



A Guide for Transforming Food Desert Communities

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Chapter 1

Introduction

Relevance to Planning
Project Structure and Result

The purpose of this project is to identify the consequences of food deserts, evaluate food justice issues, and examine opportunities for improvement. The intent is for food desert communities to use this as a guide for defining community identity and setting expectations for healthy food systems. The goal is to discover healthy solutions and approaches that would minimize or eliminate the impact of food deserts, which would then contribute to the economic growth and vitality of a community. In addition to addressing local food system concerns, this report will provide communities with tools that will allow them to have access to healthy food, affordable options, and a greater selection of food choices.

There are three broad questions that have shaped the foundation of this report. These questions have prompted the specific themes covered in the background section of this report (Chapter 2). Based on the questions and themes developed, case studies have been evaluated according to the specified criteria. Through intensive research and analyses, the process of transforming food desert communities will focus on the following questions:

- 1) What are planners' roles in the development of healthy communities as well as the issues related to food desert communities?
 - It is essential to understand how planners' efforts have contributed to the local food system through goals, policies, and implementations of the various topics concerning the community. In addition to facilitating programs and events, there is the need to consider how communities have handled issues pertaining to food deserts in the past as well as the present. Throughout the topics covered in Chapter 2, such as, health concerns, food systems, food security, and food desert communities, there are discussions on how planners have affected the food system.
- 2) How will planners and collaborators address low-income, minority, and underserved communities?
 - In order to effectively understand the underlying issue regarding food deserts, it is necessary to constantly ask questions that involve communities of color as well as those who lack the fundamental resources for healthy food. In Chapter 3, there is an assessment on a small-scale city (New Haven, Connecticut) and a large-scale city (Edmonton, Alberta in Canada) to determine strategies for food deserts. Since these groups of people are exposed to a variety of conditions that are hazardous to their health and lifestyle, planners and collaborators are expected to address these concerns in order to influence change.
- 3) What are the factors that communities must consider in the transformation of food deserts?
 - After evaluating the causes and concerns of food deserts for communities, the question on how to improve the conditions of food deserts must be considered. While Chapter 5 suggests appropriate strategies for food desert communities through various recommendations, Chapter 6 imposes methods to guide the improvement of food desert communities through community development. By addressing this question, communities will have the opportunity to build a sustainable and resilient food system for healthy living.

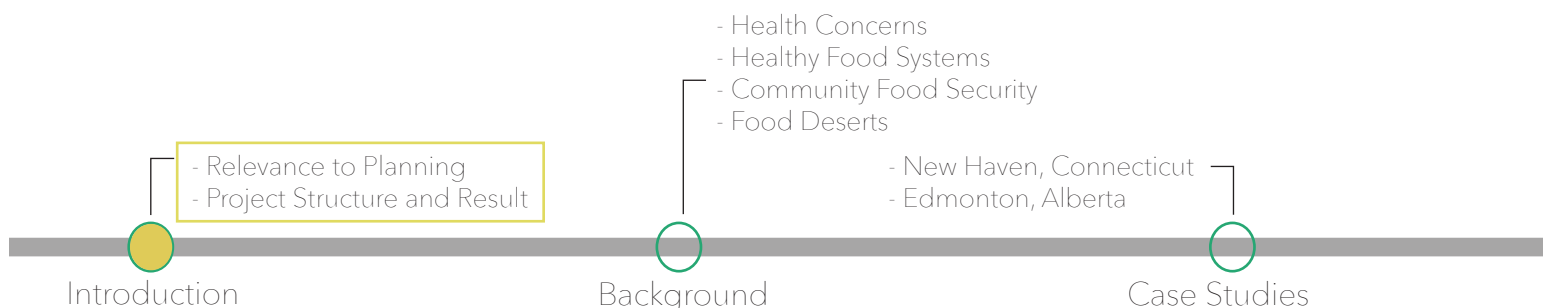
1.1. Relevance to Planning

Planning, health, food systems, and social justice are all interconnected. Planning is a profession that progressively guides decision-making in order to achieve a desired goal. While taking necessary steps to encourage participation and implement policies, planners are involved in processes that work to improve public health, sustainability, land use, transportation, environmental management, and economic development. Since planning takes into account the programs, occurrences, and functions of a city, planners and decision-makers are directly as well as indirectly affecting the community food system. They are directly interacting with the food system by creating opportunities to provide healthy food and collaborating with community members on various efforts relating to food choices. On the other hand, they are indirectly interacting with the food system through standards and policies that influence the built environment.

Planners are heavily involved in the creation of healthy places. Often times, “health is determined by planning” at least as much as it is by medical care (Dannenberg et al., 2011). It is crucial for planners to be wary of communities’ health concerns, food systems, and food security in order to minimize food desert issues. Their role in the food system involves active participation, educating the public, and providing resources, which are described below:

- *Health Concerns:* Address topics on obesity, diabetes, and food-related chronic diseases
- *Food Systems:* Facilitate sustainable food systems and healthy food planning
- *Food Security:* Provide resources to encourage healthy food availability
- *Food Desert Communities:* Establish recommendations, strategies, and approaches that promote a healthy lifestyle

Planners are beginning to acknowledge the importance of healthy food and recognize the negative impacts of food deserts in various communities. Planners are encouraged to address issues that pertain to food deserts because there is a correlation between healthy food access and social justice, food systems planning, as well as community development. This project is relevant to planning because it promotes healthy and equitable communities through effective food choices and the accessibility of ethnic and nutritious food.



1.2. Project Structure and Result

The main subject of this project is addressing the needs of food desert communities. Food deserts are areas that have a disproportionately high number of fast food chains and unhealthy restaurants as opposed to grocery stores and healthy eating places. The limited accessibility to healthy, nutritious food affects the way people live and how they will continue to live. In order to fully grasp the importance of how food desert communities impact health, it is essential to discuss social justice. Social justice is defined as the equal distribution of opportunities and resources for all groups of people. When planning for food desert communities, social justice is a fundamental consideration because issues that pertain to food deserts are commonly concentrated in low-income, minority, and underserved communities.

This subject is relevant to planning and health because in order for communities to thrive, planners and community members must strengthen the local food system by promoting healthy food that is affordable for all groups of people. In Chapter 2, there will be a discussion on how health concerns, food systems, and food security affect food desert communities. Then, Chapter 3 will evaluate the community efforts of the City of New Haven, Connecticut and the City of Edmonton, Alberta in Canada to determine effective methods for food deserts. Chapter 4 will discuss the implementation of the two case studies through interviews. Next, Chapter 5 will provide recommendations to improve food desert situations, such as, healthy stores development, community food resources, and food system strategies. Furthermore, Chapter 6 will examine the farm-to-table movement, backyard movement, and culinary tourism for the purpose of enhancing community identity and promoting diversity. Finally, there will be a concluding statement on what has been learned throughout the project.

This project is organized into five main parts:

- *Background:* Chapter 2 provides information about the broad issue of food desert as well as the reasons why health professionals, community members, and planners are concerned about its impacts socially, physically, and economically.
- *Case Studies:* Chapter 3 discusses two case studies that apply to the transformation of food desert communities and the effectiveness of particular strategies.
- *Interviews:* Chapter 4 evaluates on the effectiveness of the two case studies by conducting interviews with a community organization and public agency that have supported the implementation of the case studies.
- *Recommendations for Food Desert Communities:* Chapter 5 presents several ways for food desert communities to engage in a healthy food system and strategies for greater food accessibility.
- *Community Development Approaches:* Chapter 6 builds on the recommendations of food desert communities and suggests approaches that will benefit communities in the long run.





Chapter 2

Background

Health Concerns

The Impact of Healthy Food Systems

Community Food Security

What is Considered a Food Desert?

This section discusses how health concerns, food systems planning, and community food security influence food deserts. In order to understand food desert communities, it is essential to define the broad issue and evaluate the problems that occur depending on the issue. In this case, the broad issue relates to health problems. The health epidemic creates a domino effect by negatively impacting community food systems, which then shaken food security and contributes to the downgrade of food deserts.

2.1. Health Concerns

The problem with food desert communities has been around for a long time, but as more studies reveal the impact of food deserts on community health, more professionals and decision-makers are becoming aware of the issue. The topic of food desert communities is gradually making its way into city and regional planning discussions as well as various review boards. Planners should be concerned with topics relating to food because food access and availability affects obesity rates, diabetes, chronic diseases, and other health-related illnesses. The approach to this problem is to evaluate health concerns, food systems, food security, and how they are related to food deserts.

Cities face a wide variety of complications when they are dealing with food desert communities. Instead of having access to grocery stores, farmers' markets, and fresh food, food desert communities consist of "convenience stores and fast food restaurants that mainly sell cheap, high-fat, high-sugar, processed foods and other few healthy options" (Treuhart & Karpyn, 2010). According to PolicyLink and The Food Trust, studies indicate that low-income communities, ethnic communities, and sparsely populated rural areas have fewer opportunities to buy healthy and affordable food than those in higher-income communities. As a result, these communities have high rates of obesity, diabetes, persistent hunger, and food insecurity (Freudenberg et al., 2011).

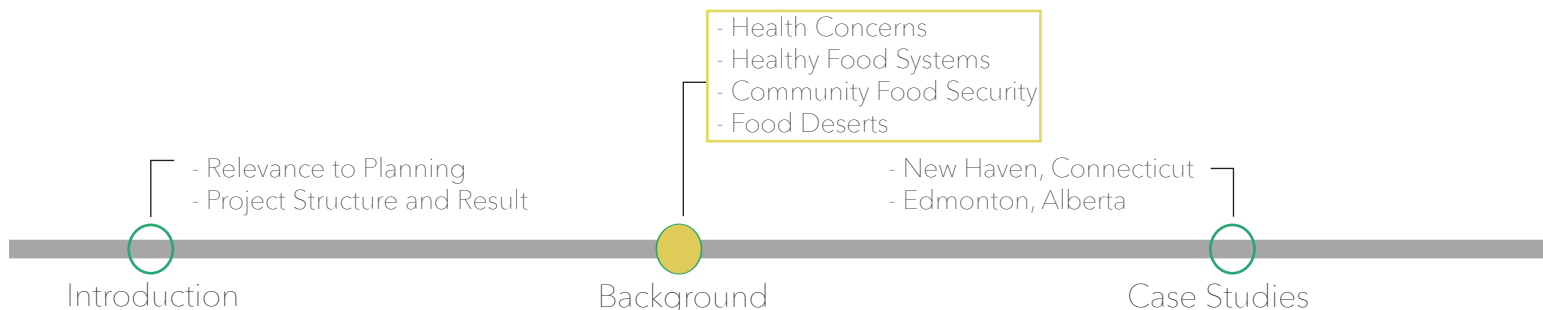
In comparison with higher income communities, the occurrence of food-related health problems is reportedly more common in low-income communities and communities of color. These communities are vulnerable because they have limited access to resources and food, which causes them to be more prone to food-related illnesses. According to a study in Chicago, "six out of every 10 adult Americans" are considered overweight, "nearly one in three" is considered obese, and meals at fast food restaurants are particularly common (Gallagher, 2006). Other diseases include hypertension, hypertensive heart disease, acute myocardial infarction, and various cardiovascular diseases (Gallagher, 2006). Although surveys have indicated higher rates of diabetes, these surveys "underestimate the prevalence of diabetes in food-insecure households" because they may not have reached all groups of people (Gucciardi et al., 2014). In 2010, 12.6% of non-Hispanic Blacks and 7.1% of non-Hispanic Whites had diabetes (Gaskin et al., 2014). This race disparity was caused by health behaviors, socioeconomic factors, and environmental factors. For instance, "residential segregation and concentrated poverty" have influenced the reduction in the access to community resources that promote good health for low-income, racial, ethnic, and underserved communities (Gaskin et al., 2014).

Although the topic of diabetes and other health impacts have been around for decades, it wasn't until a few years ago that studies were focused on the relationship between neighborhood attributes, community resources, and the prevalence of these health concerns.

In addition to the effects of limited access to food, other factors are considered in relation to health. For instance, “one-third of adults” and “17 percent of children” in the United States are obese due to sedentary lifestyles and poor nutrition (National Recreation and Park Association, 2013). In the “In Sickness and In Health” episode of a four-hour documentary series by PBS, health patterns and illnesses are compared with class and racial inequalities (Herbes-Sommers & Smith, 2008). As a result, communities with these disparities are exposed to living conditions that are intolerable and unsafe because economic, social, and built environments affect health. In fact, they are expected to endure low-paying jobs, environmental hazards, unsafe infrastructure, and unpleasant walking environments (Herbes-Sommers & Smith, 2008). In “Place Matters”, a documentary on the relationship between place and health, a refugee from Laos named Gwai Boonkeut has severe heart disease because of the environment that he lives in at age 49 (Lee, 2008). In his neighborhood, he is exposed to petrochemical companies, low-quality housing, unsafe public places, as well as easy access to tobacco, liquor, and fast food (Lee, 2008). This is not only the case for adults, but also children. While children in these communities are “hospitalized for asthma at twice the rate” of neighborhoods with an abundance of fresh food, they also have the risk of dying of diabetes is “almost twice as high” (Lee, 2008). The 2014 study on disparities in diabetes indicates that planners should use zoning regulations and urban design standards to avoid the creation of unhealthy communities where poverty is concentrated (Gaskin et al., 2014). This suggests that new studies are being conducted to validate and acknowledge that limiting access to healthy food and resources will result in an imbalance in the community food system.

Planners’ efforts are needed in the process of promoting healthy eating and places. Planners can contribute to solving health concerns through neighborhood engagement, program development, and planning process facilitation. Planners can assist in healthy food planning in the following ways (Raja et al., 2008):

- Actively engage supermarket retailers to develop stores in underserved areas
- Creative use of economic development funds to help small stores make capital investments for the purchase of storage equipment for fresh fruits and vegetables
- Support farmers markets in terms of location, supply, and feasibility
- Support programs to encourage institutional (schools, prisons, hospitals, and universities) purchasing of healthful foods
- Modify the planning process to prepare a stand-alone food system plan for the community, which includes stakeholder identification, community needs assessment, visioning, data collection, budgeting, and implementation



In order to prevent diabetes, cancer, and other health concerns, there are options to grow food locally for the purpose of solving inadequate fruit and vegetable consumption. For instance, the Native Americans in Southwestern United States have “2 to 4 times higher rates” of diabetes than non-Hispanic Whites (Lombard et al., 2014). Additionally, they have higher rates of stomach cancer, which indicates their low fruit and vegetable intake. In order to encourage healthy dietary choices, engaging communities in gardening will help minority populations achieve a healthy lifestyle. Gardening is a great suggestion for communities who are struggling to find healthy food because they are able to access “nutritious and affordable food close to home” (Lombard et al., 2014). The challenges to these solutions include the lack of participation and the amount of time planners and community members must invest in order to create a working system.

Since health and nutrition are crucial for community prosperity, there are several ways to lessen the impact of these health disparities as well as risks. Instead of overlooking underserved communities, case studies show healthy food planning efforts from various communities, which are further explained in Chapter 3. Recommendations for food desert communities, such as, healthy stores development, community food resources, and various food system strategies, are discussed in Chapter 4. Once these suggestions are employed, Chapter 5 discusses community development approaches that are likely to contribute to the prosperity and economic growth of food desert communities.

Table 2.1. Health Concerns: Question for Case Studies		
No.	Theme	Question
2.1.A	Health Among Communities of Color	Does the community address healthy food for all groups of people by taking into consideration their economic, social, and built environment?
2.1.B	Health Risks	How has the community address the short-term and long-term health risks associated with food deserts?
2.1.C	Community Partners	Is there a list of community partners or collaborators that helped the community identify health issues and address strategies? Will they continue to provide assistance?



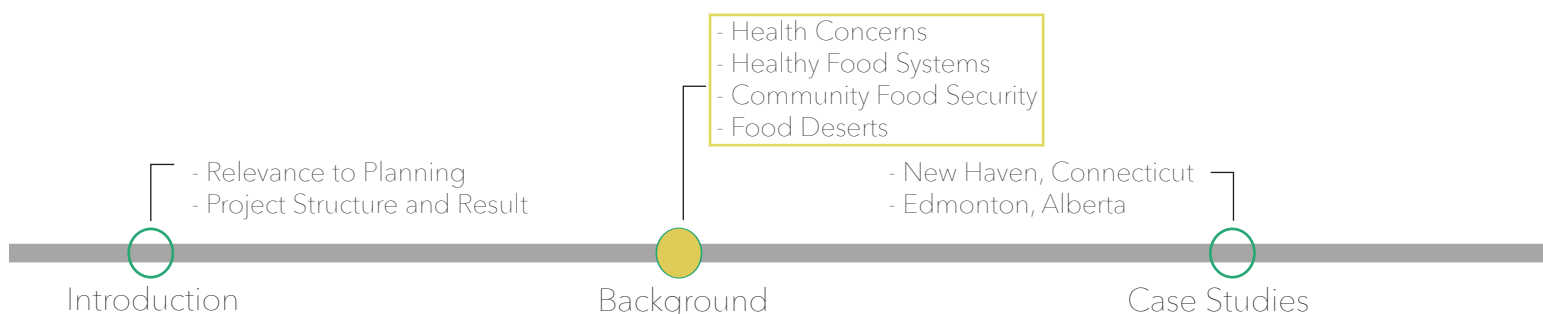
2.2. The Impact of Healthy Food Systems

During the 1960s and 1970s, supermarket retailers began to move as middle- and higher-income residents moved away from urban centers. Their interests were based on “larger and less expensive tracts of land, simplified and business-friendly zoning and other regulations, more homogenous consumer preferences, and less crime,” which is also known as supermarket redlining (Bassford, 2010). As a result, the inner cities were left with predominantly lower-income residents, which contributed to the decline of tax revenues and lower property values. Many food deserts were stemmed by the “supermarket redlining” phenomenon as it “disproportionately affected communities” and shaken the community food system (Bassford, 2010).

Without access to healthy foods and resources, communities often face challenges and opportunities become limited. When low-income communities are given food choices, they often choose sweetened beverages and fast food a short distance from their house. However, these communities have no choice but to consume these unhealthy foods because of the lack of affordable, nutritious food around their neighborhood. The frequent consumption of “inexpensive, high calorie, low nutrient foods” usually results in obesity and diseases (Freudenberg et al., 2011). Although the most affordable foods are accessible and consumed at high amounts, they have very low nutrients. As a result, “four of the six leading causes of death” are diet-related chronic diseases that have been caused by the excessive consumption of fast food and unhealthy food (American Planning Association, 2010). Since the lack of access to healthy foods is considered “an economic, health, and social justice issue,” it is crucial for planners, activists, and the community to engage in a healthy food system (Treuhart & Karpyn, 2010).

When there are increased opportunities for food desert communities to have access to nutritious food as well as incentives for consuming healthier beverages and food, there is potential for obesity rates to be significantly reduced (Freudenberg et al., 2011). This demands the presence of policy goals, human and financial resources, community leaders, decision-makers, and organizations to guide processes and movements. On the other hand, planners should seek alternatives to a food system that takes into account the health defects of processed and unhealthy foods. Policies are needed to help communities of color have greater access to affordable, healthy food through food production best practices. Moreover, these alternatives should provide disadvantaged communities with a better understanding of nutrition and food knowledge (Freudenberg et al., 2011).

In order to “cultivate” a healthy food system, it is necessary for decision-makers to consider local agriculture, environmental concerns, economic development, health and nutrition, food justice and access, as well as collaboration (Delaware Valley Regional Planning Commission, 2011).



If the food system is used responsibly, food desert communities are given the chance to protect natural resources, implement strategies, enhance programs, and support various groups of people. Also, it is important to address food access issues by emphasizing “both social justice and cultural alternatives to mainstream food practices” because it provides a “heterogeneous” perspective that will greatly affect food desert communities (Freudenberg et al., 2011).

Planners affect access to healthy food places, education programs, and advertisement strategies, which then affects the type of food that community members consume. The consumption of healthy food depends on their cultural preferences, the price of nutritionally adequate and safe food, the convenience of buying healthy food, and the travel distance of healthy food places. If residents are so accustomed to their way of life and the food that they consume every day, the question is, how can we provide another perspective for them? There is a strong need to take into account time, budget, and effort. In order to readily provide healthy food for residents and visitors, planners can provide guidelines and procedures to establish farmers’ markets at district parks (National Recreation and Park Association, 2013). For instance, although the City of Jackson in Tennessee is a “city of disparities,” planners and community partners decided to strategically place farmers’ markets in the blighted parts of the city (National Recreation and Park Association, 2013). In order to influence healthy food choices as well as expand knowledge and enthusiasm for healthy environments, decision-makers and collaborators should refer to the following multi-tiered approach:

- Use an existing venue - map grocery stores, compare prices for fresh food, assess food availability
- Create incentives for selling healthy food - educate the community on healthy eating and decisions
- Apply for funds to allow farmers to take Food Stamps - address food affordability and stability
- Talk to everyone about your project - promote the benefits of healthy food systems

Since food systems are integrated globally, nationally, regionally, and locally, it will be beneficial for communities to be actively involved in creating a sustainable food system. In order to achieve this, the greater Philadelphia area has developed a vision that supports local agriculture, protects the environment, ensures the safety and healthfulness of food, improves nutrition, ensures regional accessibility to healthy food, and encourages collaboration between all members of the community (Delaware Valley Regional Planning Commission, 2011). In order to strengthen the local food system, solutions include listening to the concerns of community groups, educating the public about nutrition, incorporating local foods into school meals, supporting local food providers, and providing incentives for healthy food access (Delaware Valley Regional Planning Commission, 2011). Although these solutions are ideal for any community, the challenge of creating a robust food system is the need for financial resources as well as getting participants to be involved in community food events and programs.



Since low-income neighborhoods, communities of color, and rural areas often face disparities in food access, the consequence of overlooking them will negatively impact the community food system as a whole. While health professionals and researchers are concerned about the “epidemics of diabetes and obesity and the growing burden of food-related chronic diseases,” planners, elected staff, and policy makers must react fast to improve food options for communities who are lacking necessary resources (Treuhart & Karpyn, 2010).

Table 2.2. The Impact of Healthy Food Systems: Questions for Case Studies		
No.	Theme	Question
2.2.A	Local Food System	Are the strategies that strengthen the local food system appropriate for the community size? How different are they in terms of small-scale and large-scale cities?
2.2.B	Healthy Food Choices	How does the community influence healthy food choices for low-income, minority, and underserved populations?
2.2.C	Food Consumption	Does the community encourage the consumption of healthy food by taking into account time, availability, budget, and preferences for all groups of people?

2.3. Community Food Security

Community food security is affected by food systems planning. Food security is when communities have the physical and economic access to meet health requirements, dietary needs, and food preferences for an active, healthy life (Falkenberg et al., 2012). The lack of food security prompts food deserts due to the limit of nutritionally adequate and safe foods for communities. Food deserts can be reduced with the support of community food systems to strengthen food security. According to **Figure 2.3.**, the components of a community’s food system consist of production, processing, distribution, consumption, and disposal (Raja et al., 2008). Food resources and production affect the health outcomes of communities. While the availability of resources and supplies are essential to keep a community from starvation, the issue would not be fully resolved without involving underserved and ethnic communities in health decisions as well. Access to healthy eating places and nutritious food is a “critical component of an agenda to build an equitable and sustainable food system” that ensures food security for various groups of people (Treuhart & Karpyn, 2010). This entails supermarkets, grocery stores, farmers markets, backyard and community gardens, and agricultural programs.

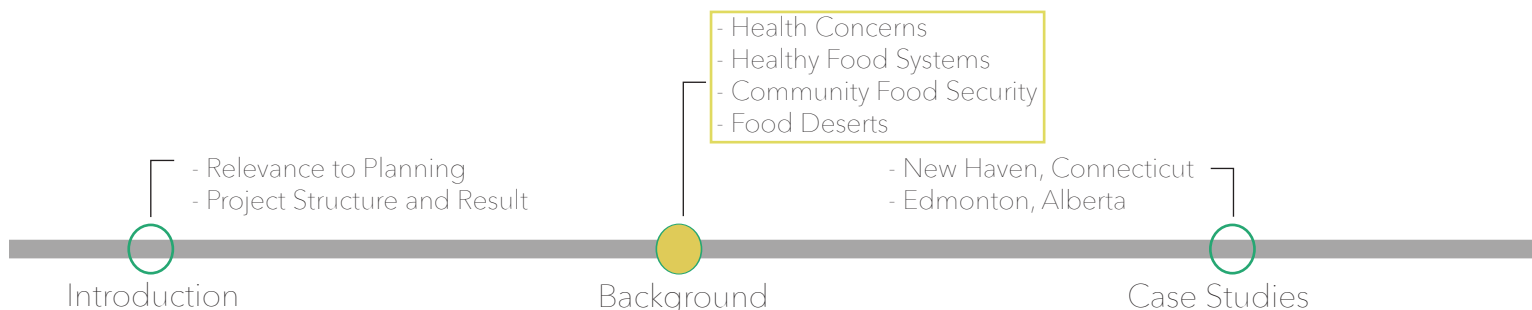
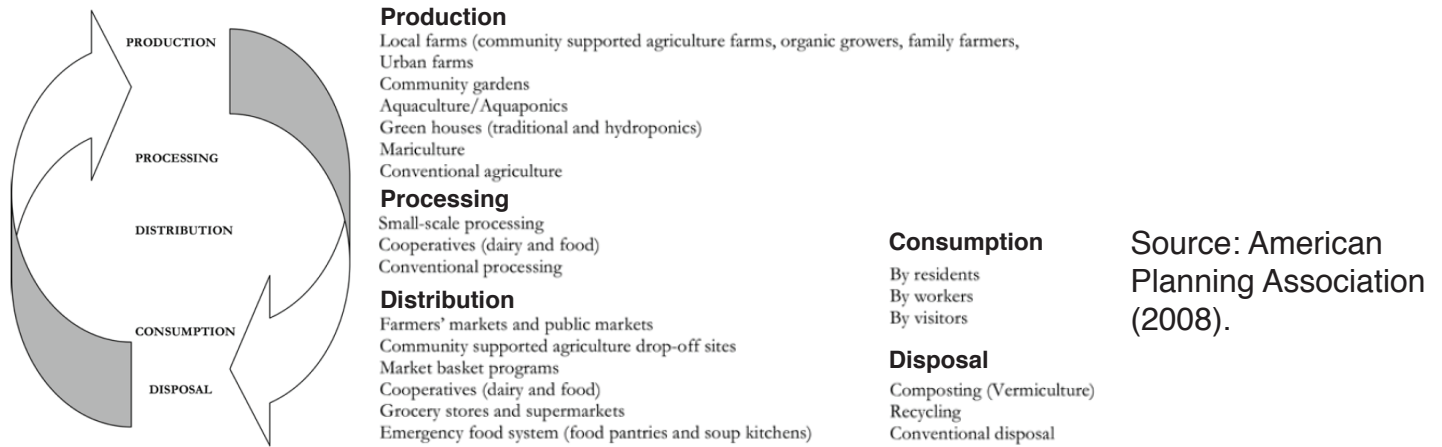


Figure 2.3. Components of a Community's Food System



A recent research study indicates that “food insecurity is a risk factor for developing diabetes” (Gucciardi et al., 2014). When communities do not have access to sufficient, safe, and nutritious food, it is highly likely that health concerns will arise. To minimize the impacts of this issue, providing the ongoing availability of food ensures that these food-related illnesses do not continue. In order to cope with the lack of access to health food, low-income communities have tried to solve these problems by skipping meals, cutting their meal sizes, and eating stale food for the sake of making ends meet (Gucciardi et al., 2014). In addition to having limited control on their diet and lifestyle, they are also sacrificing their health and wellbeing.

While planners focus on land use, transportation, economic development, safety, and infrastructure, consideration for food systems and security is essential for community development. A community's choices on food often affect the “shape, style, pulse, smell, look, feel, health, economy, street life, and infrastructure” of a city because it determines our way of life (Roberts, 2001). For instance, the availability of healthy eating places and grocery stores within a city will influence the community's food habits and health conditions. On the other hand, fast food restaurants will contribute to the community's habits and health differently. Since food affects urban life, it is important for planners to “put food closer to the top of their planning menu” (Roberts, 2001).

In order to address food system issues, there is a strong need for collaboration between planners, residents, private businesses, nonprofit organizations, and health professionals. For the purpose of conveying information more effectively, conducting a needs assessment regarding the community's food access, food production, and health trends will help define the existing conditions of the food system as well as identify opportunities and constraints of the area (American Planning Association, 2010). As shown in **Table 2.3.**, planners are recommended to apply the methods, collect data, and share the information with community members, professionals, and decision-makers.

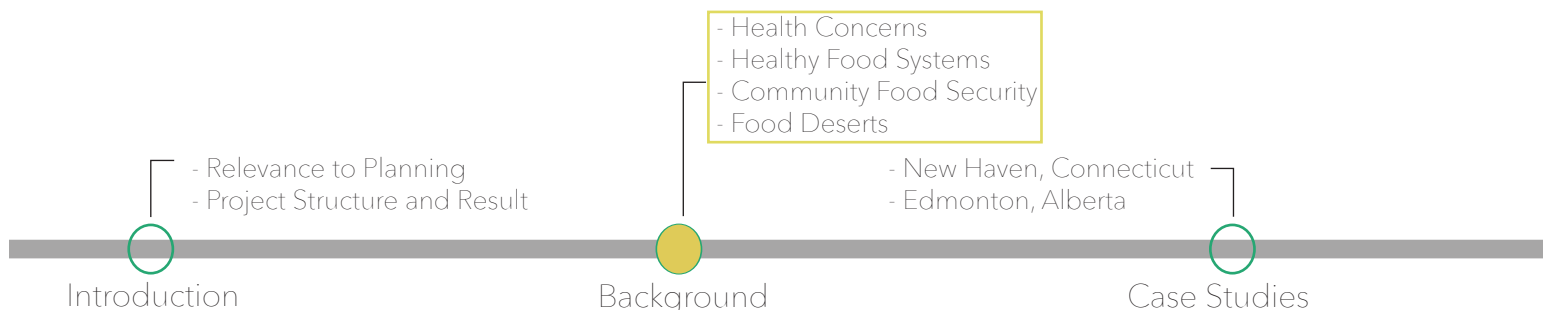


Table 2.3. Needs Assessment for Community Food Systems

Type of Needs Assessment	Description
Food Asset-Mapping	<ul style="list-style-type: none"> • Provide tools that can be used to assess, analyze, and inventory characteristics related to the components of community food systems <ul style="list-style-type: none"> o Characteristics include: <ul style="list-style-type: none"> ☒ Stakeholders ☒ Socioeconomic and health statistics ☒ Production, processing, distribution resources, trends, and economic activity ☒ Location and number of food sources and outlets within a community ☒ The availability, affordability, and nutritional quality of foods sold in these outlets ☒ Existing governmental and nongovernmental programs and policies
Community Food Assessments	
Land Inventories	

Source: American Planning Association (2010).

Low-income, minority, and underserved communities often need assistance when there is not enough affordable and nutritious food in close proximity. In order to define solutions for food availability and access, planners should help expand projects that involve healthy food and restrict the promotion and availability of unhealthy food (Freudenberg et al., 2011). By initiating a change from the availability of unhealthy snacks to healthy snack options, this provides encouragement for the community to choose with health benefits in mind. For instance, Chicago Park District representatives decided to transform their vending machines to offer healthy snacks with that are “low in sodium, sugar, and calories” (National Recreation and Park Association, 2013). As a result, their revenues tripled within 13 months and inspired other organizations to change their vending options (National Recreation and Park Association, 2013). While realizing that the community will find it difficult to adapt to these changes, the park district held workshops that included community taste tests as well as compared consumer choices and reactions (National Recreation and Park Association, 2013). It is recommended for planners to reference the development of this example because it is relevant for promoting healthy communities and encouraging participation for all groups within the community.



Since there is also a relationship between poverty and food insecurity, planners should make policy recommendations that address job growth, educational programs, and affordable housing. A solution to the issue of poverty involves healthcare providers creating a food-insecurity screen process. These healthcare providers should help patients maintain their health by referring patients to food programs as well as providing them with options that are free of cost (Gucciardi et al., 2014). Although this solution works, the challenge is that these healthcare providers could be very judgmental and discouraging to the point where patients are left feeling embarrassed about their situation.

Table 2.4. Community Food Security: Questions for Case Studies

No.	Theme	Question
2.3.A	Local Food System	Are the strategies that strengthen the local food system appropriate for the community size? How different are they in terms of small-scale and large-scale cities?
2.3.B	Healthy Food Choices	How does the community influence healthy food choices for low-income, minority, and underserved populations?
2.3.C	Food Consumption	Does the community encourage the consumption of healthy food by taking into account time, availability, budget, and preferences for all groups of people?

2.4. What is a Food Desert?

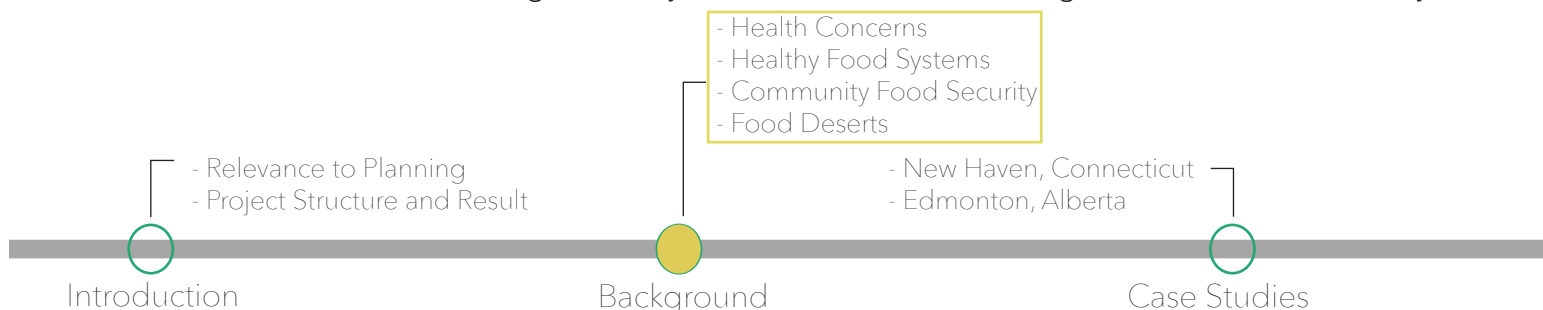
Decisions on food access impact our health, resources, and lifestyle. If there is not enough consideration for health disparities, food systems, and food security, food deserts will spread rapidly. An area is considered a ‘food desert’ when the lack of healthy eating places and resources limits the availability of affordable, nutritious food for the community. The main concern for communities often involve “meeting the needs of vulnerable segments of the society” and residents who are unable to afford alternative services (Pothukuchi, 2004). This includes low-income, racial, ethnic, and underserved communities that are bound to social justice issues in terms of the cost and opportunities of food systems and resources in an area.



Social justice is an important consideration for the success of food desert transformations. Social justice is defined as “fairness in the distribution of goods, services, rights, and opportunities” (American Planning Association, 2010). It is a collective effort that empowers various groups of people within a community. It takes into account the conditions of all groups, including vulnerable and underprivileged communities for community and regional planning. In order to solve food desert problems, we must understand the consequences of neglecting social justice. Studies show that most Americans consume an “inadequate amount of whole grains, fruits, and vegetables” while consuming an “excessive amount of saturated fat and convenience foods” (Dimitri & Rogus, 2014). Since this is caused by the high cost of healthy food compared to the cheaper convenience store food, choices are very limited for low-income communities. In addition, if healthy food access is only prevalent in thriving communities, there will be a definite divide between various populations within a community and health disparities will prevail (Lewis et al., 2011).

Food deserts are areas that have distant grocery stores and restaurants that have healthy food. On the contrary, these areas have “high concentrations of nearby fast food alternatives” (Gallagher, 2006). According to a study conducted on Chicago’s food deserts, the majority of them are “exclusively African-American” (Gallagher, 2006). The unbalanced food system within these communities are concerning because it creates food deserts, which means lower quality of life. In 1991, approximately 1 million people in Los Angeles County lived in food deserts (Cassidy & Patterson, 2008). Considering that Los Angeles County has high Latino and diverse communities, this number is not surprising because minority populations tend to have low levels of healthy food availability due to social justice issues. Since this is not a small number of people affected by the lack of food accessibility, it is necessary to assess the problems that arise in these communities.

The involvement of planners, food activists, as well as the local and regional government is essential for the revival of food desert communities. Since “planners have a role to play in shaping food environments,” it is necessary for them to consider the impact of healthy food systems, community food security, food system strategies, and community development approaches for food deserts (APA, 2008). Although food systems are so important in community development and health, residents and policymakers often assume that there is nothing wrong with it (Cassidy & Patterson, 2008). Since there is a lack of knowledge regarding food system issues, planners should provide opportunities to improve and advocate healthy food planning through regulations and nutrition programs that highlights underprivileged communities. Despite the differences and varying issues of each region and community, consideration for basic principles and approaches will provide a guideline for food desert transformations. The goal of food desert transformation is to improve access to healthy food for all communities, encourage healthy food choices, and strengthen the local economy.



Planners can contribute to food desert transformations by influencing change in behavior, eating patterns, recognition of the issue, and consequences of avoiding health. Policies should indicate criteria for nutrition and address concerns that affect the overall health conditions of a community. For example, healthy vending machines have been installed in Miami-Dade County's parks, serving "more than 10,000 children between the ages of 5 and 17 in order to reduce childhood obesity and malnutrition (National Recreation and Park Association, 2013). The following key elements have determined the program's success:

- Identifying areas with the greatest need
- Determining small changes with big impact
- Getting early buy-in from the community and local leaders
- Moving forward in phases at areas in underserved neighborhoods

There is no doubt that solving problems pertaining to food deserts is incredibly difficult and time-consuming, but providing strategies that can be developed over time will facilitate improvements. For instance, grocery store development has been widely promoted in South Los Angeles. By providing "regulatory and financial incentives" to be "tied to grocery store development in Healthy Food Enterprise Zones," developers will look into this further if there are captivating reasons to proceed with the project (Bassford, 2010). This strategy is a great way to capture the attention of grocery store developers, but the challenges the communities will face include the location of the grocery store as well as how much revenue it will generate. Even if the incentives are desirable, the community must also have the capacity to provide such incentives.

Table 2.5. What is a Food Desert?: Questions for Case Studies

No.	Theme	Question
2.4.A	Healthy Eating Places	How has the community address the lack of healthy eating places and limited resources in food desert communities?
2.4.B	Regulations and Programs	What regulations and programs have the community identified to be effective for reducing malnutrition and promoting food accessibility?
2.4.C	Public Participation	What have planners done to positively shape the food environment and stimulate public participation?





Chapter 3

Case Studies

Selection Criteria
Discussion of Questions
Broad Criteria Evaluation

This section evaluates the plans of two cities and their relevance to understanding the impact of food desert communities. The plans included in the case study evaluation are the New Haven Food Action Plan (New Haven, Connecticut) and Fresh: Edmonton's Food & Urban Agriculture Strategy (Edmonton, Alberta in Canada). The selection criteria for the case study evaluation were developed based on the questions throughout Chapter 2 with their respective themes. In order to provide comparisons of the two plans, they will be evaluated side by side in the form of tables with descriptions and thorough explanations under the tables. These explanations that are associated with the questions being asked will specify and analyze what is working as well as what is important from the plans. Toward the end of this chapter, there will be an analysis on the overarching criteria of the plans. The following indicates the structure of this chapter:

1. Selection Criteria Explanation
 - a. Table of the four themes and sub-themes
 - b. Broad Criteria Explanation
 - i. List of the four overarching criteria
2. Discussion of the questions throughout Chapter 2
 - a. Evaluation of both plans for each question
 - b. Further explanation of the descriptions
3. Evaluation of broad criteria to provide overall critique of the plans
 - a. Comparison of the plans as a whole

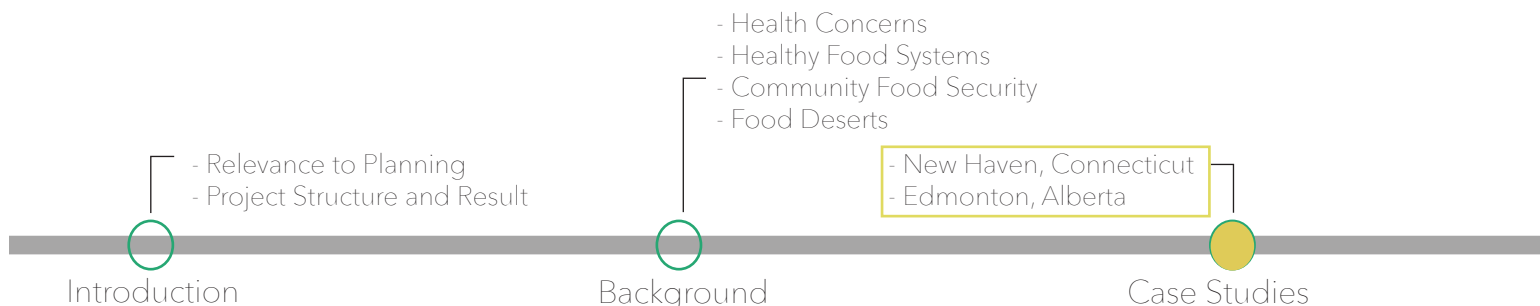
3.1. Selection Criteria

Themes

The selection of the plans depends on how well they correlate with the ongoing themes throughout the background information of this report (Chapter 2). As shown in **Table 3.1.**, the questions were based on the identified themes in each section of Chapter 2. The themes will guide and be used throughout the evaluation of the two plans. According to these questions, the New Haven plan as well as Edmonton plan must explicitly evaluate, explain, and suggest recommendations on strategies that are applicable for communities of color. These plans must address the impact of health concerns, food systems, food security, and food deserts in order to effectively solve the issues associated with these topics.

Table 3.1. Summary of Themes

Themes	No.	Sub-themes	Questions
Health Concerns	2.1.A	Health Among Communities of Color	Does the community address healthy food for all groups of people by taking into consideration their economic, social, and built environment?
	2.1.B	Health Risks	How has the community address the short-term and long-term health risks associated with food deserts?
	2.1.C	Community Partners	Is there a list of community partners or collaborators that helped the community identify health issues and address strategies? Will they continue to provide assistance?
Food Systems	2.2.A	Local Food System	Are the strategies that strengthen the local food system appropriate for the community size? How different are they in terms of small-scale and large-scale cities?
	2.2.B	Healthy Food Choices	How does the community influence healthy food choices for low-income, minority, and underserved populations?
	2.2.C	Food Consumption	Does the community encourage the consumption of healthy food by taking into account time, availability, budget, and preferences for all groups of people?
Food Security	2.3.A	Affordable and Nutritious Food	In what ways has the community address food security by providing more affordable and nutritious food within walking distance?
	2.3.B	Food Availability	What does the community do in order to expand projects that promote healthy food while restricting the availability of unhealthy food?
	2.3.C	Community Resources	How does the community provide resources for job growth, educational programs, and affordable housing to minimize the impact of food insecurity?
Food Deserts	2.4.A	Healthy Eating Places	How has the community address the lack of healthy eating places and limited resources in food desert communities?
	2.4.B	Regulations and Programs	What regulations and programs have the community identified to be effective for reducing malnutrition and promoting food accessibility?
	2.4.C	Public Participation	What have planners done to positively shape the food environment and stimulate public participation?



Broad Criteria

The broad criteria, which will be discussed toward the end of the case study evaluations, will review the effectiveness of the two plans for addressing food desert issues. While the selection criteria set the foundation of the case study evaluation, the broad criteria analyzes the bigger picture of the plans. This is essential because the criteria will provide a broader critique of the plans as a whole. The broad criteria are described below:

1. Direct and Indirect Approaches to Food Deserts
 - Provide ideas that promote healthy food systems and social justice in order to address food desert problems
 - Address health accessibility, encourage healthy food choices, and evaluate food availability
 - Explore consequences that relate to food deserts
2. Feasibility of Goals and Strategies
 - Explore approaches that are feasible and appropriate for communities that lack the resources as well as expand the scope of the project to low-income, racial, ethnic, and underserved communities
3. Community Collaboration and Empowerment
 - Collaboration between City staff, food policy councils, advisory committees, stakeholders, community partners, and youth coalitions
 - Community empowerment through programs and resources
4. Clarity and Presentation
 - Provides clear understanding of projects with great graphics
 - Visually appealing for the reader
 - Captures main points without being too text-heavy



3.2. Discussion of Questions

Health Concerns

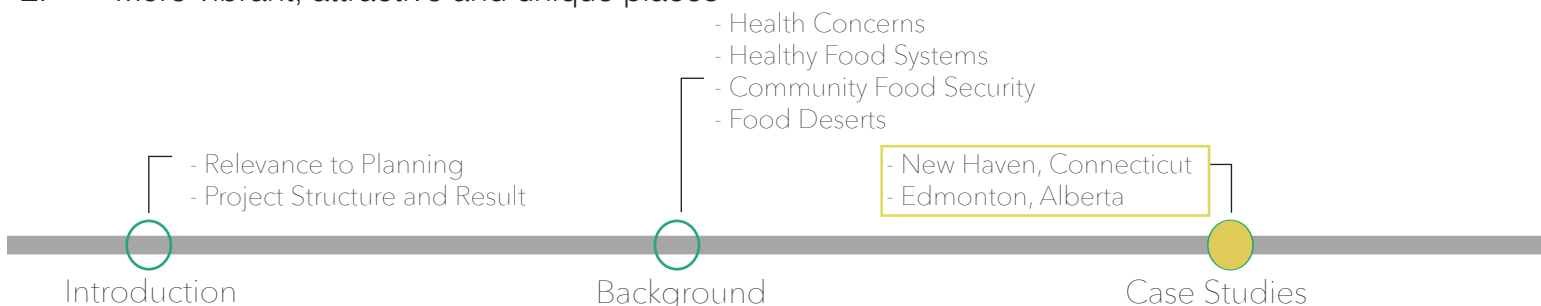
2.1.A: Health Among Communities of Color

Communities are constantly discovering new methods and strategies for healthy food systems. In the New Haven Food Action Plan, the New Haven Food Policy Council's (NHFPC) goal is to establish and implement a sustainable food system that takes into account various groups of people, including low-income, racial, ethnic, and underserved communities. This includes the following three goals:

- A. Increase access to healthy food for all people in New Haven
- B. Strengthen New Haven's local food economy
- C. Encourage healthy food choices through education and marketing efforts

The New Haven Food Action Plan refers to sustainability in terms of the environment, public health, and economy. The plan addresses environmental sustainability by recommending the reduction of the amount of food waste, reduction of the overall carbon footprint, improvement of the natural environment (air, soil, water), and preservation of Connecticut's farmland. As for public health sustainability, the plan seeks to limit the type of foods that influence chronic diseases and health defects, increase the use of vacant lots for public safety and engagement, and promote healthy eating habits. Also, the plan addresses economic sustainability by taking into account the cost of health care, food business section for economic development, local expenditures, as well as waste transport and dumping cost reductions. In order to provide for the affordability, accessibility, and availability of nutritious food, there is consideration for locally-grown food, neighborhood safety, and additional jobs for community vitality. The plan recognizes that food issues greatly impact the lives of residents as well as the community as a whole. By being aware of the impacts regarding the lack of healthy food and consequences of ignoring community food issues, such considerations have influenced the NHFPC's willingness to improve the local food environment. Throughout the process, they specified their dedication to engage residents of all ages and backgrounds. On the other hand, Edmonton's Food & Urban Agriculture Strategy takes into account fundamental City plans and critical points for their social, economic, environmental, and developmental pathways, which will ultimately help shape the city's future. In order to encourage a resilient and sustainable food and urban agriculture system, the Advisory Committee identified these five goals:

- A. A stronger, more vibrant local economy
- B. A healthier, more food secure community
- C. Healthier ecosystems
- D. Less energy, emissions and waste
- E. More vibrant, attractive and unique places



Edmonton's Food & Urban Agriculture Strategy emphasizes that their success will be based on the stories that they are told, which ensures that they address the concerns and meet the needs of all groups of people. For the purpose of addressing community resilience and livability, the plan prioritizes social, environmental, and economic sustainability. For instance, they are willing to seek feedback from the citizens regarding the accessibility to local foods, the protection of prime farmland, success of the local food sector, vibrancy of neighborhood food activities and farmers' markets, and distribution of food that takes into account the diversity of Edmonton's culture. Several critical points that the plan considers include economic development through businesses and tourism, infrastructure improvements, transportation networks, growth planning coordination, housing for cooking and growing food, municipal operations for kitchens and gardens, parks and open space for local food activities, food waste reduction and composting, as well as educational resources that consist of workshops and partnerships. The commitment to identifying food system issues is so compelling throughout the document because there is the opportunity to turn things around and positively contribute to the quality-of-life of all communities throughout Edmonton. While there is some correlation between the two plans through the specificity of the various areas of sustainability, Edmonton's Food & Urban Agriculture Strategy seems more personable and relatable for the public by providing in-depth analysis of areas and issues throughout the city to develop strategic directions. On the contrary, the New Haven Food Action Plan is more directed toward quick decision-making with strategies and actions.

2.1.B: Health Risks

The New Haven Food Action Plan identifies that it is crucial to consider children, adolescents, as well as adults in the planning of healthy communities. Among children and adolescents (ages 2-19) as well as adults (20-74) in the United States, studies in the plan indicate the increase in the prevalence of obesity from 1971 to 2008, which is expected to grow if there is not enough healthy food options. Since nutrition plays a factor in children's education, daily life, and overall health, it is important to take into account their needs for the purpose of regulating their diet for a healthy lifestyle over time. The plan demonstrates the short-term and long-term health risks of the lack of access to nutritious food by suggesting symptoms from malnutrition, school meals, fast food restaurants, and unhealthy food stores. For instance, if children do not consume healthy food, it is likely that health symptoms will arise, their attention span will significantly decrease, their memory will be less sharp, and their calorie intake will be excessive. If they continue to consume unhealthy food, the risk of obesity, diabetes, hypertension, and heart disease will dramatically increase. Also, there are three census tracts in New Haven that are considered food deserts.



These areas are often comprised of low-income households with inadequate access to healthy food. In order to better serve the needs of various groups of people, the plan suggests that it is crucial to have healthy corner stores, seasonal free school meals, and school gardens to minimize the health risks of food deserts. Other strategies mentioned in the plan include rewriting zoning and health codes to display fresh produce along store exteriors, distributing locally-grown produce to stores, and increasing residents' interest in healthy food through community gardens as well as shared resources.

As for Edmonton's Food & Urban Agriculture Strategy, it is recommended to establish an Edmonton Food Council in order to provide advisory bodies to city councils and serve as a point of connection to a broad network of food and urban agriculture initiatives and perspectives. The Edmonton Food Council is expected to support the five goals throughout the plan as well as start new initiatives, provide advice and information to the City and community, shape public policy, and improve coordination between existing programs and initiatives. In this way, the establishment of the Edmonton Food Council is a critical factor in both short-term and long-term oversight of health strategies. Unlike the New Haven Food Action Plan, this plan does not provide extensive discussions on health symptoms, obesity, diabetes, or chronic diseases as a result from the consumption of unhealthy food. Although the plan does not directly address the health risks associated with food deserts, the strategies reveal careful consideration for malnutrition, irregular diets, and physical health problems. Based on the needs and health risks of specific communities, the plan suggests that the Edmonton Food Council collaborate with community organizations to create small-scale neighborhood food hubs, upgrade commercial kitchens, and purchase processing and storage equipment. Interestingly, the New Haven Food Action Plan (2012) was created by the New Haven Food Policy Council, whereas Edmonton's Food & Urban Agriculture Strategy (2012) mentioned the establishment of a food council by June 1, 2013. This indicates that the City of New Haven's Food Policy Council have considered this action a step earlier than the City of Edmonton's Food and Urban Agriculture Advisory Committee.

2.1.C: Community Partners

A number of community partners and collaborators assisted the NHFPC in the development of the New Haven Food Action Plan. The list is provided in the "Acknowledgements" section of the document. In order to build and maintain a food system, the City of New Haven considers strengthening collaboration among community members, educating people, as well as providing healthy and affordable food. As shown in **Figure 3.2.1**, the various departments within the City are focused on positively impacting communities by providing nutritious food through soup kitchens, cooking classes, healthy food stores, community/background gardens, school gardens, and other food-related programs.

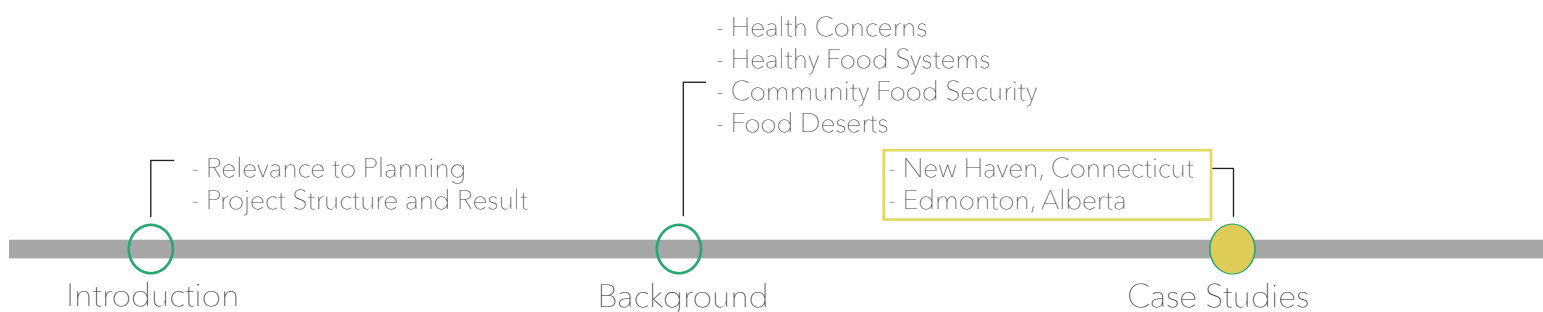


Figure 3.2.1 New Haven Food Action Plan



Source: New Haven Food Policy Council (2012).

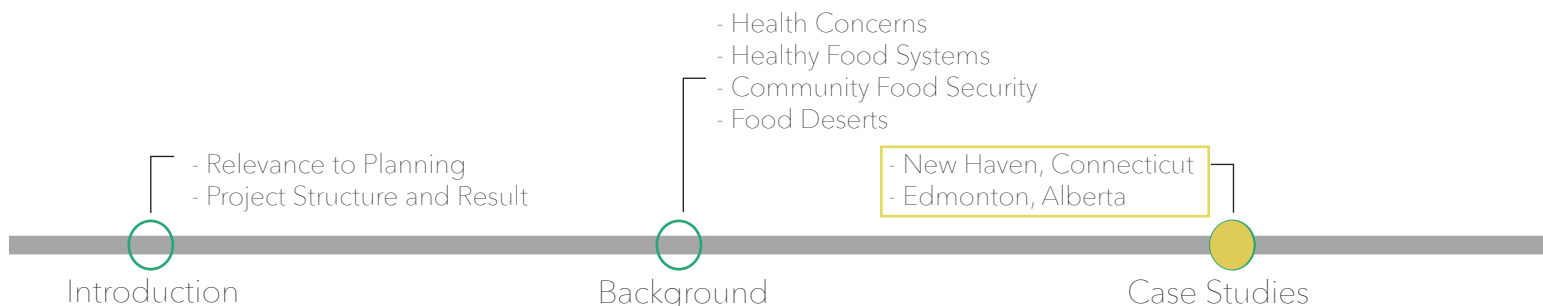
The departments include Community Development, Economic Development, Health, Youth Development, Safety, and Environment. While in the process of developing the food action plan, the NHFPC collaborated with community organizations, city departments, and community members for their inputs to improve the local food system. Building partnerships with various groups of people in the community are essential to identifying effective solutions to food issues in cities. For instance, the NHFPC has gathered insights from youth, healthcare workers, chefs, business owners, farmers, gardeners, and schools. Prior to finalizing the New Haven Food Action Plan, a draft was presented at the New Haven Food Summit on October 12, 2012 to over 130 diverse community members. The plan was previously reviewed by various groups within the community, which ensures the potential needs of these community members.

Likewise, Edmonton's Food & Urban Agriculture Strategy collaborates with farmers, developers, academic advisors, and community organizers in order to effectively identify and solve the food-related issues. The list is provided in the "Foreword: A Note from the [Food and Urban Agriculture Advisory Committee] Chair" of the document. This includes the existing Advisory Committee members that are from various local organizations, City's administrative staff, project consultants, and citizens of Edmonton. The plan was generally guided by the public through their input and feedback after conducting surveys, panels, conferences, and online activities.



The plan indicates that 3,000 “Edmontonians” participated in the plan’s consultation process and stakeholders throughout the community were willing to share their views and opinions regarding the local food system. Additionally, Edmonton’s Food and Agriculture Strategy was developed by an Advisory Committee comprised of 15 stakeholders and experts in the topics of agriculture, food systems, economic, community, and land development. Similar to the New Haven Food Action Plan, this plan provides a broad range of individuals and groups of people that are heavily involved in establishing programs that will assist in the development of a resilient food and urban agriculture system.

Table 3.2. Table of Questions and Descriptions for Health Concerns		
Question No.	New Haven, Connecticut - USA	Edmonton, Alberta - Canada
<p>2.1.A</p> <p>Does the community address healthy food for all groups of people by taking into consideration their economic, social, and built environment?</p>	<ul style="list-style-type: none"> • Addresses sustainability and the food action plan through environmental, public health, and economic sustainability 	<ul style="list-style-type: none"> • Encourages a resilient food and urban agriculture system that contributes to the overall sustainability of the city
<p>2.1.B</p> <p>How has the community address the short-term and long-term health risks associated with food deserts?</p>	<ul style="list-style-type: none"> • Considers health impacts for children, adolescents, and adults • Encourages local stores to sell fresh produce over unhealthy food items 	<ul style="list-style-type: none"> • Establishes the Edmonton Food Council as a critical factor in both short-term and long-term oversight of health strategies
<p>2.1.C</p> <p>Is there a list of community partners or collaborators that helped the community identify health issues and address strategies? Will they continue to provide assistance?</p>	<ul style="list-style-type: none"> • Acknowledges the community partners that they worked with by providing a list of council members, affiliate members, and youth coalition members • Continues to build partnerships to identify food issues in the community 	<ul style="list-style-type: none"> • Acknowledges the Food and Urban Agriculture Advisory Committee members. This includes farmers, developers, academic advisors, and community organizers • Provides a list of engaging stakeholders and potential partners



Food Systems


2.2.A: Local Food Systems

While the City of New Haven, Connecticut has a population of around 130,000, the City of Edmonton, Alberta in Canada has around 730,000. Taking into account the population sizes, New Haven is considered a small-scale city whereas Edmonton is considered large-scale. In order to improve the food system and provide guidance on food policy, an ordinance was passed by the New Haven Board of Alders to establish the New Haven Food Policy Council (NHFPC). Throughout the plan, there are goals and strategies that aim to address food issues and the needs of all residents in the City of New Haven. While partnered with CitySeed, a local organization, the NHFPC received a grant to fund a Community Food Systems Coordinator. The responsibilities of this coordinator include overseeing the implementation of the Food Action Plan, addressing food insecurity and obesity, encouraging healthy food efforts, building partnerships throughout the community, and researching ways to strengthen sustainable practices in the food system. In order to build a healthy, sustainable food system, the plan also considers the consequences of poverty, double-digit unemployment, and a high crime rate. To minimize the impacts of food system issues, a strategy in the plan indicates the need to conduct a comprehensive analysis of the City's food system as well as develop a plan to address the opportunities and challenges in the analysis. The analysis must consist of growing, processing, distributing, marketing, disposing, cooking and eating, and shopping in pursuance of providing healthy food to communities.

As for Edmonton's Food & Urban Agriculture Strategy, the plan recognizes that the components of a food system can pose planning and food-related issues. The components consist of food production, processing, distribution, consumption, and waste management. The food system impacts and is impacted by land use, urban design, transportation, economic development, the cost of living, the environment, and the overall health of the population. The strategy framework of the plan is dependent upon the scale and size of the City of Edmonton. Also, the goals and recommendations stated in the plan will be measurable depending on the community size. Since the City has a large population compared to the City of New Haven, most strategies and recommendations are evaluated at the local level with the assistance of public, private, and community partnerships. Since every community has varying issues and concerns, it is necessary to keep in mind the location of food and agriculture related businesses, primary production, and processing and distribution facilities, as well as where the majority of jobs are concentrated. The plan categorizes each community as peri-urban, urban residential, inner urban, an inner urban core in order to evaluate pertinent issues and maximize the potential for addressing these issues. In comparison with the New Haven Food Action Plan, this plan is more specific when it comes to addressing local food system issues. As shown in Figure 3.2.2, Edmonton's Food & Urban Agriculture Strategy provides a detailed chart of the solutions that pertain to each community.

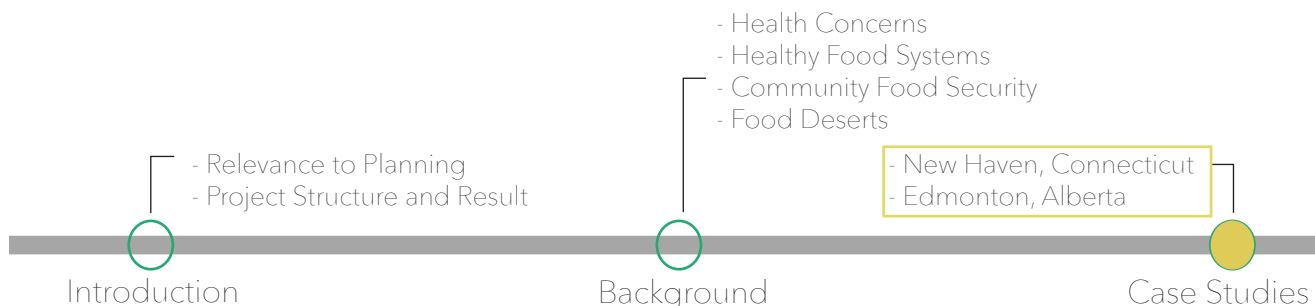


Figure 3.2.2. Per-urban to Inner Urban Core Transect



	PERI-URBAN	URBAN RESIDENTIAL	INNER URBAN	INNER URBAN CORE
	Peri-urban	Urban		
FOOD PRODUCTION	<ul style="list-style-type: none"> • Larger tracts of farmland • Market Gardens • Hobby Farms • Small livestock • Bees and Hens 	<ul style="list-style-type: none"> • Backyard Gardens • Edible landscaping in parks and public right of way • Community gardens and orchards • Possibly bees and hens (pilot) 	<ul style="list-style-type: none"> • Community gardens • Rooftop gardens • Private (condo) food gardens • Edible landscaping in parks and public right of way 	<ul style="list-style-type: none"> • Rooftop gardens • Private (condo) food gardens • Edible landscaping in parks and public right of way
PROCESSING	<ul style="list-style-type: none"> • On farm processing and preserving 	<ul style="list-style-type: none"> • Neighbourhood Food Hub / satellites 	<ul style="list-style-type: none"> • Food Hub (community food centre) 	<ul style="list-style-type: none"> • Food Hub (community food centre)
STORAGE & DISTRIBUTION	<ul style="list-style-type: none"> • Aggregation center • On-farm cooler and dry storage 	<ul style="list-style-type: none"> • Cellars 	<ul style="list-style-type: none"> • Community root cellars • Fresh box delivery 	<ul style="list-style-type: none"> • Community root cellars • Fresh box delivery
BUYING & SELLING	<ul style="list-style-type: none"> • Farm gate sales • Rural farmers' markets 	<ul style="list-style-type: none"> • Farmers' markets • Grocery stores 	<ul style="list-style-type: none"> • Farmers' markets • Grocery stores • Food programs 	<ul style="list-style-type: none"> • Farmers' markets • Food programs
EATING & CELEBRATION	<ul style="list-style-type: none"> • On farm tastings • Home consumption 	<ul style="list-style-type: none"> • Home consumption • Restaurants 	<ul style="list-style-type: none"> • Food trucks, Restaurants, Patios • Cooking programs • Community kitchens 	<ul style="list-style-type: none"> • Street festivals, Food trucks, Restaurants, Patios • Community kitchens
WASTE & RECOVERY	<ul style="list-style-type: none"> • On farm waste management • Reduced packaging at farm gate 	<ul style="list-style-type: none"> • Residential composting • Restaurant food waste pick • Reduced packaging 	<ul style="list-style-type: none"> • Condo / home composting • Reduced packaging • Office composting 	<ul style="list-style-type: none"> • Reduced packaging • Office composting program
EDUCATION & GOVERNANCE	<ul style="list-style-type: none"> • Training and Incubation farms for new farmers • Extension services • Provincial crop and farm research • University programs • Opportunities for new immigrants • Farmer training 	<ul style="list-style-type: none"> • Training for urban gardeners • School programs • University programs • Urban gardener training • Food preparation • Nutritional advice 	<ul style="list-style-type: none"> • Training for urban gardeners • School programs • University programs • Urban gardener training • Food preparation • Nutritional advice 	<ul style="list-style-type: none"> • Training for high tech urban gardeners • Urban gardener training • Food preparation • Nutritional advice

Source: Fresh: Edmonton's Food & Agriculture Strategy (2012).



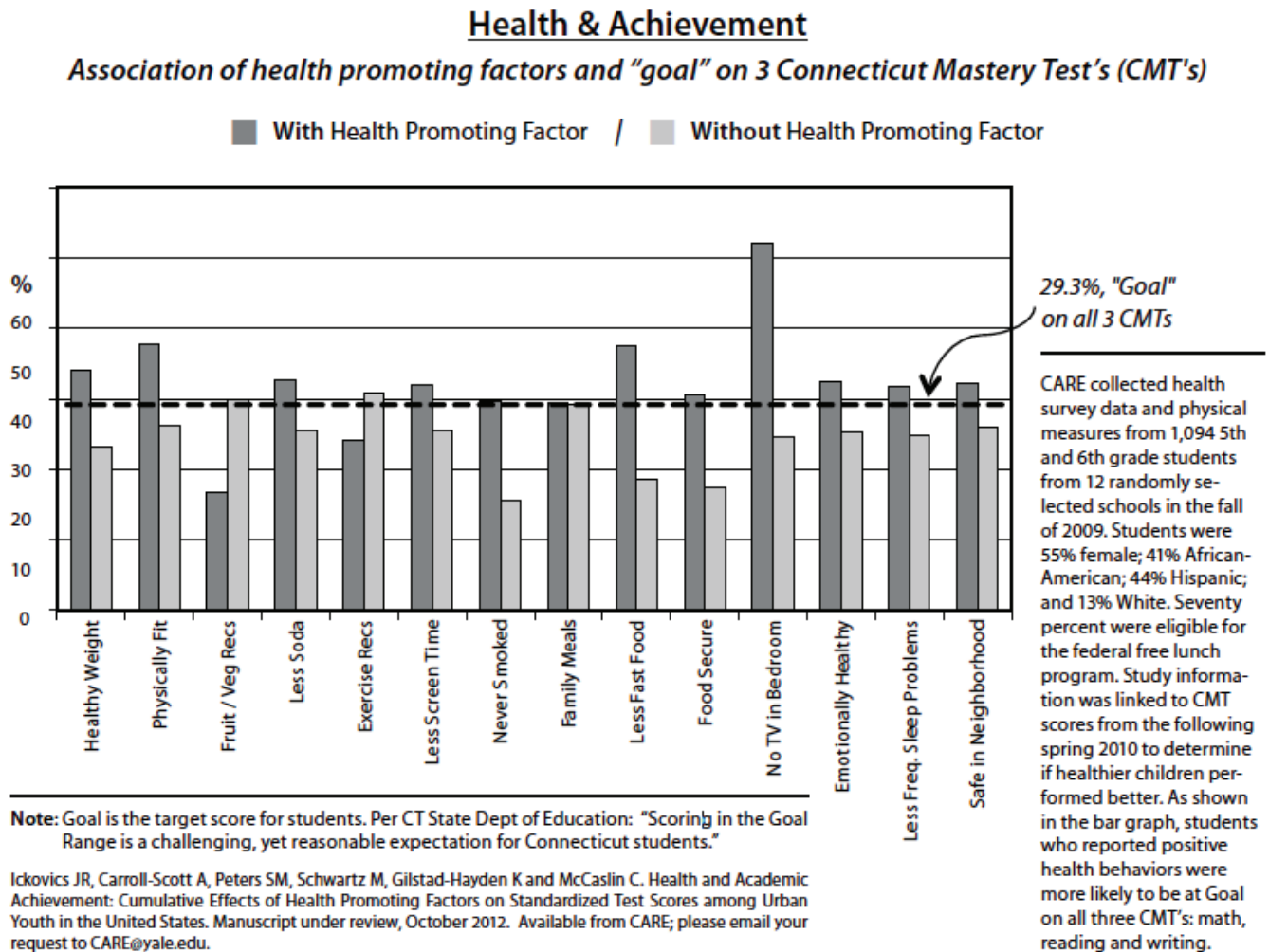
2.2.B: Healthy Food Choices

The NHFPC seeks to influence healthy food choices for low-income, minority, and underserved populations through the specified strategies throughout the New Haven Food Action Plan. Although these communities may be more accustomed to fast food and unhealthy vending machines, the plan makes it essential to provide people with the skills and knowledge they need to choose and cook healthy food daily. Several learning opportunities include training younger residents in farming and agricultural business, basic cooking skills, and nutritional advice. To further encourage healthy food choices, diverting the attention of consumers away from unhealthy food through marketing tactics is recommended. Since people are often swayed by what they see on television, the Internet, as well as other media sources, the plan suggests that there should be more awareness of the extent to which food companies market their product. As consumers understand more about the product, they can make more informed decisions about food and their health. Also, the plan is heavily focused on the health impacts for children. Marketing strategies also pertain to children's perspective of food by concentrating on the increase of advertisements for fresh fruit, vegetables, whole grains, as well as locally-grown and unprocessed foods. By targeting children through nutrition and health education, they are likely to perform better in school and have positive health behaviors. According to the graph on **Figure 3.2.3**, there is a direct correlation between the health and achievement of children.

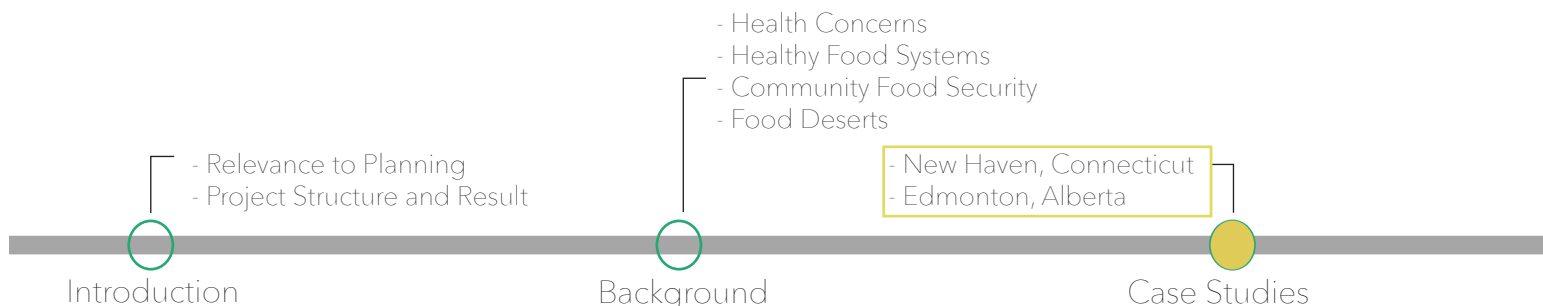
As regards to Edmonton's Food & Urban Agriculture Strategy, the Advisory Committee seeks to influence food choices through innovative and relatable design approaches that reflect and embrace the culture of Edmonton's new and emerging minority groups. While taking into account these considerations, the plan emphasizes on representing the diversity of their culture through the food they buy, cook, and eat. The plan discusses the creation of community kitchens, where there will communal cooking and sharing of meals in a social atmosphere. These community kitchens can be used as a gathering space for food preservation and healthy food preparation classes and activities. Although the New Haven Food Action Plan suggests cooking classes and educational programs for their community, it only touches upon the subject of culture representation by generally mentioning a collective approach to the inclusiveness of all groups of people. On the other hand, Edmonton's Food & Urban Agriculture Strategy specifically mentions the necessity of involving culture in the planning of healthy food communities. In terms of mentioning children, the New Haven Food Action Plan is more heavily focused on creating opportunities and programs for children to have access to nutritious and healthy food on a daily basis. As for Edmonton's Food & Urban Agriculture Strategy, there is mention of active collaboration with schools, hospitals, and universities, but there statistics are not provided to indicate the relationship between children's health and achievement levels. In this way, the New Haven Food Action Plan provides more detailed background information than Edmonton's Food & Urban Agriculture Strategy.



Figure 3.2.3. Children's Health and Achievement Graph



Source: New Haven Food Policy Council (2012).



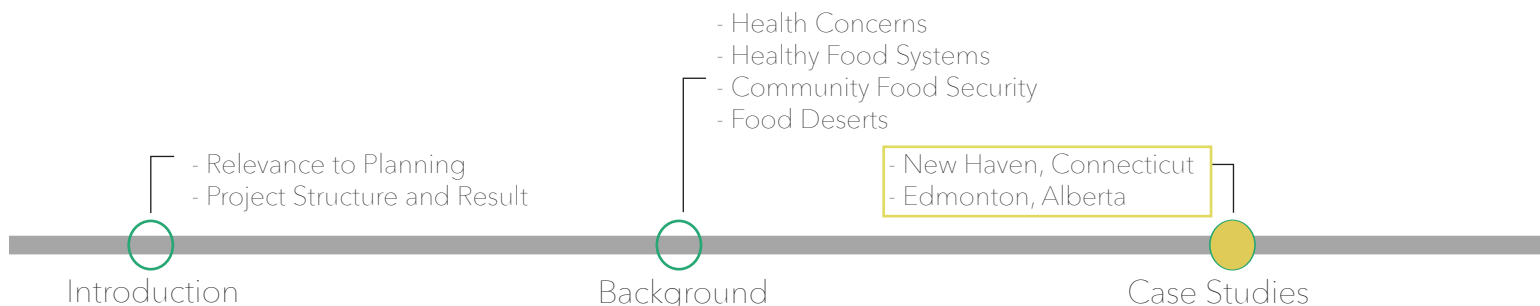
2.2.C: Food Consumption

Community members are often compelled to consume food depending on their time, availability, budget, and preferences. In order to positively affect the lifestyle of all groups of people, the New Haven Food Action Plan specifies the need to support healthy food businesses and locally-grown food because they serve as catalysts for economic growth. Since schedules and jobs heavily influence the food decisions of residents, it is important to keep these factors in mind. The plan indicates that if consumers shift their preferences to locally-grown foods, then there is a chance for their city and surrounding county to have an economic boost through generated revenues. To encourage growing food locally through community and backyard gardens, the plan shows the need to provide financial support in terms of adequate tools, seeds, and materials. Also, the plan reveals that community gardeners are more likely to consume fruits and vegetables because they grew these healthy foods themselves. Other opportunities include programs on cooking and food shopping, school gardens, agriculture, and valuable skills for community food building. As residents are exposed to various programs and educational initiatives, their understanding of the impact of healthy and unhealthy food will broaden. With the acquired knowledge and skills, residents have the ability to make healthy decisions regarding what they should consume.

Moreover, Edmonton's Food & Urban Agriculture Strategy recognizes that what, how, and why people consume food are affected by their availability, geographic location, financial circumstances, and cultural preferences. Food consumption in the City of Edmonton involves the consideration of households, restaurants, grocery stores, and institutions (schools, universities, hospitals). The plan acknowledges that there is a need to provide opportunities that promote the enjoyment and convenience of healthy food for all groups of people within a community. The plan mentions that recognizing the diversity of scale and players involved in the local food system will assist in the rebuilding of healthy communities. The plan recommends community gardening, which is the practice of growing and raising food as a group or individual, for the purpose of having access to healthy food at home or in close proximity to home. To encourage this practice, financial support is needed to provide bed allotment plots, tool sheds, water access, signage, and other features. In order to actively engage the community and communicate the health benefits associated with nutritious food, the plan suggests educational programs that involve the many levels of learning and knowledge transfer around growing, preparing, preserving, as well as enjoying food. As these programs promote the awareness for the residents' time, availability, budget, and preferences, there is the potential for these residents to take advantage of the healthy food resources throughout the community. In this respect, the two plans are very similar to one another in terms of encouraging residents to be an integral part of the community through programs that promote the sharing of resources as well as collaboration through learning and partnering.



Table 3.3. Table of Questions and Descriptions for Food Systems		
Question No.	New Haven, Connecticut - USA	Edmonton, Alberta - Canada
<p>2.2.A</p> <p>Are the strategies that strengthen the local food system appropriate for the community size? How different are they in terms of small-scale and large-scale cities?</p>	<ul style="list-style-type: none"> • Encourages a robust, sustainable, and healthy food system in the city • Components of a food system 	<ul style="list-style-type: none"> • Key dimensions and components of a food system • Strategy framework for food system opportunities
<p>2.2.B</p> <p>How does the community influence healthy food choices for low-income, minority, and underserved populations?</p>	<ul style="list-style-type: none"> • Seeks to provide residents with the skills and knowledge to choose and cook healthy meals • Suggests marketing efforts • Target children to help them develop and establish life-long healthy eating habits 	<ul style="list-style-type: none"> • Reflect and embrace the culture of Edmonton's new and emerging minority groups • Represent the diversity of their culture through community kitchens
<p>2.2.C</p> <p>Does the community encourage the consumption of healthy food by taking into account time, availability, budget, and preferences for all groups of people?</p>	<ul style="list-style-type: none"> • Indicates that community-based strategies to increase access to healthy food improves community health • Encourages community and backyard gardens • Educate residents about the consumption of healthy and unhealthy food 	<ul style="list-style-type: none"> • Eating and celebration involves the preparation and enjoyment of healthy food • Community gardening • Communicate the health benefits of nutritious food through education and governance



Food Security

2.3.A: Affordable and Nutritious Food

To bridge the gap of traveling far for healthy food, the New Haven Food Action Plan emphasizes on effective bus transit locations for people of all ages and abilities. Strategies in the plan indicate greater accessibility for senior citizens through various transportation programs and services. For instance, senior citizens need financial assistance for food and transportation, which has a major impact on their health and quality of life. As for residents who live on a limited fixed income and are homebound most of the time, they also have restricted access to transportation. Due to these circumstances, it is important to consider all groups of people when assessing the improvement of linkages throughout the community. Through the implementation of better lighting, crosswalks, environmental measures, and transportation systems, all groups of people are given the opportunity to choose healthier foods. By considering walkability with pedestrian-friendly elements in areas that sell fresh produce and other healthy food items, residents are more likely to find access to these food stores. The plan suggests conducting a survey to determine rider needs related to food access and collaborating with transit agencies will provide greater information regarding how to address the needs of the community. Also, the plan mentions that New Haven has been establishing their food culture since 2011. Currently, there are full-service, centrally-located grocery stores that are serving the needs of multiple neighborhoods and communities.

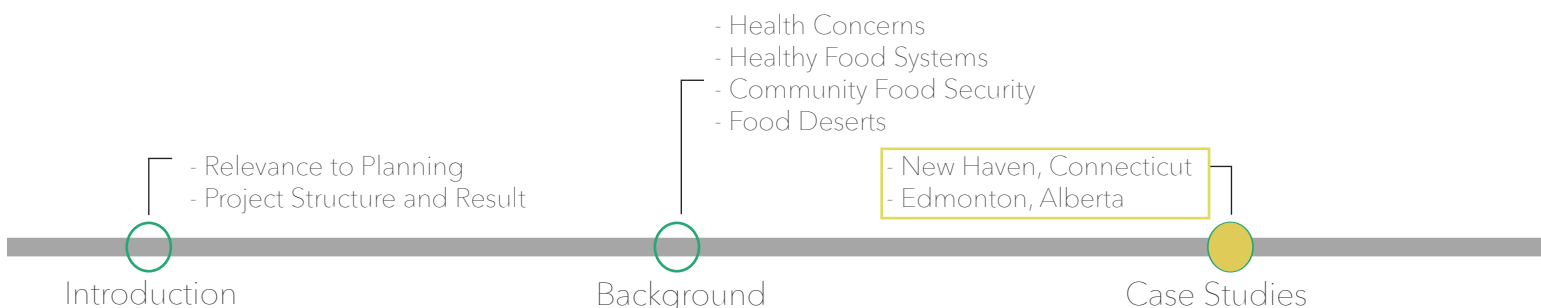
As for the Edmonton's Food & Urban Agriculture Strategy, there are strategic directions and plans to develop transit stations as well as transportation for all groups of people. The plan mentions that mobile markets are meant to provide fresh produce and other foods in convenient locations, such as transit stations and business districts, in order to address food security issues. Similar to these mobile markets, the plan suggests food trucks as a way to bring affordable and nutritious food to various communities. The food trucks are mobile markets that rely on temporary licenses to operate in high-pedestrian traffic areas, but they serve a wide-range of breakfast, lunch, dinner, and snack options within walking distance. The plan highlights that people are drawn to plazas and streetscapes through food. By creating nearby festivals and events that are concentrated around music, street life, entertainment, and food, this provides people with a reason to participate. As long as there is good food being made, served, and enjoyed, people will likely flock there. For example, Whyte Avenue and 124th Street in the City of Edmonton have attracted a wide range of people by being a destination for food. Their success has been demonstrated through the popularity of the food trucks that gather there because they usually sell out before lunch hour begins. The New Haven Food Action Plan and Edmonton's Food & Urban Agriculture Strategy have both considered the impact of accessible places and walkability in order to improve the food environment.



2.3.B: Food Availability

For the purpose of promoting healthy food and minimizing the availability of unhealthy food, the New Haven Food Action Plan suggests the creation of “healthy food zones” nearby schools. By doing so, schools are encouraged to actively assess their food environment to serve the meet healthy food standards. The plan mentions establishing zoning regulations to prohibit mobile vendors from selling unhealthy food near schools. Instead of unhealthy snacks and beverages that poses health concerns for children and adolescents, vendors are expected to provide nutritious food that will likely contribute to better school performance. Furthermore, the plan recognizes that New Haven Public School District has been educating its students on the impacts of unhealthy food. In addition to removing vending machines with high-calorie snacks, they have also eliminated fried foods and sweetened beverages from the school breakfast and lunch lines. Since the community already has examples of high schools and community colleges that implemented these strategies, the community expands these projects by mentioning the successes and contributions to public health. Although these strategies provide a stepping stone for the community, the plan mentions that they are not enough to fully address obesity and other health concerns. In order to continue meeting the community health needs, it is essential to expand projects in low-income, minority, and underserved communities as well.

In addition, Edmonton’s Food & Agriculture Strategy considers other projects that focus on providing healthy food to local communities. The plan reveals that food security is when people meet their dietary needs and food preferences for an active, healthy life. Food security is when nutritionally adequate and safe foods are readily available in socially acceptable ways. For instance, there is no need to resort to emergency food supplies, scavenging, stealing, or other coping strategies. In terms of planning mechanisms, non-farm uses are often restricted to ensure that the land is only developed and used for food and agricultural purposes. The plan suggests that in order to support a wide range of food retail in new and existing neighborhoods, food accessibility could broaden if more research is conducted to evaluate the impacts of placing restrictive covenants on grocery store sites. By enabling fresh food kiosks and mobile markets to locate in or near food deserts, community centers, and sports complexes, there will be more opportunities for all groups of people to purchase affordable, nutritious food. In order to increase geographic access to fresh food sources and provide more opportunity for people to include fresh food in their diets, the plan mentions that it is necessary to consider neighborhood-scale food retail. On the bright side, the plan states that there are over 60 community gardens in Edmonton, especially in parks, school grounds, vacant lots, and boulevards. In this way, the City of Edmonton has been restricting the availability of unhealthy foods in this area. The New Haven Food Action Plan and Edmonton’s Food & Urban Agriculture Strategy have similarly identified ways to expand projects that promote healthy food while discouraging the development of unhealthy food places.



2.3.C: Community Resources

There were indicators of poverty and food insecurity in the City of New Haven. The New Haven Food Action Plan specifies that a great number of residents did not meet their nutritional needs at all times. In the meantime, many students were eligible for free or reduced-price lunches. Especially for the New Haven residents who were from low-income neighborhoods, surveys showed the incapability of purchasing healthy food on a regular basis, which suggests malnutrition caused by an inadequate food supply. The plan indicates various efforts to provide resources for job growth, educational programs, and affordable housing. The plan mentions that the Economic Development Corporation of New Haven, Town Green Special Services District, and Gateway Community College have been evaluating food business growth in areas throughout the city in order to promote local jobs and healthy foods. In terms of job growth, the plan indicates economic development efforts that seek to establish a Food Business Incubator at the New Haven campus of Gateway Community College in order to expand the City's food economy. To further incentivize healthy food businesses, store-front renovation grants are needed to attract residents and visitors. The purchase of locally-grown foods by the City of New Haven's businesses, hospitals, and schools is a great way to strengthen the local economy, increase farm viability, and encourage the development of more food businesses. As for educational programs, the plan indicates that providing basic cooking skills as well as awareness for the health concerns associated with convenience, unhealthy, and processed food will influence healthy food decisions. Although the plan does not directly mention affordable housing, mobile market employees have been selling produce at a 100-unit senior citizen public-housing complex in New Haven in order to provide further accessibility to healthy, affordable food.

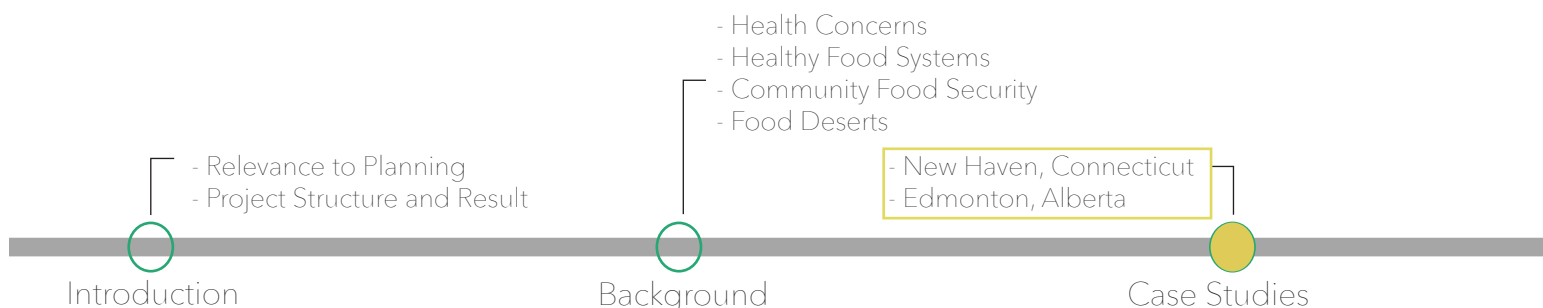
On the other hand, Edmonton's Food & Urban Agriculture Strategy takes into account the resiliency and foresight of a community. The plan specifies that it is essential for communities to identify future growth based on where there is room to expand, which areas need further evaluation, and where people can live near workplaces as well as food places. By producing and processing food locally, the city is less susceptible to food price increases and food supply interruptions. Through the conservation of some agricultural land and consideration for energy prices, food prices, climate, and natural disasters, the food supply will be greatly impacted. Several of the plan's strategy directions include partnering with regional municipalities, community organizations, and advocates to deliver services and programs to vulnerable populations. In order to ensure a stronger, more vibrant local community, the plan suggests that providing more jobs and business opportunities in the local food and agriculture sectors will encourage "Edmontonians" to buy, share, and enjoy local and regional food. In terms of education programs, the plan mentions that food skill education can enable access to an array of food system information.



As long as there are collaborative efforts to develop and support education and training programs, people could have a better understanding of their connection to the food system. For instance, they can determine how they are affected by the food system and how the food system is affected by their actions. Additionally, the plan recognizes in the livability principle excerpt that there needs to be access and affordability for people of all incomes to have access to affordable housing, food transit, and core social services, which affects the competitiveness of the city in attracting and retaining residents. Overall, both plans have addressed the impact of food insecurity through job growth, educational programs, and affordable housing.

Table 3.4. Table of Questions and Descriptions for Food Security

Question No.	New Haven, Connecticut - USA	Edmonton, Alberta - Canada
<p>2.3.A</p> <p>In what ways has the community address food security by providing more affordable and nutritious food within walking distance?</p>	<ul style="list-style-type: none"> • Improve public transportation and walkability to increase access to healthy food stores 	<ul style="list-style-type: none"> • Decide on where cost-effective public transit can be developed • Establish mobile markets and food trucks
<p>2.3.B</p> <p>What does the community do in order to expand projects that promote healthy food while restricting the availability of unhealthy food?</p>	<ul style="list-style-type: none"> • Creating “healthy food zones” in and around schools • Eliminate fried foods and sweetened beverages from breakfast and lunch lines 	<ul style="list-style-type: none"> • Promotes a healthier, more food secure community • Support a wide range of food retail in new and existing neighborhoods
<p>2.3.C</p> <p>How does the community provide resources for job growth, educational programs, and affordable housing to minimize the impact of food insecurity?</p>	<ul style="list-style-type: none"> • Takes into account food insecurity by providing necessary resources • Seeks assistance from local organizations and institutions 	<ul style="list-style-type: none"> • Identify future growth based on expansion factors • Provide access and affordability for people of all incomes to have access to affordable housing, food, transit, and core social services



Food Deserts

2.4.A: Healthy Eating Places

The New Haven Food Action Plan addresses the lack of healthy eating places by a strategy that increases the number of neighborhood-based stores selling fresh produce and other healthy food items. The plan aims to increase the distribution and sale of locally-grown and healthy food items to neighborhood-based stores that is accessible for all groups of people. The stores are considered in the participation of the New Haven Healthy Corner Store Initiative, which incentivizes stores to participate by showcasing fresh produce and financial incentives that reimburse storeowners if their fresh food does not sell. In order to address the limited resources in food desert communities, the plan suggests sharing resources that support urban growing, which includes tools and materials for planting. Several farm-to-market programs that promote the share of Connecticut-grown food are through Community Supported Agriculture (CSA) and Community Supported Markets (CSM). While the CSA program allows individuals to invest in a portion of the season's harvest and pick up a weekly share of the produce, the CSM allows farmers to participate in a farmers' market that contributes to the weekly share of produce that individuals purchase at the beginning of the season. The plan indicates several resources that have been showing effort to strengthen New Haven's food economy include the Economic Development Corporation of New Haven, Town Green Special Services District, food business plans, and small urban farms. These resources have challenged local businesses and restaurants to think critically about the impact of job creation and locally-produced food.

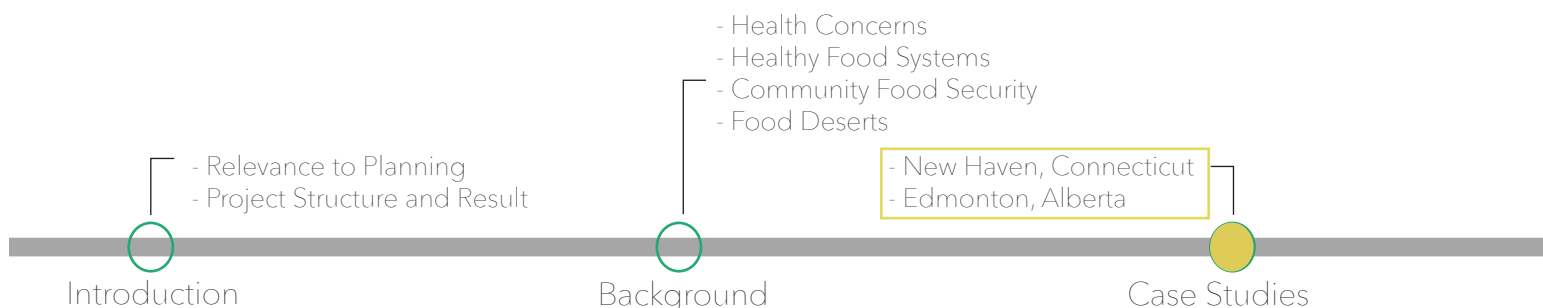
As for Edmonton's Food & Urban Agriculture Strategy, the recommendations under each strategic direction inform actions that are necessary for creating healthy eating places. For instance, the plan recommends that community organizations and partners assist in the creation of appropriate spaces and opportunities for local food businesses to operate and expand. Additionally, the improvement of neighborhood-scale food infrastructure encourages the creation of small-scale neighborhood food hubs, commercial kitchen upgrades, processing and storage equipment purchases, and other initiatives that address the needs of communities and neighborhoods. In order to address the issues associated with the lack of healthy eating places, it is necessary to understand the city's context. The plan suggests that an assessment and mapping exercise of Edmonton's food system assets will capture the background information that is needed to evaluate the concerns of each area. The map of the various food assets comprises of food processing, storage, distribution, and retail. The food assets include agricultural land, community gardens, grocery stores, farmers' markets, food and culture-related gathering spaces, street vendors, local restaurants, food festivals, and meal programs. The plan specifies that a key component of the asset map is generating ideas with partners and community members. In this way, partners can make necessary decisions to contribute to the sharing of resources and address any limited resources. Similar to the New Haven Food Action Plan, Edmonton's Food & Urban Agriculture Strategy takes into consideration improvements that are appropriate for communities that have vulnerable resources.



2.4.B: Regulations and Programs

The New Haven Food Action Plan mentions that the District Wellness Committee drafted the New Haven Public School Wellness Plan in order to address malnutrition for students. Health Heroes, the Physical Activity and Wellness (PAW) program, school-based wellness teams, and school gardens are several school initiatives that have been attempted to influence people to think about the benefits of nutritious food. Through local organizations and community-based programs, youth as well as adults are given the opportunity to learn more about how food and health are interrelated. To promote food accessibility, the plan suggests donations to emergency food providers, such as, universities, hospitals, soup kitchens, food pantries, and food banks. This includes a list of these food providers as well as food donation safety requirements to ensure the health the every new Haven resident. The plan also recommends the encouragement for more food businesses to donate to these food providers rather than throwing their food away. This method is effective because it reduces the amount of food waste incinerated in trash combustion facilities as well as provides additional healthy food for New Haven residents.

Correspondingly, Edmonton's Food & Urban Agriculture Strategy emphasizes that fresh produce has the most nutritional content closest to when it is harvested, which implies that local produce will be more healthful for Edmonton residents. As production heightens in the city, this also suggests additional access points to fresh local foods for all groups of people. Several programs that the plan mentions include food hubs, fresh box delivery, university programs, farmer training, and rooftop gardens. The food hub concept reflects the needs of suppliers and customers. While businesses are given access to storage, aggregation and distribution services for commercial uses, the concept also takes into account retail spaces, operating spaces for event venues, farmers' markets, as well as educational and cultural programs. Additionally, the plan recommends the creation of a local food purchasing policy, which encourages organizations and institutions to contribute to the local food supply and demand. The activities that focus on keeping the community engaged in smaller scale food and urban agriculture activities include a food bank, fresh food box program, space for non-profits, special event venues, workshops, and other diverse opportunities. In comparison with the New Haven Food Action Plan, this plan also provides a wide selection of regulations and programs that aims to reduce malnutrition and promote food accessibility. Although the strategies of both plans are not exactly the same, they are appropriate for the community size and equally innovative.



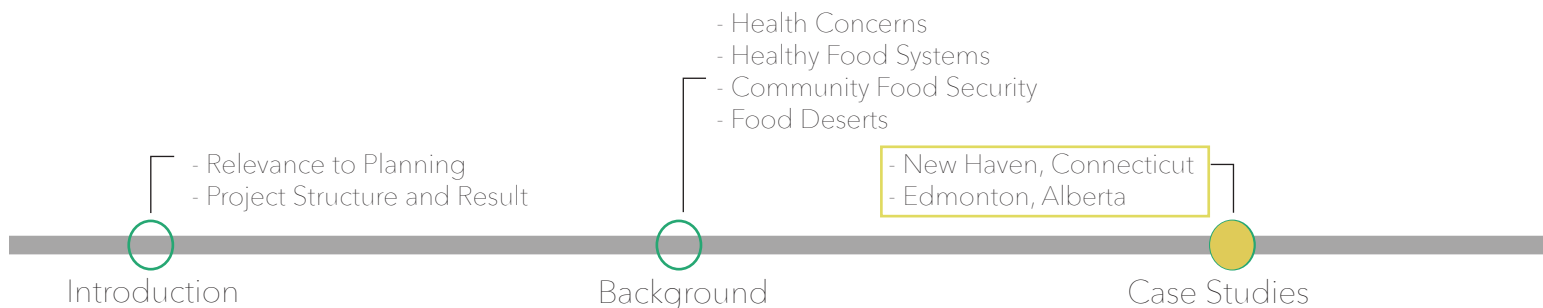
2.4.C: Public Participation

The New Haven Food Action Plan suggests that City administration can positively influence the food environment through community and economic development as well as engagement efforts for residents of all ages, race, and ethnicity. Although the plan does not directly mention planners, it discusses how the City of New Haven can assist in the identification of food system issues and provide guidance to the community. The plan discusses that they have been engaged at the local and state level on a broad range of issues that pertain to food deserts. This includes rewriting zoning and health codes to improve the quality of food in public schools, support the growth of urban agriculture (farms and school gardens), and develop a policy primer on school food in order to address obesity. The City of New Haven Health Department and Office of Sustainability collaborate with the NHFPC to exchange ideas and carry out decisions. Planners are expected to be supportive and involved in the implementation of the strategies throughout the plan. City offices and departments could increase SNAP and WIC purchases at farmers' markets through outreach efforts. In order to stimulate public participation, the plan suggests that planners provide opportunities to actively engage students in the decision-making process about school food. Also, it is recommended in the plan that planners develop and implement policy that sets the highest nutrition standards for any foods or beverages sold or distributed during city-sponsored events or on city-owned property. As partnerships continue to build and food system issues are acknowledged as well as addressed, planners are likely to have a larger impact on the community as a whole.

In the Edmonton's Food & Urban Agriculture Strategy, there is an entire section on public consultation and engagement, which indicates that the public participation is needed to carry out any recommendations throughout the plan. The methods of engagement includes citizen panels, stakeholder workshops, public opinion surveys, land owner surveys, food in the City conferences, social media, open houses, and "fresh" feedback surveys. In order to get effective feedback and gain further support from all members and residents throughout the community, the plan acknowledges that there needs to be research, consultation, discussion, analysis, and coordination with other City plans as well as initiatives. Through the identification of issues and public consultation phase, the ideas revolved around available urban spaces, access to local food, agricultural land protection, food and community cohesion, balanced growth, economic development, educational programs, infrastructure improvements, sharing of resources and information, and City staff collaboration. The plan demonstrates that there is a strong connection between the City, public, and food environment. The relationship between the New Haven Food Action Plan and Edmonton's Food & Urban Agriculture Strategy consist of their heavy emphasis on public participation, collaboration, community resources, issues identification.



Table 3.5. Table of Questions and Descriptions for Food Deserts		
Question No.	New Haven, Connecticut - USA	Edmonton, Alberta - Canada
<p>2.4.A</p> <p>How has the community address the lack of healthy eating places and limited resources in food desert communities?</p>	<ul style="list-style-type: none"> • Locally-grown and healthy food items at neighborhood-based stores • Programs to share resources and Connecticut-grown food 	<ul style="list-style-type: none"> • Recommendations to improve local food spaces and lack of access to healthy food • Assess and map food system assets
<p>2.4.B</p> <p>What regulations and programs have the community identified to be effective for reducing malnutrition and promoting food accessibility?</p>	<ul style="list-style-type: none"> • Initiatives and programs in schools to address health and nutrition • Donations to emergency food providers 	<ul style="list-style-type: none"> • Local fresh produce has nutritional content closest to when it is harvested • More production in the city
<p>2.4.C</p> <p>What have planners done to positively shape the food environment and stimulate public participation?</p>	<ul style="list-style-type: none"> • Engage residents of all ages • Have been engaged at the local and state level on a broad range of issues • Collaborate with the City of New Haven Health Department and Office of Sustainability for decision-making 	<ul style="list-style-type: none"> • Public consultation and engagement to discuss findings and recommendations • Strong connection between the City, public, and food environment



3.3. Broad Criteria Evaluation

Direct and Indirect Approaches to Food Deserts

Although the plans do not heavily emphasize on food deserts specifically, they address the issues that are associated with food deserts. For instance, there are discussions regarding possible health impacts, as well as food systems, security, and accessibility for low-income and diverse communities. The direct approaches that the plan specifies include identifying local food system issues, providing healthy eating places, influencing healthy food choices, as well as expanding projects that promote healthy food availability, accessibility, and consumption. By providing more affordable and nutritious food nearby workplaces and neighborhoods, communities are less restricted to healthy food options. As for the indirect approaches, the plan mentions that several ways to minimize the impact of food deserts are education, training, and economic development. If knowledge, resources, and opportunities are shared, people are more likely to understand the effectiveness of addressing the needs of food desert communities. As community resources contribute to the job growth, educational programs, and quality of living situations of food desert communities, improvements will be evident over time. In this way, community members are given the chance to make informed decisions about their health and become more aware of the consequences of food deserts.

Feasibility of Goals and Strategies

While the plans encourage a healthy, sustainable food system by defining key components, goals, strategies, and recommendations, they also take into considerations the size as well as scale of the community. The New Haven Food Action Plan has defined three main goals in order to implement a sustainable food system. The goals are highlight the improvement of healthy food accessibility, local food economy, as well as education and marketing efforts to promote healthy food choices. Edmonton's Food & Urban Agriculture Strategy has identified five goals for building a sustainable food and urban agricultural system. These goals include vibrant local economy, food secure community, healthier ecosystems, energy, emissions, and waste efficiency, as well as inviting places. The strategies determined in both plans for the purpose of meeting these goals are appropriate for the community size. Although both plans have identified similar issues and potential solutions, their approach to solving problems is slightly different. Since the City of Edmonton is larger than the City of New Haven, it is essential for them to evaluate the varying sectors of the community. In order to effectively identify Edmonton's issues more thoroughly, the plan indicates the importance to break down these sectors for further evaluation. The sectors range from peri-urban (outskirts) to inner urban core, which have distinct strategies that are feasible and appropriate for the area. As for the City of New Haven, its small-scale characteristic allows issues to be evaluated in a more concentrated manner. While an analysis of the areas within the community have been conducted, the strategies suggested in the plan are relevant for all groups of people dispersed throughout the city. Although the two plans share very similar goals and strategies, their take on the matter varies depending on the health problems surrounding their diverse populations.



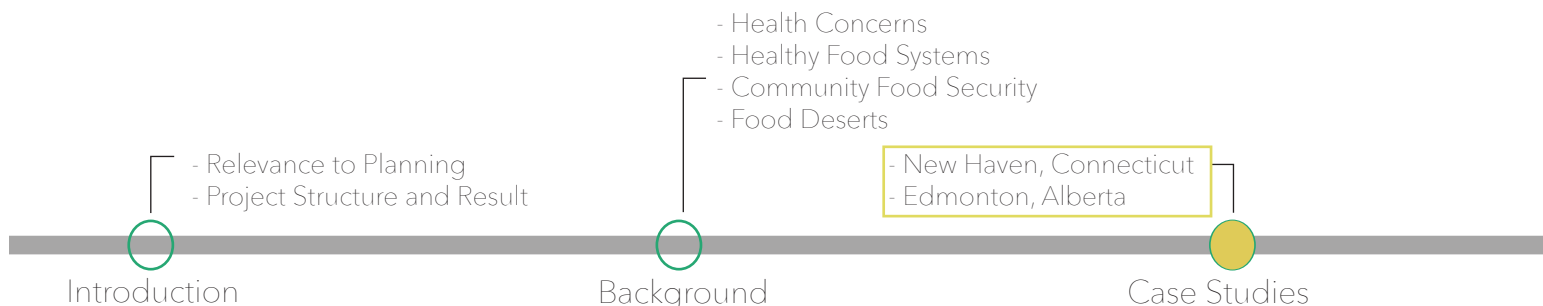
Community Collaboration and Empowerment

The plans consistently reiterate the importance of community collaboration and empowerment throughout the development of goals, strategies, implementations, and recommendations. Both plans acknowledge the value of City administration, food councils, partnerships, advisory committees, youth involvement, and public participation in the process of identifying issues and concerns within the community. The plans indicate that providing opportunities for learning and sharing will strengthen collaboration and allow people to be engaged in health- and food-related discussions. In order to empower communities to be an integral part of solving problems associated with food deserts, the plans determine suitable and feasible programs as well as resources. The programs and resources are meant to support the needs of the community and minimize the impact of food deserts. The plans emphasize that these collaborations need to be maintained and continued over time in order to ensure that community activities are fully supported. In addition, the plans mention that it is essential for residents to provide further input and feedback by being involved in conferences, surveys, and activities online as well as offline.

Clarity and Presentation

The plans provide a clear understanding of the mission, goals, strategies, and recommendations. There are many charts, graphs, images, and graphics that motivate the user to continue reading. They both cover a variety of topics that are of a concern for residents, visitors, and all community members. Also, the plans take into account the themes that pertain to the issues of food systems. In order to effectively engage the community and capture their understanding of the topics, the New Haven Food Action Plan strategically separated into the main points that the NHFPC hopes to convey. The Table of Contents include acknowledgements for the collaborators, critical steps to building and sustaining the collaboration with community members, food action plan goals and strategies, and extensive explanations of the three main goals as well as the three elements of sustainability (Environmental, Public Health, and Economic).

Although both of the plans provide effective visual representations of their goals, strategies, and approaches, Edmonton's Food & Agriculture Strategy is more heavily involved in the community evaluation and issue identification process. The Table of Contents include a foreword on their partnership collaborations, food and urban agriculture reality, strategy building, document theme development, food systems and frameworks, strategic directions and recommendations, strategy enactment, and conclusions about Edmonton's future. While providing link to goals, links to consultation, example matrixes, strategic directions recommendations, the plan also defines jargons and terms that may be unfamiliar or new to the general public. In terms of document clarity, the Advisory Committee has delivered their message regarding food and urban agriculture system improvements very well throughout the plan.



End of Chapter 3.





Chapter 4

Interviews

CitySeed
City of Edmonton

This section examines the potential of transforming food desert communities into thriving, healthy food environments by conducting interviews with a community organization and public agency. The interviews were based on questions from the Background section and Case Studies section, which reviewed the New Haven Food Action Plan and Fresh: Edmonton's Food & Urban Agriculture Strategy. The interviewees are Ms. Tagan Engel, a member of CitySeed, an organization that promotes equitable, local food systems in New Haven, and Mr. Quan, a City staff member at the City of Edmonton. The CitySeed members collaborated with the City of New Haven to develop the New Haven Food Action Plan. As a City staff member, Mr. Quan was one of the project managers involved in the creation of Edmonton's Food & Urban Agriculture Strategy from the very beginning. The purpose of the interviews was to understand the case studies in greater detail and, ultimately, to reflect the responses in the recommendations of this report.

The following questions were asked:

1. *Have you noticed any changes that may have arisen from the plan? (Positive/negative/no changes)*
2. *Has the plan prepared you to plan healthy communities? Do you find it useful?*
3. *Is there anything that you would change about the plan?*
4. *In creating the plan, what do you think worked? What would you have done differently?*
5. *Can you tell me a little bit about your collaboration with city planners, city staff, nonprofits, and other community organizations?*
6. *What, if anything, in the plan has been implemented?*
7. *In developing the plan, can you tell me how you've involved low-income communities and communities of color? (What types of outreach did you do? How many community members were involved? Organizations involved? How long did the effort go on? Where did the outreach occur?)*

The interviews for both Ms. Engel and Mr. Quan are paraphrased in the following two sections.

4.1. CitySeed - Tagan Engel

1. *Have you noticed any changes that may have arisen from the plan? (Positive/negative/no changes)*

The New Haven Food Action Plan has influenced many changes in New Haven. Several positive changes include creating opportunities that unify people around objectives, cooperating with community members, building resources, and expanding collaboration to cover food system concerns. Other changes include expanding programs that support urban agriculture and address hunger issues as well as funding nutritional programs and free food for seniors.

2. *Has the plan prepared you to plan healthy communities?
Do you find it useful?*

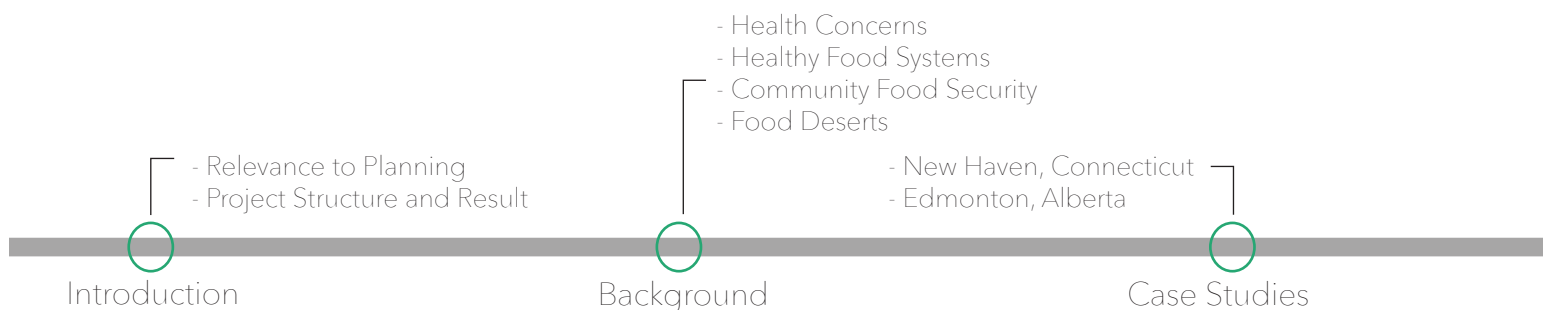
The Plan itself was created for the purpose of planning for healthy communities. Ms. Engel was heavily involved in the development process of the Plan. She finds it useful because it provides a framework and guidelines for assessing and improving food systems. Although it does not cover every topic relating to food issues, she mentioned that it is a great starting point for understanding the New Haven food system.

3. *Is there anything that you would change about the plan?*

Ms. Engel specified that the Plan did not focus on worker's rights and job creation as much as it should. She would've placed more emphasis on the community development and economic involvement section of the Plan. Since the Plan was established by a group of volunteers and not funded by the City, she mentioned that it would be helpful to receive funding for programs in order to promote healthy food. These volunteers were members of community organizations who would like to make a greater impact on the New Haven food system.

4. *In creating the plan, what do you think worked?
What would you have done differently?*

Public outreach and neighborhood meetings were impactful during the development of the plan because they had the opportunity to gain invaluable community input. Ms. Engel believes that the Plan suits New Haven because it was created for small cities with varying priorities from larger cities. If given more time, she commented that she would've liked to reach out to the business community and be more involved with the New Haven community in order to better understand their concerns. Since the Plan did not receive any funding prior to its release to the public, volunteers came up with an outreach strategy, trained people to do outreach, and gathered input from the community. Due to the lack of funding, the volunteers had to prioritize which goals to focus on. For instance, they focused on establishing an action plan for food access, education, and economic development. Also, she mentioned that they are constantly researching for ways to address poverty and hunger throughout the City of New Haven.



5. *Can you tell me a little bit about your collaboration with city planners, city staff, nonprofits, and other community organizations?*

Ms. Engel noted that she and the volunteers have conducted interviews with City staff from the Office of Sustainability, Health Department, and City Plan Department to evaluate existing regulations and how to improve the plan. The volunteers collaborated with the Office of Sustainability to establish the food component of the Sustainability Plan; the Health Department to understand how food impacts community health; and the City Plan Department to consult about zoning regulations and implement the specifics of the Plan.

6. *What, if anything, in the plan has been implemented?*

There are several things in the plan that have been implemented. Although Ms. Engel did not have time to go into greater detail, she mentioned that the City of New Haven has implemented increased meal programs and school foods improvement programs. Also, the biggest achievement is that the City plans to hire a Food Systems Director in the next few months, which has been included in the City's budget for this year.

7. *In developing the plan, can you tell me how you've involved low-income communities and communities of color? (What types of outreach did you do? How many community members were involved? Organizations involved? How long did the effort go on? Where did the outreach occur?)*

Most of the public outreach involved low-income communities and communities of color. Outreach responses indicated that Black and Latino populations were among the most involved and assessed during the Plan's development process. In addition, volunteers attended a food summit to present the plan, receive feedback, and work in groups to address issues. Participants were distributed into the Food Assistants and Hunger Group, Cooking and Food Education Group, and Economic Development Group.



4.2. City of Edmonton - Hani Quan

1. *Have you noticed any changes that may have arisen from the plan?
(Positive/negative/no changes)*

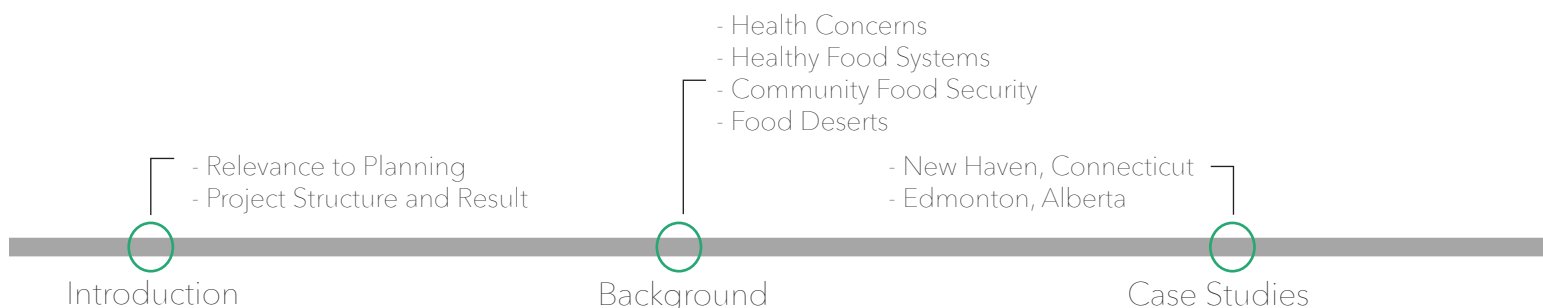
Edmonton's Food & Agriculture Strategy has influenced positive change, both culturally and socially. There have been dramatic changes in the last 10 years. Edmonton's Food & Agriculture Strategy began in 2011 and was approved by City Council in 2012. Seven different consultants were hired during the process. The main issue mentioned by the community was protecting agricultural land. Implementation of the plan began in 2013 and 2014. The Food Council was established shortly after, which was considered a best practice. In addition to stimulating public dialogue during the development of the plan, many people become informed and aware about local food issues. Currently, there are 80+ community gardens, 40+ food trucks, and 25+ farmers markets in the City of Edmonton.

2. *Has the plan prepared you to plan healthy communities?
Do you find it useful?*

The plan has influenced policy in the Planning Department, including in their Municipal Development Plan. Initially, in the planning process, there was an information gap between the planners and the public, with the public not understanding larger food system issues and the planners not understanding the concerns of the community members. The City responded to this gap with a City-wide strategy to: 1) Inform the public regarding all possible food issues; and 2) Engage the public regarding the content of the plan. In the meantime, the Planning Department continually has the opportunity to make suggestions and comments regarding the recommendations throughout the plan.

3. *Is there anything that you would change about the plan?*

Mr. Quan emphasized that the plan is particularly complex and comprehensive. When asked if there is anything that he would like to change about the plan, he mentioned that he would try to make it simpler to address only the main points. He specified that the recommendations were specific for the purpose of satisfying all stakeholders and community members. Although this holistic approach is beneficial for the community, providing an excess amount of information makes the material lengthy.



4. *In creating the plan, what do you think worked?
What would you have done differently?*

The creation of the plan's content was a relatively quick process, which took about a year. On the other hand, consultation with the public took more time due to its complexity. Mr. Quan mentioned that if he was given the opportunity to do things differently, he would've had more extensive public engagement, including creating a more iterative process to avoid heated debates and polarized conversations. Also, he would've put more emphasis on food insecurity and health in the plan.

5. *Can you tell me a little bit about your collaboration with city planners, city staff, nonprofits, and other community organizations?*

Mr. Quan emphasized the collaborative nature of the project. (See response to Question 7)¹

6. *What, if anything, in the plan has been implemented?*

There are several things in the plan that have been implemented. Although Mr. Quan did not have time to go into greater detail, he listed the items that the City of Edmonton has implemented from the plan:

- Edmonton Food Council:
 - o The Council was formed as part of the plan development process to stimulate community involvement and provide relevant issues related to food and urban agriculture. The Council has remained active following the plan's completion;
- Regulatory changes and opportunities:²
 - o Encouragement of food production on rooftops;
 - o Promotion of processing and selling activities within residential & other zones;
 - o Addressing regulatory barriers to improving the food system;

¹ Edmonton's plan details some of partners in the process, including, the Angus Watt Advisory Group, Sustainable Food Edmonton, Agriculture and Agri-Food Canada, Food Processing Development Centre, Greater Edmonton Alliance, Kuhlmann's Market Gardens, Alberta Netherlands Trade Office, Walton Development and Management, Toma & Bouma Management Consultants, Live Local and Blue Pear Restaurant, Edmonton's Federation of Community Leagues, Horse Hill Community League, University of Alberta, and Growing Food Security in Alberta.

² While Mr. Quan did not provide details regarding these changes, the following regulatory changes and opportunities were outlined in the plan.



- Zoning Bylaw:³
 - o The text has been amended to implement food and agricultural processes;
 - Urban agriculture:⁴
 - o Encouraging urban agriculture through rooftop farms, community gardens, park lands, vacant lot conversions, on-site food sales;⁵
 - International Research Project with the University of Alberta:
 - o A study has been initiated to research the impact of food insecurity;
 - Efforts to encourage vendors at farmers markets to do collective work:
 - o This collective marketing campaign promotes price matching and minimizes competition;
 - Agricultural Society:
 - o The group hosts major entertainment events that have a local impact on the economy.
7. *In developing the plan, can you tell me how you've involved low-income communities and communities of color? (What types of outreach did you do? How many community members were involved? Organizations involved? How long did the effort go on? Where did the outreach occur?)*

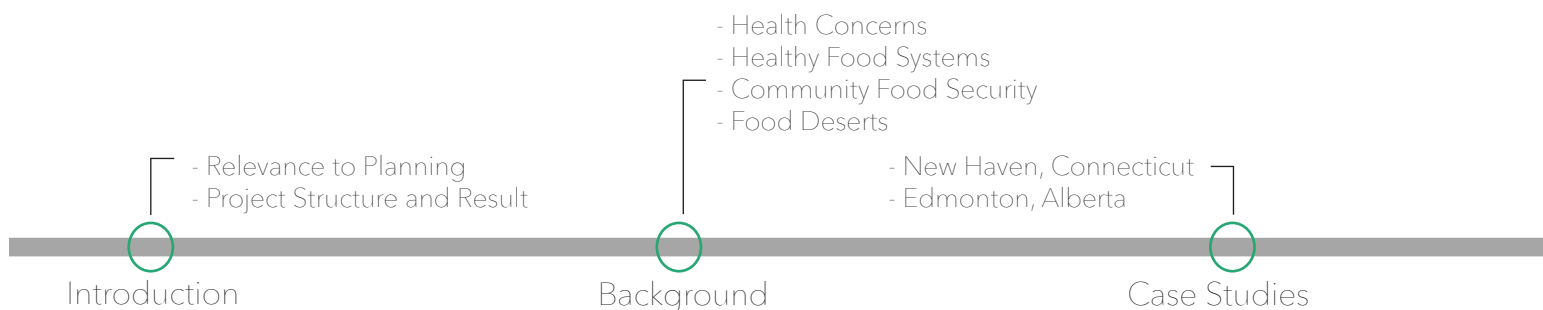
In terms of the collaboration and consultation process, there were multiple levels of input from the community. The following steps indicate the levels:

- 1) Political: Met with political officials and counselors to develop scope and deliverables. In late 2011, an Advisory Committee of 16 professionals was formed;

³ This document describes the characteristics land uses and built forms that are allowed on a specific property, and regulations for the uses.

⁴ While Mr. Quan did not provide details regarding these changes, the following regulatory changes and opportunities were outlined in the plan.

⁵ While Mr. Quan did not provide details regarding these changes, the noted regulatory changes and opportunities were outlined in the plan.



- 2) Stakeholder Focus Groups: Spoke and collaborated with producers, buyers, retailers, educators, etc. to determine food system issues. These focus groups also reviewed the themes throughout the plan after the completion of a draft document;
- 3) Public Opinion Survey: Gathered ideas and impressions from the community about the local food system in order to determine the appropriate focus:
- 4) Landowners Survey: Created a separate survey for landowners/developers;
- 5) Partnership: Partnered with the Center of Public Involvement at the University of Alberta to create a number of citizen panels. From a list that targeted a variety of community members and groups, including low-income communities, communities of color, and underrepresented groups of people, 26 people were selected to provide input for the project. These 26 people were divided into citizen panels. They had no background knowledge of what the project was about, but they were given preparation and best practices materials, met continuously, and worked in groups to critically analyze food system situations.
- 6) Conferences/Open Houses/Supplementary Reports/Blog/Twitter: Ensured that all groups of people are aware of food system issues and how they can be involved in the process.





Chapter 5

Recommendations

Healthy Stores Development
Community Food Resources
Food System Strategies

This section discusses recommendations and strategies to minimize the impact of food deserts for all groups of people within a community. These suggestions are described under the overarching themes of healthy stores development, community food engagement, and food system strategies. This includes, but is not limited to, converting corner stores, prioritizing grocery store development, establishing fresh and healthy food enterprise zones, developing a food hub to facilitate food distribution, supporting new funding initiatives, promoting public education, creating farmers' markets, attracting mobile produce vendors, strengthening healthy food retails, and encouraging walkability. In order to assist communities of color and address food desert issues, collaboration between public agencies, educational institutions, health professionals, health advocates, organizations, and community members will be examined throughout this section. Also, it is important to keep in mind that the scale and size of a community will affect the feasibility of these recommendations. However, these recommendations are intended to be open-ended and can be modified depending on the community's resources. By accessing and analyzing existing data regarding the state's or community's food environment, these recommendations will become more relevant for the community. The following indicates the breakdown of this section:

- Healthy Stores Development: Topics include corner stores, grocery stores, healthy food retails
- Community Food Resources: Topics include farmers' markets, community gardens
- Food System Strategies: Topics include community involvement, technologies, guidelines

5.1. Healthy Stores Development

The way we live, work, play, and learn are all influenced by our surroundings. Community members that are frequently exposed to healthy eating places will have varying food choices and preferences as opposed to those from low-income neighborhoods and communities of color. Taking into consideration the consequences of the lack of access to healthy food, the elements within the general plan should address policies and programs that “promote health, equity, and sustainability” in order to improve the quality of life of food desert communities (Puget Sound Regional Council 2014). For instance, land use and transportation plans should address issues that pertain to the health factors that are involved in walkability and accessibility.

5.1.1 Healthy Corner Stores

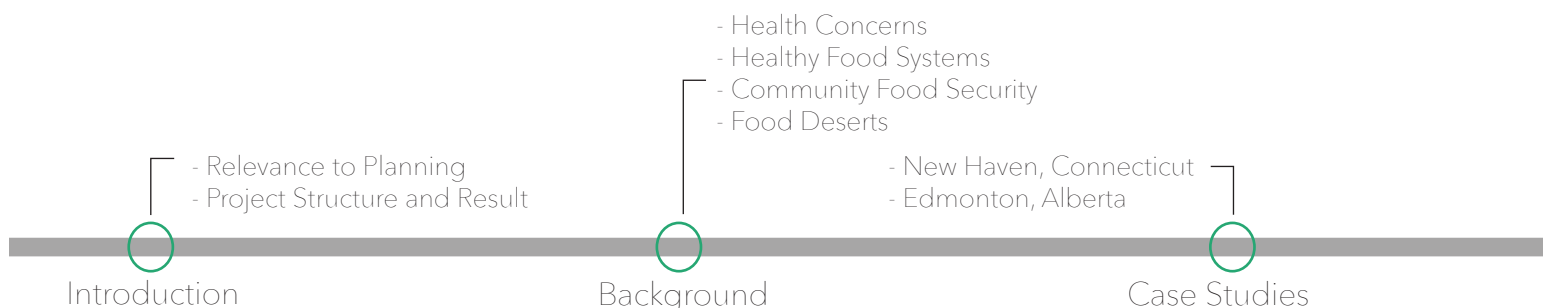
Corner stores are small stores located in neighborhoods for residents to conveniently purchase healthy food. There are several barriers to purchasing healthy food within a community. A survey conducted of residents of Bayview Hunters Point, a neighborhood in San Francisco, have identified barriers that are related to food access, availability, quality, as well as the costs and time constraints associated with eating healthy (Pothukuchi et al., 2002). For instance, the factors include unsafe neighborhoods, poor quality food, food unavailability, expensive food, not, inaccessible stores, and not enough time to shop or cook. In order to serve the needs of neighborhoods and communities, there should be “better food on the shelves of corner stores” (Pothukuchi et al., 2002). Often times, corner stores are “less than 5,000 square feet and sell primarily prepackaged foods, liquor and cigarettes” as opposed to fresh produce (Bassford, 2010). A corner store conversion program can influence these stores to sell fresh produce and other healthy foods.

For example, residents from South Los Angeles neighborhoods already visit these corner stores on a regular basis, so the addition of healthful foods will help these people make “healthier choices without changing their shopping habits” (Bassford, 2010). If corner stores are unable to provide a full stock of fresh food, it is essential that they at least make a commitment to stock a minimum amount of fresh food. The Healthy Corner Store Network (HCSN) Web site provides further information on “in-store assessment tools, store owner surveys, sample materials, and resource guides” (Center for Disease Control, 2014). Although corner stores improve food access in areas that lack grocery stores and high-traffic areas, there is also the need for full-service grocery stores that offer a variety of healthy products at affordable prices.

5.1.2 Grocery Stores

Since hunger and food insecurity are primarily evident in underserved and high poverty areas, it is necessary to consider options that are appropriate for these communities. In order to understand the community’s food system status, there should be a community-wide “grocery store investigation” (Pothukuchi et al., 2002). By examining the structure of the food system from grower to grocery store, such food assessments spark awareness for grocery store development and improvement because of identified conditions. Since the proximity of these grocery stores is crucial for community food accessibility, there is a need to coordinate transportation routes and linkages (Pothukuchi et al., 2002). The City of Madison in Wisconsin provides access to quality food and healthy eating opportunities by actively seeking grocers and food retailers, as well as offering financial assistance to underserved communities (Raja et al., 2008). To facilitate grocery store development in communities, planners’ role in the healthy food environment includes determining store locations and removing barriers, “both regulatory and financial” for the purpose of preventing the private market from establishing food destinations (Raja et al., 2008). The tools and strategies that are intended to attract grocery stores are suggested below (ChangeLab Solutions, 2012):

1. Designate a main point of contact at the City – someone who can build incentive packages
2. Engage elected officials – decision-makers that can influence city priorities and get things done
3. Learn about the grocery industry – find out issues in the industry and stores in the city
4. Identify obstacles – why retailers are not locating in target neighborhoods
5. Assess possible sites – buildings and vacant lots
6. Work with the community to identify desired retailers – learn about what the stores need
7. Develop marketing materials and a preliminary incentive package – sell the retailer on the neighborhood
8. Negotiate a community benefits agreement – contract with a developer for a development project
9. Expedite the development process – work with the retailer and developer to overcome obstacles
10. Ensure the store’s survival and growth – maintain long-term collaboration with the retailer



5.1.3 Healthy Food Retail

Healthy food retail is stores and outlets that provide “affordable, fresh produce and other foods in a culturally appropriate setting” (ChangeLab Solutions, 2012). While they include grocery stores, small stores, and farmers’ markets, there are also restaurants that provide healthy choices. In order to attract healthy food retail, it is essential to consider economic development tools and funding sources. For instance, ChangeLab Solutions has identified three strategies that will ensure a sustainable community. This includes business attraction and retention to keep retailers and jobs within the city, neighborhood revitalization to transform distressed areas into vibrant places, and workforce development to offer residents employment opportunities (ChangeLab Solutions, 2012). Regardless of the opportunities, there are challenges that communities face when developing healthy food retail. These challenges consist of the lack of viable sites, cost of land and development, lengthy approval processes, negative perceptions of the target neighborhood, lack of political will, and perceived lack of spending power (ChangeLab Solutions, 2012). Although these challenges are likely to cause limitations, communities can foster growth by being supportive through financial assistance, encouragement, feasible programs, and community resources. Since the lack of healthy food retail “hinders community economic development in neighborhoods that need private investment, activity hubs, and jobs,” the community should act upon these suggestions immediately and collaboratively (Treuhart & Karpyn, 2010).

5.2. Community Food Resources

Community food security is essential for the prosperity of neighborhoods and communities. In order to strengthen the community’s food system and alleviate food insecurity, it is essential to provide support through community food resources (Central Coast Agricultural Network, 2011). Since food is a “critical ingredient in city planning,” planners are expected to be conscious of food system issues in order to suggest opportunities and determine solutions (Roberts, 2001). In addition to taking into account food security, planners need to engage with food systems experts and determine best ways to foster healthful food choices. Community involvement consists of collaborating with local universities and colleges, City departments, and community organizations in order to discuss food system issues. It is recommended to establish a Food Council or provide funding for a Food Systems Director to facilitate communication between decision-makers and community members. By increasing the understanding and availability of nutritious, affordable food, residents are given the opportunity to make informed decisions about the food they eat on a daily basis.

5.2.1. Farmers’ Markets

Farmers’ markets provide an inexpensive way to make “high-quality fresh, local, and affordable produce available” to communities (Bassford, 2010). These markets are often successful because there is the distribution of locally produce food, which is accessible for all community members, including low-income residents. Also, farmers’ markets promote healthy social environments by creating spaces where people can interact with other people,



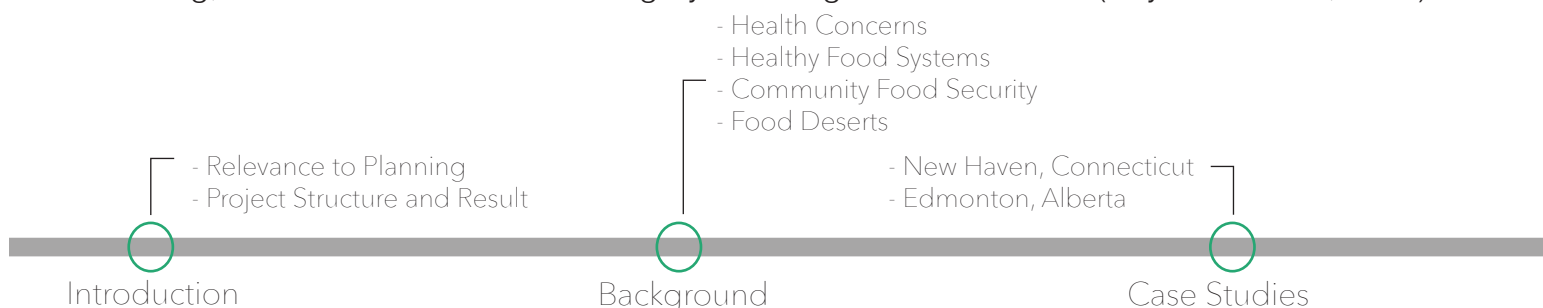
watch entertainers, purchase fresh food, and become part of the scene (Roberts, 2001). In this way, they offer many benefits that integrate the food environment with public welfare. While farmers' markets increase food accessibility for residents, farmers are also given the opportunity to "maintain economic viability by supplying the local market with fresh foods" (Central Coast Agricultural Network, 2011). Furthermore, these markets bring heavy traffic into nearby main streets and revitalize local businesses by increasing the sales in nearby food stores (Roberts, 2001). Since farmers' markets have many health and public benefits, many communities have included them in their weekly event schedule.

5.2.2. Community Gardens

Community gardens are shared spaces where people gather in one place to grow fruits, vegetables, flowers, and plants (Central Coast Agricultural Network, 2011). Even in the most dense and large scale communities, community gardens are effective in terms of providing food production resources. In order to reduce hunger and food insecurity, it is important for the cities to provide plots for community gardens in neighborhood parks and other areas. Several strategies to growing food in small spaces include gardening in containers, adding food plants into landscape beds, transforming sunny lawn areas into a garden, planting strips between the sidewalk and street, growing vertically, and sharing space with a neighbor (City of Seattle, 2011). In terms of taking into account low-income and underserved communities, community gardens offer these residents to "grow top-quality food at minimal cost" (Roberts, 2001). Since there are many benefits to creating community gardens, it is recommended that communities make the effort to incorporating them in their plans. In addition to contributing to the community's healthy food production, residents are building their skillsets as they receive training, equipment, and support (Roberts, 2001). While benefiting the community with fresh produce, these gardens become centers for "education, food assistance program, local marketing, and small business development," which promotes community development (Central Coast Agricultural Network, 2011).

5.3. Food System Strategies

In order to effectively plan healthy communities, "bottom-up, community-based strategies" is essential to influence institutional programs and policies, as well as public policy reforms (Lewis et al., 2011). Based on the case studies and interviews conducted, it is recommended that communities build partnerships with public agencies, local organizations, and educational institutions to gain invaluable community input. Several activities to strengthen collaboration include community meetings and ongoing conversations with food retailers and developers. Also, communities have considered mobile food vending as a way to encourage healthy food accessibility in low-income, minority, and underserved communities. A study in Oakland, California indicates that most residents and visitors thought that food trucks "enhanced their pedestrian experience and created a better sense of community" (City of Oakland, 2012). When participants were asked how they found about the mobile food vending, 79% mentioned either walking by or through a friend/referral (City of Oakland, 2012).



In order to promote food accessibility, it is important for communities to consider food system strategies that are relevant for locals. Other food system strategies involve bringing healthy food closer to home, designing healthy environments, educating communities about food, protecting food productive places, encouraging urban agriculture, rebuilding infrastructure for regional food systems, purchasing locally produced foods, celebrating food culture, promoting regional distinctiveness, capturing the value of food waste, and building capacity for implementations (Urban Food Strategies, 2015).

In relation to technology and planning, there are emerging technologies online that have food delivery and ordering services. However, it is recommended to expand these options to low-income communities. Some examples include *AmazonFresh*, which delivers groceries to neighborhoods, shops and restaurants, *Graze*, which creates and delivers boxes of nutritious snacks, as well as *GrubHub*, which is a food ordering online service for users to search local restaurants available for delivery and pick up. These food applications are designed to be user-friendly and provide a platform for healthy food access. These applications should be used by planners as a reference to address issues relating to food deserts and explore ideas on how to improve the product. If the idea is feasible and appropriate for a particular community, software developers, graphic designers, and planners will explore further ways to bring the idea to life and create an application that can be used by various groups of people.

According to “A Planner Guide to Community and Regional Food Planning,” there is a process for planners to promote access to healthful foods for residents. The process involves a series of steps as shown below (Raja et al. 2008):

- Phase 1: Identify partners to participate in the planning process – partners with a diverse set of skills, interdisciplinary knowledge, and varied experiences
- Phase 2: Devise a planning approach that fits the community’s need – develop a planning approach and methodology to guide the planning process
- Phase 3: Visioning process – engage the community in a visioning exercise to articulate values, ideals, and preferences for a healthy food environment
- Phase 4: Gather and analyze relevant data – understand the state of the food environment in their municipality
- Phase 5: Prepare preliminary recommendations and establish benchmarks for measuring progress – develop recommendations for improving access to healthful foods based on the preferences of the community
- Phase 6: Review findings and recommendations with interested stakeholders – visioning session with community stakeholders to receive feedback
- Phase 7: Implement the recommendations and measure progress – prepare for the implementation phase to assess resources and timelines





Chapter 6

Community Development Approaches

Farm-to-Table Movement
Backyard Movement
Culinary Tourism
Concluding Remarks

This section describes relevant approaches for revitalizing food desert communities. Once communities have taken into account the recommendations and strategies of maintaining healthy food systems, these approaches should be used as guidelines to maximize and enrich local resources. The suggestions in Chapter 5 were meant to set a solid foundation and understanding of creating healthy environments, whereas the approaches in this chapter will further solidify and enrich the food experience of these communities. By providing adequate resources and programs, food desert communities will be engaged in a food system that promotes economic prosperity and community development.

6.1. Farm-to-Table Movement

The Farm-to-Table Movement is meant to support local agriculture, grow the local food economy, and improve profitability for farmers (Delaware Valley Regional Planning Commission, 2011). The movement includes programs that provide assistance to schools, universities, hospitals, restaurants, as well as homes. In order to minimize the prevalence of overweight children and increasing rates of obesity among youth, farm-to school programs provides healthful foods from local farms to school cafeterias. While “expanding new market opportunities for farmers,” these programs also provide nutritional benefits to youth, improve school food environments, and support the local farm economy (Raja et al., 2008). A farm-to school program in Bennett Park Montessori, a public school in Buffalo, New York, has formed local partnerships to promote healthy eating by initiating the following efforts (Raja et al., 2008):

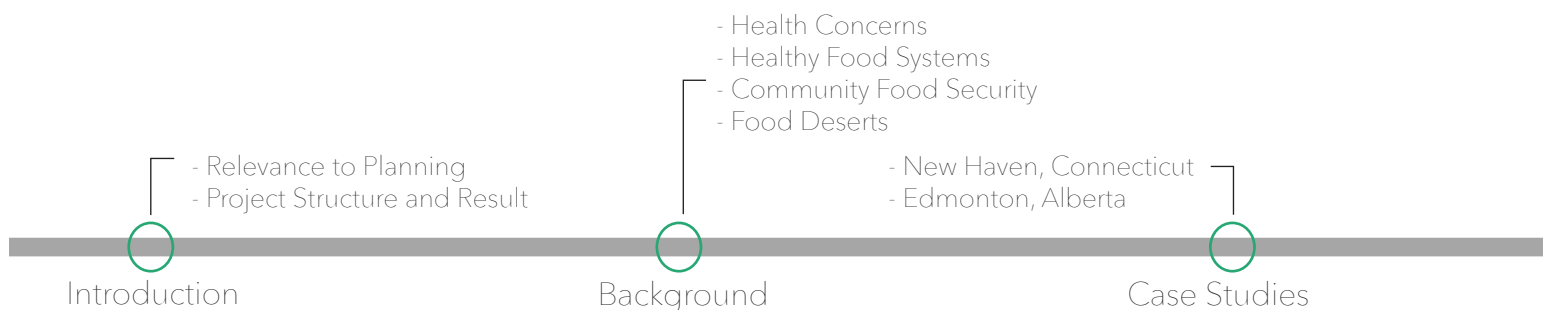
- Free weekly salad bar to serve local and organic produce for about 124 students
- After-school peer workshops to demonstrate growing, cooking, and consumption of healthy foods
- Integration of healthy eating concepts within the school’s curriculum
- Hosting dinners and featuring healthful and locally grown foods to reinforce healthy eating beyond the confines of the school day
- Students designed and created portable mural depicting eating healthy to reinforce healthy eating concepts in the physical environment

The limitations of this program include the lack of resources as well as participation from the local community. For instance, there may not be enough administrative capacity, local farms may be unable to supply sufficient produce, school districts may be hesitant to participate, and the program may be too costly (Raja et al., 2008). While taking these limitations into consideration, it is important that communities build and maintain partnerships as well as collaboration among organizations, planners, health professionals, food experts, and community advocates. Several communities have acted upon these challenges to solve food system problems and health concerns. For example, Philadelphia’s schools have been working with the Health Promotion Council, The Food Trust, and the School District of Philadelphia to expand existing farm-to-school programs to other schools (Delaware Valley Regional Planning Commission, 2011). In regards to the Virginia Farm-to-Table Plan, efforts to develop supply, markets, infrastructure, programs, and policies have been established for the purpose of facilitating the implementation of this movement (Bendfeldt et al., 2012). The plan seeks to grow jobs as well as new entrepreneurs to strengthen the local food system. Challenges are addressed by identifying issues facing farmers and the local community as well as suggesting how to solve these issues. Despite the challenges, these programs will stimulate economic prosperity and community development in food desert communities as more people are aware of the long-term benefits.

6.2. Backyard Movement

The Backyard Movement promotes urban agriculture, fresh foods, and innovative growing techniques for backyard and market gardeners. Backyard gardens are usually more prevalent in “mature areas and suburbs” away from the city core (City of Edmonton, 2012). In the City of Edmonton, backyard gardens have expanded into community spaces that include parks, school grounds, vacant lots, and boulevards (City of Edmonton, 2012). In order to encourage community members to consume more locally-produced fruits and vegetables, methods of local food distribution should incorporate the accessibility of resources for gardeners and residents. For instance, a study in Somerville, Massachusetts indicates the need to increase available public spaces for gardening, begin a city-wide yard waste and food scrap collection program for composting, and establish a gardeners’ network to encourage collaboration (Bickerdike et al., 2010). However, for communities that lack the resources and sufficiency to meet gardeners’ personal needs, it is more effective to assess methods for increasing urban agriculture production in the city. It is essential to develop partnerships in order to assist in the redistribution of healthy, fresh, and high-quality food, as well as expand backyard gardens, urban farmers, fruit harvests, food retail, and processing sources (City of Edmonton, 2012). Several strategies include changing zoning laws, prioritizing the creation of community gardens, launching a city-run composting program, and encouraging yard sharing (Bickerdike et al., 2010). As a result, the movement encourages food desert communities to explore existing resources and contribute to the growth of local foods. The goals that are intended to expand the backyard movement in communities consist of the following (Bickerdike et al., 2010):

- Make vacant lots available for cultivation – make information on vacant parcels public to convert into gardens
- Revise parking ordinances to increase cultivable areas – revise parking regulations to allow existing buildings to provide fewer off-street parking spaces
- Better utilize city-owned open space for agriculture – produce an urban land inventory to increase the amount of land available for cultivation
- Plant fruit trees on public land – plant fruit trees in semi-public locations that already have designated landscape services
- Increase the number of community gardens – provide equal access to garden space for all residents
- Make urban agriculture a priority in the Comprehensive Plan – incorporate urban agriculture into the Comprehensive Plan
- Amend zoning laws to encourage urban agriculture – explicitly allow backyard livestock and bees



- Encourage creative gardening in and out of the ground – incorporate intensive gardening practices
- Address soil fertility and contamination – encourage gardeners to perform soil tests
- Increase the availability of compost to gardeners – reduce the amount of food waste going to landfills through composting programs and efforts
- Establish a learning farm – advertise agriculture-related public events, meetings, workshops, and lectures to the wider community
- Formalize a gardeners’ network – identify leaders and prominent organizations in the urban agriculture community
- Establish a shared-use community kitchen – begin by temporarily using an existing kitchen in churches and school facilities during underutilized hours
- Increase “backyard to market” opportunities – establish standard growing practices and develop relationships with key retailers who are already interested in local food
- Consider a backyard community supported agriculture (CSA) – create a system where consumers pay farmers for produce in advance of the season and receive a box of weekly local grown produce weekly during the growing season
- Donate to emergency food providers – encourage growers to donate to food pantries near them
- Facilitate sharing between gardeners – promote regular events where gardeners can trade their produce with other gardeners
- Consider a Community Supported Market – allow consumers to buy market coupons in advance of the season and redeem them at a market stand during the growing season

6.3 Culinary Tourism

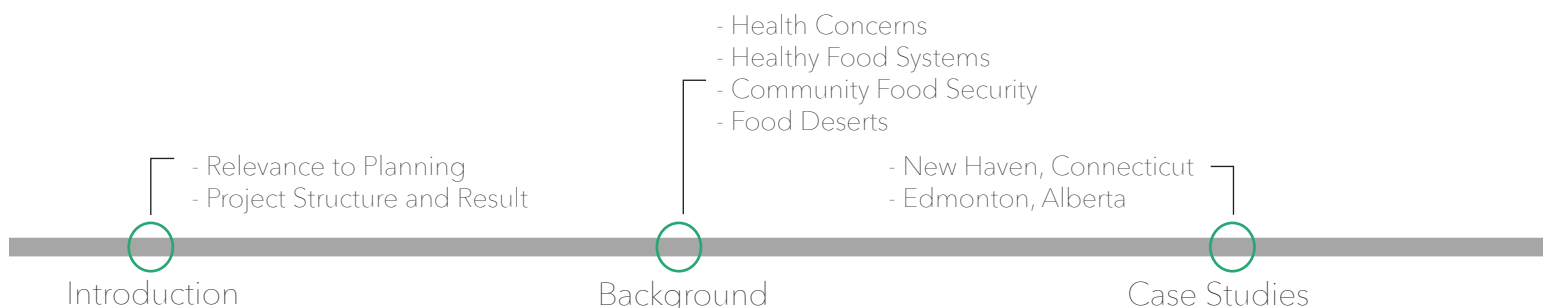
An emerging component of the local food movement is culinary tourism (Green & Dougherty, 2008). Culinary tourism enhances community identity as well as promotes diversity and economic growth through the creation of memorable eating and drinking experiences. Initially, communities are concerned about food deserts, which emphasizes on the lack of food accessibility and availability in underserved areas. As healthy food system strategies are implemented and food desert transformations occur, communities are encouraged to continue expanding through community revitalization. The “consumption spaces,” known as restaurants and eating places, are some of the determinants for enriching tourists’ experiences (Neal, 2006). For instance, “areas with limited culturally satisfying restaurant options” should consider creating opportunities to expand their “symbolic and aesthetic value” (Neal, 2006).



These consumption spaces enhance the quality of life for communities. Chicago's Millennium Park, for example, is an urban entertainment district that provides art, food, and music for the community without being too costly (Neal, 2006). In other words, communities are encouraged to transform these culinary deserts to gastronomic oases that will capture the interest of people in neighboring and faraway cities. As the area's popularity increases over time, economic growth will occur with the balance of supply and demand of healthy food and resources.

There is a direct correlation between food, culture, and tourism. There is an emphasis on authenticity and quality of food for cultural tourism. As communities build more resilient local food systems and rediscover their "agricultural roots and culinary traditions," consumer and tourist interest will increase because there is a purpose for them to engage in these cultural experiences (Alexander Communications Group, Inc., 2012). In order to foster growth in communities and encourage culinary tourism, the "best starting point" is identifying regional foods and resources that are highlights culture and uniqueness (Brown, 2010). In this way, the community will gain interest from visitors because they cannot have the same food experience elsewhere. Communities can engage residents and visitors through diverse restaurants, farm stands, community dinners, cooking demonstrations, tours, festivals, and specialty gardens, which are all dependent upon locally grown foods (Brown, 2010). In addition to gaining outside recognition, the community itself will acknowledge the potential of their local food systems. By integrating tourism and local food systems, communities are building their "cultural heritage of the region" as well as supporting retailers and local producers (Green & Dougherty, 2008). As a result, culinary tourism is a tool for community development and economic vitality. In order for culinary tourism projects to be successful, it is important to take into consideration the following (Green & Dougherty, 2008):

- Coordination across several communities is necessary when promoting a region as a tourist destination.
- There should be collaboration among several sectors of the regional economy. This includes farmers/ranchers, retail establishments, restaurants, and processors.
- Consider an assessment of the community's local food supply and demand, just in case there is the requirement for a large supply of produce on a regular basis. Usually, restaurants and retail establishments have a lower quantity of demand than large institutions (schools, universities, prisons).



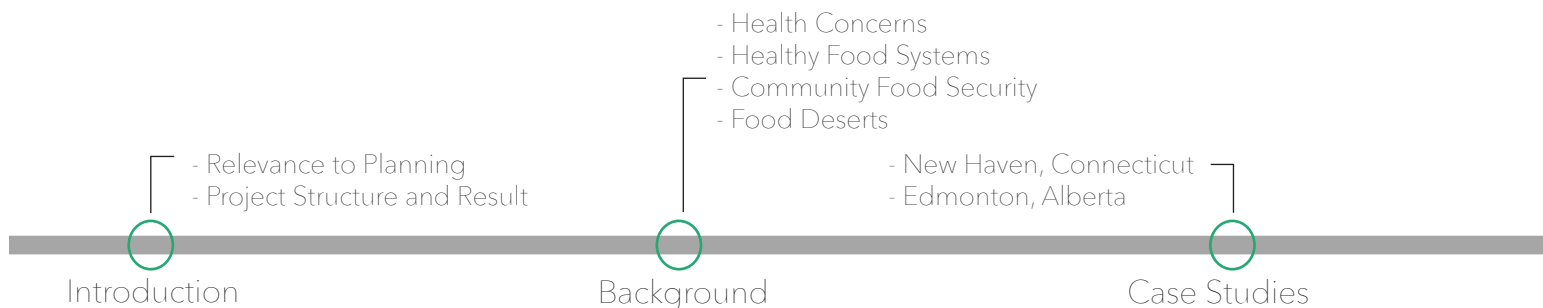
6.4 Concluding Remarks

Throughout the process, I have discovered that transforming food desert communities does not happen overnight. With research, it has been brought to my attention that there is a relationship between the environment, people, and food. The more I study about the topic of food deserts, the more intrigued I am about building healthy communities and being inclusive of communities with varying backgrounds. Although the community size varies, it is recommended that communities take into account their resources and existing conditions. Through community food assessments, collaboration, and strategies, it is essential to understand the issues associated with the local and regional food system. By actively engaging in community gatherings as well as collaborating with organizations, food deserts communities are given the opportunity to communicate concerns and address health risks. Due to the time constraints, the creation of an iPhone or Android application was not achievable. If given more time, I would have created an app that identifies nearby grocery stores, supermarkets, healthy eating places, as well as farmers markets and cooking classes in order to encourage food accessibility. I envision that users could easily rate and comment on the app about the quality of the store, event, or program. As an optional functionality, these healthy eating places will have an icon indicating if there is a delivery service. In terms of considering low-income communities and communities of color, it is important to provide a city-wide demonstration of the product and make it accessible to as many diverse communities as possible.



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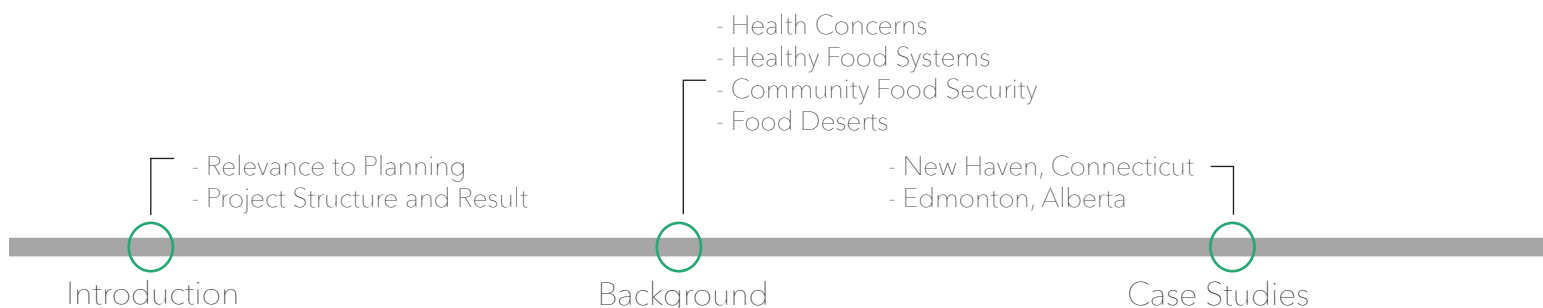
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