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## Towards an integrated, critical approach to municipal food systems planning in Calgary, Alberta

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### *Abstract*

In response to socioecological food systems concerns, municipalities—including the focus of this study, Calgary, Alberta—are increasingly integrating food systems into their planning processes and policies. This paper outlines the findings from a research initiative aimed to integrate urban food systems planning into a forthcoming revision of Calgary’s municipal-wide planning document to encourage a just, sustainable, and healthy food system for the city. The research methodology combines qualitative methods including a literature review to determine current food systems policy strategies and a case study approach to assess Calgary’s current food systems and policy context. Using a constant comparative approach to the data collected, three areas of recommendation emerged: the need for a systems approach to the integration of food planning within planning documents and recognition as food infrastructure as a core infrastructure; a greater emphasis on inclusive governance practices and on critical equity approaches to food systems planning; and finally, a need for further resource allocation and evaluative processes.

Keywords: Food systems; food systems planning; food policy council; inclusive governance; food equity

### *Résumé*

En réponse aux préoccupations socio-écologiques liées aux systèmes alimentaires, les municipalités - y compris le sujet de cette étude, Calgary, Alberta - intègrent de plus en plus les systèmes alimentaires dans leurs processus et politiques de planification. Ce document présente les résultats d’une initiative de recherche visant à intégrer la planification des systèmes alimentaires dans une prochaine révision du document de planification de la municipalité de Calgary afin d’encourager un système alimentaire juste, durable, et sain pour la ville. La méthodologie de recherche combine des méthodes qualitatives, y compris une revue de la littérature pour déterminer les stratégies politiques actuelles des systèmes alimentaires et une approche d’études de cas pour évaluer les systèmes alimentaires actuels de Calgary ainsi que sa politique de systèmes alimentaires. Trois domaines de recommandation ont émergé: la nécessité d’une approche systémique pour l’intégration de la planification alimentaire dans les document de planification; un

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accent plus marqué sur les pratiques de gouvernance inclusive et sur les approches critiques d'équité dans la planification des systèmes alimentaires; et enfin, la nécessité de nouvelles affectations de ressources et de processus d'évaluation.

Mots-clés : Systèmes alimentaires; planification des systèmes alimentaires; Conseil des politiques alimentaires; Gouvernance Inclusive; Équité Alimentaire

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## The rise of municipal food systems planning

Although the intimate connection between food systems and cities is nothing new (Steel 2008), it is only relatively recently that the integration of food into municipal policy has become commonplace. Twenty years ago, Pothukuchi and Kauffman (1999; 2000) decried the lack of food systems consideration within planning and outlined several socio-economic, health, and environmental reasons that food matters within city planning—for example, the food sector comprises an integral part of a city's economy; citizen health concerns such as obesity, malnutrition, and cardiovascular diseases are often food related; and the food system involves multiple ecological considerations for local settings from loss of farmland to air, water, and soil pollution. Pothukuchi and Kauffman (2000) also highlighted the amplified effects of food system contexts on low-income citizens; for example, proportionately more low-income residents work within the food service industry and depend on charitable organizations for access to food.

Within the last twenty years, municipalities have progressively recognized food systems within planning—often acknowledging food as a basic right—and food systems have become increasingly integrated into municipal policy. Several significant strides have been made to further municipal involvement in food policy development. For example, in 2007, the American Planning Association adopted a policy guide on community and regional food planning promoting the integration of planning processes and policies towards equitable food systems that support ecological sustainability, cultural connections, people's health, and local and regional economies. Similarly, the Milan Urban Food Policy Pact (MUFPP) initially signed in 2015 by over 100 cities and now supported by over 210, advocates for the integration of just, resilient, and sustainable food systems into municipal policies, processes, and programs (MUFPP n.d.-a; n.d.-b).

In Canada, municipalities are also focusing on ameliorating their local food systems through policy initiatives (MacRae and Donahue 2013). In Calgary, where this case study is centered, a number of advances have been made to address municipal food policy within the last decade; however, there remains much to be done. This paper outlines the findings from a research initiative aimed to integrate systemic and critical approaches to food systems planning for urban areas into a forthcoming revision of Calgary's Municipal Development Plan, the city's municipal-wide statutory planning document. This paper begins by contextualizing contemporary food systems issues, the case study context of Calgary, Alberta, and the research initiative. A summary of findings follows, which involves a discussion of the food systems planning approaches needed to address the gaps in Calgary's food planning policies. These findings involve three main areas: systemic and integrated approaches to food systems planning; inclusive governance strategies and critical approaches to food planning; and finally a need for resource allocation and evaluative policy strategies to precipitate food policy action. The analyses and recommendations described within this paper provide possible municipal interventions, strategies, and conceptual considerations for municipalities, planners, and food policy advocates currently involved with or interested in food systems planning.

## Global industrial food systems in crisis

Historically, municipal planning has neglected taking a stronger role in food issues often with the perspective that food systems are primarily guided by market forces (Pothukuchi and Kaufman 2000). Although modern industrial and capitalist food processes have helped deliver higher standards of living within the past century, current socioecological and health crises undermine these dominant approaches (Swinburn et al. 2019). For example, contemporary food system processes—including agricultural production, preproduction processes related to the manufacturing of fertilizer, and postproduction practices such as processing and waste management—contribute to approximately

19%–29% of human induced greenhouse gas emissions, and thus significantly contribute to climate change (Vermeulen et al. 2012). At the same time, climate change and other related ecological calamities, such as water scarcity, and soil degradation, are threatening current agricultural production (eg. Godfray et al. 2010; Jie et al. 2002).

In addition to these environmental issues, contemporary food systems fail to adequately address ongoing human health crises. Forms of malnutrition are extensive and widespread, with recent reports documenting more than 2 billion people overweight or obese (Swinburne et al. 2019) and over one quarter of the global population experiencing either moderate or severe levels of food insecurity. These insecurity levels will continue to rise with the ongoing effects of the COVID-19 global pandemic (FAO et al. 2020). The pandemic outbreak has exposed a number of vulnerabilities and inequities within global food systems; within a North American and Canadian context, panic buying, significant disease outbreaks at food processing plants and agricultural facilities, and unemployment losses increasing food insecurity are a few salient examples. Finally, there is a growing body of literature raising ecological and health concerns about meat-based diets and exploring the advantages of plant-based whole food diets (Willett et al. 2019)

Growing consumption and population stresses on current food systems necessitate a move towards more sustainable food practices while increasing food production to feed the estimated 9 billion people that will inhabit the planet by 2050 (Godfray et al. 2010); the vulnerabilities exposed by the COVID-19 pandemic further illustrates the need to move towards more just and sustainable food system processes. These types of global socioecological issues associated directly with food systems are experienced differently in diverse local contexts. Several of the trends described can be similarly identified within Calgary, Alberta where this case study is situated.

### **Case study context: Calgary, Alberta**

Originally established in the late 1800s as a police fort, Calgary was one of the first settler-colonial European settlements in the middle of Indigenous Blackfoot territory (Smith 1962). Situated east of the Rocky Mountains in prairie grasslands, Calgary is Canada's fourth largest city with a population of 1,285,711 (City of Calgary 2019). Calgary is located in the province of Alberta, which has the second largest number and area of farms in Canada and also contains the largest cattle herd (Statistics Canada 2018). Similar to other North American and global trends, Alberta has shifted from small scale farms to being dominated by larger commercial farming (Begam and Adilu 2017; Statistics Canada 2016). Furthermore, Alberta's agriculture is integrally tied to global food systems with a heavy reliance on the export market (Begam and Adilu 2017).

Throughout much of its history, Calgary's development has been dominated by boom and bust cycles fueled by the economic expansion and recession of the oil and gas industry. In the last few decades, Calgary has experienced rapid economic growth relative to other Canadian municipalities with median incomes among Canada's highest; simultaneous to this growing wealth, however, has been a growing pattern of income inequality with increased poverty and ongoing concentration of wealth (Townshend et al. 2018). Concomitant to growing economic disparities and poverty, several troubling indications of food insecurity for Calgary's most vulnerable populations have emerged. Research indicates food deserts and inequitable access to food services within Calgary (Lu and Qiu 2015). Food bank usage has also increased with emergency food hamper use climbing since 2008 and over 98,000 food hampers distributed in 2019 (Calgary Food Bank 2020). Given economic recession from the decline in the oil and gas industry, and socio-economic and health crises brought on by the COVID-19 pandemic, food insecurity has been exacerbated within the city. For example, the Calgary Foundation's 2020 Vital Signs report, based on a survey of 1000 Calgarians, found that 33% of people reported they struggled to afford basic needs such as food and housing (Calgary Foundation 2020). Given recent unemployment rates in Calgary, which soared to a high of 11.6% in September of 2020 notably exceeding an already high national average of 9.6% at this time (City of Calgary 2021), it is no surprise that food insecurity is a growing problem during the COVID-19 pandemic and Calgary's economic recession.

### **Research objectives and methods**

This research was conducted in collaboration with a local non-profit organization, Sustainable Calgary, within a larger initiative aimed to identify urban planning policies that support affordable, sustainable, and healthy options in relation to Calgarians' three highest household expenditures: housing, transportation, and food. During Sustainable Calgary's four-year research initiative (2016–2020)—the Housing-Transportation-Food (HTF) Nexus—the City of

Calgary began extensive public consultations with the goal of reviewing its primary planning policy document: the Municipal Development Plan (MDP). Since the City of Calgary's current MDP includes modest reference to food systems planning, Sustainable Calgary saw the MDP review process as an opportunity to advocate for policy that supports sustainable food planning (City of Calgary 2018b). The main research aim for this project was to determine recommendations surrounding the integration of food systems planning into the MDP to encourage a just, sustainable, and healthy food system for Calgary.

This inquiry, which specifically explores the bounded context of urban food systems planning in Calgary, employed a case study methodology (Merriam and Tisdell 2015). The literature review served to determine current food systems policy strategies for urban centres while an analysis of Calgary's current food systems and policy context provided case study data. Similar to Pellow (2016), we used a purposive sampling of documents as data for this study; these consisted of primarily urban food systems planning literature, City of Calgary policy documents, and Calgary food initiatives and food systems documents and websites. The authors of this paper conducted the research, and were also informed by their own varied work experiences related to the context of Calgary's urban planning and food systems as educators, planners, and researchers.

Using a constant comparative approach to the data collected within the food systems literature and data collected on the current context of food systems within Calgary, several thematic findings emerged as areas for food policy development. These findings are discussed in the following sections and fall into three areas of recommendation. First, the need for a systems approach to the integration of food planning within the City's MDP; second, a greater emphasis on inclusive governance practices—including the advocacy for a Food Policy Council within Calgary—and on critical approaches to food systems planning; and thirdly, a need for further resource allocation and evaluative processes to back policy goals.

## **Food systems and systemic policy integration**

The integration of food into Calgary's MDP and other policy documents needs to recognize food as a core infrastructure and food systems as complex multifaceted processes that span departmental silos and the public, private and not-for-profit sectors. While urban agriculture often receives the majority of attention within both policy action and scholarship (Mansfield and Mendes 2013; Sonnino 2009), the various other processes involved in food; for example, processing, transportation, storing, procuring, and distribution, all need to be considered. Some of these processes are often neglected forming a "missing middle" when considering the food system from production to consumption (Sonnino et al. 2019, 115). Food systems are also connected to diverse municipal systems, for example transportation, ecological, and economic systems (Raja et al. 2018). Rather than creating discrete food policies, cities are increasingly considering food policy within broader policy contexts that also address issues such as sustainability, community health, and social justice (Mendes and Sonnino 2018).

Bringing a systemic approach to food into policy requires the recognition that food systems are made of complex processes that connect to other systems and policy spheres, and that within food system processes, there are multiple interconnected and interacting components (Sonnino et al. 2019). Although the challenge becomes how to integrate and embed networked "thinking within and across local government departments in order to solve systemic issues such as food" (Mansfield and Mendes 2013, 55), there are several precedents from municipal jurisdictions that have adopted types of systemic approaches to support food systems planning (Mansfield and Mendes 2013; Sonnino, Tegoni, and De Cunto 2019). For example, the City of Toronto and the City of San Francisco embed a systems approach to food across multiple, if not all, municipal departments (Mendes and Mansfield 2013). The City of Vancouver's approach to food systems planning also demonstrates how food can be embedded into various other municipal initiatives; for example, large development applications for rezoning are required to submit plans that address sustainable food systems (City of Vancouver 2020). Currently, the City of Calgary is similarly engaged in discussions to embed a food systems lens into the review stage of major developments; this would bring significant changes towards the greater integration of food systems into planning processes.

Similarly food policies can be integrated within broader goals, for example, related to health, sustainability, or economic and community development (Mendes and Sonnino 2018). Sonnino, Tegoni, and DeCunto's (2019) study exploring 33 global cities' systemic approach to food found that municipal governments are increasingly recognizing that food policies can address multiple issues, especially related to citizen health and well-being, environmental

sustainability, and social and economic development (Sonnino, Tegoni, and De Cunto 2019). In recognizing that food policies can address multiple issues, local governments can design multiple actions to address a spectrum of interconnected issues. A recent Lancet report exploring three interrelated global pandemics—obesity, undernutrition, and climate change—describes “systems-level interventions [that] could serve as double-duty or triple-duty actions to change the trajectory of all three pandemics simultaneously” (Swinburn et al. 2019, 792); for example changes to nutritional guidelines and the encouragement of dietary modifications, such as an increase in lower carbon diets, could target all three pandemics. As illustrated by this global example, approaches to food issues are being considered through a systems-based lens with the integration of systems-based solutions. Similarly, research is demonstrating that a fourth global pandemic, COVID-19, is also a food and nutrition issue with susceptibility to long term COVID significantly reduced in those with access to healthy food (Butler and Barrientos 2020).

Likewise in local governments, the integration of food systems thinking across agencies and departments, can result in efficiencies that may not be realizable by considering food policy within a discrete category (Raja et al. 2018). Within the City of Calgary’s 2020 draft revised MDP, there are several modest but meaningful areas where food has been integrated to support other economic, environmental, and social goals. For example, the 2009 MDP encourages the development of “complete communities” that include aspects such as housing diversity, public transit, retail, and employment opportunities (City of Calgary 2018b, 2–15). The 2020 revised draft re-defines complete communities to include “spaces for community gardens and local food production, processing, sales and programming” (City of Calgary 2020a, 36). It is notable that the only reference to food in the economy section of either document is a mention, in the draft 2020 MDP, of “agribusiness” as a growth cluster (City of Calgary 2020a, 24). It is also worth noting that both the 2009 and 2020 MDP documents include food production as uses within its green infrastructure, environmental services, and ecological networks.

Additionally, food systems need to be considered across multiple scales. Although urban centres have become “strategic transition nodes” within the advance towards more sustainable food systems (Sonnino, Tegoni, and De Cunto 2018, 110), food systems operate across regional and global scales where cities have limited power to influence outcomes. When planning for food, the City of Calgary needs to ensure that it collaborates with regional partners. This is especially important given that Calgary is surrounded by 12,000 square kilometres of predominantly agricultural rural municipalities (Rockyview, Wheatland, Foothills) containing some of the best agricultural lands in western Canada. Efforts in this direction have been hampered by dysfunctional regional governance with various iterations of a regional partnership forming and dissolving in the past 50 years. Furthermore, to address food issues outside their own authority, the City of Calgary may need to take on a role of advocacy by appealing to other levels of government or actors and organizations. For instance, in order to address the root causes of food insecurity, poverty reduction needs to be targeted; this has led Food Banks Canada to advocate for government antipoverty policies at the federal level, such as basic income programs for all Canadians (Food Banks Canada 2019).

Given the multiple jurisdictions, sectors, and stakeholders involved with food systems and the resultant need for an integrated approach to food policy, partnerships and participatory tools are required to address food systems issues (Mansfield and Mendes 2013). To facilitate greater integration, partnership and participation, a unique approach to governance within food planning is required.

## **Encouraging inclusive governance and critical approaches within food systems planning**

Given the aforementioned multi-scalar and -stakeholder context of food systems, urban food systems can present complex and intractable issues; it is little wonder that within food systems planning and scholarship, governance has become an increasingly significant issue of concern (eg. Andrée et al. 2019; Mendes and Sonnino 2018). Governance refers “to the relationships, processes, rules, practices, and structures (both institutional and discursive) through which power and control are exercised and decisions are made” (Andrée et al. 2019, 4-5). Given the wide-ranging characterization of governance and food systems, the breadth and diversity of governance within food systems can involve everything from decision-making within global corporate organizations and regulations from multinational trade agreements, to the influence of local grassroots or non-profit organizations (Andrée et al. 2019). Although municipal governments will have limited capacity and authority to affect change within the broad spectrum of food system governance, there are significant roles that municipalities can fulfill to encourage inclusive governance that supports sustainable food systems.

Urban governance challenges most frequently involve issues surrounding citizen participation, democracy, and engagement (da Cruz et al. 2019). Among the diversity of structured and informal governance arrangements used to facilitate citizen and stakeholder participation within urban food systems, food policy councils (FPCs) are perhaps the most commonly used type of organization to bring together multiple stakeholders to address food policy within municipal contexts (eg. Mendes and Sonnino 2018; Sonnino et al. 2019). FPCs have been illustrated as constructive joint-actor forums that bring together food system stakeholders from diverse sectors—for example school boards, non-profit organizations, and local food activists and producers—to work with municipal and regional governments to encourage food policy development (Gupta et al. 2018; Mansfield and Mendes 2013). Food policy councils engage in diverse activities related to food policy, such as the identification of food policy issues, the active engagement in policy and regulation development, lobbying for policy or legislative actions, and also public engagement and education surrounding food issues (Scherb et al. 2012).

Although there have been attempts to form a FPC within Calgary, currently there is no FPC where stakeholders and community members can gather, coordinate, or mobilize action on food issues related to policy development, implementation, or evaluation. Nonetheless, there is no shortage of food activists within Calgary and some have played a role within recent municipal policy development. Many of Calgary's food activists have focused primarily on local food and urban agriculture, however, within these goals, social justice and environmental sustainability have been a theme. For example, a local and regional producer cooperative entitled YYC Growers and Distributors (YYC) has affected change within municipal and provincial policy and program development (Beckie and Bacon 2019). YYC comprises approximately 15 urban and rural farmers within the Calgary area that work together to produce and sell local produce to Calgarians (YYC 2020). Although YYC's main focus involves selling locally produced food, the organization also strives to encourage sustainable agricultural production, economic viability for their producers and consumers, relationship building between rural and urban farms, and the encouragement of urban farming as a land use (YYC 2020); as such the cooperative's aims extend beyond market production to social and environmental values (Beckie and Bacon 2019).

Calgary is also home to two of Canada's largest urban farms: Grow Calgary, operated by a non-profit organization that uses sustainable agricultural practices and provides fresh food for Calgarians in need, and Highfield Farm, an urban agricultural pilot project led by the City of Calgary in partnership with the Compost Council of Canada. There is a growing list of food activists and organizations in Calgary, for example—to list a few—Slow Food Calgary, which supports local food cultures; the Calgary Food Bank; and the Calgary Horticultural Society, which supports community garden development. The local food ecosystem also includes vertical farming, hydroponic, and aquaponic start-ups. Established and emerging food activists continue to increase, indicating there is a growing movement to address food insecurity and environmental sustainability issues within Calgary's food system. The establishment of a FPC within the Calgary region would provide a forum for these kinds of organizations to collaborate on “alternative food initiatives” that challenge and confront the dominant market-based, global, and industrial food system that primarily shapes the flows of food within Calgary (Levkoe 2011, 688).

Although local food initiatives have increased within Calgary, some of these projects may not necessarily benefit all. To illustrate, community gardens have increased exponentially in Calgary within the last twenty years to include more than 200 community gardens; however, these sites are less prevalent in areas with more visible minorities and lower education levels (Author A et al. 2020). Beyond encouraging limited access to healthy food, community gardens have been shown to provide benefits such as community building, spaces for psychological and physical well-being, and supporting cultural connections (eg. Glover et al. 2005; Wakefield et al. 2007; Twiss et al. 2003). Although community gardens may not be cultivated as a solution to food insecurity in Calgary, they do provide many other significant benefits. The City of Calgary helps coordinate the establishment of community gardens, however the vitality and success of community gardens is dependent on the initiation of individual community or neighbourhood groups. The creation and maintenance of community gardens is reliant on many resources—material (eg. funding) and otherwise (eg. volunteers)—making these initiatives inaccessible for some communities (Glover et al. 2005; Jermé and Wakefield 2013).

A number of possible barriers may impede participation within food planning; for example, a study on community gardens within Toronto found that language barriers and a lack of transportation impeded the participation of Chinese community members within community garden initiatives (Baker 2004). Those designing community planning processes and initiatives need to employ deliberative engagement methods that reach out to underrepresented groups (Clark et al. 2017; Raja et al. 2018); this may involve partnering with community organizations that already

have relationships with community members. Focused outreach implies an equitable, not equal, approach to planning (Clark et al. 2017); as such it purposefully seeks the involvement of marginalized people that are most vulnerable to and have the most to benefit from food systems change (Raja et al. 2018). This means reaching out specifically to communities and individuals that are experiencing issues such as food insecurity and socioeconomic vulnerabilities. The Alex Community Food Centre (thealexcgc.ca), the Leftovers Foundation (food rescue) (leftovers.ca), and Fresh Routes (mobile grocery stores) (freshroutes.ca) are all examples of equity-focused organizations that have emerged in Calgary over the past decade.

Furthermore, the predominantly “local” discourse that surrounds Calgary’s food initiatives may frequently lack what much local food discourse lacks: “concerns related to the ability of people of color, immigrants, and low-income populations to produce, access, and consume healthy and culturally appropriate foods” (Agyeman 2013, 60). Although having a more locally-based food system may result in more sustainable and just food practices, this is not necessarily always the case (Agyeman 2013). Given the complexity of social systems that operate along planes of structural imbalance and dynamics shaped by numerous factors, such as race, culture, and class, it is essential to consider intersectional identities and complexities that impact food systems. For example, another salient illustration of the absence of a critical lens within City of Calgary food planning approaches is the lack of direct reference to culturally appropriate foods, which is so often listed in other contexts. Research increasingly demonstrates a significant link between food initiatives and cultural communities; for example, community gardens have been shown to provide people with both culturally appropriate foods and as sites to connect with cultural community members (Abramovic et al. 2019; Baker 2004; Wakefield et al. 2007; Gichunge and Kidwaro 2014; Martin et al. 2017). Considering aspects such as culture within food systems not only allows for more equitable processes, it also facilitates other community development goals, such as community building and developing social capital.

The concept of food sovereignty is frequently used within critical approaches to food planning. Food sovereignty can be defined as “the right of nations and people to control their own food systems, including their own markets, production modes, food cultures and environments” (Wiebe and Wipf 2011, 4). As a concept and movement, food sovereignty has been critically contrasted with food security; for example, critics have suggested that food security discourse frames global food issues as technical problems related to scarcity and fail to address greater underlying power dynamics that shape inequitable food system processes (Levkoe 2013). Sovereignty within urban food systems planning is not necessarily aimed towards complete self-reliance, but rather “the designing of more inclusive urban foodscapes” (Sonnino et al. 2019, 114) and “the idea that people, especially those most marginalized by the dominant food system, are reclaiming control of their own food systems” (Andrée et al. 2019, 24).

Within settler-colonial and Indigenous contexts, food sovereignty has gained prominence as a way to address food system inequities for Indigenous peoples and as a way to reclaim relationships to food, land, and culture (Robin 2019). Informed by her work involving Indigenous food sovereignty initiatives in western Canada, Morrison (2011) describes four main principles that guide Indigenous communities seeking food sovereignty: access to food as a sacred right regardless of colonial power, active participation in practices that foster positive relationships with the land and food, self-determination in relation to decision-making about food, and the need for cross-sectoral legislation and policy reform to reconcile Indigenous food values with dominant colonial food systems.

Similar to other western prairie contexts, settler colonialism in the Calgary region involves “the displacement of an Indigenous food system by a European industrial food system” (Rudolphe and McLachlan 2013, 1092). For example, the intentional decimation of the buffalo population, which Indigenous people were dependent on for survival, assisted in clearing land of Indigenous peoples for settler-colonial purposes such as agricultural production and ranching (Daschuk 2013; van Herk 2001). Similar to other settler governments that are attempting to redress harmful colonial legacies and reconcile their relationship with Indigenous nations, the City of Calgary has called for several actions across municipal departments, for example the incorporation of Indigenous content in recreational and educational facilities and programs (Calgary Aboriginal Urban Affairs Committee 2016). Food systems planning with an explicit incorporation of an Indigenous food sovereignty lens would further support the City’s commitments to addressing its settler-colonial history and associated injustices. Perhaps most importantly, the incorporation of Indigenous food sovereignty lens requires that Indigenous people are involved within the processes of food planning and policy development to determine how best food policies can incorporate and encourage Indigenous food values and practices. For example, within our recommendation for a FPC, the representation of and meaningful collaboration with Indigenous community members on the council can help address Indigenous food sovereignty goals. The City of Calgary’s Aboriginal Urban Affairs Committee (CAUAC) is made up primarily of Indigenous community

members, and works to address Indigenous issues within the city (City of Calgary 2021). This committee and type of collaboration could help assist with greater incorporation of an Indigenous food sovereignty lens within the City's urban food systems planning. CAUAC's *White Goose Flying* report and calls for action in response to the Truth and Reconciliation Commission reinforces this momentum (CAUAC 2016).

### Addressing policy inertia with resource allocation and evaluation

Within the last ten to fifteen years, The City of Calgary has taken optimistic strides towards improving their food system within visionary policy documents outside the MDP. In the early 2000s, the City of Calgary worked to develop a long range sustainability plan entitled *imagineCalgary*. Released in 2006, the plan included food goals such as “by 2036, 100 percent of Calgary's food supply derives from sources that practice sustainable food production” and “by 2010, 100 percent of Calgarians have access to nutritious foods” (City of Calgary 2006, 5). In 2012, The City of Calgary released a food strategy: *Calgary Eats! A Food System Assessment and Action Plan for Calgary*. Within the plan, the primary goals outlined were “to create a sustainable and resilient food system for the Calgary region so that every Calgarian has access to local, healthy and environmentally friendly food” (City of Calgary 2012, 2). This strategy was created by multi-sector stakeholders including the Calgary Food Committee. This committee was organized to guide the food strategy's development and included City of Calgary representatives, food producers, local food businesses, and provincial government representatives from health and agricultural departments (City of Calgary 2012, 14).

Following the endorsement of its food strategy, the City of Calgary undertook a land use bylaw amendment project to support urban food production, processing, and distribution (City of Calgary 2020). These amendments have made possible the creation of initiatives such as pop-up food markets at light rail transit stations and residential boulevard gardens located on city property. In addition to integrating a food systems lens into its urban planning processes through regulatory changes, the City of Calgary has also integrated food systems perspectives within the City's climate resilience strategy, which calls for diverse food systems actions such as the reduction of food waste, promotion of local food production, and systems-wide research on food activities (City of Calgary 2018a).

Unfortunately, Calgary is not on track to achieve the laudable goals laid out in its long range sustainability plan or food strategy. Swinburne et al. (2019) describe the significance of effective governance and supportive public advocacy to combatting policy inertia; governance challenges include maintaining coherent motivation (amongst multiple interests and stakeholders) and commitment, acquiring the resources required to act, and addressing power asymmetries and inequities with food systems. By supporting the creation of a FPC, or other type of inclusive planning structure, the City of Calgary could provide administrative support for an organization that continues to advocate for food policy development and implementation. When Calgary's food strategy was being developed, the Calgary Food Committee was created; however, with the strategy's completion, this group of diverse players dissolved and is no longer present to advocate for food systems issues. MacRae and Donahue (2013) emphasize that “the most fundamental contribution of food policy initiatives is the creation of opportunities for discussions and action that would not typically occur” (20). A FPC is a forum to bring up food systems issues and advocate for food as a core infrastructure where few other opportunities exist to have those multistakeholder collaborations.

Within their study examining policy initiatives from 64 local and regional municipalities around Canada, MacRae and Donahue (2013) found several facilitating factors for successful municipal policy development. Strong support from the municipal government was found to be important, including active participation from municipal workers; shared and partnered support around common aims from government officials (both staff and politicians); and food systems thinking that recognizes interconnections among aspects such as food processes, players, and sectors. MacRae and Donahue's (2013) research found that municipal support among jurisdictions represented a spectrum of involvement, for example at times taking the lead or other times providing the administrative and economic support required to coordinate some form of multi-stakeholder organization. During the the creation of Calgary's food strategy, the latter approach was taken where the City of Calgary provided staff and budgetary support to assist the work of the Calgary Food Committee.

To accomplish many of the recommendations proposed in this paper, the City of Calgary would need to commit more resources, both through funding and staffing, to help encourage food systems planning. Currently the City of Calgary only has one staff member devoted to encouraging sustainable food systems planning. As has been emphasized by others, addressing food systems planning—and integrating inclusive planning processes such



as deliberative engagement—requires an investment of resources (eg. Clark et al. 2017; Thibert 2012). Integrating food systems policy work is an investment advancing several other municipal goals including resiliency, sustainability, and community health. Another strategy to help gain resource and administrative support is the encouragement of resource-pooling through creative partnerships within municipal departments, with higher orders of government (e.g. provincially on health and federally on fiscal policy), and with private and not-for-profit sectors (Clark et al. 2017; Porter and McIlvaine-Newsad 2013; Swinburne et al. 2019).

In addition to backing policy goals with resources, evaluative methods are another strategy towards combatting policy inertia. As food systems planning has gained more and more traction within municipalities, evaluating what is working (or not) within policy development and implementation becomes the next step (Raja et al. 2018). The evaluation of policy changes and food systems initiatives would allow for encouraging successes and abandoning failures (Raja et al. 2018). To adequately evaluate and provide feedback mechanisms for policy development, data collection and analysis are needed (MacRae 2017).

Calgary is in need of greater data collection on its food system, which would help to evaluate policy strategies as well as help determine new directions for food systems interventions. Currently, the MDP monitoring report contains only a rudimentary suite of indicators confined to the average distance to a big box grocery store and the number of community gardens, orchards, urban farms, and farmer markets (City of Calgary 2018b). The Sustainable Calgary indicator project has identified the percentage of food grown locally as one potential metric (Sustainable Calgary 2020). The need for further data assessment is highlighted in Calgary's Food Strategy and a regional strategic policy for food security developed by the former Calgary Regional Partnership (City of Calgary 2012; Letizia 2018). As evidenced by a local study on Calgary regional food systems stakeholders, many stakeholders work independently without considering other interacting agents or contexts; access to food systems data can help “stakeholders with visualizing how their food-related work fits into the regional food system and facilitate multiple interest discussions” (Letizia 2018, 53). Data on food systems components and processes can highlight the significant interrelationships between and among the multiple food processes such as production and consumption or ecological sustainability and human health (Sonnino et al. 2019). Data collection on local food systems are also significant social movement levers to demonstrate inequities within the dominant food system (Pothukuchi and Kauffman 2000).

### **Integrating critical food systems planning approaches to City of Calgary policy**

Although Calgary has taken great strides towards improving its food systems, more is needed. Our research has found three main thematic areas where the City of Calgary can ameliorate its approach to food systems planning.

Our research recommends that the City of Calgary adopt a systems approach to the integration of food planning within its MDP, where goals that encourage just, sustainable, and healthy food system practices are established as core goals of the municipal development plan and food is recognized as a core infrastructure. This requires embedding food more fully into city policy and a change of corporate culture that welcomes, encourages, and champions the elevation of food in municipal policy discourse. Food planning scholarship emphasizes food systems as complex processes involving interconnection across multiple stakeholders and scales; therefore, planning processes need to be boundary-crossing, whether across municipal government departments, orders of government or across public, private, and not-for-profit sectors.

Our research also recommends that the City of Calgary integrate inclusive governance practices and critical approaches to food systems planning. This recommendation specifically advocates for the City of Calgary's administrative and resource support of an independent regional FPC where a multi-stakeholder group can foster essential connections between different sectors and levels of government that interact within complex food systems. Furthermore, a FPC could collaborate and advocate for changes in the global food system in relation to local concerns, such as issues related to equity, access, and nutrition. Our research highlights the significance of deliberative engagement of those who are most marginalized by the dominant food system. Our research also advocates for the encouragement of culturally appropriate food and an Indigenous food sovereignty lens within food systems planning in Calgary, where Calgary can address its settler-colonial legacy and move towards practices that encourage reconciliation.

In our final recommendations, we advocate for the use of evaluative methods to encourage policy goal accountability and to continually assess food systems contexts and initiatives to ensure appropriate policy directions. We also recommend that the City further support food systems planning with greater resource allocation to support the aforementioned recommendations as well as the initiatives and policy goals the City has already undertaken. When

considering greater resource allocations, following our above recommendation towards greater equity and Indigenous food sovereignty approaches, it is imperative to consider for whom these resources will benefit. For example, studies have shown that urban agricultural and other food-based initiatives can contribute to and signal gentrification (e.g. Alkon et al., 2021). It is not enough to simply invest in further alternative food systems initiatives; rather local actors (i.e. the City of Calgary) need to employ a reflexive approach to supporting food systems asking “what and who they are really for” and by engaging with marginalized groups to determine community needs (Alkon et al., 2021, p. 330). For example, in relation to the establishment of a Calgary FPC, reflexive and equitable approaches are necessary to ensure that diverse groups of community members are meaningfully included within the development of a council. One of the many barriers towards diverse community member inclusion within FPCs is a lack of financial resources to adequately engage communities and the time required from volunteer-based FPC roles (Agyeman 2013). These resources need to be directed towards the communities and people that need them most, and that are currently marginalized within the current food system.

From our research, we found several areas needed for further investigation, including a greater examination of how an Indigenous food sovereignty lens could be integrated into the City of Calgary’s planning for municipal food systems and a closer analysis of the municipal tools and processes that can help mobilize our broad scale policy recommendations. As previously noted, the City of Calgary updated some planning tools, such as bylaw amendments to allow for more urban agriculture, backyard hens, beekeeping and local food sale sites; however, additional updates to a variety of local planning instruments including other municipal bylaws, zoning, licensing, and procurement guidelines, could be utilized to mobilize the changes we are advocating for within the City of Calgary’s approach to urban food systems. For example, procurement requirements for projects led by the City could include food production identification that could support economic diversification and equitable access to food; this could be particularly applicable for affordable housing developments or industrial development, both of which are often led by the City. Licensing requirements could be expanded to be more flexible for commercial growers while specifically deregulating or exempting foraging, small scale community sharing activities, or similar activities that currently occur and are an integral, primarily unmeasured, aspect of a comprehensive food system. Moreover, urban design, from streetscapes, to building and neighbourhood typology, is increasingly recognized as interacting with food systems (e.g. Komisar & Nasr 2019); modifications to municipal planning requirements that guide urban design could also facilitate the broad municipal food systems goals that we have laid out in this paper.

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