medium-size food producers.

Last, and not least, this study found that a majority of respondents are uncertain about the work force they need to carry out their work, and a majority are unsure about accessing skills development programs. Farmers indicated a need for agricultural mentoring and research. Related to their labour, a majority of respondents indicated that housing is a significant issue. Making sure that food sector work force issues and opportunities are a high priority in the broader labour force public policy challenges is reinforced by this study.

As we progress with our work to build a stronger, better local food system in this region we can continue to mine all of this data and use it as a measuring stick for food system changes. The most important thing, though, that study provides us is a regional, unique view of capacity gaps that are limiting the ability of local food businesses and organisations to meet regenerative objectives and associated supply needs

What's Next?

This section provides a roadmap for testing the shared meaning of the research results presented in this report and taking action based on collaborative priority-setting. The aim is to build commitment to a food system that will be stronger and more sustainable if it works across

the region. The collaboration is an ambitious undertaking, driven by present day necessity and locally-grounded leadership. This is not a time for doing nothing.

The findings presented in this report replicate and advance findings from previous original research conducted as part of Closing the Supply Gap in addition to other research conducted in this region and more broadly. Remarkably the gaps are common across the food sector regardless of the different roles of farmers, fishers, processors, grocers, restaurants, and community organisations. The overriding feature of the gaps they experience is an interdependent set of functions.

Setting Priority Actions for Change

1) What's next always begins with building a shared understanding of where we are. This report points to acknowledging four very strong defining qualities about the current local food system.
   - ❖ We live in a regionally-based ecosystem that has the capacity to produce an abundance of food for our region. We have historical experience and knowledge to support regenerative practices for building a local food system.
   - ❖ We have food businesses and community organisations that bring expertise and experience to the development of a robust local food system.
   - ❖ We are building a foundation of research-based shared knowledge about the gaps and obstacles which need to be addressed in order to create a local food supply chain based on community values of socioecological justice.
   - ❖ We have a collaborative process and leadership in place to plan and execute the actions that will address the gaps and obstacles.

2) Through collaboration across the region we seek to increase our shared understandings in the food sector of what we need to make our local food available and accessible in the mainstream throughout the region. Preliminary discussions about these research results with CSG leaders suggest ways of collaborating on the results.
   - ❖ Conduct small discussion groups spanning the region to share the findings and compile information about shared priorities from the sub-regional perspective

- ❖ Increase inclusive participation in the collaboration, with a focus, for example, on bringing more grocers, restaurants, wild fishers, and school meal program planners into the collaboration
- ❖ Workshop ideas for building organisational capacity to take on responsibility for shared infrastructure.

3) Conduct a region-wide symposium in the fall of 2022 to:
- ❖ Provide an opportunity for food businesses, community food organisations, investors, researchers, and policymakers to build shared understandings of what a local food system means and what is needed for it to take its place in the mainstream of our food culture
- ❖ Learn from regional food sector experts about emerging food system developments
- ❖ Present priorities and the stages for their development in the supply chain context
- ❖ Create the regional sectoral structure for leading action on the priorities
- ❖ Identify research needs

In conclusion, the local food system gaps illustrated in Figure 2, represent key components in a supply chain that needs to function as a whole. A supply chain, by definition, is an interconnected network. The model we see in the industrial food system is vertically integrated under the banner of transnational corporate control and management. Our objective, here, is not to compete with that powerful system but rather to establish a food supply chain that resonates across communities in our region and is based on community-led regenerative principles and values. To that end it more closely resembles a circular economy model where collaborative structures provide the links.

Closing the Supply Gap was created and continues with the goal of building a coherent local food short supply chain that produces ecological, social, economic, and cultural benefits for all and a legacy for generations to come.

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Appendix A Map of the Capital Region of British Columbia, Canada, 2022

Appendix B A Local Food Short Supply Chain Model

The following is an excerpt from:

Taking Action to Re-Localise the Global Food System: If Not Now, When?

Patricia Reichert, 2022 (pp. 137-140)

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Schematic of an Emerging Short Local Food Supply Chain

Figure 10 illustrates the components and functions of a localised short food supply chain that could operate the local food system in this region, and could be adapted for use in other locales. It includes the components necessary for localised scaling up of food production, including fishing, farming, wild harvesting, and processing. This system holds the potential of linking with other re-localised food systems based on embedded values of sustainability.

A key attribute of this short local food supply chain model is that it is not vertically integrated but, rather, invests decision making in each of the components with the nexus being the production node. In this model, farmers, fishers, and other wild harvesters can make a diversity of marketing decisions supported by system infrastructure. They can choose selling direct to eaters, direct to primary and secondary processors, direct to retailers, and direct to distributors. And they can distribute direct to community food programs. If they wish they can choose any or all of these mechanisms at the point of production, depending upon their business model and relationships within the locale. Importantly, whatever their choices in this model, the system is in place to ensure that production decisions are not being made in a void.

Figure 1: *Schematic of a Local Food System Short Supply Chain*
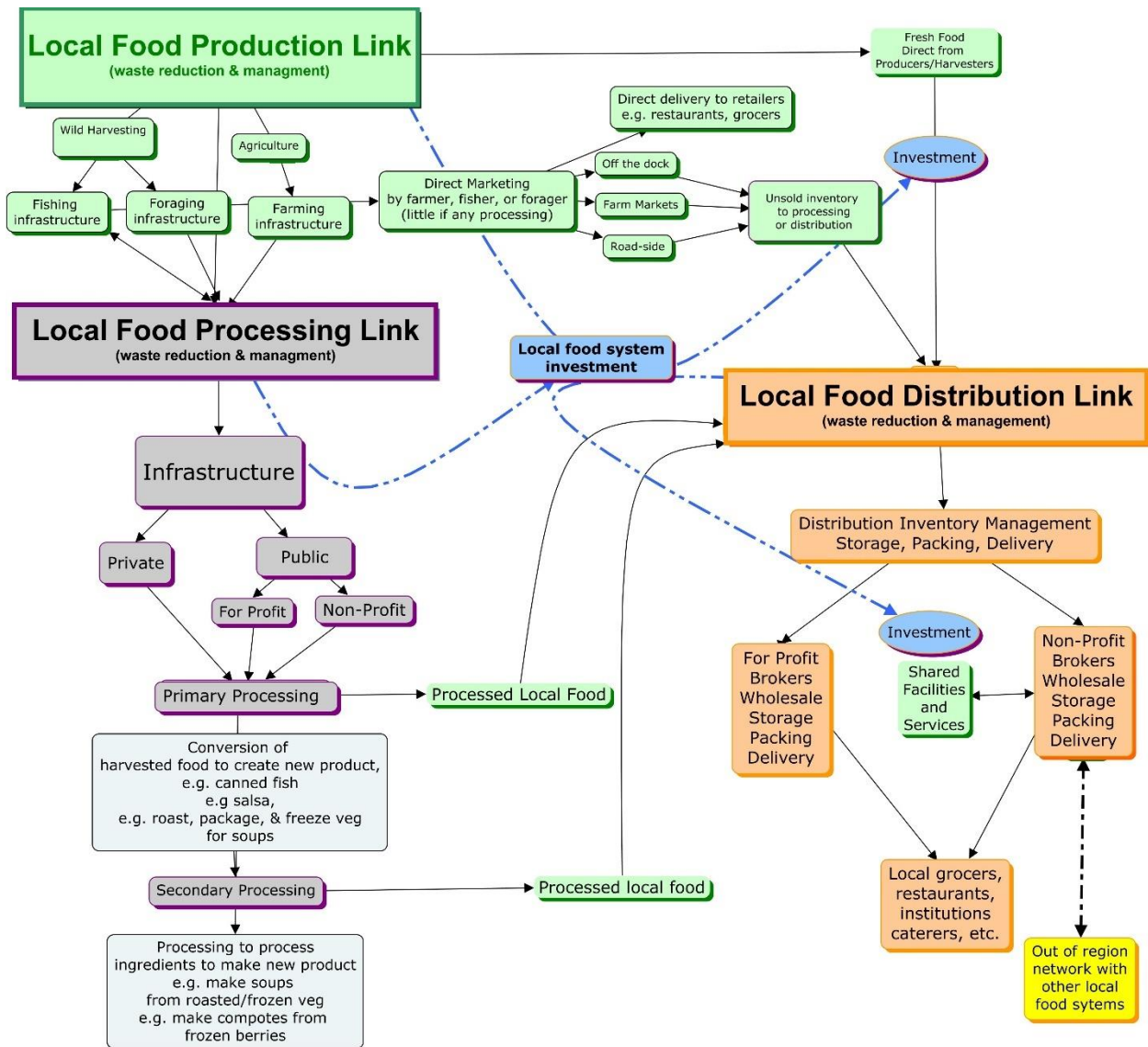
In the schematic I have indicated polygonal pathways to show that this local food short

supply chain is not a two-dimensional or linear chain but, rather, is interactive from any point in

the chain to any other point in the chain, depending on what is needed to create or maintain resilience in the system and to ensure diversified decision pathways. It discourages vertical integration that concentrates power in a few corporations or institutions. It is a power-sharing model. In this way, it can accommodate planned redundancy if necessary to support resilience, such as to advance climate action or address extraordinary needs in a pandemic. The vertices within the supply chain are representative of choices that can be made by participants within the chain rather than externally. They are the pathways for building those relationships that make the system sustainable.

Following the arrows, the schematic illustrates that options remain open within the chain for public and privately owned infrastructure and for several links into the distribution system. It indicates that waste reduction and waste management—both of which are huge issues in the industrial system—are integrated into the operational culture of each component. The character and sustainability of the chain will depend upon the nature and quality of relationships that are built within the chain and the values proposition that people within the locale embed in this re-localised food system. The relationships will determine the value of food and access equity in the social structure of the locale. The schematic illustrates that distribution to food programs can be built into production and processing as part of the system, so that high quality food is available for all. The chain creates the structure for building the socio-ecological-economic relationships within a values based environmental and cultural matrix, a priority identified by participants in this research.

It is reasonable to assert that in the process of reshaping the culture of the food system, local sovereignty will emerge. Food policies will change and local investment will be drawn to the system. Given the priority that participants in this research placed on relationships within the food system, it is reasonable to predict that the success of the players in each of the nodes is dependent on equalisation of power with the players in the other nodes. Most significantly the polygonal pathway is a mathematical metaphor for the transformational potential of this model, including scalability while maintaining the integrity of the food supply in the originating locale. In this schematic local food for local use is the first priority while suggesting that local food systems can be networked based on local food system principles and values.

Patricia Reichert, 2022 (cc)