



Attachment #1 to
Report No. SS-17-22

***Consulting Services to Improve System
Coordination and Capacity for
Acquisition, Storage and Distribution
in the Halton Food Security Sector***

FINAL REPORT

March 21, 2022

Executive Summary

Completed by Value Chain Management International (VCMI), the purpose of the project is to enable continual improvements to be made to the performance of Halton region's food security system (referred to as "the Sector") from acquisition, storage and distribution perspectives.

Fifteen community food organizations actively participated in the study. A sixteenth community food organization provided information from which conservative annual estimates of food volumes could be derived. The organizations are located across the Halton region and provide a range of food services to vulnerable populations experiencing food insecurity.

The results contained in this report should be considered directional and indicative, not definitive. Few of the organizations who participated in the study closely monitor and record the volume of food acquired, stored and distributed. More organizations monitor the volume of food received than monitor the volume of food stored or distributed.

The 2021 census identified that 596,637 people live in Halton. Based on Regional knowledge and local and national trends, it is estimated that approximately 11 percent of Halton's population is experiencing severe to moderate levels of food insecurity, with the total needs of Halton's food insecure equating to 51 million pounds of food and beverages. The volume of food that the 16 organizations are estimated to directly and indirectly distribute within the Halton region totals 11.3 million pounds per year.

The study identified that the Sector, notionally valued at over \$40 million in terms of food distributed and available resources, underperforms compared to what is possible. Current infrastructure and resources could be utilized more effectively, resulting in greater ability to efficiently meet demands. Symptoms of underutilized assets and limited interagency collaboration include that, in any month, some organizations can experience a moderate shortfall, while other organizations can experience a potentially significant surplus.

The primary need facing the Sector is not additional infrastructure; it is a means to improve the utilization of the infrastructure and resources that currently exist by addressing the barriers that lead to strategic and operational misalignments between the organizations that together form the Sector. Addressing these misalignments would enable more informed investment decisions than presently possible.

The findings do not negate the fact that additional refrigeration/freezer and ambient storage facilities may be required to improve the performance of the Sector by enabling improvements in the acquisition, storage and distribution of food to address Halton region's food security needs. What the findings do show is that, unless factors that negatively affect the Sector's current performance are addressed, any investment in infrastructure will have suboptimal effects.

The report concludes with seven recommendations for improving the Sector's long-term performance:

- 1) Identify Gaps, Overlaps and Complementary Initiatives
- 2) Benchmarking
- 3) Standard Monitoring and Reporting Metrics
- 4) Centralized/Pooled Buying and Coordination
- 5) Centralized Data Services
- 6) Shared Resources
- 7) Funding Source Alignment

Table of Contents

Executive Summary	1
1 Purpose and Objectives	3
2 Research Methodology.....	3
2.1 Research Limitations	3
2.2 Activities	4
2.3 Data Analysis and Validation	4
3 Supply and Demand.....	5
3.1 Notional Demand	5
3.2 Ability to Supply.....	6
3.3 Volumes, Services and Organization Characteristics.....	7
3.4 Supply versus Demand	8
4 Resources to Address Current Limitations	11
5 Causal Factors Affecting Performance and Resource Utilization	12
6 Recommendations.....	14
7 References	18
8 Appendix A: Participating Organizations	19
9 Appendix B: Estimates of Food Insecurity in Halton Region	20
10 Appendix C: Dashboard for Monitoring and Reporting.....	21
11 Appendix D: Coordinated Purchasing Structure.....	22

List of Tables

Table 3-1: Total Potential Demand Amongst Halton’s Vulnerable Populations (n = 65,630).....	5
Table 3-2: Potential Geographic Demand for Food within Halton Region	6
Table 3-3: Estimated Total Food (Lbs) Entering Halton via the Participating Organizations	7
Table 3-4: Volume of Food Distributed, Role Performed, Organization Characteristics	8
Table 3-5: Supply vs. Demand and Factors Affecting Alignment to Serving Clients’ Needs	10
Table 4-1: Resource Requirements	11

List of Figures

Figure 3-1: Reported Surpluses and Shortages	9
Figure 5-1: Factors Shaping Interagency Dynamics	13

1 Purpose and Objectives

The purpose of the project is to enable continual improvements to be made to the performance of Halton region's food security sector (hereafter referred to as "the Sector") from acquisition through to direct and indirect distribution of nutritious food to those in need.

A key objective of this study was to support the following resolution, passed by Halton Regional Council on December 15, 2021:

"That Halton Regional Council directs Staff to expedite Staff's work with the CSWB Food Security Action Table to develop a plan to improve acquisition and distribution in Halton region to be able to provide nutritionally balanced and culturally appropriate food baskets to Halton's residents experiencing food insecurity and report back to Council in April."

This has been achieved by:

- 1) quantifying the food related demands of vulnerable populations residing in the Halton region;
- 2) determining the extent and nature of those demands that the Sector is currently not meeting;
- 3) identifying then benchmarking the extent of current performance gaps and inefficiencies versus what could be achieved by better utilization of the current infrastructure; and
- 4) recommending improvements to address current inefficiencies in meeting food security demands, and providing guidance on how to implement the improvements proposed.

2 Research Methodology

The performance of any system is an outcome of factors associated with individuals' motivation and ability to make then implement management decisions in a structured reiterating manner. The research methodology that Value Chain Management International (VCMI) incorporated to complete the analysis of the Sector reflects this fact. Organizations' ability to effectively and efficiently deliver against clients' needs and expectations is not just a function of technology or infrastructure, but also intra- and inter-organizational relationships, including business systems and processes. This is regardless of the industry in which the organizations that comprise a system operate, or whether they are for profit or not for profit.

2.1 Research Limitations

A number of factors limited the depth of analysis that could be achieved during this study and conclusions that could be drawn from the research. These limitations primarily relate to time frame, and resource and pandemic related constraints. The deadline for the project's completion prevented the researchers from implementing a means to capture continuous, measurable and standardized data on acquisition, storage and distribution activities from each of the participating organizations. The short time frame, along with resource constraints, limited the research to the largest community food agencies operating in Halton region. Pandemic restrictions and resource constraints prevented the research team from physically visiting each organization and witnessing operations first hand. This forced VCMI to base estimated demand and shortfalls, in terms of volume and distinct types of food, on secondary data and third party perspectives.

2.2 Activities

Completed within the tight time frame of five weeks, the project encompassed five distinct phases:

- 1) Literature review
 - Information and secondary data contained within projects previously completed by VCMI, Halton Region and organizations operating within the Sector were reviewed and collated.
- 2) Primary research
 - Historical data was captured via a survey distributed to the 15 participating organizations¹ operating within the Sector. A sixteenth organization in Oakville, did not participate, though provided data from which annual estimates of food volumes could be derived. Individuals' suggested solutions for improving the Sector's performance, along with factors expected to affect the success of those solutions, were captured through a series of semi-structured interviews.
- 3) Data analysis
 - The processes used to analyze secondary and primary data captured during the project were reiterative, with the outcomes guiding the development of conclusions and potential recommendations.
- 4) Reporting
 - The reporting took two distinct forms: the first was in the form of a presentation of interim findings to members of Halton Region's Food Security Action Table; the second was in the form of this written report.

2.3 Data Analysis and Validation

Quantitative data captured through the first two phases of the project was collated into an Excel document and analyzed to identify patterns or trends. Qualitative data was analyzed thematically to identify commonalities and differences associated with responses received from participating agencies. Primarily due to the project's tight time frame, the quality and granularity of data that could be captured from the participating organizations did not allow for the statistical analysis of data.

The results contained in this report should be considered directional and indicative, not definitive. The production of definitive insights and outcomes would require the implementation of standardized time-oriented data collection methods. Such research methods could be designed to form the basis of a continual improvement program for the Sector.

¹ The 15 participating organizations are listed in Appendix A.

3 Supply and Demand

3.1 Notional Demand

The examination of food flows from supply and demand perspectives began by establishing a notional figure of current total demand for food amongst Halton’s vulnerable populations. A review of reports and materials completed prior to the pandemic identified that in 2013/14, Canadian Community Health estimated that seven percent of Halton region’s population were food insecure (Halton, 2019). Based on trends identified in subsequent research completed by VCMH (Gooch et al, 2021) and other researchers (e.g., PROOF, 2021; Statistics Canada, 2020; Tarasuk & Mitchell, 2020), and information reported in community food organizations’ publications (e.g., McNicoll & Curtis, 2021), it was concluded that the proportion of Halton’s population experiencing some level of food insecurity has increased to 11 percent or more. The 2021 census measures Halton’s population at 596,637; 11 percent of this equates to 65,630 people. Three distinct snapshots that illustrate the estimated increase in food insecurity that has occurred within Halton region as a percentage of total population are included in Appendix B.

For the purposes of this research, in conjunction with Halton Region and members of the Food Security Action Table, it was determined that estimated total demand would reflect a hypothesis that three percent of the region’s population is severely food insecure and eight percent of the population is moderately or marginally food insecure. Based on prior research and discussions with Food Security Action Table representatives, the daily volume of food required to provide three full meals and snacks plus beverages (e.g. milk, fruit juices) to severely food insecure and one meal and/or snacks to moderately food insecure equates to 3.8 pounds and 1.5 pounds, respectively. This total volume of food would encompass a) food accessed from organizations including food banks, b) meals provided by community centres and school programs, and c) food purchased with grocery coupons/vouchers.

As shown below in Table 3-1, the total volume of food required to fully meet this estimated demand across Halton’s vulnerable population equates to 51 million pounds of food per year. In line with the Canada’s Food Guide, this would comprise 25.5 million pounds of fruits and vegetables, 12.7 million pounds of protein (incl. meat, poultry, lentils, beans, and tofu), and 12.7 million pounds of carbohydrates (incl. rice, pasta, bread, vegetable oil, and flour).

Table 3-1: Total Potential Demand Amongst Halton’s Vulnerable Populations (n = 65,630)

Total Annual Demand – Lbs of Food			
11% population food insecure: 3% severely food insecure, 8% moderately food insecure			
	Full food insecurity 3.8lbs/day	Partial food insecurity 1.5lbs/day	TOTAL Lbs (million)
TOTAL Lbs (million)	24.8	26.1	51.0
Fruits and vegetables (50%)	12.4	13.1	25.5
Protein (25%)	6.2	6.5	12.7
Carbohydrates (25%)	6.2	6.5	12.7

Based on the assumption that 11 percent of Halton’s total population experiences moderate to severe food insecurity, Table 3-2 presents the total volume of demand for foods (overall and by each food type) in relation to the population of the four geographic areas that comprise Halton region: Oakville, Burlington, Milton, and Halton Hills. For each geographic area, the number of private dwellings occupied by permanent residents are also shown (Statistics Canada, 2022).

Table 3-2: Potential Geographic Demand for Food within Halton Region

Location	Total population (2021)	# of households (2021) ²	11% food insecure (# individuals)	Total estimated food demand (million Lbs)	Estimated demand (million Lbs/yr)		
					F&V	Protein	Grains
Halton Hills	62,951	21,825	6,925	5.4	2.7	1.3	1.3
Oakville	213,759	73,558	23,513	18.3	9.1	4.6	4.6
Milton	132,979	40,038	14,628	11.4	5.7	2.8	2.8
Burlington	186,948	73,180	20,564	16.0	8.0	4.0	4.0
TOTAL	596,637	208,601	65,630	51.0	25.5	12.7	12.7

The breakdowns presented above do not reflect comparative socio-economic differences that may in turn impact the prevalence of food insecure individuals residing within each given community (e.g. Burlington vs. Halton Hills).

Fully meeting a community’s food insecurity needs is arguably an unrealistic expectation. Given this, and in the absence of robust data on actual needs that exist within Halton’s vulnerable population, the above estimates should be considered directional only. The quantification of actual demand would require research that was beyond the scope of this study.

3.2 Ability to Supply

The 15 organizations who participated in the study were asked, via the survey, to estimate the total volume of food handled in the most recent year for which they could provide data, along with the primary sources of that food (e.g. via donation, interagency transfer or purchased). They were also asked to report on monthly supply shortages and surpluses that they experienced for total food and each of the three types of food being investigated.

Those organizations whose focus is school meal/snack and day care/infant programs reported that their programs typically enable the flow of food to vulnerable populations through financial means. For example, they provide funding to schools, who in turn purchase food that is served at the school, or they purchase food which is then distributed to students at the schools where they attend for later consumption. In the instances where other organizations reported that they purchase some food, the proportion of total food that this typically represents for them is comparatively small.

To enable the total volume of food distributed by the Sector to be estimated, financial expenditures on food were converted into volumes using the general estimate of \$3.50 per pound. This figure reflects Second Harvest’s 2019 estimate of \$3.14 per pound, established prior to the pandemic, plus an allowance for food inflation (Ali, 2022; Canadian Press, 2022). As shown in Table 3-3, the total estimated volume of food that the 16 organizations represent equates to 11.6 million pounds.

² Private dwellings occupied by usual residents (2021 Census of Population)

Table 3-3: Estimated Total Food (Lbs) Entering Halton via the Sixteen Organizations

Food source	Total food (estimated lbs)	Including purchased food	Excluding purchased food	Food losses
Donated	2,223,934	19%	26%	
Interagency transfer	1,223,230	11%	14%	
Rescued	5,030,002	44%	59%	
Purchased	3,085,752	27%	-	
Total food received	11,562,918*	100%		389,011

**Excludes food which enters the Sector and is distributed to destinations outside of Halton.*

As can be seen, purchased food represents 27 percent of the total estimated volume of food that enters the Sector via the 16 organizations. The volumes shown above in Table 3-3 do not include food that enters the Sector and is known to be distributed outside of Halton (e.g. Hamilton). Of total food physically handled by the organizations, approximately 389 thousand pounds or 3 percent of food is lost. Based on a value of \$3.50 per pound, this equates to \$1.36 million. Reasons cited for this loss included damage or spoilage, and foods reaching their best before dates.

Two important considerations should be made in relation to the estimates contained in Table 3-3. The first is that few of the participating organizations closely monitor and record the volume of food acquired, stored and distributed. More organizations monitor the volume of food received than monitor the volume of food stored or distributed. Organizations that do monitor food volumes typically do so for total foods, not by food type. A large proportion of the volumes reported in this report are therefore based on estimates provided by participants.

The second consideration is that the volume of food entering the Sector and presented in Table 3-3 pertain to only 16 organizations operating within the Sector. The above estimates do not include the total volume of food received by the community food organizations that operate in Halton region, but were not included in this study.

3.3 Volumes, Services and Organization Characteristics

The volume of food provided annually by each of the 16 organizations ranges from less than 50,000 pounds to over 4 million pounds. The organizations serve a variety of functions within their immediate community, across the wider Halton region and further afield. Table 3-4 presents a summary of the 16 organizations' key roles and the primary services they provide to their immediate community and/or third party organizations. Due to sensitivities regarding precise volumes of food handled by discrete organizations, the information presented below has been anonymized.

Table 3-4: Volume of Food Distributed, Role Performed, Organization Characteristics

Food distributed by volume (lbs)		<50K	50 - 100K	100 - 200K	200 - 300K	300 - 500K	500K - 1M	4M	Count
Logistics Model	Hub ³							1	1
	Spoke ⁴		2		1		1		4
	Hub & spoke ⁵			2	3	2	1		8
	Purchasing agency	1		1				1	3
Organization Characteristics	Also provide cooked meals		2	1	3				6
	Child/school focused	1		1				1	3
	Food bank				2	2	1		5

As can be seen, one organization possesses characteristics typically associated with a distribution hub and handles the largest volume of food in the region. Eight organizations perform hub and spoke roles, both providing food to third party organizations and directly serving clients. Three organizations directly or indirectly purchase and directly ship the majority of food that they represent, and are focused on the infant or school age population. Six organizations cook food that is consumed on their premises or taken away for consumption elsewhere. Five organizations are primarily food banks.

In terms of the volume of food handled by participating organizations within a geographic region, Burlington based organizations appear to handle the largest volumes of food. Compared to Burlington, Oakville’s food security sector is composed of numerous typically smaller operations.

A number of organizations provide more than one form of food-related services. Organizations such as Kerr Street Mission and Oak Park Neighbourhood Centre provide non-food services that seek to address the root causes of food insecurity. Examples of such services include financial literacy, personal development and mental health support. Organizations such as Food for Life and Country Heritage Park handle food that is distributed to clients residing outside Halton. Other organizations provide food to clients who visit Halton from surrounding regions.

3.4 Supply versus Demand

Participating organizations were asked to provide estimations on monthly shortages or surpluses that they experienced for food overall, and for each of the three types of food: fruit and vegetables, proteins, and carbohydrates. Due to the sporadic and aggregated nature of information provided by respondents, it was not possible to produce an estimate of the volume of food shortfalls or surpluses that typically occur during a given month of the year. It was, however, possible to provide directional insights into the nature

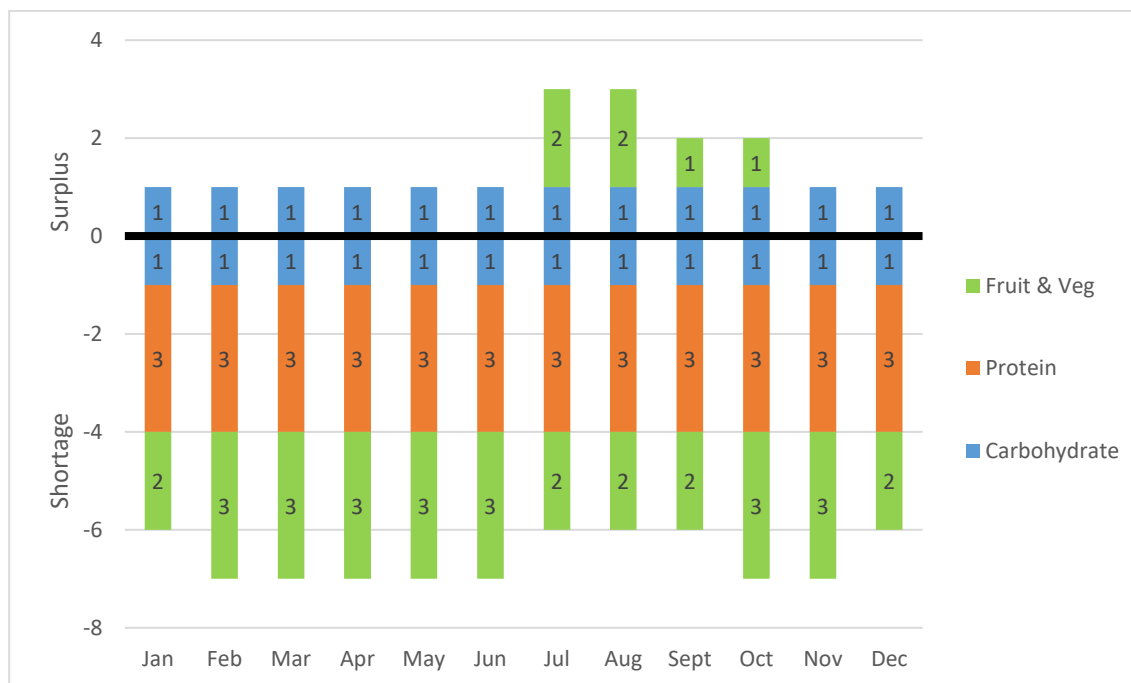
³ A hub is a larger centralized location, whose primary role is distributing food regionally to smaller recipient organizations.

⁴ A spoke is an organization that receives food from a hub, which is then distributed directly to clients.

⁵ A hub and spoke organization performs an intermediary role, acting as a localized hub for organizations in their immediate area and also distributing food directly to their clients.

of shortages or surpluses by tallying responses received for each of the three food types. The results, presented in Figure 3-1, are for food type (e.g. fruit and vegetables), not distinct foods (e.g. broccoli or apples).

Figure 3-1: Reported Surpluses and Shortages



An analysis of survey and interview data identified that it is typically smaller organizations that experience shortfalls in supply versus known demand. Surpluses appear more likely to be experienced by larger organizations. In any month, therefore, one or more organizations can experience a moderate shortfall, while another organization(s) experiences a potentially significant surplus. The type of food most likely to be in surplus is carbohydrate (bread, rice, pasta, etc.). The type of food most likely to be in short supply is protein (meat, poultry, lentils, etc.).

The most commonly cited reasons for smaller organizations experiencing shortages relate to the underutilization of assets and limited interagency collaboration. They also typically have short hours of operation, and are thus only able to accept deliveries within narrow windows of time. Organizations of all sizes cited general shortage of skilled staff and committed volunteers being another factor negatively affecting their operation. The factors that respondents most commonly reported as negatively impacting agencies' willingness to collaborate are discussed in Section 5.

Regardless of the volumes of food that they reported handling, almost all respondents reported that they possess physical assets (vehicles, buildings, land, etc.) that are underutilized. Addressing the chokepoints and bottlenecks that affect the overall systems' performance would enable current acquisition, storage and distribution assets to be utilized more effectively than currently possible. It would also enable more informed investment and operational decisions than presently possible.

Based on the information provided by the 16 organizations, presented below in Table 3-5 is the estimated gap between the volume of food that these organizations distribute within Halton and total potential demand. The supply column in yellow represents the supply of the 16 organizations, which is a subset of

the total food security agencies in Halton. Therefore, we can assume that some of the unmet demand is met through other means. The far right column summarizes factors affecting the performance of the Sector within each of the four geographic areas and overall. The estimated food supplies exclude food that is not handled by the 16 organizations, nor food purchased with coupons or vouchers distributed by other organizations.

Together, the 16 organizations are estimated to distribute 11.6 million pounds of food across Halton. This equates to 23 percent of the region’s total potential food security needs. Estimating the extent of the true gap that exists between food supplied by Halton’s wider food security system and demand exhibited by Halton’s vulnerable population was beyond the scope of this project.

A portion of the estimated 39.4 million pounds in demand that is not met by the 16 organizations on which the study focused will be met by other community food organizations. In December 2019, there were approximately 40 community food agencies operating in the region. This included weekly meal programs, multi-service agencies, food hamper programs, and food pantries.

Table 3-5: Supply vs. Demand and Factors Affecting Alignment to Serving Clients’ Needs

Location	Estimated Demand (Million Lbs/yr)*			Supply		Gap		Comments Regarding Accessibility
	F&V	Protein	Grains	Mill. Lbs	% of demand	Mill. Lbs	% unmet demand	
Halton Hills	2.7	1.3	1.3	1.64	30%	3.7	70%	Dominated by volunteer-run organizations. Organizations’ locations and operations not aligned to serving clients’ needs.
Oakville	9.1	4.6	4.6	3.46	19%	14.8	81%	A focus of organizations in this region is addressing the root cause of hunger and poverty. Limited food distribution capabilities.
Milton	5.7	2.8	2.8	2.45	22%	8.9	78%	Organizations involved in addressing food insecurity are detached to varying degrees from the south Halton food distribution hub.
Burlington	8.0	4.0	4.0	4.01	25%	12.0	75%	Together, agencies have an abundance of food, though the duplication of efforts leads to clients having to access food from multiple sources.
TOTAL	25.5	12.7	12.7	11.6	23%	39.4	77%	Misalignments and replication lead to the Sector underperforming compared to what is possible.

*Based on geographical populations indicated in Table 3-2.

The volumes of food handled by regional distributors were spread across all four geographical locations. Based on Statistics Canada data, 22 percent of Halton region’s population reside in Milton. Therefore, the estimate of food distributed within Milton includes 22 percent of total food distributed by organizations that serve across Halton, such as Food for Life and Halton Food for Thought.

As referenced above, smaller organizations experience resource constraints and limited hours of operation. Individuals whose food insecurity demands are beyond the capability of such organizations to serve are therefore forced to access food from multiple organizations. Particularly for vulnerable populations residing in less urbanized areas, this can mean travelling to organizations that are located many kilometers from their home. In other areas of Halton, multiple community food organizations and duplicated services are located within a short walking distance.

4 Resources to Address Current Limitations

Respondents were asked to identify the importance of additional resources, which, if provided, would enable them to better meet demand. This included the ability to better utilize the assets that they already possess. Table 4-1 presents the number of respondents who identified that a particular resource(s) is critical to enabling them to improve their organizations’ performance by better utilizing the assets that they already possessed. The criticality of a discrete resource was determined by a respondent identifying its importance as being a “4” or “5” on a scale of 1 to 5 (where 1 = ideal requirement, and 5 = critical requirement). To provide context, the raw results captured from respondents (presented in the table below) is followed by a discussion of the nuances that emerged during the interviews.

Table 4-1: Resource Requirements

Resources	Count of responses indicated as being critical
Staff	5
Volunteers	4
Physical infrastructure	4
Equipment	4
Funding to purchase food	3
Logistical infrastructure	2
Food donors	1
Other	1

As can be seen (and as previously mentioned in Section 3-4), the most commonly cited critical requirement is staff. The need for staff does not reflect the size of or volume of food handled by an organization. Access to additional skilled and capable staff would enable current assets to be utilized more effectively and efficiently than currently possible. It would enable organizations to better serve their clients by, for example, being open for longer periods of time during the week. It would also enable the logistic capabilities that they already possess (e.g. trucks, forklifts, refrigerated storage space) to be better utilized, resulting in more food flowing to those in need. The “other” resource, cited by a respondent, is peer-to-peer networking and the opportunity to gain insights into best practices.

For most organizations, the criticality of volunteers relates to the need for skilled and dependable volunteers, not more volunteers per se. Examples of physical infrastructure and equipment requirements cited by respondents include larger storage facilities and refrigeration. The installation of small refrigeration units across the region was cited as enabling improved distribution across the region. That said, some respondents stated that the importance of improved infrastructure was not so that they could better serve more people in need; it was so that they could store more food in more enhanced conditions. Two respondents deemed additional logistical infrastructure (e.g. more vehicles, forklifts, loading docks, and small freezer units) as being critical resource needs. They emphasized that this, along with additional staff or volunteers, would enable higher volumes of food to be distributed more efficiently with current logistics infrastructure. In turn, this would enable storage facilities to be managed more effectively.

Interestingly, additional food per se was not cited by any respondent as being a primary requirement. Increased ability to purchase specific foods, ideally linked to bulk purchasing arrangements to ensure value for money and consistency of supply/quality, is the key desire. Reference to the need for more food donors relates to the ability to access specific foods.

The above findings do not negate the fact that additional refrigeration/freezer and ambient storage facilities may be required to improve the performance of the Sector by enabling improvements in the acquisition, storage and distribution of food to address Halton region's food security needs. What the findings do show is that, unless factors that negatively affect the Sector's current performance are addressed, any investment in infrastructure will have suboptimal effects.

5 Causal Factors Affecting Performance and Resource Utilization

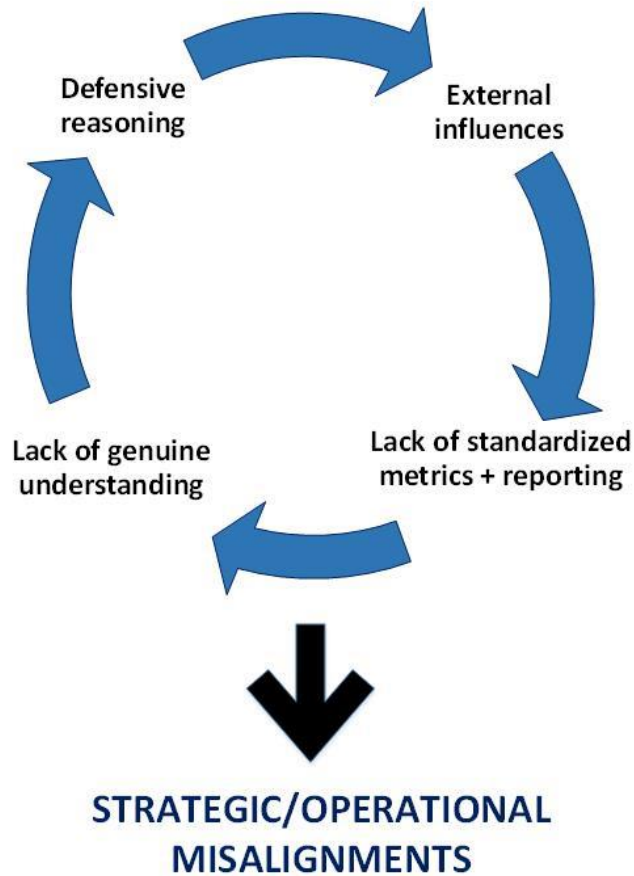
The assets possessed, employees/volunteers retained and food distributed by organizations that together comprise the Sector is a multi-million dollar enterprise. At a notional average value of \$3.50/pound, the value of foods and beverages handled by the 16 organizations equates to \$40 million. This excludes the following: a) the replacement cost of logistical and administrative infrastructure, equipment, vehicles, etc.; b) operating costs associated with staff, building lease/rent, maintenance, utilities, insurance, consumables, etc.; and c) in-kind costs associated with volunteers who perform numerous duties from serving clients, acquiring, storing and distributing food, and acting as directors. That the Sector is so large and reflects such a high financial value is indicative of the level of support it receives from private and public donors, and the commitment of many hundreds (potentially thousands) of individuals.

Why the Sector underperforms and does not realize its full potential includes the fact that this "enterprise" lacks the governance structure and oversight controls required to ensure that strategic and operational alignments exist between food security organizations located across the Halton region. Influences that emanate from beyond Halton region also shape the interagency dynamics that determine how effectively current infrastructure is utilized; and, therefore, how effectively and efficiently the Sector performs in relation to demands exhibited by Halton region's vulnerable population.

The current situation is not the fault of one organization, one individual, or group of individuals. It is largely a function of many individualized agencies each growing organically, often more in relation to immediate surroundings and short-term subjective assumptions than strategic considerations.

The study identified that factors which affect interagency dynamics and, ultimately, the efficiency and effectiveness of the Sector, can be categorized into the four groups shown below in Figure 5-1. These reiterative factors result in strategic and operational misalignments.

Figure 5-1: Factors Shaping Interagency Dynamics



The outcomes that can be achieved by the proactive systems-focused organizations that clearly exist in Halton region are limited by the operational environment typified in the above graphic. Lack of genuine understanding of each other's operations/challenges/needs prevents organizations and individuals from identifying and working towards a common vision. Lack of standardized metrics and reporting leads to communication asymmetries, and negatively impacts the ability to make objective informed decisions. Defensive reasoning leads to the apportioning of blame and deflection of accountabilities, rather than seeking to identify then implement constructive mutually-beneficial solutions. External influences cited by respondents as impacting interagency dynamics include, though are not limited to, provincial organizations and competition for funding.

Amongst the outcomes that result from strategic and operational misalignments are artificially high concentrations of community food agencies in some areas and artificially low food security deserts in others. Beyond impacting individuals' access to food per se, it also impacts individuals' ability to equitably access nutritional food.

The lack of collaboration causes agencies to invest resources and utilize current capabilities in ways that negatively affect the overall Sector's ability to serve the demands of Halton's vulnerable population. Increased collaboration could release existing latent infrastructure capacities, thereby enhancing the overall Sector's ability to effectively and efficiently acquire, store and distribute food.

The remainder of the report presents a series of recommendations for addressing the causal factors identified as negatively impacting the Sector's performance. Acting on these recommendations could result in Halton region's food security system possessing the ability to continually improve its performance and adapt to changing circumstances.

The need for both improved performance and the ability to adapt is highlighted by participating organizations expressing concern that demand for food security services is expected to increase amongst Halton's vulnerable population, and that the level of support organizations have received from public and private donors during the pandemic is likely to decrease. This sentiment reflects the findings of a national study commissioned by Second Harvest (Gooch et al, 2021).

6 Recommendations

Guided by the research findings, discussions with representatives of the Food Security Action Table, and the VCMI team's experience assisting organizations to improve their performance by establishing pragmatic continual improvement systems, the following section proposes a number of recommendations that will enable the Sector to better serve vulnerable populations residing in Halton. None of the suggested options to address food insecurity by improving the acquisition, storage and distribution of food are mutually exclusive.

During the research, a number of respondents mentioned a desire to learn from their peers and initiatives that have led to the establishment of more effective and efficient food security systems than previously existed. While analyzing such systems to identify how lessons learned could be applied to organizations operating in Halton was beyond this project's scope, jurisdictions from which it appears Halton organizations could gain valuable insights include Mississauga and Toronto.

Depending on the level of interest voiced by the Sector, all seven of the following recommendations could be implemented in the short to medium term and would not require considerable capital investment. Longer term, additional refrigeration/freezer and ambient storage facilities may be required to improve the performance of the Sector by enabling improvements in the acquisition, storage and distribution of food to address Halton region's food security needs. Initiatives such as the identification of gaps, overlaps and complementary initiatives, and the establishment of standardized monitoring and reporting systems that guide organizations' governance practices and flow into Food Security Action Table deliberations could begin immediately.

1. Identifying Gaps, Overlaps and Complementary Initiatives

It is recommended that the Food Security Action Table creates a process to share information on each of their roles in the Sector and provide ongoing regular updates. Utilizing the Food Security Action Table's anchor statement to inform system planning and organizational decision making would help ensure the formation of a shared sense of genuine understanding across the Sector.

The proposed initiative could take the form of an ongoing process that begins with an interactive forum, where organizations have the opportunity to gain greater understanding of each other's food programs and the types/volumes of food that they seek to distribute. In identifying each other's core competencies and where programs or services overlap or detract from each other, organizations would also have the opportunity to identify synergies that could strengthen the overall Sector and establish the basis of stronger distinct services that complement each other.

2. Benchmarking

It is recommended that the Food Security Action Table creates standard benchmarks based on best practices to improve the performance of Halton's food security sector.

The recommended initiative would encompass two complementary forms of benchmarking: performance and process. Performance benchmarking is measured quantitatively and measures efficiencies and effectiveness at a specific point in time. In so doing, it provides thorough insights into how organizations' operations differ to those from whom they are seeking to gain ideas. Process benchmarking can incorporate both quantitative and qualitative assessments that measure progress over time. It usually involves building relationships with better performing organizations that are comfortable in sharing how they achieved their superior performance. Process benchmarking often occurs in conjunction with organized visits to peer groups. Both forms of benchmarking would increase the outcomes and benefits achievable from standardized monitoring and reporting.

3. Standard Monitoring and Reporting Metrics

It is recommended that all Food Security Action Table members adopt a set of simple common metrics that could inform decisions at the agency and system level. This could be in the form of a dashboard (see Appendix C, which shows a screenshot of a potential dashboard containing historical and forward-looking metrics that would be reported weekly).

Such a process could result in a) a more effective and efficient utilization of current assets and infrastructure, and b) organizations and Halton Region being able to identify then validate infrastructure and operational investments that represent an effective long-term return on public monies.

The proposed process could be extended to include the creation of a standardized two-part management system: 1) core food handling policies and procedures, and 2) report card and management review processes.

4. Centralized/Pooled Buying and Coordination

It is recommended that the Food Security Action Table engages in centralized buying through one lead agency. This could include the purchasing of consumables (incl. office materials, bags, boxes, take out containers for food, and PPE supplies).

Centralized/pooled (bulk) buying would not preclude any organization from purchasing a proportion of food from traditional sources, such as local grocery stores. Nor would it automatically translate into individual organizations having to accept then store food in large volumes.

In conjunction with the other recommendations, the implementation of a centralized/pooled buying would increase the Sector's capacity to meet clients' needs and would provide clarity on which investments in infrastructure and resources would produce the greatest long-term benefits.

As shown in the graphical overview of the coordinated purchasing structure contained in Appendix D, it is suggested that the acquisition, storage and distribution processes would flow through strategically-located geographic hubs. Ideally, this approach would be piloted, tested and refined prior to being rolled out to those organizations from across Halton who wished to participate. The establishment of a centralized coordination system could be linked to the fifth recommendation: centralized data services.

5. Centralized Data Services

It is recommended that the Food Security Action Table establishes or adopts a central client registration system to be used by all food security organizations across Halton. During its development, the feasibility and benefits of linking the centralized data services to Links2Feed should be explored.

The system could be extended across all services, not only the provision of food. Registering just once on the system would lessen negative connotations associated with an individual accessing a food bank or support service. Bar code scanners could form the basis of a fairly simple, relatively low cost and robust data management system for tracking individual transactions and clients accessing the Sector. The use of point of sale (POS) type software would assist the organization and management of hub and spoke style centralized procurement and distribution systems.

To minimize redundancy and optimize costs, it is suggested that the development of a centralized data base would commence with the development of use cases. This would be followed by testing and refining conceptions from user and client perspectives. Only once a concept has been thoroughly tested and validated would a decision be made to invest in hardware and software. Based on VCMI's experience, this process and the piloting of an initial data system could be completed for approximately \$150,000 or less.

6. Shared Resources

It is recommended that the Food Security Action Table identifies opportunities to improve acquisition storage and distribution in Halton through shared resources, including employees, infrastructure and/or equipment.

The provision of shared resources, such as employees and/or equipment that are shared by smaller organizations, would produce a number of benefits. Smaller organizations would have the latitude to accept a wider variety and bigger volumes of food distributed by larger organizations. It would also enable smaller (typically more rural) organizations to operate for longer periods of time and more regularly throughout the week. A combination of longer opening hours and access to higher volumes of nutritious food would negate clients' need to spend time and money accessing multiple organizations across Halton. The provision of shared resources may also extend to the provision of non-food support services, such as financial literacy and counselling.

7. Funding Source Alignment

It is recommended that funding agencies in Halton align food security funding priorities to support the recommendations of the report and priorities of the Food Security Action Table and encourage collaborative applications.

This recommendation would take two forms. The first would be to encourage stronger strategic collaboration between funding sources, thereby encouraging funding bodies (both private and public) to determine how their activities can complement each other. This would lead to greater alignment between funding decisions, thereby leading to more impactful outcomes and effective utilization of awarded funds. Ideally, this approach would commence with an influential funding body taking on an inter-funding organization facilitation role focused on the recommendations of the Food Security Action Table.

The second form would be for agencies to partner in the development and submission of collaborative funding requests. The Food Security Action Table could play a central role in identifying and supporting the development then submission of collaborative funding initiatives.

Both approaches – the establishment of strategic relationships between funding organizations and the formation of collaboration relationships between those seeking funding – have proven to be an effective means of facilitating the establishment of sustainable systems and innovative best practice outcomes.

7 References

- Ali, A. 2022. How expensive are food products getting in Canada? A breakdown of some popular items; Canadian Press; Globe and Mail. March 16, 2022. Accessible from: <https://www.theglobeandmail.com/business/article-how-expensive-are-food-products-getting-in-canada-a-breakdown-of-some/#:~:text=Statistics%20Canada%20reported%20Wednesday%20that%20food%20prices%20rose,per%20cent%2C%20the%20highest%20it%E2%80%99s%20been%20since%201991>
- Canadian Press. 2022. Canadians cutting back spending on groceries as inflation rises: Leger; Canadian Grocer; March 18, 2022. Accessible from: https://canadiangrocer.com/canadians-cutting-back-spending-groceries-inflation-rises-leger?utm_source=omeda&utm_medium=email&utm_campaign=NL_CanadianGrocer_REG&utm_keyword=&oly_enc_id=6789J8317367G5A
- Gooch, M., Bucknell, D., LaPlain, D., Nikkel, L., Summerhill, V. 2021. The Invisible Network Technical Report; National Identification of Community Food Organizations: Needs and Shortfalls in Supply Versus Demand 2019 To 2021; Second Harvest and Value Chain Management International; Ontario, Canada. Accessible from: <https://www.secondharvest.ca/getmedia/ea0ea5d3-b647-4b8c-a3d5-f83bbc82ff63/National-Identification-of-Community-Food-Organizations.pdf>
- Halton. 2019. Household food affordability Health indicator report; Halton Region, August 2019. Accessible from: <https://www.halton.ca/Document/Health-Statistics/Household-food-affordability/Household-food-affordability>
- McNicoll, S., Curtis, A. 2021. Beyond Hunger: The Hidden Impacts of Food Insecurity in Canada; Community Food Centres Canada. Accessible from: <https://act.beyondhunger.ca/page/66634/action/1>
- OKN. 2022. Health Landscape – Turning Statistics into Information; Our Kids Network Data Portal. Accessible from: <https://okndataportal.ca/>
- Polsky, J.Y., Garriguet, D. 2022. Household Food Insecurity in Canada Early in the COVID-19 Pandemic; Statistics Canada; February 18, 2022. Accessible from: <https://www150.statcan.gc.ca/n1/pub/82-003-x/2022002/article/00002-eng.htm>
- PROOF. 2021. Household food insecurity is a serious public health problem that affects 1 in 8 Canadian households; Food Insecurity Policy Research (PROOF); University of Toronto. Accessible from: <https://proof.utoronto.ca/food-insecurity/>
- Statistics Canada. 2022. Census Profile. 2021 Census. Statistics Canada Catalogue no. 98-316-X2021001. Ottawa. Released February 9, 2022. Accessible from: <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/index.cfm?Lang=E>
- Statistics Canada. 2020. Food Insecurity During The COVID-19 Pandemic, May 2020; Statistics Canada. Accessible from: <https://www150.statcan.gc.ca/n1/pub/45-28-0001/2020001/article/00039-eng.htm>
- Tarasuk V., and Mitchell, A. (2020). Household food insecurity in Canada, 2017–18. ; Food Insecurity Policy Research (PROOF). University of Toronto. Accessible from: https://www.homelesshub.ca/sites/default/files/attachments/REPORT-1_031220_1206.pdf.

8 Appendix A: Participating Organizations

The 15 organizations who participated in the project are listed below. Fare Share Food Bank in Oakville did not formerly participate in the project, though did provide information from which estimated annual volumes distributed could be derived.

Acton FoodShare
Burlington Food Bank
Burlington Salvation Army
Country Heritage Park
Food for Life
Georgetown Bread Basket
Halton Food for Thought
Halton Food4Kids
Kerr Street Mission
Milton Community Resource Centre (MCRC) Infant Food Bank
Milton Salvation Army
Oak Park Neighbourhood Centre
Open Doors St. Christopher's
Syyidah Centre (Milton Halal Foodbank)
Wellington Square

9 Appendix B: Estimates of Food Insecurity in Halton Region

Shown below are estimates of the percentage of Halton region's total population that are food insecure. Covering the period between 2013 and 2021, they reflect low, middle and high estimates of food insecurity. The numbers in the far right column are based on Halton's 2021 population of 596,637 (Statistics Canada, 2022).

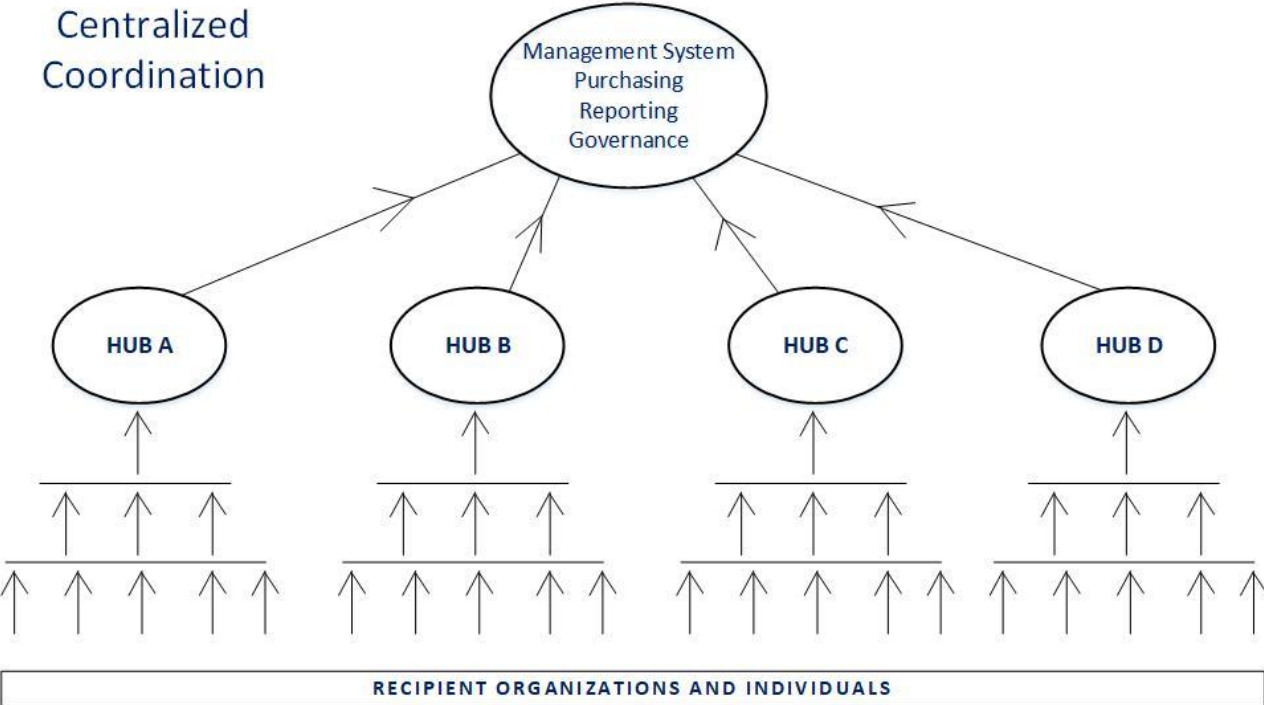
The higher estimate of 17 percent aligns with the results of a national study commissioned by Second Harvest (Gooch et al, 2021), which identified that, following the crisis caused by the COVID-19 pandemic, an estimated 18 percent of Canadians were food insecure and accessing food from charitable sources.

Timeline	Percentage	Data Source	Number of food insecure in Halton region
2013/2014	7% (low)	Canadian Community Health Survey (Halton, 2019)	41,765
2017/2018	11% (middle)	PROOF: Canadian Community Health Survey (Tarasuk & Mitchell, 2020)	65,630
2020	11% (middle)	Statistics Canada (Polsky & Garriguet, 2022)	65,630
2021	17% (high)	Our Kids Network Halton Youth Impact Survey, Halton Region Public Health Survey (OKN,2022)	101,428

10 Appendix C: Dashboard for Monitoring and Reporting

	Current period	Previous period	Trend +/-
Time period	w/c Feb 28, 2022	w/c Feb 21, 2022	
Clients served and volumes			
Unique households served	n = x	n = x	%
New households served	n = x	n = x	%
# Individuals served	n = x	n = x	%
Food Type and Volume			
• Produce	n = x	n = x	%
• Eggs	n = x	n = x	%
• Dairy	n = x	n = x	%
• Meat/poultry/fish	n = x	n = x	%
• Non-meat proteins (pulses, beans, etc.)	n = x	n = x	%
• Carbohydrates (bakery, rice, pasta, etc.)	n = x	n = x	%
• Other (e.g. cooking oil)	n = x	n = x	%
Total volume (lbs):	n = x	n = x	%
Average lbs per household	n = x	n = x	%
Average lbs per individual	n = x	n = x	%
Unmet demand			
Households unable to serve	n = x	n = x	%
Individuals unable to serve	n = x	n = x	%
Unmet Demand: Food Type and Volume			
• Produce	n = x	n = x	%
• Eggs	n = x	n = x	%
• Dairy	n = x	n = x	%
• Meat/poultry/fish	n = x	n = x	%
• Non-meat proteins (pulses, beans, etc.)	n = x	n = x	%
• Carbohydrates (bakery, rice, pasta, etc.)	n = x	n = x	%
• Other (e.g. cooking oil)	n = x	n = x	%
Total volume (lbs):	n = x	n = x	%
Average lbs per household	n = x	n = x	%
Average lbs per individual	n = x	n = x	%

11 Appendix D: Coordinated Purchasing Structure



The above diagram illustrates how information on acquisition requirements would flow to the body that oversees the purchasing coordination.