NORTH AMERICAN FOOD SECTOR, PART TWO:

A ROADMAP FOR CITY FOOD SECTOR INNOVATION & INVESTMENT

USDN urban sustainability directors network

WALLACE CENTER WINROCK INTERNATIONAL

changing tastes

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PREFACE

This project is a partnership of the City and County of San Francisco and the Cities of Minneapolis, Portland, Seattle and Vancouver, and is funded through the Innovation Fund of the Urban Sustainability Directors Network, a Project of the Global Philanthropy Partnership, through the support of the Surdna and Summit Foundations. The purpose of this project is to develop a roadmap for cities to create innovative, resilient and productive local and regional food systems that deliver near-term benefits and sustainable value. In mid-2012, the Wallace Center at Winrock International and Changing Tastes were hired as consultants to develop this roadmap.

The development of this toolset was undertaken in two phases. The project team first conducted a comprehensive literature review to survey the sustainable economic development potential of the food sector nationally, and to assemble a set of innovative case studies to complement the national scan. In the second phase, the team drew upon the evidence-based foundation of the literature and its collective experience and successes to develop the roadmap, focusing upon leverage points in the food system that are within the ability of cities to change. The results of this work are presented in two documents: ***North American Food Sector, Part One: Program Scan and Literature Review*** and ***North American Food Sector, Part Two: Roadmap for City Food Sector Innovation and Investment***.

It is the hope of the project team that these documents will help cities throughout North America make innovative food sector investments that yield sustainable benefits in the form of job creation, higher wages, revenues generated, and increased access to healthy foods among all communities. These are now major areas of concern for many metropolitan areas as they become more deeply engaged in food system planning – an increasingly critical need to help create a resilient food system.

As cities use these documents in food sector planning, the project team would welcome any questions, feedback about their utility and ways to improve them in the future. You may contact us about the project at any of the project websites:

City and County of San Francisco Planning Department:
http://foodsystempolicy.sfplanning.org

Changing Tastes:
http://changingtastes.net/our-work

Wallace Center at Winrock International:
http://www.ngfn.org/cityfoodsector

SECTION ONE: INTRODUCTION AND OVERVIEW

INTRODUCTION

The ***Roadmap for City Food Sector Innovation and Investment*** is a guidance document to help cities focus and develop investment strategies to increase the number of new innovations and ventures in their local food systems, and to better the odds of their survival and success. The building blocks of the Roadmap are the ***asset inventory, tools and strategies***, and ***indicators*** sections, which are included in this document, along with the investment priorities and worksheets for making the local economic case, maximizing return on investment, and managing risk, which are available for download at the project websites (***http://changingtastes.net/our-work*** and ***http://foodsystempolicy.sfplanning.org*** and ***http://www.ngfn.org/cityfoodsector***). Together, these tools can help cities play an essential role in strengthening local food systems and stimulating innovation in the food sector.

We consider a food sector "innovation" to be ***a discrete program, project, or policy that relies on a new business model, or provides new products and services that either deliver or have the potential to deliver significant socioeconomic, health and nutrition, and environmental benefits, with an emphasis on economic development***. These can include healthy foods produced entirely in or near a city as well as foods that are produced sustainably, using growing methods that protect and restore the natural environment.

Regarding "local food," there are almost as many definitions as there are cities. No single definition, whether based on a geographic boundary or a specific distance, works in each and every city. Thus, the pursuit of a universal definition is of limited value for the purposes of this Roadmap. By comparison, the values of producing food in urban regions are diverse, including the creation of a more self-sufficient food system that is better insulated from global conditions, albeit more connected to local ones. Regardless of where food is grown, caught, or raised, cities can garner most of the economic benefits by expanding the number of local ventures that add value to food through processing, distribution, marketing, service, and sales.

Ultimately, this Roadmap for investment is aimed at realizing these benefits, and creating resilient and productive locally and regionally based food systems that deliver both near-term improvements and create enduring value.

THE CURRENT AND PROJECTED GROWTH OF THE FOOD SECTOR

The food sector, from food production through foodservice and retail, remains one of the largest sectors of the economy and one that has continued to expand and create new jobs even through the recent economic downturn. Food sector employment is now growing at about twice the rate of the overall economy.

Taken as a whole, the food sector is a favorable one for stimulating economic activity and job creation. Our review found that the food sector has been, and will continue to be, a major source of job creation. But jobs have and will continue to be of uneven quality, with many at relatively low wages (<$10/hour) and with uneven working conditions. Also, many food businesses create relatively few jobs, with about 91% of all food businesses having fewer than 50 employees.

In coming years, job growth also will be concentrated in certain kinds of businesses, with the greatest growth in foodservice and a loss of jobs in food production. Processing and retail businesses such as foodservice have the greatest economic benefits, depending on the strength of the local infrastructure and related asset base. That said, there could be a trade-off between creating a few high paying jobs, or creating lower-wage jobs, and this difference is attributable in part to where investments are made along the supply chain (foodservice, for example, typically yields lower paying jobs).

About 2.2 jobs are created for every $100,000 in food sales.

Larger food companies also are optimistic about future growth, with 80% of companies forecasting continued growth despite limited ability to raise prices. More than a fifth of companies forecast growth of 6% or more in coming years, more than double the rate of growth in the overall economy. These larger companies also see future growth in the local food market, a belief supported by numerous consumer insights studies. They plan to invest heavily to meet the growing demand by acquiring locally owned food companies, citing significant barriers to transforming their own existing business models to accommodate these new practices.

Simultaneously, venture capitalists are beginning to understand the potential of these shifts in demand, backing the launches of new, small-scale local and sustainable food businesses. Many of these rely on innovative business models that, while unproven and more risky, also may disrupt existing ways of doing business and create large-scale change among existing businesses and food systems.

In both instances, greater private investment is driven both by increasing consumer interest in healthy and sustainable food and also the opportunity for providing food using new business models better suited for a growing population, a changing climate, and a limited natural resource base. Taken together, these shifts are creating a new landscape for local food business: newer, smaller ventures backed by venture capital, and larger, mature local food businesses, often with access to

new funds and resources after they are acquired by larger corporations. Both are focused on expanding supplies of local food, now coming from either large national companies or smaller, independently owned companies.

In the ***Program Scan and Literature Review*** that serves as a foundation for this Roadmap, we found the following emergent economic trends, which should be taken into account when investing in food sector innovation:

- ***Increased and sustained demand for local food.*** Increased demand for local food will continue in the foreseeable future, with growth focused in and around urban centers. Research suggests that 30% of consumers are now willing to change where they buy food in order to buy locally or regionally sourced food.

- ***Shifts in local/sustainable food business ownership.*** Increasingly, larger national and multinational food businesses and venture capitalists are taking notice of sharp increases in demand for locally and regionally sourced food, and are taking steps to engage in this market. Both are working to increase their investment and ownership of businesses that offer local food, now coming from both large national companies as well as smaller, independently owned companies.

Source: Green City Growers

- ***Concentrated job creation and increased wages.*** Due to increasing demand and continued investment, jobs in the food sector are likely to increase. Job growth will likely be concentrated in specific parts of the supply chain, primarily in processing, foodservice, and retail. Wages are likely to increase as well, though food sector jobs are of uneven quality, and the increase will ultimately raise the starting costs for new ventures. Finally, because most food businesses do not create many jobs and more than 90% have fewer than 50 employees, it will be important to grow businesses and not just start them.

- ***Risks of failure remain, but costs to communities are lower.*** While the risk of food ventures is only slightly higher than other businesses, this risk is offset by the fact that the cost of failure to communities is actually less. Their assets are easily absorbed into the economy: they often end in distressed sales to other companies; occupy sites that are easily reusable; and have relatively low debt and inventory levels. Overall, the sector is a sound investment.

OPPORTUNITIES FOR CITY-LEVEL POLICY AND ACTION

As clusters of creativity and innovation, cities are in a unique position to invest in innovative business models and approaches to local food systems challenges. And they have the population density, and thus demand, for successful efforts

to be taken to scale. Cities could look for opportunities to add value to supply from regional farms and to develop technologies that offer services across the supply chain. Depending on a city's assets and goals, investments may need to focus on the supply side, but supply side efforts are strengthened by programs and policies targeting food businesses that source locally, and that are locally owned.

City investment (perhaps in partnership with regional or state actors) in supply-side infrastructure based in rural areas has the potential to address bottlenecks and barriers in connecting (rural) supply to (urban) demand, while strengthening the resilience of rural areas and their capacity to respond to increased demand over time. In fact, successful and sustainable regional food businesses based in urban areas are necessarily dependent on the success and sustainability of these farms.

Some of the specific ways cities can spur innovation and investment in the food sector are:

- ***Technical assistance.*** As with entrepreneurs in other sectors, food sector entrepreneurs would benefit from investments in capacity building and technical assistance in business skills and risk reduction techniques. While the research suggests particular need at the project start-up phase, ongoing management training is necessary as well.

- ***Direct public financing.*** Cities are seeing returns on direct financing mechanisms such as place-based federal pass-through funding and federal empowerment zones, which focus on community-defined economic and social development impacts.

- ***Land use policies.*** Of particular interest in urban areas is the issue of land use barriers and zoning. Cities are finding that policies that simply allow more flexibility in land use catalyze innovative use of urban spaces. For example, assemblage of adjacent plots of unused land in a neighborhood opens up new possibilities for use.

- ***Food safety regulations.*** Typically designed with larger companies in mind, food safety regulations can be difficult, time consuming, and therefore more expensive for smaller companies to meet. Examination of these policies through the lens of smaller food businesses, and the range of businesses affected, has the potential to reduce risks and costs in the sector while maintaining high levels of food safety.

- ***Straightforward and streamlined services.*** Complicated or multi-office permitting processes remain an obstacle. Coordinating and streamlining city governance functions related to the food sector would reduce obstacles for new ventures.

Examples of cities and counties with comprehensive, general or sustainability plans that focus on the food system:

- **Baltimore, MD**
- **Detroit, MI**
- **Marin County, CA**
- **Minneapolis, MN**
- **Milwaukee, WI**
- **Portland, OR**
- **Sacramento, CA**
- **San Francisco, CA**
- **Seattle, WA**
- **Vancouver, BC**

Current economic trends, together with the demonstrated potential of recent innovation, show significant opportunities for cities to drive economic development, including job creation, through investment in select parts of the food sector. Cities can drive more and faster improvements in these areas through targeted policies and actions.

LEVERAGE POINTS FOR INVESTING IN THE FOOD SECTOR AND MODELS OF INNOVATION

No model exists for innovation, and what works for one city may not work for another. Innovation is neither standard nor common, and carries the risk of being unproven, but also holds the promise to catalyze change in the business sector and the larger food system. Many of the best examples are those that are diversified and integrated, in that they have multiple consumer segments, multiple market channels, and are diversified for profit/non-profit revenue streams.

Veritable Vegetable (a food hub) and ACEnet (a food business incubator) are centers of growth, job creation and knowledge capital on how to bring food businesses to scale.

Taken as a whole, the local and regional food sector has the potential to act as a significant economic driver in terms of growth, job creation, and increasing access to healthy food. It is in fact is already beginning to doing so in at least some small ways.

From the well-researched work of farmers markets, to the increasingly sophisticated negotiation of food supply and demand of regional food hubs, to the cutting-edge combinations of food business incubators, commercial/community kitchens, and shared processing/training facilities, the local and regional food sector is both slowly building upon mature systems of growth and job creation, and more quickly reconfiguring these systems to better meet increasing demand for healthy affordable food.

Based on the ***Program Scan and Literature Review***, the most promising supply chain categories of innovations profiled, with the greatest potential for investment that leads to positive impact on local and regional economic development and job creation are:

- ***Local/regional food hubs:*** While these may only directly provide 15 jobs on average, they contribute to job creation throughout the local food supply chain.

- ***Food business technology companies:*** These range in size from 7-70 employees, but are a source of high-skill, high-pay jobs, are quickly expanding, and are an important intermediary in meeting fast-growing demand.

- ***Food business incubators:*** These “businesses that create businesses” provide the local learning infrastructure to decrease the failure rate of new businesses (from 56% to 13%), and bring job training and business ownership

opportunities to historically excluded populations.

- ***Farm to institution supporting businesses:*** There is tremendous demand from institutions for regional sourcing, but a growing need for intermediaries to manage relationships and logistics. These businesses are bridging this gap, and a growing body of knowledge is helping to understand how to best deliver economic benefits to both buyers and suppliers.

Investing in the food sector is one of the best opportunities to create jobs—but not always high wage jobs. There may be a trade-off between creating a few high paying jobs, or creating lower-wage jobs, and this difference is attributable in part to where along the supply chain investments are made (foodservice, for example, typically yields lower paying jobs).

Through the literature review, we also found a larger set of established business models and emerging innovations that would generate the greatest local economic benefits in terms of increased local revenues, jobs, wages, and access to healthy foods, and that offer the greatest investment opportunities:

- ***Processing and retail/consumption/foodservice.*** In terms of potential high-return segments of the supply chain, processing is among the most promising. This includes benefits derived from extending the season for fresh foods, increasing the utilization of seconds, and combining with business incubators and job training programs to increase job creation.

- ***Food clusters that mix diverse businesses including a retail component.*** Locating businesses of a similar or competing nature together can have negative effects. The exception is new business incubators that co-locate many very small businesses that are all in their start-up phase, and therefore benefit dramatically from shared infrastructure, and from avoiding start-up costs and time consuming permitting.

- ***Increasing access to start up and expansion capital.*** Food ventures require capital to grow and create jobs, just like most small businesses, albeit often in smaller amounts. Cities can help overcome technical assistance and business management gaps by creating new financial vehicles and increasing the awareness of food-related opportunities for their private investor or lending institutions.

Critical success factors for local and regional food investments to maximize their sustainable economic benefits:

- A systems approach to planning
- Compatible procurement policies and incentives
- Supportive infrastructure (aggregation, processing, distribution)
- Strong relationships with suppliers
- Local branding
- Favorable political climate
- Streamlined services
- Business/technical assistance
- Seed capital
- Healthy food marketing campaigns
- Community involvement

- ***Institutional purchasing.*** Government and institutional purchasing policies (for schools, colleges and universities, and hospitals) that mandate some portion of food be sourced locally or regionally are becoming more and more common. In some cases such efforts are now facing bottlenecks due to insufficient aggregation and distribution infrastructure, or insufficient quality and quantity of supply.

- ***Fruits, vegetables, and meats.*** Increasing the supply of fruits and vegetables is the single most important overall investment, with multiple economic, environmental, and health benefits up the supply chain. Locally sourced meats appeal to a variety of buyers, from high end restaurants serving tourist crowds to the high-growth foodservice sector, and offer opportunities for valued added and niche products.

- ***Food waste prevention through timely sale.*** The "short sale" retail for food almost ready to expire has been a viable business through discount outlets and a new wave of social media technologies that now bring a similar “flash sale” approach to short sales in mainstream grocery and retail.

- ***Food waste prevention through processing of value-added seconds.*** A number of city and non-profit programs are finding innovative uses for getting seconds to consumers, particularly to vulnerable populations, and/or those with low access to fresh foods. In addition to systems for supplying and distributing seconds, there is the opportunity to invest in operations that process seconds into value-added products.

LIMITATIONS TO THE ROADMAP

A number of cities have embarked on plans to catalyze local and regional food sector growth, with a broad range of intended impacts including economic development; increased access to affordable healthy food; environmental sustainability; food waste reduction; and improved health outcomes, among others. But little data exists on the successes, challenges, or lessons of these efforts. An understanding of what has—and has not—worked, and why, represents a significant research gap. The accompanying literature review document, ***North American Food Sector, Part One: Program Scan and Literature Review***, attempts to fill this gap in part. But more remains to be done and cities can play a central role.

The research gap and what is currently known about food sector innovations and investments serve as both the focus of this Roadmap and its foundation. It is the authors’ hope that this roadmap will not only help provide a systemic planning framework and set of investment and evaluation tools for cities to use in food sector investment, but that it will also be a significant and early step in building a national base of knowledge over time that cities will play an instrumental role in developing.

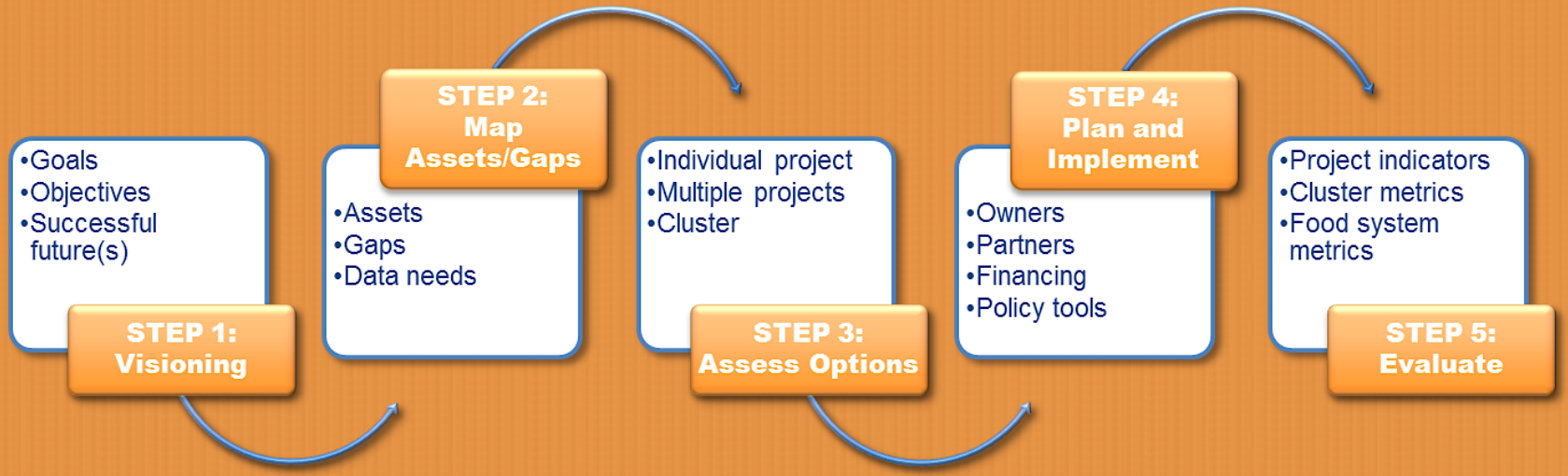
In thinking about how cities might be poised to capitalize on the opportunities identified in the Roadmap, there are two important issues to note. The first is that food sector investments and policy interventions should be seen through the lens of the supply chain; many different kinds of businesses are involved in moving food from farm and ranch to restaurant and grocer, including processing, distribution, and a host of allied businesses.

The second issue to note is that policy and investment priorities will necessarily vary based on city characteristics, assets, and goals. While this is reiterated below, it is an important lens through which to view the majority of these implications: each city should take into account its own aims and assets as it develops strategies for food sector investment.

SECTION TWO: HOW THE ROADMAP IS ORGANIZED AND HOW TO USE IT

The Roadmap for City Food Sector Innovation and Investment is intended to guide cities as they develop investment strategies that increase the number of new innovations and ventures in their local food systems, and helps improve the odds of their survival and success. The asset inventory, tools and strategies, and indicators sections, together with investment priorities and worksheets are designed to help make the local economic case, maximize sustainable return on investment, and manage risk. These components provide the building blocks for the Roadmap. The aim of this toolset is to help cities play an essential role in strengthening local food systems and stimulating innovation in the food sector.

Figure 1 – Food Sector Innovation Planning and Evaluation



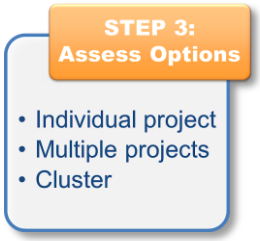
Taking into account city roles and these questions, there are five steps proposed in the framework for conducting a planning process centered on investment in food sector innovations to maximize local economic benefits, job creation, and access to healthy foods. Cities can begin at any step in the process, depending on where they are in the process of food sector innovation and investment.

STEP 1: Visioning *(page 12)*

In this critical first step, a city envisions what a successful future would look like in the food sector as a whole, and the potential role or roles of the city in building toward this future. This initial visioning would ideally occur with the input of public and private stakeholders who would collaborate in achieving this vision.

STEP 2: Mapping Assets and Gaps: Inventory of Food Related Assets *(page 15)*

In this second step, a city compiles an inventory and map of all food related assets in a given community or citywide, depending upon city needs and the scale of a proposed investment. The intention of this inventory and map is to provide a full picture of food sector assets, their interconnections and their gaps.

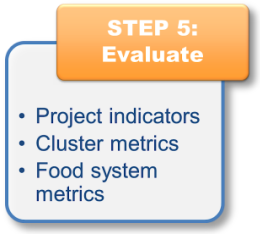


STEP 3: Assess Options: Individual, Multiple, or Clusters of Projects *(page 24)*

Once the asset-gap inventory and map provide a full picture of food sector assets and their connections, cities are in a better position to figure out which gaps exist, and which types of specific investments in the food sector best address them. The scale of investments ranges from individual or multiple projects to clusters of projects in an innovation district, depending on needs and goals. This topic will be examined in greater depth in ***Tools and Strategies***.

STEP 4: Plan and Implement Food Sector Investment: Partners, Tools, and Strategies *(page 35)*

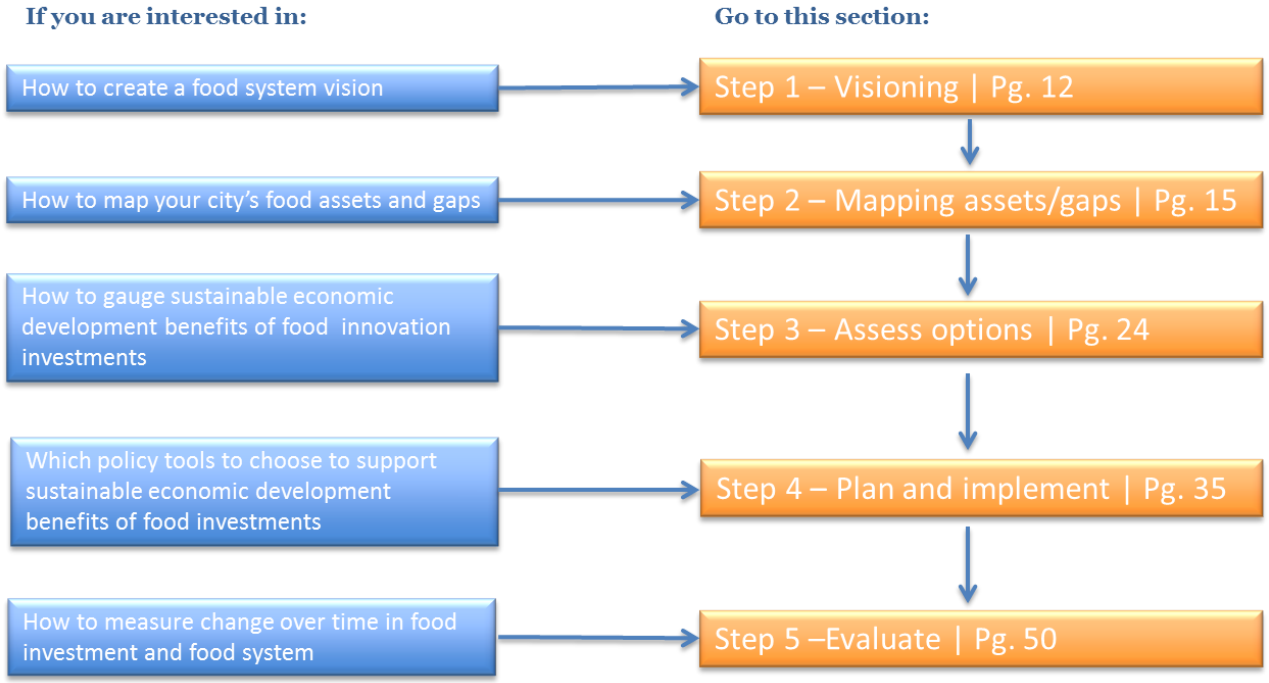
As part of the planning and implementation process, a city assembles its unique resources to support the chosen investment(s), and strengthen its assets and their connections. These resources include partner and stakeholder engagement, direct or indirect financing, and policy tools. This topic will be examined in greater depth in the Tools and Strategies section.



STEP 5: Evaluate: Project, Cluster, and Food System Metrics (page 50)

Once a project is in operation, an evaluation of its impacts is a critical measure of effectiveness. It also helps build local and regional knowledge about what works where and why. Indicators are important evaluation tools for these purposes. This topic will be examined in greater depth in the Indicators section.

Though there are five steps proposed in this framework, cities can begin at any step in the process, depending on where they are in the process of food sector innovation and investment. The Roadmap Flow Diagram below provides guidance on where to begin.



STEP 1: Visioning

- Goals
- Objectives
- Successful future(s)

SECTION THREE: VISIONING – GETTING STARTED

As the visionary systems thinker and sustainability leader Donella Meadows observed, roughly 90% of the conversation around crafting policy focuses on implementation, with the remaining 10% devoted to modeling and information. But where is the place for visioning? The proportion of time frequently spent on implementation and information gathering leaves little room for the establishment of a clear and feasible vision and goals.[i]

A vision is as strong and deep as it is systemic, and is as broad as the array of the public and private stakeholders who share in its development. The hallmarks of a strong vision are that it is clear and achievable and forges a pathway for shared action that transforms a system toward a commonly understood and desired end. A vision also taps into the wants, needs, and passions of its stakeholders. A strong vision for a city centers on its aims and goals and provides a clear and cohesive picture of how to get there.

Before starting to plan food sector innovations, as with any complex effort, the establishment of a cohesive vision and clear goals provides an essential foundation. In this first step of the Roadmap, city stakeholders would together envision what a successful future looks like for their food sector as a whole, how individual investments could help achieve this vision, and what would be the potential role or roles of the city in building this future.

For example, when we developed this Roadmap, the participating cities started the project by honing in on the core project goal: create and stimulate opportunities for sustainable innovation and investment in the food sector, with specific priorities in mind. These are to spur innovation and entrepreneurship that has multiple local economic benefits, create livable wage jobs, and increase access to healthy foods, especially among low income and disadvantaged communities.

The public and private stakeholders who engage in developing a vision should provide a wide range of perspectives, be diverse thinkers and doers, and share a commitment to helping advance the vision toward a successful outcome (see ***Section Four: Mapping Assets and Gaps*** for examples). Stakeholders could include public officials, local business leaders, community organizations, philanthropies and institutions, among others.

As a starting point for the civic dialogue on visioning and goals, there are several questions cities can pose to stakeholders that lead toward developing an achievable vision. A few examples of potential questions to ask are:

- What kind of future do we want?
- What do we want to change and what will remain the same?
- What kind of city/community/world do we want to live in?
- What kind of city/community/world are we trying to create now and for future generations?
- What do success and/or progress look like in the future?
- How do we know we have achieved our aims?

Adapting these questions to create a vision for your city's role in food sector innovation and investment, some specific questions to consider in a visioning process include:

- What kind of future food system/sector do we want?
- How do we want the food system to change and remain the same?
- How do we create the food system/sector we want?
- How do we connect food to urban sustainability and resilience?
- What is the role of the city in recreating the food system/sector?
- How do we make food a centerpoint of civic life and the urban fabric?
- How do we connect the food system/sector to other urban assets?
- What do success and/or progress in the food system/sector look like?

The Detroit Future City asset-based strategic framework involved a two-year engagement process with hundreds of public and private stakeholders citywide. The plan starts with a systems perspective and unified vision for creating 3 to 4 jobs per Detroit resident by 2030. Food sector innovation and investment is a centerpoint.

When envisioning what a successful food future looks like in the food sector as a whole, it is also important that this vision reflects a systems perspective – the food supply chain from farm to consumer, its elements, their connections, leverage points, and impacts. Depending on the stakeholders involved, and their role in the city and the food sector, it may be advisable to root the first conversations in mutual learning about the food system as a whole and how it works.

The degree to which this is desirable and appropriate also depends on whether the convening city organization and stakeholders involved are more comfortable with a evidence-based process, or one that is mostly intuitive and where each participant's perspective, knowledge, and intuition are equally respected. Ultimately, it is up to the convening organization to decide which approach best meets its needs, while also serving the goals of inclusiveness and engagement, and a shared commitment to achieving the vision.

RESOURCES

1) Griffin, Toni et al. 2012. *Detroit Future City: Detroit Strategic Framework Plan*. Detroit Works Project. Excellent systemic vision for future Detroit that includes a well-developed food system component centered on the Eastern Market. http://detroitworksproject.com/wp-content/uploads/2013/01/The-DFC-Plan.pdf.

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3) Colasanti, K., Cantrell, P., Cocciarelli, S., Collier, A., Edison, T., Doss, J., George, V., Hamm, M., Lewis, R., Matts, C., McClendon, B., Rabaut, C., Schmidt, S., Satchell, I., Scott, A., Smalley, S. (2010). Michigan Good Food Charter. East Lansing, MI: C.S. Mott Group for Sustainable Food Systems at Michigan State University, Food Bank Council of Michigan, Michigan Food Policy Council. The Michigan Good Food Charter presents a vision for Michigan's food and agriculture system to advance its current contribution to the economy, protect our natural resource base, improve our residents' health and help generations of Michigan youth to thrive. www.michiganfood.org.

STEP 2: Map Assets/Gaps

- Assets
- Gaps
- Data needs

SECTION FOUR: MAPPING ASSETS AND GAPS - INVENTORY OF FOOD-RELATED ASSETS

INTRODUCTION

Cities play a critical role as champions of innovation and investment in the local food sector. By necessity, their investment priorities and potential must vary based on city characteristics, assets, community needs, and goals. Once a vision is established, conducting an inventory of both food sector assets and gaps is a key component of a metropolitan food sector investment plan and strategy. It also serves as a way to understand the future potential of these investments to strengthen these assets and their wealth-generating capacity. This document provides cities with a framework for mapping their assets, gaps, and data collection needs. This framework is designed to support city efforts to cultivate resilient and productive local and regionally based food systems, delivering near-term benefits and creating enduring value.

WORKING DEFINITION OF ASSETS

Assets are the foundation for an investment activity, and the key to its success or failure, as well as the cornerstone of community connectivity, place-making, and wealth-building. Individuals, households, organizations, businesses, and government agencies all can own and/or manage assets. Broadly speaking, for the purposes of this document, ***assets are forms of human, social, financial, physical, and natural (or environmental) capital that are essential and interactive building blocks for an investment and its wealth generating capacity*** at varying scales, including metropolitan or citywide, community, business, and household.

Table 1 - Five Forms of Assets

Form of Capital	Definition	Examples
Human	Capacities and skills of people who live in a community	Work force and self-reliance
Social	Rules, relationships, regulatory climate, and networks	Community organizations, food safety rules
Financial	Monetary resources	Equity, credit, grants
Physical	Manufactured items or built infrastructure	Tools, equipment, facilities, vacant buildings, community gardens
Natural	Naturally occurring/ecological resources	Land and soil, water, air, habitat, biodiversity, unimproved green space

THE VALUE OF ASSETS

Assets yield two kinds of value for investors, the surrounding community, and society at large. They are intrinsically valuable for their ability to strengthen the public good and knit together households, communities, and the larger society. Some can also have readily quantifiable monetary value, as is the case with vacant buildings or reusable land, which rises or falls depending on the strength of the asset base. From a metropolitan planning perspective, another way to conceive of the place-based role of assets is as *nodes of value*, especially when developing spatial plans for connectivity, such as a city general or comprehensive plan.

Figure 2 - Types of Assets

METROPOLITAN ASSETS AND ASSET-BASED CITY PLANS

Cities are dynamic clusters of assets that together serve as engines of growth for the society at large, the economy, and the environment. Their characteristics of central location, density, diversity, transportation infrastructure, large workforce, abundant creative class, and extent of vacant land holdings are uniquely metropolitan assets. These assets drive productivity, wealth building, and sustainable growth in metropolitan areas and the national economy. [ii]

To date in the United States, there seem to be few examples of asset-based plans, mapping, and frameworks for wealth building at the city level beyond the acknowledgement of the range of metropolitan assets. For example, in Detroit's plan, the Eastern Market will become the hub for a food industry corridor around which other assets will be clustered and connected, such as food businesses, urban farms, and other productive lands and green space in adjacent areas. This new corridor plan for the Market is estimated to create more than 4,000 additional jobs in food packaging and distribution.

FOOD SECTOR ASSETS AND HOW THEY FUNCTION

One gauge of the potential value of a project-level innovation beyond its quantifiable local economic benefits is in terms of its connection to, and relationship with, existing community and municipal assets. Increasing connectivity adds value to the urban food system and helps build wealth, including social capital, and a sense of place. Investments in the food sector not only help fill a market supply or demand niche, they also help build upon, knit together, and strengthen other assets within the food system and the city itself that add multiple forms of value and root the investment in a place or community.

Food sector assets may include the following: cornerstone businesses, other elements of the food sector (e.g., distribution infrastructure), or attributes of the city (e.g., transportation network, vacant land or buildings, social networks, green space, retail corridors, schools and community centers).

Drawing together the five capitals, assets for building local and regional food systems function in these primary ways:

- ***Assets needed by stakeholders as they innovate and plan***: Financial resources, social networks, skills and knowledge, land, and markets.[iii]
- ***Assets that are building blocks for siting individual food sector investments***: Central location, transportation infrastructure, vacant buildings, vacant or reusable land, large workforce, abundant creative class/entrepreneurs, density, and diversity.[iv]
- ***Assets to build capacity of local/regional food systems***: Expertise and technical assistance, adequate infrastructure that overcomes seasonal bottlenecks (e.g., processing/distribution, etc.), and food safety regulations.[v]
- ***Gaps, challenges or deficits that are converted to assets***: Land security/land tenure, business training, remediated soil and land, water, and other shared resources.[vi]
- ***Assets as the foundation for a "food commons"*** [vii] ***that can transcend geographic boundaries***: A multidimensional common asset base that fosters a sense of place, connects public goods, creates public value, and generates all scales of wealth.

The visionary plan Detroit Future City has a central focus on strengthening the social, economic and environmental connectivity between assets such as the Eastern Market as a basis for city redevelopment.

One example of the asset building capacities of food sector investments are ***food business incubators***, which combine processing, distribution, and training in a single hub, and draw upon and connect multiple types of assets to assist beginning entrepreneurs. Incubators connect organizations and businesses into their network, while also serving as a center of economic activity that spurs new businesses within their communities.

A good incubator builds resources and assets and creates new ones, and connects members from all parts of a community to each other and to markets. Incubators also provide avenues to economic opportunity for individuals and communities that may not otherwise have had the chance, ensuring that economic benefits are spread throughout a community.

FRAMEWORK FOR ASSET-GAP MAPPING FOR THE FOOD SECTOR

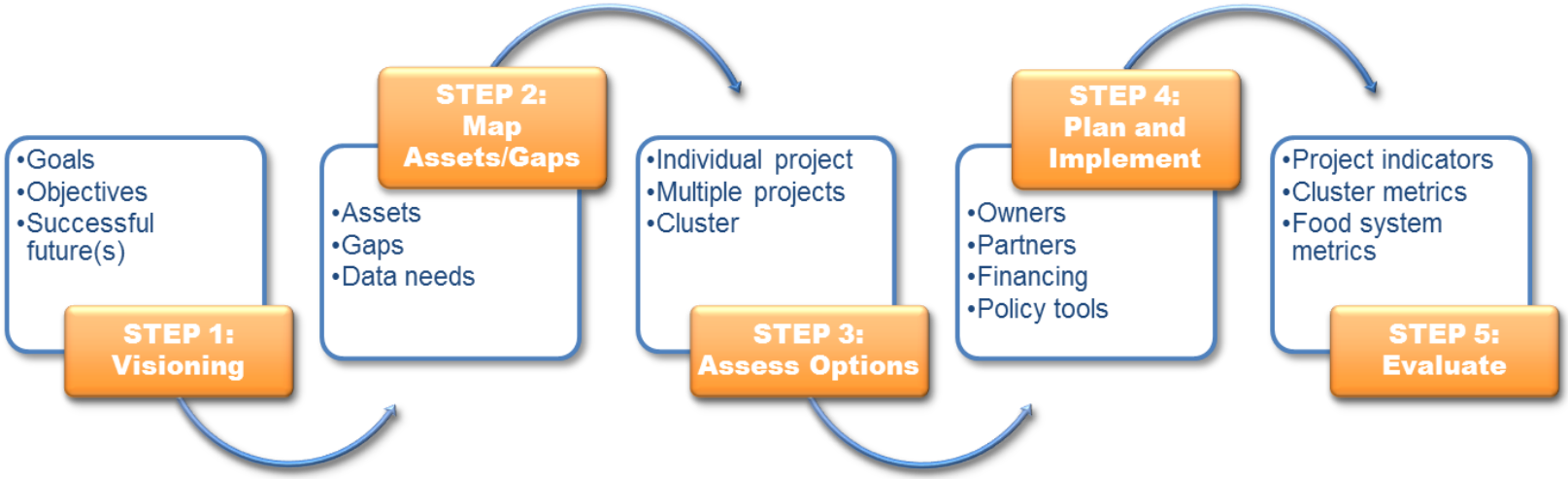
As mentioned earlier, an inventory of both food sector assets and gaps is a key component of a city's food sector investment plan and strategy, and also serves as a framework for understanding the future potential of these investments to strengthen these assets and their wealth-generating capacity. This section provides a basic framework for mapping a food sector and

connected urban assets, their gaps, and essential data collection needs for making informed decisions about how and where to invest.

To date, a few cities and food organizations have utilized asset-gap inventories, but fewer still in the United States. Though an asset-gap inventory is similar to a "strengths-weaknesses-opportunities-threats" (SWOT) analysis, it differs in one key way: it is a "livelihoods"-based approach[viii] that connects people, activities, and place in an integrated manner, which is more reflective of how cities, their economies, and assets function together.

Figure 3 provides a flow diagram of a model planning process for food sector investments and where an asset-gap inventory fits in. In this diagram, the mapping of an asset-gap inventory and assessment of data needs is the second step in figuring out where a city focuses its resources on investments in food sector innovation. Later in the planning and development process, this inventory provides a foundation and framework for assessing options and choosing among them, that is, whether to invest in new or current businesses, or individual or clusters of projects.

Figure 3 - Food Sector Innovation Planning and Evaluation



For the purpose of this framework, it is assumed that cities will muster and focus their considerable resources toward investment in food sector innovations, and in so doing play the following roles:

- ***Data collection*** - Assemble and map baseline information about food sector assets and their gaps, including identifying local goals and benchmarks to address through innovation investments.
- ***Weighing options and decision-making*** - Employ this base of information in identifying investment priorities and choosing which to support.
- ***Policy support and financing*** - Draw together city tools and strategies, and other resources as appropriate, (e.g., grants, special district and/or federal allocations) to support food project planning and implementation.
- ***Monitoring performance*** - Track performance of the innovation investments over time, and to the extent that the city desires, performance of the food sector or system over time.

Among the questions to be addressed about assets in general as part of this process are:

- What does a baseline asset-gap inventory reveal about the food sector lay of the land?
- Which assets are foundational or key to successful project-level investment? For multiple project investments? For establishing food industry clusters?
- Which assets would best support the planning and development of food industry clusters or innovation districts?
- Which assets are benchmarks to track progress/performance over time?

Taking into account city roles and these questions, there are four steps proposed for conducting an asset-gap inventory and using it to inform subsequent phases of the planning process as shown below**.**

A. Mapping Assets and Gaps: Inventory of Food Related Assets

In this first step, a city would compile an inventory and map of all food related assets in a given community or citywide, depending upon city needs and the scale of a proposed investment. The intention of this inventory and map is to provide a full picture of food sector assets, their interconnections and their gaps, as well as data needs. See **Table 2** for the possible contents of this map. This map would provide a foundation that informs and helps shape all subsequent phases of food sector planning and evaluation.

Table 2 - Types of Food Sector Assets, Gaps, and Data Needs

Form of Capital	Description	Examples of Asset Type/Gaps	Examples of Metrics	Examples of Data Sets
Human	Capacities and skills of people who live in a community	• Living wage labor • Semi-skilled labor • Skilled labor • SBA food technical assistance resources	• Number and/or percentage of each employed/unemployed within a given area/radius/commute distance from a food innovation • Number and/or percentage of each within job categories in each supply chain segment within a given area • Wage profile: average daily/hourly wages by job category • Number (and possibly quality) of technical assistance providers • Number who would benefit from SBA technical assistance	• Local city or county data • SBA agencies • US Census, BLS data
Social	Rules, relationships, and networks	• Community-based food organizations • Neighborhood food networks • Food access programs • Food safety regulations • Procurement protocols • Distribution networks • Land use/zoning code • Cooperatives • Food policy councils • Workforce development programs • Ag. preservation programs	• Number of each within a given area, as appropriate • In the case of rules, e.g., food safety, number and types of violations • Number and/or percentage of population with access to healthy foods	• Local city or county data and regulations • Local or regional nonprofit directories or inventories • USDA Food Atlas and/or Food Desert database
Financial	Monetary resources	• Venture capital • Equity/patient capital • Angel investors • Property tax exemptions • Property tax revenues • Grants	• Number and amount of each available during a given period • Amount of funding needed • Amount of revenues generated • Amount/proportion of local dollars generated/multiplier effects	• Local city or county data • USDA directories of food-related grants • Directories of venture capitalists and foundations

Form of Capital	Description	Examples of Asset Type/Gaps	Examples of Metrics	Examples of Data Sets
Physical	Manufactured items or built infrastructure	• Community kitchens • Urban farms • Bake ovens • Food banks • Farmers markets • Processing facilities • Supermarkets • Small food stores • Food banks • Restaurants • Schools • Colleges and universities • Vacant facilities • Transportation infrastructure • Mobile markets • Vacant facilities	• Number of each within a given locale/community • Retail Environment Food Index = (#fast food + #convenience stores)/(#supermarkets + # produce stores + #farmers markets) (compare communities with and without good access)	• Local city or county data • USDA Food Atlas and/or Food Desert database
Natural	Naturally occurring/ecological resources	• Vacant unimproved land • Soil health and tilth • Water for irrigation • Pollinators and their habitat • Preserved agricultural land	• Amount of and/or access to healthy natural assets	• Local city or county data • Local or regional inventories of habitat, soil tilth, and wildlife (through nonprofits including universities)

B. Identify Cornerstone Assets to Help Assess and Choose among Options: Individual, Multiple, or Clusters of Projects

Once the asset-gap inventory and map provide a full picture of food sector assets and their connections, cities are in a better position to figure out where gaps exist, and what types of specific investments in the food sector best address them. See **Table 3** below for examples of key or cornerstone assets and potential gaps by innovation category, which may influence investment decisions. The scale of investments ranges from individual or multiple projects to clusters of projects in an ***innovation district***, depending on needs and goals. This topic will be examined in greater depth in ***Section Six: Tools and Strategies***.

Table 3 - Examples of Key Assets and Gaps by Category

Innovation Category	Key/Cornerstone Assets and Potential Gaps
Farm to Institution	• Supportive procurement policies • Proximity to large-scale institutions and/or districts • Critical mass of producers supplying desired products • Appropriately scaled processing, storage (e.g., freezing), and distribution facilities • Skill building and training assistance
Farmers Markets	• Vacant land or facility • Access to transportation infrastructure • Critical mass of seasonal/year-round producers/processors
Food Hubs	• Vacant and flexible facility • Flexibility in food safety regulations and other appropriate local regulations/policies • Semi-skilled and other labor force
Food Waste	• Critical mass of producers • Retailers and/or consumers supplying potential waste • Flexibility in food safety regulations and other appropriate local regulations/policies • Facilities for processing • Compost policies
IT/Social Media/Tech	• Venture capital and other financing for IT • Trained IT workers and other labor force
Incubators	• Small Business Administration (SBA) and other technical assistance • Flexibility in food safety regulations and other appropriate local regulations/policies • Skilled/semi-skilled labor force
Incubators/Food Waste	• SBA and other technical assistance • Flexibility in food safety regulations and other appropriate local regulations/policies • Critical mass of potential food waste to process
Mobile Markets	• Access to transportation infrastructure • Access to vehicle fleet and other physical capital • Supportive regulatory framework and political climate
Urban Agriculture	• Vacant land • Soil health and tilth • Flexibility in zoning/land use regulations • Tool lending libraries • Seed money

D. Connect and Strengthen Assets through Planning and Implementation

As part of the planning and implementation process, a city would assemble its unique resources to support the chosen investments, connect them to its assets, and thereby mutually strengthen them. These resources include partner and stakeholder engagement, direct or indirect financing, and policy tools. This topic will be examined in greater depth in ***Section Six: Tools and Strategies***.

E. Weave Asset Categories into Evaluation and Metrics Development

Once a project is in operation, an evaluation of its impacts is a critical measure of effectiveness. It also helps build local and regional knowledge about what works where and why. Indicators are important evaluation tools for these purposes. See **Table 2** above for a sampling of metrics by type of asset in the food sector. This topic will be examined in greater depth in the ***Section Seven: Evaluation***.

RESOURCES

1) Cochran, Jim and Larry Yee. 2011. *The Food Commons 2.0: Imagine, Design, Build*. Innovative framework for thinking about food system as a set of assets that are the foundation for a food commons. http://www.thefoodcommons.org/images/FoodCommons_2-0.pdf.

2) Griffin, Toni et al. 2012. *Detroit Future City: Detroit Strategic Framework Plan*. Detroit Works Project. Excellent systemic vision for future Detroit that includes a well-developed, asset-based food system plan centered on the Eastern Market. http://detroitworksproject.com/wp-content/uploads/2013/01/The-DFC-Plan.pdf.

3) Nourishing Ontario Sustainable Local Food Systems Research group asset gap mapping methodology. One of the best and most useable descriptions of what could be included in food system asset gap map by an Ontario food research group. http://nourishingontario.ca/swot-analysis-and-asset-gap-mapping/.

4) Vancouver, City of. 2013. *What Feeds Us: Vancouver Food Strategy*. A recent example of a comprehensive metropolitan food system plan that uses the compilation of an asset inventory as its foundation. http://vancouver.ca/files/cov/vancouver-food-strategy-final.PDF.

STEP 3:
Assess Options

- Individual project
- Multiple projects
- Cluster

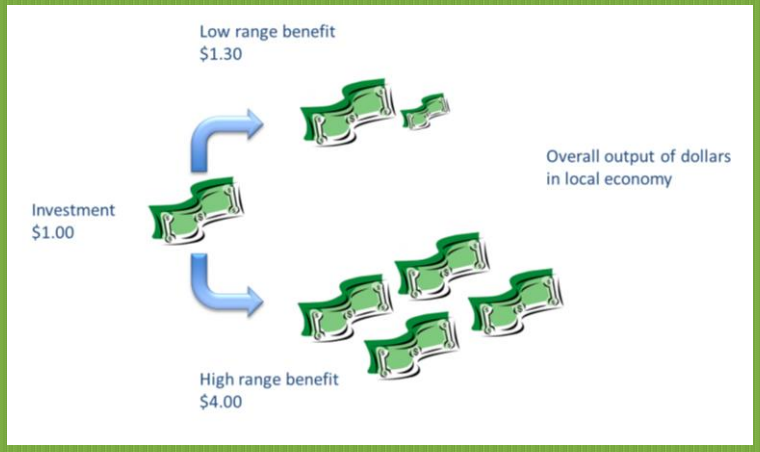
SECTION FIVE: ASSESSING OPTIONS

BACKGROUND

The previous section on ***Mapping Assets*** provides the means for assessing a city's current social capital and needs. Later sections review supportive policy tools and strategies, and potential indicators to measure impact. Now we turn to financial assessment as a key part of the ***Assess Options*** step of the Roadmap.

This section provides a financial toolset to assist a city in choosing among investment options once a clear vision for the food system is articulated and placed within the context of municipal food sector assets. This toolset builds upon the economic and case study data from the ***Program Scan and Literature Review***, drawing where possible from applicable local economic (e.g., multiplier), jobs, and wage data.

Figure 4 - Overall Multiplier Effect of Local Food Investment



Innovative proposals test the limits of investment and risk assessment tools. By definition, innovations are unproven—either new or with scant track records—and full of potential to disrupt and transform existing practices that define the conventional food system. These tools can help create better insight into the potential benefits and the risks. Both should be considered in the context of the larger food system that is proving to be increasingly brittle as the risks of climate change, declining soil and water quality, and rising health care costs driven by poor nutrition all weigh heavily on it.

While no investment is certain, and innovative approaches may be less certain still, it cannot be underestimated that greater risk lies in not changing current practices within the food sector.

INTRODUCTION

This component of the Roadmap provides two decision-making tools to help cities assess options for food sector investment:

- The ***Investment Evaluation Tool*** evaluates decisions to invest or spend public funds to support the creation or expansion of local, sustainable food ventures.
- The ***Risk Management Tool*** determines and manages the level of risk associated with these investment decisions.

In combination, the two tools can help cities both evaluate business proposals and existing projects ***and*** develop an overall investment plan that complements a city's current asset base and goals, and meets its tolerance for risk.

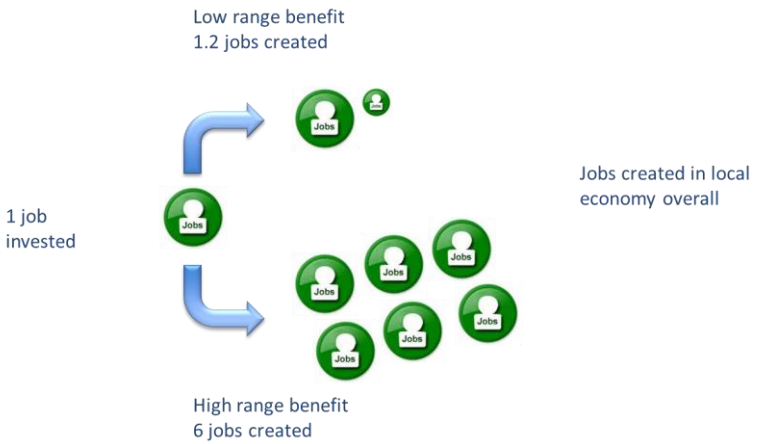
This section provides a brief review of the ***Investment Evaluation Tool*** and the ***Risk Management Tool*** and guidance for using each along with the data needed. These discussed elements for each tool are:

- Analytics
- City-specific goals and considerations
- Use of the analytics and score
- Data used

In addition, the companion Excel workbook (available for download on the project websites) includes a model for both tools with basic analytical functions. It also includes a table of data on indirect local economic benefit that was developed using economic and case study data relevant to the most promising food sector innovations, which was gathered during the literature review.

This section also includes references to risk and wage data sets that are regularly updated by federal agencies. Cities may choose to rely on these data for evaluating innovations, but are best served by creating city or region specific data sets to use in making decisions.

Figure 5 - Overall Jobs Multiplier Effect of Local Food Investment



A. Investment Evaluation Tool

The ***Investment Evaluation Tool*** provides a way to compare potential projects and requests against one another, and also provides some key metrics for comparing them to investment requests to support other industries and segments. The tool can be used to evaluate a set of requests that includes unsolicited economic development support for food sector projects, requests in response to a call for proposals (e.g., proposals to develop a food bub), and projects proposed by city agencies.

1) Analytics

The ***Investment Evaluation Tool*** provides an analysis of:

- Return on Investment in the 3rd year of a project, with the 3rd year analysis providing a more level playing field for new or start-up projects compared to expansion of existing businesses and organizations.
- Return on Investment including Indirect Return based on the Local Economic Multiplier, which varies for different types of food ventures.
- Investment cost per job created.

And an additional series of key metrics that include:

- The ratio of public investment to overall local economic activity and overall wage (payroll creation).
- The quality of jobs compared to an annual income threshold (e.g., average wage or poverty threshold).
- Ownership including local, public, or non-profit business ownership.
- Whether the project provides a function (e.g., local fruit and vegetable processing) identified as a priority by the city as part of its vision development and asset inventory processes.
- The Local Economic Multiplier for that business type.
- How significant the project will be in shifting a city's overall food market toward more local food, as a share of relevant purchases.

The Excel workbook that accompanies this Roadmap includes a tab, ***Investment Evaluation Tool***, which provides a worksheet for inputting and analyzing project specific data and analytics.

Food hub multipliers range from 2.6 for the Wisconsin Food Hub Cooperative to 4 for Toronto's Ontario Food Terminal.

2) City-specific goals and considerations

Each city's goals and circumstances differ. Top priorities for investment in economic development in the food sector may range from creating new jobs or better paying jobs to creating businesses that fill key roles for increasing a city's consumption of locally grown

food. The ***Investment Evaluation Tool*** uses a balanced scorecard approach to provide a customized investment request rating for a project based on each city's specific priorities.

The ***Investment Evaluation Tool*** creates the balanced score by first having a user indicate the city's priorities by assigning any share of 100% priority across seven considerations. These are:

1. Increased local economic activity
2. Increase in wages generated
3. Increase in jobs created above an average income threshold
4. Creation of locally owned private businesses, cooperatives, or publicly owned ventures
5. Increase in businesses (or expanded capacity) to fill a specific function in the local food sector
6. Increase in the amount of locally grown, sustainable, and healthy food available
7. Follow on benefit to local economy (multiplier effect)*

   *Note on #7 - A low weighting or no weighting at all for the local economic multiplier effect is recommended as the primary research underpinning this benefit is directionally accurate, but not predictive of performance.

The ***Investment Evaluation Tool*** assigns a score of 0-1 (no benefit – high benefit) for each of the financial metrics along with a rating for the other benefits that are not stated in monetary terms (e.g., form of ownership). It then combines this with the Balanced Scorecard to produce an overall project rating that can be used to compare any number of projects.

The excel workbook that accompanies this document includes a tab, ***Investment Evaluation Tool***, which provides three suggested Balanced Scorecard weights for three sample communities:

- A community that has a top priority to increase overall local economic activity.
- A community that has a top priority to increase the number of jobs above an identified annual income threshold.
- A community that has a top priority to invest in projects that increase capacity in a specific part of the local food system.

3) Uses of the analytics and score

Key analytics included in the ***Return on Investment Analysis*** along with information about the proposed investment may be directly useful in comparing food sector investment opportunities to those in other sectors.

These Project Evaluation scores can be used to compare multiple projects to identify top investment opportunities, which is useful to:

- Decide to fund those above a desired level of benefit up to a total investment limit.

- Select among multiple projects to fill a single need (e.g., build a food hub).
- Compare sets of current projects under consideration to the quality of past projects and requests.

In each of these situations, the score for a project may be used as follows:

Table 4 - Sample Scoring Systems for Food Investment Projects

Project	Score	Amount of Investment
A	0.93	$100,000
B	0.91	$100,000
C	0.89	$100,000
D	0.82	$50,000
E	0.74	$50,000
F	0.71	$100,000
G	0.69	$50,000

If $500,000 of funding is available to disburse, then fund projects A, B, C, D, E, and F.

If seven food hub proposals are being compared, then fund project A or further investigate A and perhaps B and C (similar scores).

If E and F are projects from a current round of investments considered and A, B, C, D, and G are requests from prior rounds, then evaluate why overall quality of funding requests and proposals has declined (solicitation method, economic condition, quality of technical assistance, etc.).

4) Data used

The ***Investment Evaluation Tool*** relies on four sets of data to conduct the evaluation (with specific data points detailed in the tables below):

- Information available from the request for investment and support for a specific project or business.
- Information available from a basic business plan for the project.
- Information provided by a city about goals for food sector economic development and supporting local food systems.
- Data about the local food sector including wage ranges (which are often available at the city, state, or regional level).

The tables below present the necessary information from the first three categories:

Table 5 - Project or Business Specific Information

Item	Comment
Project Revenue in Year 3	A measure to more fairly compare new business and business expansion requests
Number of Jobs Created by Year 3	
Value of Additional Payroll in Year 3	
Business Ownership	Local, Coop, Nonprofit, and/or Public
Age of Business	Business Creation Benefit for new or start up (<3 years old)
Type of Business*	From a list of conventional and innovative roles in the local food system. See note below.
NAICS Code**	A table of codes correlated to innovative ventures follows as an appendix in the Roadmap. See note below.
Does the business principally offer locally grown food	
Does the business increase access to fresh produce and other healthy food	
Share of the relevant local market need met by this venture	A market assessment is a key element of a business plan and share of relevant market is a good measure of impact on a city's food consumption.

Table 6 - Investment Specific Information

Item	Comment
Value of Investment or Loan	Value of cash investment or reduced tax revenue to local government
Other Costs	Cost of technical assistance or other new programs, and/or value of donated land, buildings, or other assets
Goal of Investment / Asset	Does the investment fill a stated need in the city's local food vision or gap in its food systems asset base?

Table 7 - Government or Community EDC Specific Information

Item	Comment
Threshold Wage	The annual income threshold for a job to be considered "good" (e.g., 200% poverty level for a family of 1)
Minimum Gross Revenue Threshold	Minimum size of business to consider for public support
Minimum Gross Payroll Threshold	Minimum size of business payroll to consider for public support
Minimum Number of Jobs Threshold	Minimum size of business by number of employees to consider for public support
Balanced Scorecard Rating	A statement of goals and priorities for public investment in the local food system
Tax Rates***	See note below. May be for information purposes only.

A Note on Type of Business
The type of business is used to assess whether the project fills a priority or need of the city based on its vision and goals or asset inventory. The type of business also is used to determine the local economic multiplier, which varies by business type. A table in the Excel workbook (available on the project websites) that accompanies this tool, provides the local economic multiplier for a range of food ventures, including innovative ventures highlighted in the literature review.

A Note on NAICS Code
The NAICS code system is set up to catalogue a large variety of common food businesses. Not all of the innovative ventures described in the literature review fit into this assessment system. A table in the Excel workbook (available on the project websites) that correlates some innovative approaches to the NAICS code system accompanies this tool. The codes are useful for determining wage rates if none are provided and also for assessing risk, based on the small business loan repayment failure rate for similar businesses as a strong indicator of overall business risk of failure to deliver benefits. Wage data is updated quarterly and loan repayment data is updated at least annually, although current year updates may be delayed due to furloughs in most federal agencies.
Link to wage data by NAICS code is here.
Link to loan repayment failure rate data is here.

****A Note on Tax Revenues***
The tax situation for food ventures, be they private, non-profit, or publicly owned, differs greatly among cities in North America. Each city relies on some mix of property, sales, and corporate tax to generate income and also treats the sale of food, the tax on tenants and owners, business equipment, and non-profits and cooperatives in different ways. Some projects also may receive city support in the form of tax advantages. It is beyond the scope of this tool to adequately account for every variation. However, a city may choose to calculate the forecast tax revenue as another evaluative measure.

The San Francisco Wholesale Market has created over 600 jobs. After expansion, it is expected to create another 1000 jobs. Sales are expected to increase from $475 million to $735 million and tax revenues from $720,000 to over $1.04 million annually.

B. Risk Management Tool

The ***Risk Management Tool*** provides a way to evaluate potential projects and requests based on their likelihood of success. It also provides guidance for assembling a set of projects that are more likely to meet a city's goals for local economic development and strengthening the local food system that better match its tolerance for risk.

Poor planning and unskilled management are among the most significant contributors to project failure. Each city must make its own evaluation of the overall quality of a project or proposal and the management team that will lead it, and whether supplemental assistance (e.g., technical assistance) from a city may be warranted. Besides those, there are two

main factors that significantly inform the likelihood of a well-planned and well-managed food venture failing: the type of business activity in which it engages and the age of the business. Some types of food businesses are more likely to fail than others, and start up and newer businesses also are more likely to fail than those that have been in existence for more than three years, with the odds of survival increasing each year.

Unlike many other types of businesses, when food ventures fail, they usually do so in ways that do not overly burden their host communities. Rather than leaving abandoned buildings and unexpected cleanup costs, food ventures that are not viable usually have their inventories, customers, and services absorbed into other food businesses. But their failure, when supported by public investment or other actions, still means that the expected benefits to the local food system and the local economy, including job creation, are not realized.

That means that the actual experience of the community is either a business or venture that delivers benefits similar to those that are planned or one that delivers almost none, including no return on any invested or lent funds or no direct or indirect local economic benefit or tax revenues.

Beyond what is known from an initial assessment of a project's or plan's merits and management team skill, it is not possible to predict the outcome with certainty, only to know generally the odds of success based on the experience of similar ventures.

Cooperative ownership can help reduce risk and achieve greater local economic benefits. Cleveland's Green City Growers Cooperative is one of the most successful. When built out, it will create 35-40 long-term, living wage jobs. Starting pay is $10 per hour, with health insurance and an ownership stake in the coop after six months.

The ***Risk Management Tool*** provides two types of analysis to assist a city in deciding in what project, and what set of projects, to invest:

- A risk adjusted Return on Investment for a single project, which discounts its forecast benefits based on general likelihood of success or failure. The risk adjusted Return on Investment is useful in comparing requests from a mix of new and existing food ventures or ventures that provide different types of food products and services.
- A portfolio assessment that shows the expected benefits and returns from a set of investments and recommendations for how to increase overall return, either by reducing risks or increasing potential risk and benefit.

ANALYTICS

Based on that information, the ***Risk Management Tool*** provides an analysis of the:

- Risk adjusted Return on Investment in the 3rd year of a project, with the 3rd year analysis providing a more level playing field for new or start-up projects compared to expansion of existing businesses and organizations.
- Risk adjusted Return on Investment including Indirect Return based on the Local Economic Multiplier, which varies for different types of food ventures.
- Risk adjusted investment cost per job created.
- Likelihood of failure to deliver full benefits and to achieve project goals within three years.

CITY-SPECIFIC GOALS AND CONSIDERATIONS

Each city has a different circumstance including a political tolerance for risk and to what extent public actions and investments must or may not deliver expected benefits. The ***Risk Management Tool*** provides the risk adjusted Return on Investment and likelihood of failure to deliver full benefits to help cities decide on which investments are appropriate.

When comparing investments in the local food system against investments in other industries, cities may want to assess the likelihood of failure of those ventures in other industries, as well as the cost of failure which can be much higher than for failure of food ventures, in order to evaluate comparable potential benefits and returns on investment.

USE OF THE ANALYTICS AND SCORE

Key analytics included in the ***risk adjusted Return on Investment Analysis*** can be used to compare multiple projects to identify top investment opportunities, which are useful to:

- Decide to fund those above a desired level of benefit up to a total investment limit.
- Select among multiple projects to fill a single need (e.g., build a food hub).
- Compare sets of current projects under consideration to the quality of past projects and requests.
- Decide if a set of investments are appropriate or if some projects should be eliminated, added, or substituted.

In each of the first three uses, the risk adjusted score for a project may be used as follows:

Table 8 - Risk Adjusted Score for Food Investment Projects

Project	Risk Adjusted Score	Amount of Investment
A	0.83	$100,000
B	0.43	$100,000
C	0.65	$100,000
D	0.41	$50,000
E	0.74	$50,000
F	0.71	$100,000
G	0.31	$50,000

If seven food hub proposals are being compared, then fund project A or further investigate A and perhaps E and F (top scores).

If A and B are projects from a current round of investments considered and C, D, E, F, and G are requests from prior rounds, then evaluate which approaches in the current round may have led to the submission or consideration of a superior proposal.

For the fourth use, several of the analytics for each proposal can be used to determine three additional metrics for an overall set of investments. These are:

- A risk adjusted Return on Investment and Score.
- The overall risk (or likelihood of failure) for the entire portfolio.
- The overall risk for the entire portfolio weighted by size of investment in each project.
- The likelihood that at least one project will fail.

This portfolio assessment can be used to determine if the appropriate balance of risk and potential benefit for a city has been established. If the portfolio risk is too high, a city may choose to not invest in the riskiest projects or substitute projects that have a Return on Investment and lower risk, which will result in a higher risk adjusted return.

If the portfolio's risk adjusted Return on Investment is too low, a city may consider substituting a project with a potential higher Return on Investment and higher level of risk.

The Excel workbook that accompanies this document includes a tab, ***Investment Evaluation Tool***, that provides a worksheet for inputting the Small Business Association (SBA) loan repayment failure rate data and also accesses data from

the ***Investment Evaluation Tool*** Excel worksheet in the same workbook. It also includes an additional section for manually inputting the analytics for several different investments to assess portfolio performance for a sample of five investments, which can be expanded or reduced as appropriate. In this section, all formulas are also shown beneath this portion of the tool for ready adaptation for a larger or smaller set of projects.

DATA USED

The ***Risk Management Tool*** relies on the same data used by the ***Investment Evaluation Tool***. It also requires the current SBA Loan Repayment Failure Rate for businesses with the same NAICS code, available here.

RESOURCES

1) Hagan, Erin and Victor Rubin. 2013. *Economic and Community Development Outcomes of Healthy Food Retail*. Oakland: PolicyLink. One of the best recent explorations of the economic and community development benefits of food retail investments. http://www.policylink.org/atf/cf/{97c6d565-bb43-406d-a6d5-eca3bbf35af0}/FINAL%20HER%20ECONOMIC%20WHITE%20PAPER%20FINAL_1%2018%2013.PDF.

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STEP 4: Plan and Implement

- Owners
- Partners
- Financing
- Policy tools

SECTION SIX: PLANNING AND IMPLEMENTING

INTRODUCTION

Cities have a critical role to play in stimulating and supporting innovation, growth, and investment in the local food sector. The ways in which cities can bolster their local food sector are as myriad as the ways in which food is present in every facet of urban life. The most effective tools and strategies are focused on stimulating the creation of new and innovative businesses and the growth of existing ones while relying on direct actions that are under the control of city agencies.

This section presents a set of tools and strategies that provide the greatest opportunity to increase local economic activity and job creation in the food sector by supporting the launch and expansion of ventures that offer regionally produced, healthy, and sustainable food. They are drawn from the findings of the ***Program Scan and Literature Review***, which surveys a broad selection of proven and innovative businesses that would benefit cities using these tools and also would contribute to a city's local food economy.

OVERVIEW OF TOOLS AND STRATEGIES

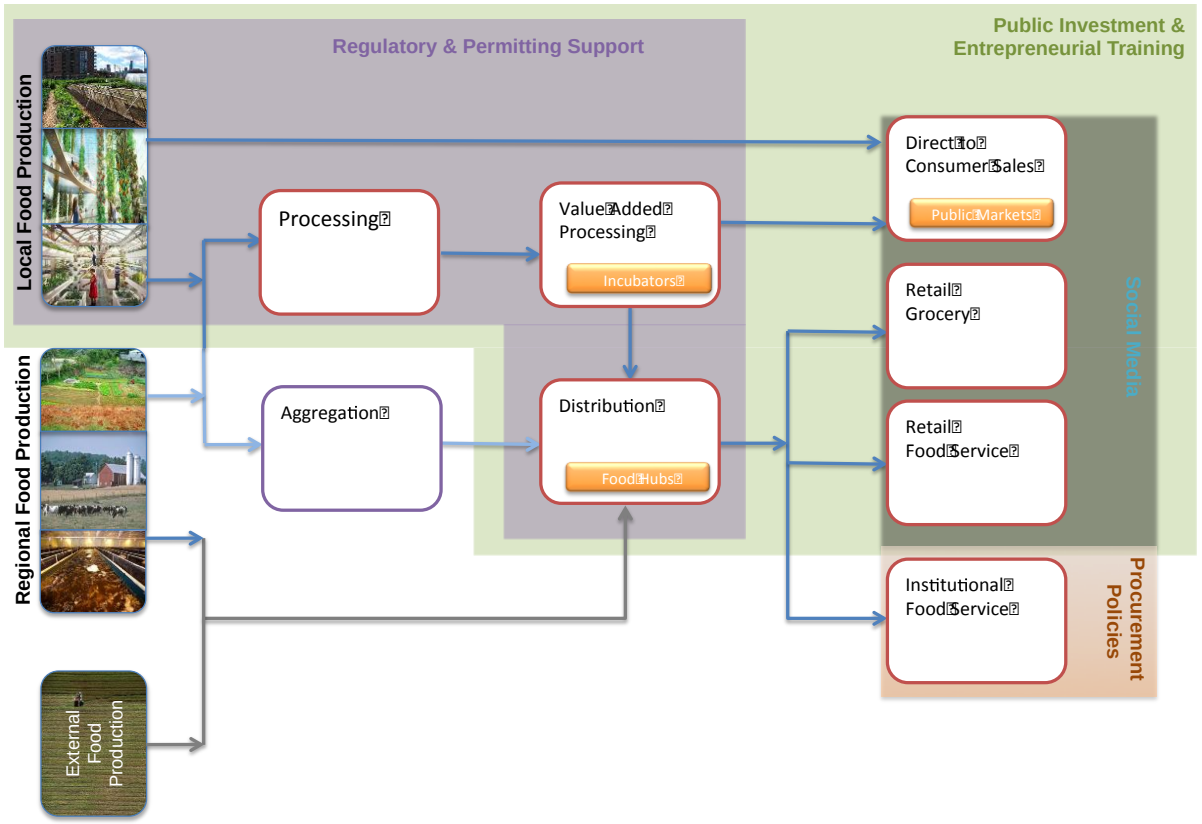
The tools selected for inclusion in this document are ones that have been used successfully in other cities, and sometimes in other segments of the economy. We also include new tools designed to address emerging trends in the food sector including the rapid increase in the influence of social media on consumer food choices and the near-term consolidation in the food industry, where larger companies plan to acquire a greater number of businesses offering locally grown, sustainable, and healthy foods over the next several years. Finally, these tools and strategies enable city governments to take action in each of the five asset areas and in ways that cities can directly affect, including:

Table 9 - Five Capital Assets

Asset	Types of Action
Human	Entrepreneurial Support
Social	Regulatory Infrastructure
	Information Infrastructure/Social Media
Financial	Public Investment
	Stimulating Private Investment
Physical	Physical Infrastructure
Natural	Land Assembly

Many cities are working to affect one of these assets. Some engage in several areas or are using multiple approaches to affect a single asset, perhaps based on the efforts of a city agency. See **Figure 6** below. But no city efforts that focus only on one asset area such as human or financial assets are as effective as an approach that includes all of these.

Figure 6 - Key Opportunities for City Involvement in the Regional Food System



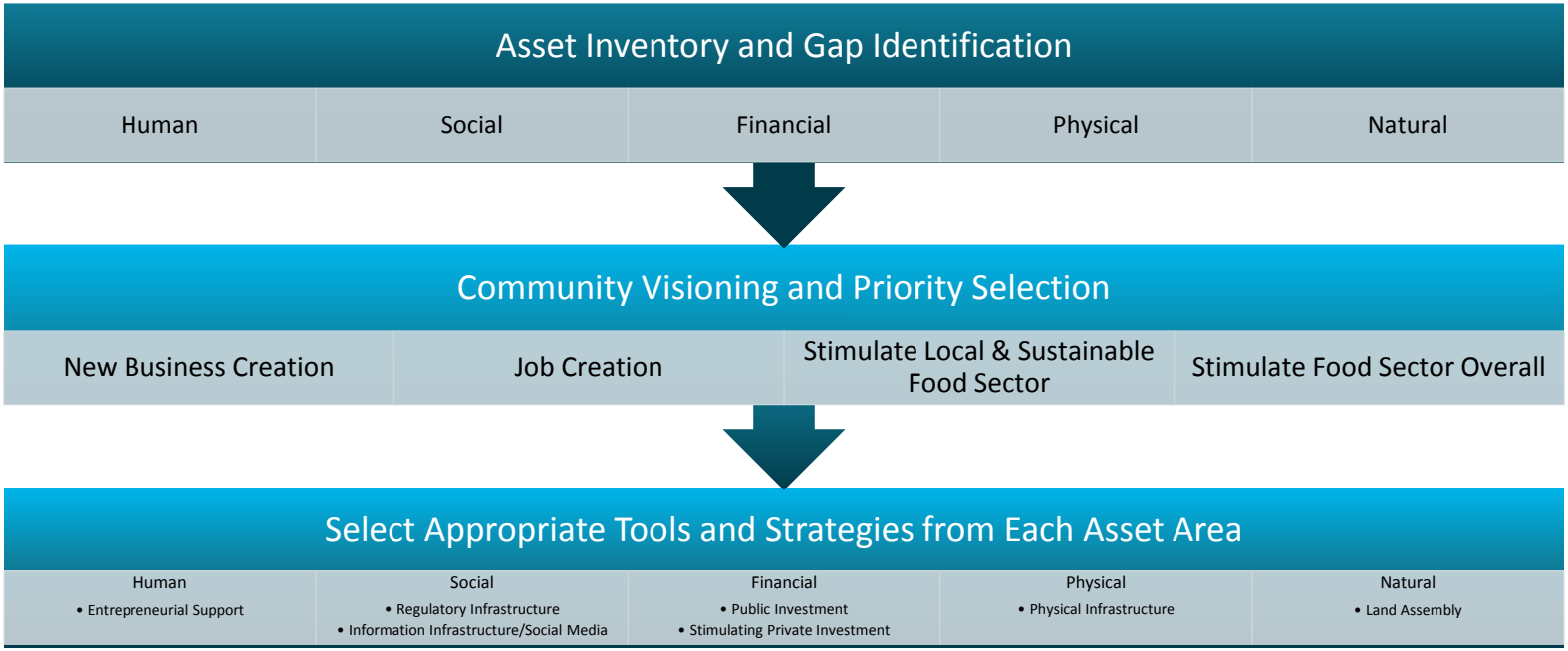
Our strong advice is that the best way to stimulate and support innovation, growth, and investment in the local food sector is to take some action in each of the domains including continuing current efforts, rather than focusing on just one or a few. The tools and strategies presented within each domain, as shown in **Figure 7** below, are meant to offer a set of choices for cities to select from, based on their unique circumstances and assets. See the ***Section Four: Mapping Assets*** for more discussion on this latter topic.

WHICH TOOLS TO USE? DECIDING WHAT TO BUILD OR FIX

When choosing the right tools to use, a city must identify both its needs and its priorities. To help do so, a city could start with either the visioning process or asset-gap inventory step, depending on the city's preference and where the greatest need lies for information and stakeholder engagement. An asset-gap inventory is the first and best step to identify those domains where gaps exist and that need relatively more bolstering, as well as those that are relatively well-suited to support economic development in a city's food system. This inventory, along with a visioning process, also can be useful in determining whether a city's main priority is the creation of new businesses, job creation, market stimulation for the local food economy or the food sector overall, or some mix. With those known, tool selection becomes more straightforward.

As an example, the process that a city can use to identify the appropriate tools for its circumstance could include the following steps:

Figure 7 - Identifying Appropriate Tools



The tools and strategies we present make up a flexible toolkit for cities to use depending on their asset base and gaps as well as specific economic development goals. Some are most effective in stimulating the creation of new ventures while others are better suited to driving job growth principally through the growth and expansion of existing food ventures. Many do both either because they stimulate specific demand for locally produced foods or because they stimulate the city's food economy overall, including local, healthy, and sustainable foods. And, in some instances, tools and strategies are designed to achieve several outcomes.

The following guide can help your city choose the right tools to achieve your priorities for economic development in the food sector given your current asset base and the assets that require further enhancement.

Table 10 - Types of Tools by Asset Categories

Asset	Type of Action	Use	Tools
Human	Entrepreneurial Support	■	Business Training
		■	Food Start Up Business Incubators
		■	Food Sector Innovation Clusters
		■■	Community Prep Kitchens
Social	Regulatory Infrastructure	■■	"One Stop" Permitting
		■■	Local Food Procurement Policies
		■■	Supportive Land Use Planning and Zoning
		■	Mobile Foodservice and Retail Access
		■■■	Food Policy Councils
	Information Infrastructure/Social Media	■■	Social Media Placement Advocate
		■■■	Online Aggregation Platforms
Financial	Public Investment	■■	Direct Investment
		■■	Public Loans
		■■	Tax Incentives
	Stimulating Private Investment	■■	Orientation for Banks and Loan Officers
		■	Connecting Angel and Venture Investors with Entrepreneurs
		■■	Matching Public and Private Investment
		■■	Incenting Private Lending through New Market Tax Credits

Key to Uses of Tools and Strategies	
■	Creation of **new, locally owned businesses**
■	Creation of **new jobs in existing locally owned businesses**
■	Increase **demand for local, healthy, sustainable foods** (including creation of new businesses and jobs in existing businesses to meet increased demand)
■	Increase **demand for food of all kinds supplied by locally owned retail and distribution** (including creation of new businesses and jobs in existing businesses to meet increased demand)

Asset	Type of Action	Use	Tools
Physical	Physical Infrastructure	■■■	Food Hubs
		■■	Infrastructure Renewal
Natural	Land Assembly	■■	Land Assembly

A. Entrepreneurial Support

Cities can increase the likelihood of new food ventures succeeding and growing by providing a range of support to entrepreneurs. These range from training and technical assistance, enhancing networks among new and existing ventures in the local food economy, to expanding access to affordable facilities that are fully permitted, equipped, and ready to use. The best tools available to cities are:

■ *Business Training*

Economic development agencies or third parties can provide business training to entrepreneurs interested in launching food ventures. Training programs should cover general business start up skills including business planning, human resources, financial management, and other issues. They also should address issues that are unique or especially significant to the success of new food ventures including product development, permitting, managing supply chains and variability in the cost of agricultural inputs, and maintaining work/life balance. These training programs also should be promoted through incubators and innovation clusters, if any, as well as permitting agencies and public investment vehicles, and should be required training for less experienced food entrepreneurs seeking public investment.

■ *Food Start-up Business Incubators*

Incubators provide food entrepreneurs with a "quick start" for their new food companies by offering fully permitted and built out commercial kitchens and food processing facilities that can be rented by the hour, day, or longer. Ideally, these incubators allow for distribution, foodservice preparation, and retail sales.[ix] And they provide professional services to assist in product development, marketing, and sales to institutions. Cities can support their creation through permitting appropriate locations to host many kinds of food operations. Incubators can exist as privately owned businesses that may receive support similar to other private food ventures or as non-profit ventures supported through public and private funds as well as fees for service and rental use.

The Rutgers Food Innovation Center in Bridgeton, NJ is a food industry tech park. It has assisted over 1400 companies and individuals in business start up and trained over 100 in food safety. It is projected to create 1000 new jobs, over $200 million in revenues, and generate millions in local taxes.

Food Sector Innovation Cluster Strategies

Cities can establish a food innovation cluster or zone, either in a specific geographic location where new food businesses are easily launched or throughout a city. While most food businesses have a strong ability to build relationships with business partners across a city, new businesses can benefit from being in the same location. Whether in one or several locations, the cluster or zone should:

- Be approved and permitted for many kinds of food operations, including space in an incubation center.
- Be well served by appropriate road, water, and sewer.
- Allow for, and have available kitchen, processing, distribution, retail, and foodservice space for lease, and allow for retail and foodservice to be combined with processing and distribution operations.
- Include cornerstone ventures that provide the above services for a fee or as a business partner to early stage companies (such as incubator kitchens, commissary prep kitchens, food hubs, and multi-tenant retail marketplaces). Cities may need to invest directly in the cornerstone businesses as a first step.

In Boston's Crop Circle Kitchen incubator, 100 companies and over 200 local jobs were created.

New businesses in the innovation cluster should be made aware of business training and "one stop" permitting assistance, should a city implement either or both of those strategies.

In recruiting new businesses into an innovation zone, it is important to recruit a mix of businesses that play complementary rather than competing roles (e.g., processing, retail) or sets of roles (combined processing and retail, combined foodservice and distribution). Locating many similar businesses together, especially those offering or developing similar products or services, is not a preferred choice.[x]

Again, it is important to note that innovation clusters are a good strategy for stimulating food entrepreneurship and innovation especially if a city is lacking assets such as incubators, commercial kitchen space, or business training. But they provide only modest benefit when compared to having all of these assets spread throughout your city, as food businesses generally establish their own networks despite modest geographic separation.

Community Prep Kitchens

Cities can invest in or enable the creation of a community prep kitchen that can serve newer food truck and catering ventures. Both food trucks and catering offer lower cost ways for entrepreneurs to enter the foodservice sector. They avoid the cost of investing in "bricks and mortar" and require lower cost "wheels" that allow them to serve a client base spread over a large geographic area and also experiment with different locations and formats. The intensive and frequent food prep needs of these two foodservice operations differ substantially from the commercial kitchen space needs of other kinds of food businesses, and sharing incubator or common commercial kitchen space can prove challenging.

B. Regulatory Infrastructure

Both through regulatory action and as a major buyer, cities can increase the market for regionally produced, healthy, and sustainable foods and also support new and existing food ventures by eliminating obstacles and reducing the time and complexity necessary to meet regulatory requirements.

Establish an office for "One Stop" Permitting of Food Businesses

Cities can identify a city coordinator or coordinating office where an entrepreneur or new business can go to learn about and secure all necessary local, state, and federal business and food safety and handling permits. This role can be housed in any relevant city agency such as zoning and permitting, construction code, public health, or economic development.

Creating a single point of contact for all necessary business, land use, and public health permits not only saves new businesses time in obtaining permits from multiple agencies, but also eliminates the time and error associated with each new business having to identify all the permits they require, especially when multiple levels and functions of government all play a role in permitting. The office also can provide a list of potential public and private funding sources and business training opportunities.

Revolution Foods, a certified B-Corporation, has hired over 1000 employees within the communities they serve. All employees are paid above minimum wage and full-time employees have full benefits including health insurance and sick leave. In 2012, the company was designated one of the world's 50 most innovative corporations by Fast Company magazine.

Local Food Procurement Policies

Cities can enact institutional purchasing policies mandating that at least a portion of all food purchases are grown locally (i.e., same region, state, or a distance from point of services). This requirement is best targeted to ingredient categories (e.g., fresh fruits and vegetables, poultry, dairy) that are readily produced given the cities' and peri-urban area's natural assets. Cities also can increase the impact of this approach by playing an organizing role with public and private institutions within cities (e.g., colleges, schools, hospitals, and senior care facilities) to adopt similar policies.

These policies should mandate both the location where food is grown and also that the business providing the food product or service be locally owned. Requirements that foods provided be fresh, whole, or minimally processed can ensure the healthfulness of local food and are now a part of school nutrition and federal foodservice requirements.

To best support the creation and growth of new businesses, it is advisable that procurement policies also be tailored to suit the capacity of small businesses. Ideally they should require modest documentation of business practices, labor standards, and insurance. They also could offer long-term contracts and payment terms that can be used by small businesses to finance the inventory or expansion necessary to serve institutional clients.

Procurement policies for larger institutions can be designed around a "many to few" approach that allows many small producers to each propose to satisfy a small part of an institution's overall need and collectively win business that would otherwise be available only to larger companies. Online aggregation platforms provide a simple and inexpensive way to implement a "many to few" approach. (This is discussed in ***Information Infrastructure and Social Media,*** below.)

Supportive Land Use Planning and Zoning

To support both growth and innovation, cities can revise[xi] or enact land use plans and zoning regulations to allow many kinds of food businesses to locate in the same area, mixing processing and distribution with retail grocery and restaurant foodservice. Land use regulation should allow for the production of food within city limits using appropriate contained technologies including greenhouse, hydroponic, and indoor aquaculture production as an allowable use at least in commercial and industrial districts. This enables producers to efficiently use empty airspace and increase both the productivity of existing buildings and the capacity of the city to produce food. Adopting zoning and other regulatory tools to support food systems innovations has the dual advantage of strengthening food systems and stimulating economic development.

Source: http://www.findlafoodtrucks.com/blog

Mobile Foodservice and Retail Access

Land use, business, and public health regulations should allow mobile food retail—including trucks, shipping containers, and other temporary "pop up" restaurant formats that offer low cost of entry for new food businesses — in commercial districts. Mobile foodservice and retail ventures can increase food access and allow food entrepreneurs to enter the market at relatively low cost and experiment with location. Mobile foodservice and retail is a rapidly growing market segment and many cities are already making the necessary regulatory changes to allow access to locations all along city streets.

Food Policy Councils

Food Policy Councils are a good platform for coordinating the actions of multiple government agencies, but they do not lead to economic benefit simply by their existence. Ideally, these councils are authorized by the city's top political leaders with a specific mission to promote the local food sector and also coordinate government actions. They should be comprised of stakeholders from major food-related sectors include production, processing, distribution, retail, and foodservice, as well as from the finance and investment, public health, environmental, social service, and community development sectors.

C. Information Infrastructure and Social Media

Cities can increase the market demand for regionally produced, healthy, and sustainable food through participation in online and social media platforms.

Social Media Placement Advocate

Assign a city agency or retain a third-party public relations agency to ensure that your city's local food ventures are included and promoted through major social media platforms that guide consumer food choices. This includes listing all relevant businesses and products as well as offering assistance to social media companies conducting surveys of or visits to your community. These platforms play an increasing role in shaping consumer buying and dining habits. Some companies retain public relations agencies to ensure placement and visibility in these forums while others have dedicated staff. But smaller food ventures are best served by sharing resources. Based on the ***Program Scan and Literature Review*** and findings on the most effective social media strategies for influencing consumer food choice, it is more effective to ensure visibility on popular, existing platforms that guide consumer food choices overall than to create a separate platform to promote a city's local food sector.

Online Aggregation of Small Producers

Online portals offer a low cost and lower risk way for large buyers—both public institutions and private foodservice and retailers—to source from many small producers. This "many to few" approach involves large buyers in a reverse auction where each states their needs in general terms and small producers submit their proposals to fill portions of an order. (In practice, this allows a buyer of 2,000 pounds of "greens" to have an order filled in part by a farmer with kale and in part by several farmers with different varieties of collards.) The deal is closed only if enough qualified small producers submit proposals for usable products within a given time frame. Government agencies or large public institutions can establish an online portal and then make the service available to other large buyers in the city.

Relay Foods currently serves customers in Washington DC, Richmond, VA, Baltimore, MD and Charlottesville, VA. The online shopping platform with central drop off locations connects small- and medium-sized producers with customers. The company offers competitive wages and benefits for entry-level positions. It has raised $14.25 mil from investors since 2009.

D. Public Investment

Cities can play a role in helping to launch or expand local food businesses through direct loans and investments as well as by providing tax incentives to offset the cost of renovating or constructing buildings appropriate for food-related businesses. The best tools and strategies include:

Direct Investment

Cities can invest in local food businesses both to support the creation of new ones and the expansion of existing ones. Cities may choose to work through Small Business Investment Companies authorized by the federal Small Business Administration or other community development organizations, while setting local food sector development as a priority.

Working through an existing vehicle is usually a good approach and will save time, cost, and complexity. Simply directing existing agencies to make food sector investment a priority also is a useful approach to leverage existing funds already targeted for small business development. Other good approaches are to establish specific funding dedicated to investment in local food businesses and invest additional public funds to expand the pool of available investment.

Using an external investment vehicle is superior to direct city investment as it creates a dedicated point of contact, avoids some amount of political dynamics, and allows the vehicle to leverage city funds by also seeking other public or private funds to invest in local food ventures. And, if these types of community assets are not present, cities also can establish new funding vehicles modeled after other state and city level public small business investment and venture funds.

Once the lending vehicle is identified or established, it also can leverage the funds your city invests and increase impact by seeking state, federal, and private dollars to invest alongside city funds. The investment vehicle also should utilize a second set of tools to balance greatest benefits with appropriate risk. These include:

- ***Take a portfolio approach*** and invest in several businesses in each round or set of rounds of financing, choosing businesses that provide different and complementary products and services, rather than similar ones, and ensure that the mix of businesses funded are over-weighted towards roles that drive greater local economic benefit and job creation such as processing, distribution retail, and foodservice.
- ***Design a portfolio that delivers the right mix of benefits*** for your community overall as evaluated using a "balanced scorecard" approach that considers local ownership and proposed mix of products and services; proposed local economic and job creation benefits; over-weighting for retail, foodservice, distribution, and processing; appropriate weighting between new and existing businesses depending on a community's preference between business creation and new job creation; and the overall portfolio risk.
- ***Design a portfolio with an acceptable risk level*** given the relative likelihood of new business failure or below-forecast performance. Risk can be reduced by investing in some businesses that are in low-risk sub-industries such as poultry and grain processing and distribution. (A full list of new business loan repayment failure rates can be viewed here.) The portfolio also can include investments in the expansion of existing businesses, an approach that avoids the risk of early stage failure.

- ***Invest in businesses whose funding proposals score well when evaluated using a "balanced scorecard" approach*** that considers local ownership and proposed mix of products and services; proposed local economic and job creation benefits; over-weighting for retail, foodservice, distribution, and processing; appropriate weighting between new and existing businesses depending on a community's preference between business creation and new job creation; and the ventures' risk of success.

Also, as with all assistance for newer businesses, the application process should be as simple as possible and offer terms that allow for payments to increase over time as a business grows.

Public Loan Funds

City economic development agencies and other community investment vehicles, such as Community Development Financial Institutions, can establish dedicated small business loan funds to support the launch or expansion of early stage, locally owned food businesses. To achieve maximum effect, loans should follow the same criteria as direct investments: screened for ownership and proposed mix of products and services; over-weighted towards retail, foodservice, distribution, and processing; and appropriately weighted between new and existing businesses depending on a community's preference between business creation and new job creation. And, as with any loans for newer businesses, the application process should be as simple as possible and offer terms that allow for payments to increase over time as a business grows.

Tax Incentives for Creation and Expansion of Food Ventures

New Market Tax Credits and Tax Increment Financing (TIF) offer similar support for local food businesses and it may be best to choose whichever approach is already used in your city. Both reduce the cost of capital improvements by reducing tax rates either for investors or businesses. New Market Tax Credits function similarly to loans for businesses but benefit investors, and are discussed further below.

In states and cities that allow for tax increment financing (TIFs), be sure to authorize this benefit for all types of food businesses. TIFs can reduce the cost for businesses to make improvements to buildings and infrastructure. Co-locating many different types of food businesses is better than locating several food businesses that fill similar roles and may compete against each other. Tax incentives that allow only one or a limited array of food businesses are likely to deliver lesser benefits and even create challenges for some businesses.

Another certified B-Corporation, Farmigo is an online farmers market and a software system helping farmers in 25 states manage CSA subscriptions. The company received a $2 million angel investment and $8 million in Series B investments from Sherbrooke Capital, RSF Social Finance, and Benchmark Capital. The company's transaction fee is 10%, with farmers receiving roughly 80% of sales.

E. Stimulating Private Investment

Cities can play a significant role in increasing the amount of private funding

available to new and existing food businesses. Direct action can increase the interest and awareness of private investors such as by using public funds to offset risk by "matching" private investment, and also stimulates the local food market which increases the opportunity and rate of growth for local food companies. The best tools and strategies include:

Local Food Systems Orientation for Banks and Loan Officers

Make bank loan officers more familiar with opportunities, market conditions, and business models in your city's local food economy. This can increase the amount of private loans available to locally owned food ventures. Outreach by elected officials and city staff together with formal information sessions conducted by government staff or a third party consultant are the main activities, along with hosting forums for local food business owners and lenders. It is also important that entrepreneur-support programs include training on applying for formal loans.

Connecting Angel and Venture Investors to Local Food Entrepreneurs

Connecting local food entrepreneurs with angel and venture investors is a key step to securing early stage funding for newer food ventures. Elected officials and city agencies can both play a role in hosting "match making" sessions that include briefings on opportunities in your city's local food economy along with presentations from entrepreneurs seeking investment. Informing angel and venture investors about local food sector opportunities can increase their already growing interest in the sector. It is also important that entrepreneur-support programs provide training on how to present to early stage investors.

Matching Public and Private Investment

Cities can use their direct investment and loans to stimulate private investment by using them as "matching" funds, and by making sure that entrepreneurs, investors, and lenders are well informed of this action. Matching funds attract private investors because they increase the effectiveness of their investments and also reduce their risk by providing the businesses they support with additional funding to achieve their goals. Matching can include any or all of three approaches:

- Lending or investing in a specific and publicly announced ratio in businesses that secure private investment (e.g., $1 in public loan investment for every $2 of loan or investment secured).
- Lending to a business that secures private investment on favorable terms, such as low interest and deferred payment schedules, so that businesses experience fewer early stage financial performance pressures.
- Taking "second position" so that private investors and lenders know they will be paid back before public investment should businesses experience any shortfalls.

Incentives for Private Lending through New Market Tax Credits and Loans

New Market Tax Credits provide a vehicle for economic development agencies to offer an incentive for private lenders to invest in new food ventures and provide below market rate loans to support new business creation or business expansion

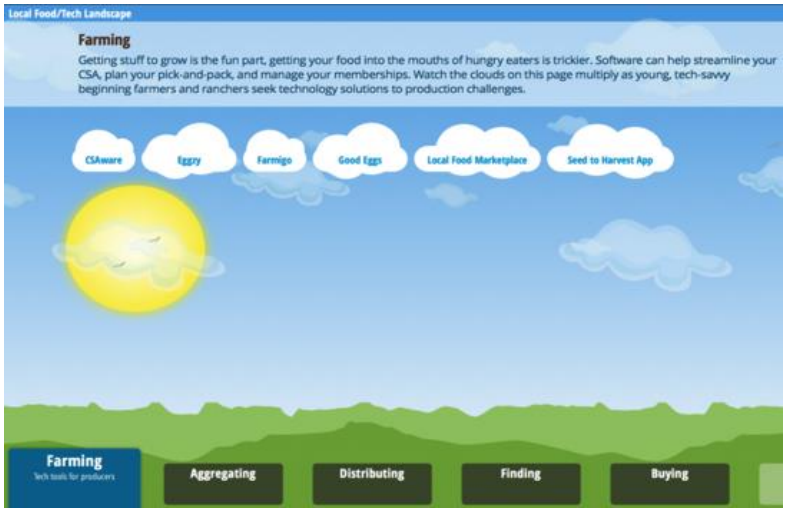
that creates jobs. Eligible businesses must meet the U.S. government definition of a Qualified Active Low-Income Community Business, or essentially be located in a low-income census tract. Private investors direct their investment through a community-based lending vehicle, such as a certified Community Development Enterprise, or private lending institution and then claim the federal New Market Tax Credits in addition to being paid back over time.

As discussed above, cities also can accept a secondary position on their loan guarantees, to assure private lenders that they will be paid first, which may create an incentive for additional private lending.

F. Physical Infrastructure

Food Hubs

Developing a food hub is an effective approach to providing processing and distribution capacity dedicated to locally produced food. This is most useful in cities that do not already have existing businesses that provide processing and distribution services that can be shifted to serve local producers. Developing a food hub requires appropriate zoning, facility identification and land assembly, assurance of adequate road, water and sewer infrastructure, and direct loans or investment along with promotion by elected officials and city agencies. This type of dedicated facility for processing and distribution of locally grown foods can improve the ability of local food producers to serve both institutional and individual clients in your city.



Food-Hub.org offers a new interactive graphic to organize food technology companies and where they fit in the supply chain. *Source: Food-Hub.org*

Food hubs in major cities should be sized to meet a major share of the communities' food needs, particularly fresh fruits and vegetables, as smaller hubs have relatively little economic impact. Also, food hubs are not substantially superior to networks of businesses serving the same function that may be dispersed throughout the city, just like their client base.

If built, food hubs can provide a direct service in marketing locally grown and sustainable foods to institutional clients and also minimize food processing for storage and transport that can reduce the healthfulness of some foods. Food hubs also can spur innovation if co-located with, or near, incubator and prep kitchens and entrepreneur training programs. Ideally, food hubs are located in areas zoned for mixed use so that they can have access to both a ready workforce and retail customers and also allow for the nearby location of businesses that grow out of the hub.

Infrastructure Renewal

Help food ventures avoid conflict with longstanding infrastructure renewal projects and planned improvements by assigning planning, transportation, and public works with responsibility to coordinate with agencies that support new businesses. While the construction of incubators and other enabling infrastructure can help new food ventures, major public construction projects can create business impediments for the early growth of local food ventures. While land prices are often low in areas slated for major construction, the siting of incubators, clusters, and new stand-alone businesses should be directed to other areas. Having dependable road access is critical to all food ventures, bringing customers in and allowing food to pass in and out. Sewer service and water supply are essential for food processing and large-scale foodservice businesses. Economic development and planning officials responsible for supporting the creation of new businesses should have ready access to information about planned repair and renewal projects. Entrepreneurial-support programs also should provide information on areas slated for major public infrastructure construction.

G. Natural Assets

A city's natural assets — land and water resources — are fairly fixed. There are no major tools or strategies we recommend for cities to change their natural asset base. However, one critical intervention cities can take is to make land available and to allow access and use for food ventures. Tools that do this can enable the launch of new, smaller businesses or provide occasional support to the launch of a larger venture that needs large amounts of land within a city. But cities can provide this support only occasionally at most, and not repeatedly to support the growth of many businesses. The two natural asset strategies to consider are:

PlaNYC and Green Thumb in New York and NeighborSpace in Chicago are three of the better-known land assembly programs for urban agriculture. Detroit's SHAR urban agriculture program alone is expected to create 2500 to 3500 living wage jobs ($10 per hour) over the next decade.

Land Assembly

Cities can work to make vacant and abandoned or tax delinquent land available for food production either directly through their taxing authority or through a land bank or conservancy. Often this land is not contiguous and may be suited only for smaller urban gardens that provide minimal job and economic benefit but can increase neighborhood access to fresh fruits and vegetables. Occasionally, larger blocks of land suitable for field or contained food production can be made available, or can be assembled from several contiguous parcels. As abandoned and delinquent land becomes available, cities can rezone the land for many kinds of food ventures and solicit proposals to develop the land for food production or other food-related activities, and offer favorable purchase or long-term lease terms.

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STEP 5: Evaluate

- Project indicators
- Cluster metrics
- Food system metrics

SECTION SEVEN: EVALUATION

INTRODUCTION

With growing interest in local and regional food systems across the country, numerous cities, regions, and states have laid out plans for a more sustainable food system that offers both better health to its citizens and also enhanced economic opportunity. Few cities at present assess or measure the potential impacts of what is being proposed in these plans or the actual results of their investments. Measurement is a critical component of any initiative because it provides a focused means of assessing the opportunities and risks in the planning phase and then monitoring growth and impacts in implementation.

OVERVIEW OF FOOD SECTOR PLANNING AND EVALUATION INDICATORS

While there are many things one can measure, gathering and capturing data can be time consuming and expensive. Therefore, it is prudent to clarify and prioritize throughout the process what data is important to the city and why. There should be a balance between what is measured in order to make decisions and monitor impacts, and the effort it takes to perform these tasks. And it is also prudent to select a manageable number of indicators, ideally no more than ten, that are most important to a city's vision, goals, and desired outcomes.

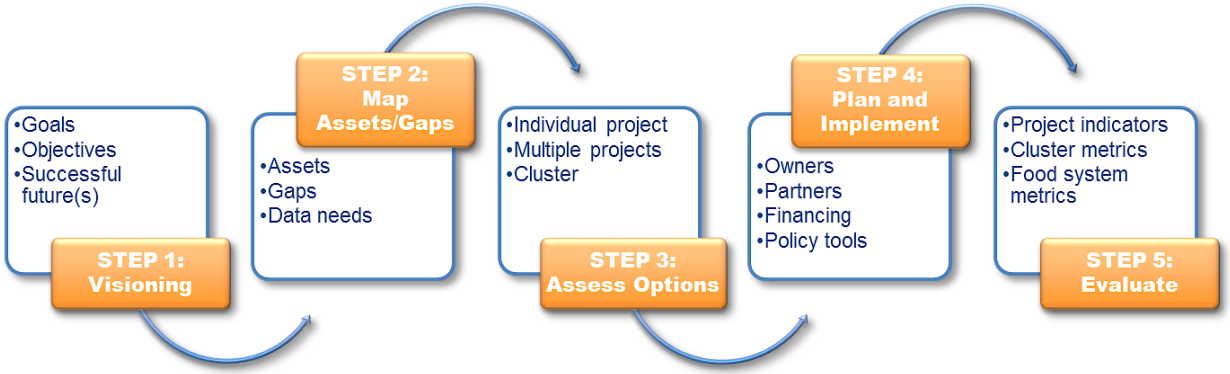
Specifically we sought to create balanced scorecard of indicators that draws from both currently available data (local, regional, and national) and, as appropriate, outlines new data to be collected at the local level for the following purposes:

1. *Provide selection criteria for city agencies to use in choosing among a variety of investment options (e.g., for grant funding projects/programs or others that would tap city resources).*
2. *Provide a means for assessing medium-to long-term impacts of individual projects or programs.*
3. *Provide a means for cities to monitor performance of a group or cluster of food sector investments over time, and thus build knowledge about impacts.*
4. *Provide a toolset for cities to use in communicating priorities to project proponents, developers, and other investors that would be addressed in grant proposals and/or other requests for city support of a project.*

The indicators and metrics in this section are designed to support the process described earlier in this document and as summarized below in **Figure 8.**

The indicators here are offered as examples, and are by no means comprehensive, as there are an infinite number of indicators and sub-indicators. The focus is on indicators that drive change in the near-term or that provide intermediate results, which at a later time will lead to the desired result, but can be reported and tracked (e.g. increased shelf space for local food leading to increased sales of local food). Some indicators could be used in one, two, or all three phases of the process. For example, indicators used in ***Mapping Assets*** and ***Assessing Options*** could serve as a baseline for Evaluation.

Figure 8 - Food Sector Innovation Planning and Evaluation



Data on food sector investment impacts are needed nationwide. The City of Seattle selected the following indicators to gauge future citywide impacts:

- % of residents within ¼ mile of a healthy food access point
- % of residents who are food secure
- Acres of city-owned land used for food production
- Value of local food sold at farmers markets or other direct marketing venues
- Value of EBT benefits redeemed at farmers markets
- Acres of farmland preserved
- Number of businesses increasing availability of healthy food in stores
- % of food waste diverted for composting or recycling

In addition to the indicators provided for each planning and implementation phase, an explanation and examples of additional social and environmental impact indicators are offered at the end of this document, for cities that want to track these types of indicators or make them more a part of their core programming strategies.

When selecting indicators, it is important to keep in mind that this will be your best way of telling your investment story of what you have invested in, how it is progressing, and what the impacts are or will be. Because of this, it is critical to know who you are telling this story to and what their interests in the work are. For example, economic development interests need to know key financial and employment information, while community interests may want to make sure the

investment increases their quality of life and that they are protected from negative environmental impacts. Usually a mix of quantitative and qualitative indicators will allow for stronger monitoring and ongoing reporting on performance for critical audiences. Selecting a comprehensive range of indicators assures you can respond to a variety of audiences. As the same time, opting to go deep in key areas of focus will support a strong story and monitoring for critical audiences. Identifying indicators and data sources and tracking over time is a commitment of resources, so it is important select a set of indicators for which you can get data and limit how many you select so as not to create an undue burden. While there is no perfect number of indicators, ***a range of nine to twelve should allow you to address the three main areas of sustainability: economic, social, and environmental***. It is probable that an initial community assessment may actually measure and take stock of many more than this (**Phase 1** below). This approach is fine for an initial scan that needs to be comprehensive. However, for **Phases 2 and 3** a more measured approach is recommended.

Phase 1: Community Assessment: Establishing a Community Baseline

Taking stock of what existing assets a city has and where the gaps are is an important starting place when looking to find gaps and further develop the local food economy. The community assessment phase will help paint a quantitative and qualitative picture of the resources upon which the city can consider various innovations and how well situated they are to utilize them. Ideally cities will be able to determine how to build upon their strengths and target priority needs through the three-phase process described in this section, starting with establishing a community baseline. Most if not all development initiatives require some level of human, social, financial, physical, and natural capital, making it important that the baseline take each type of asset into account. In this step we have provided examples of indicators for each asset category in **Table 11** below.

Table 11 - Types of Assessment Metrics by Asset Category

Asset	Category	Examples of Metrics
Human ***Capacities and skills of those who live in a community***	Labor, Wages, Health and Equity	• Number/percentage of people employed within job categories or supply chain segment • Employment/unemployment rates within a given area • Current wage profile: average daily/hourly wages by job category • Number and type of existing food business training programs/mentorships • Measure of food insecurity for given region (e.g., number or percentage living in food desert, diet-related disease) • Number and/or percentage of residents with diet-related disease (e.g., obesity, diabetes, hypertension) by race, gender, age, income level, geography • Number and type of existing food sector and business training programs
Social ***Relationships and networks, organizational culture, equity and other types of social capital***	Local Food Stakeholders and Policies	• Number, type, and age of entities doing food sector work (e.g., across supply chain, networks, trade associations, support services, for-profit, nonprofit, etc.) • Number and type of agencies working across multiple sectors, programs with multi-sector approach • Number and type of entities sourcing local food • Number and/or percentage with local food procurement policy • Number and type of city tourism programs, number with food or agriculture component • Number and type of place-based products branded as local, or local brands/branding campaigns • Policy tools available/familiar to the city for economic development and land use/zoning • Number of city offices a food business needs to seek approvals from to launch and keep business open • Number of local procurement policies by type (public and private)

Asset	Category	Examples of Metrics
Financial ***The income stream flowing through a community is a form of financial capital***	Capital, Revenue, Taxes, and Local Food Economy	• Annual capital investment in food sector • Annual food sales by sector (production, processing, distribution, retail, etc.) • Annual food purchases of public and private institutions • Demand for local food (institutional, retail, foodservice) in given area • Sales tax revenue to city from food sector • Dollar value of governmental food assistance (e.g., SNAP/EBT, WIC, school food programs) within given area (e.g., city, school district, etc.) • Local food expenditures by public and private institutions • Value of food processed locally/sold to local processors • Calculated multiplier impacts by supply chain component
Physical ***Built forms of infrastructure that represent community wealth***	Food Businesses and other Infrastructure	• Number, square footage, location, and product value of supply chain facilities • Number, square footage, location, and sales at point of purchase (food retail, restaurant, farmers markets, etc.) • Age and condition of supply chain infrastructure • Local food production: Acres, volumes, product type, value, value added attributes (e.g., organic, free range, etc.) • Retail Environment Food Index *Compares communities with and without good access: = (#fast food + convenience stores)/(#supermarkets + # produce stores + farmers markets)* • Transportation and public transit programs (availability, mode, cost, distance to food business, e.g. grocery store, farmers market, selected employment sites)
Natural ***Naturally occurring resources along the impact human activity has on them***	Land, Water, Energy, Production, Waste	• Amount and location of vacant unimproved land, vacant brownfields • Capacity of water system (for processing and irrigation) • Quantity/quality of land available for urban farming • Number of officially recognized urban farms, by type and business structure, production practices, e.g. organic • Total organic materials generated by and diverted from landfills and waterways, generated by and/or provided to urban agriculture programs • Renewable energy production (current and capacity) • Greenhouse gas emissions resulting from food sector production, processing, or disposal

Phase 2: Innovation Investment Options: Assessing to Invest

In this section, we provide some concrete examples of indicators cities can use when assessing where they can direct investment dollars for the greatest returns, be they financial, labor, or otherwise. See **Table 12** for examples. Doing an assessment at this phase not only helps identify opportunities but also helps assess the risk associated with an innovation. Application of these and other indicators will help cities assess risk stemming from competition, market dynamics, supply chain dynamics, and more. Some of these indicators can also serve as baseline data for post-implementation evaluation, provided the datasets are consistent with those used in **Phase 3**. Note that not all indicators will apply to all categories of innovations. Which combination of indicators a city chooses to apply will depend on the priorities, goals, and objectives of the city or specific program. See ***Other Indicators*** at the end of this section for additional ideas for non-economic indicators, or components of a triple bottom line approach that has economic, social, and environmental benefits.

Table 12 - Types of Assessment Indicators and Metrics by Desired Benefits/Goals

Function (in order of priority[xii])	Indicator Type	Examples of Indicators & Metrics
Creation of High Quality Jobs ***Number of jobs created with higher wages and benefits, and/or with potential career path***	• Jobs • Wages • Benefits • Workforce Development & Training	• Number of jobs to be created or retained by job category • Skill level and wage profile of jobs to be created by job category • Potential for advancement within company/sector • Frequency of which this type of innovation offers benefits to employees • Commitment to employee development (dollars invested per employee) • Number and type of existing food sector and business training programs
Overall Job Creation ***Total number of jobs created by venture***	• Jobs • Workforce Development training	• Number of jobs (full time, part time, temporary jobs) to be created or retained by job category by year 1, 3 and 6 • Skill level and wage profile of jobs to be created by job category • Total wages into the community
Local Food Consumption ***Local food makes up a larger proportion of total food sales in city or region***	• Food Production/Producers • Food Marketing/Marketers • Local Food Branding	• Local demand for local food by product or service, share of market, channel (processing, retail, restaurant, institutional) • Projected sales and market for local food by product or consumer demographic • Utilizes or expands recognition of the cities' local or regional branding
Increase in number of locally owned businesses ***Business is locally owned, including private ownership***	• Risk • Business life cycle • Business model • Local Procurement	• Failure rate of locally owned business • Number of and failure rate of businesses working as part of a cluster • Number and size of new businesses to be created by type (e.g., processors, aggregators) • Number of businesses currently in the innovation category (level of competition) • Number of new businesses created in a food innovation zone and/or by an incubator

Function (in order of priority[xii])	Indicator Type	Examples of Indicators & Metrics
		• Available quantity and quality of local inputs (e.g. is local fruit available for fruit processing innovation)
Increased Access to Affordable, Healthy, Locally Grown Food ***Increased food access by low income residents to healthier foods, e.g. fruits and vegetables***	• Consumer demand and spending • Food access • Food security • Transit/transportation	• Number and/or percentage of consumers willing to buy local or healthy if given option • Number and type of new or recently created food access programs • Number of stores with unmet demand for local and/or healthy food • Number of miles traveled to purchase local and/or healthy food • Number of new transportation and city-run transit programs that address food access
Reduced Food Waste and Loss ***Increase in share of food grown that is consumed***	• Gleaning • Recovery ($$) • Donated	• Projected increase in amount of "seconds" channeled to food access/processing innovations • Change in volume of food loss (waste) by consumer, aggregating, processing, distribution, or marketing (retailer, restaurant other) • Total organic materials generated and diverted from landfills, waterways

Phase 3: Post-Implementation Evaluation

In order to determine an innovation's impacts, the impacts a city investment has on the selected innovation(s), and identify course corrections, it is important to have in place monitoring and evaluation plans and indicators customized to the specific goals and objectives of the city and type of innovation. Some categories of these indicators will have already been addressed in **Phases 1 and 2**. When evaluating the degree of change over time, it is important to use the same set of indicators to compare the baseline with the actual impacts to date. However, when using indicators to enumerate some feature or other one-point-in-time impact, it may be advisable to start fresh, since the data may be different from what was gathered for **Phases 1 and 2**, time will have lapsed, and some things will have changed. In **Table 13** below is just a sampling of indicators that can be used to measure success and performance of a given innovation or project.

Table 13 - Types of Post-Project Implementation Indicators and Metrics

Function (in order of priority[xiii])	Indicator Types	Examples of Indicators & Metrics
Local Economic Benefits ***Increase in local economic activity including wages, taxes and local number***	• Risk • Food Sector size and scope • Market and Consumer • Products • Services	• Number, type, sales, maturity of food sector businesses (throughout supply chain) • Sales of food products and services (by enterprise, product line, consumers) • Profits/profitability: by business, product, campaign, acre of land in production • Tourism spending and number of city-sponsored programs for

Function (in order of priority[xiii])	Indicator Types	Examples of Indicators & Metrics
		tourism • Tax revenues generated to city • Tax incentives provided to business • Cost of local procurement versus non-local • New products and/or value-added products created and introduced
Creation of High Quality Jobs ***Number of jobs created with higher wages and benefits, and/or with potential career path***	• Jobs • Wages • Benefits • Workforce Development & Training	• Wage profile: average daily/hourly wages by job category • Number and/or percentage of each employed/unemployed • Number and/or percentage by job category and/or supply chain segment • Number of jobs created and/or retained, number full time, part time, temp • Median wage by food enterprise compared to city or national • Number of job training programs created by type and cost (e.g. fee based) • Number of unemployed and/or trainees placed in jobs (by type of job) • Income to urban and/or regional farmers
Overall Job Creation ***Total number of jobs created by venture, regardless of type or pay***	• Jobs • Workforce Development training	• Total number of food sector jobs created by venture, type (full or part time, temp) • Number and type of employment and workforce development providers (e.g. city, non-profit, faith-based) • Number of people trained for employment • Number of people who move from part time, temporary to full time employment
Increase in Share of Local Food Produced in City or Surrounding Rural Areas ***Shift in share of local food purchases by consumers that are grown in or near the urban area***	• Food Production/Producers • Food Marketing/Marketers • Local Food Branding	• Number and type of entities sourcing local food with local food procurement policy • Number of city, county or state-level local food campaigns • Number of consumers preferring local food • Number of new or repeat purchase customers of local food • Number of businesses using local or regional branding; and/or place-based branding campaigns/brands created • Value ($) of food processed locally/sold to local processors • Sales ($) of local food outside the region or city • Number of new and/or first-time locally based producers type or product • Number of cooperatives created and by type (farmer, grocery, purchasing)

Function (in order of priority[xiii])	Indicator Types	Examples of Indicators & Metrics
Increase in Number of Locally Owned Businesses ***Business is locally owned, including private ownership***	• Business classification • Business Model • Business Financing	• Number of locally owned businesses • Number of urban and/or regional farms • Number of cooperatives created (e.g. producer, grocery, purchasing) • Dollar amount of loans to locally owned businesses • Number or type of "buy local" campaigns
Increased Access to Affordable, Healthy, Locally Grown Food ***Increased food access by low income residents to healthier foods, e.g. fruits and vegetables***	• Consumer demand and spending • Food access • Food security • Purchasing power	• Number and/or percentage with access to healthy foods • Number and types of food security programs by type and agency • Number and/or percentage food retailers selling local and/or healthy by type • Number of retailers accepting SNAP/EBT and WIC; number of recipients • Dollar or percentage of SNAP/EBT/WIC spent on healthy or local food • Retail square footage dedicated to healthy and/or local food • Number of community gardens created; volume of crops yielded; money saved
Reduced Food Waste and Loss ***Increase in share of food grown that is consumed***	• Gleaning • Recovery ($$) • Donated	• Cost Savings from: food recovered, reduced spoilage, diverted from landfill • Value of local food "seconds" purchased locally and by type • Number and type of companies donating food • Number of food processors handling donated, gleaned or recovered food
Increased Number of Enterprises with At Least Partial Public or Community Ownership ***Business is locally owned with public agency or community org. having ownership stake***	• Business stakeholders • Public investment	• Number of food sector businesses with public investment and/or ownership or sponsorship • Number of community-owned or worker-owned food sector businesses.

OTHER INDICATORS: SOCIAL AND ENVIRONMENTAL INDICATORS

In the preceding pages we provided examples of mostly quantifiable indicators that cities can use to explore where to invest for economic development, to determine what innovations to invest in, and how to evaluate the returns and impacts of such investments. There are other less tangible, but in some ways equally important, indicators that are social and environmental in nature, many of which have long-term effects on economic impacts.

There are numerous trends pointing us toward the idea of "sustainable" and "impact" investment, beyond just meeting consumer demand and consciousness-raising. Large crosscutting problems such as food-related disease and global warming, for example, demand that we bring private sector business activity and public policy more into sync. More companies are adopting corporate social responsibility policies; many are even founded as "social enterprise" organizations that apply market-based strategies to achieve a social purpose.

Sustainability has social, economic and environmental dimensions. The source of a project or program's success or failure extends beyond financial, physical and infrastructure capital invested that impact the bottom line. Often overlooked, social capital affects start up, networking, value creation, sales, growth and more, especially among small and medium enterprises where the greatest growth in the food sector occurs.

Social enterprises can be for-profits as well as non-profits; a good number of both exist in the food arena. The aim of these enterprises is to achieve success in social, environmental, and financial measures: a triple bottom line. Although many commercial businesses have social objectives, a social enterprise is distinct because its social or environmental goals are central to its purpose and business plan. The underlying assumption is that a market-based approach can drive social as well as financial outcomes as long as the business design and operational choices about how resources are allocated and liabilities are incurred remain appropriate.[xiv]

In the case of cities, some are more engaged and proactive than others when it comes to valuing social metrics. Some use them as a core focus; others include them as part of an economic development plan, with the rationale that social and environmental community assets contribute to the economic success of any endeavor. Depending on the goals, objectives, and starting point of the city in this process, it is worth considering these and other social indicators as part of a systems approach, described earlier, for long-term impacts.

Table 14 - Other Social and Environmental Indicators and Metrics

Function	Rationale	Indicator Types	Examples of Indicators & Metrics
Human health	Human health affects economic success in many ways; it affects the individual, family, company, and city.	• Productivity • Diet-related disease • Healthcare	• Absenteeism and sick days taken • Number and/or percentage with health benefits by type • Number and/or percentage with obesity, diabetes, or other diet-related disease • Cost of healthcare to patient, business, and/or city • Number and reach of nutrition outreach and education programs by type and agency
Equity	A community that has fair and equitable access to basics such as education and training, jobs, and healthcare, will be more resilient and self-reliant.	• Incomes • Education • Food/Health (see above function) • Racial, gender, disability, sexual orientation	• Number of workforce development, skills training, and job placement programs available to community • Household makeup, age of family members, parent age • Average number of years' K-12 schooling completed, graduation rates, percentage going to college • Pre-K • Availability of healthy food, distance to grocery store, cost of getting to grocery store • Number and/or percentage employed or unemployed by race, gender, or other, and type of employment • Home ownership by income bracket/race
Environmental	The health and wealth of any community is interdependent with the health of the natural and managed environment.	• Land • Soil Health • Water • Crime • Animal Control	• Land conserved/restored in metropolitan area, by acres and type production practice, crops • Soil contamination levels, e.g. Phase I and/or II environmental site assessments, biological contamination tests e.g. E. coli • Access to water, e.g. water source, usage policy, volume available for agricultural use • Water quality, water preserved (in gallons), Toxics reduced or eliminated (pounds) • Volume and type of product created with recycled farm materials, e.g. compost, fertilizer, animal feed, feedstock for anaerobic digesters and other agricultural products • Energy saved/conserved (BTUs), Renewable energy capacity generated (megawatts), Reduction in Greenhouse Gas Emissions (metric tons of CO_2) by enterprise or farm • Crime level by city, census tract, neighborhood, population • Miles of sidewalk and number of street lights • Presence of pests and animals; animal control statistics: raccoons, stray cats, rodents, deer, other animals pests affecting urban farm • Number and acres of community gardens/urban agriculture

RESOURCES

1) Anderson, Molly, John Fisk, Michael Rozyne, Gail Feenstra and Stephanie Daniels. 2009. *Charting Growth to Good Food: Developing Indicators and Measures of Good Food. Final Project Report.* Arlington: Wallace Center at Winrock International. Highly useful guidance about food system indicator development and evaluation approaches. http://www.wallacecenter.org/our-work/past-initiatives/sustainable-food-indicators/sustainable-indicators-report/CHARTING%20GROWTH%20BOOK%20final%20with%20charts.pdf.

2) Lerman, Sharon. 2012. *City of Seattle Food Action Plan.* City of Seattle Office of Sustainability and Environment. A recent example of a comprehensive metropolitan food system plan that outlines types of indicators to use in measuring outcomes. http://www.seattle.gov/environment/documents/Seattle_Food_Action_Plan_10-24-12.pdf

3) Vancouver, City of. 2013. What Feeds Us: Vancouver Food Strategy. One of the few metropolitan food system plans that outlines a broad evaluation approach and types of indicators to use in measuring outcomes. http://vancouver.ca/files/cov/vancouver-food-strategy-final.PDF.

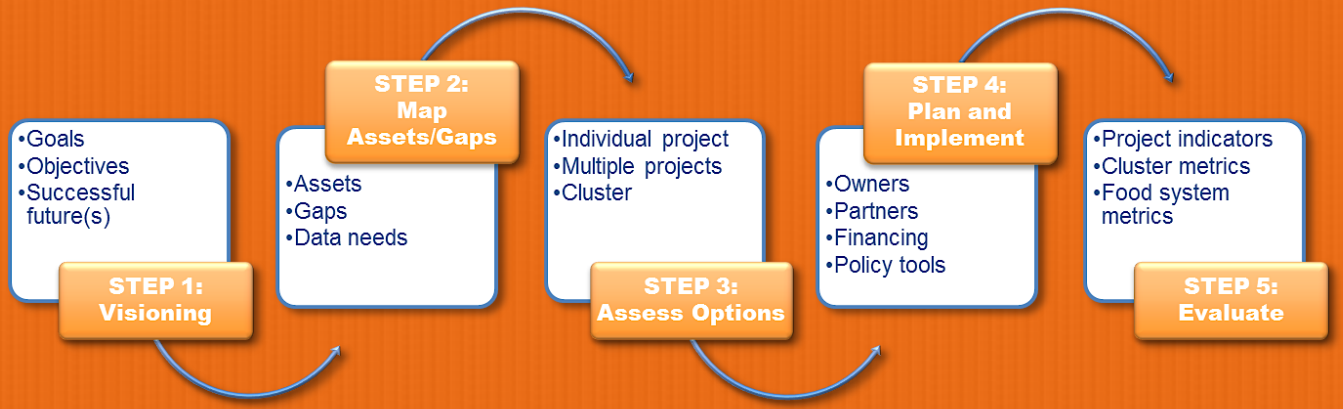
SECTION EIGHT: CONCLUSION

We intend for this Roadmap to help your city reach an important destination: a more vibrant and resilient local food system. The reasons for doing so are as manifold as the ways in which food is present in the life of a city: to benefit our cultures, the economy, built and natural environments, our communities, our well-being, and our public health.

For the cities of San Francisco, Minneapolis, Portland, Seattle, and Vancouver ,which guided this project, the case for making investments and shaping policies to support innovation, entrepreneurship, and the development of local food systems is based on efforts to dependably create jobs, deliver local economic benefit, and increase access to healthy and sustainably grown foods. Other cities' reasons for action may differ, and the vision and goals will be unique.

What is common across all cities is that local governments play perhaps the most critical role in the long-term, sustainable success of their local food systems. Cities have the unique ability to establish the right mix of policies, regulations, and priorities, and also play a leading role in investment, technical assistance, and stimulating market demand. Many cities are already taking action in one or more of these ways to support their local food system, but taking action in each of these areas is more effective than emphasizing only a few.

This Roadmap provides a framework, tools, and strategies for creating that change through five key steps:



A key part of this change is a city's support for innovation and entrepreneurship. The case for innovation is clear: it is the gap between a city's vision for the future of its food sector and how the sector currently functions and affects public health, culture, the environment, and the economy.

Innovative and powerful ideas can come from anywhere—city agencies, existing food businesses, non-profit and social ventures, and entrepreneurs, some of whom may be new to the food sector. Taking action to nurture and support innovation is critical. Powerful new approaches can emerge from any city, and the unique mix of assets in a city helps stimulate a diversity of new ideas. So a final step is to share new and successful programs and ventures that spring up in one city with other cities, and further expand the set of tools and strategies available throughout the country. It is the hope of all involved with this project that the Roadmap and the accompanying ***Program Scan and Literature Review*** will help spark conversations, action, and innovation among cities at the intersection of food system planning and sustainable economic development.

COMPLETE LIST OF RESOURCES

Step 1: Visioning

1) Griffin, Toni et al. 2012. *Detroit Future City: Detroit Strategic Framework Plan*. Detroit Works Project.

Excellent systemic vision for future Detroit that includes a well-developed food system component centered on the Eastern Market. http://detroitworksproject.com/wp-content/uploads/2013/01/The-DFC-Plan.pdf

2) Meadows, Donella H. 1994. "Envisioning a Sustainable World." Paper presented at the Third Biennial Meeting of the International Society for Ecological Economics. San Jose, Costa Rica.

A succinct and eloquent perspective on the importance of visioning and what a strong vision entails by one of the foremost systems thinkers and sustainability leaders. http://www.sustainer.org/pubs/Envisioning.DMeadows.pdf

3) Colasanti, K., Cantrell, P., Cocciarelli, S., Collier, A., Edison, T., Doss, J., George, V., Hamm, M., Lewis, R., Matts, C., McClendon, B., Rabaut, C., Schmidt, S., Satchell, I., Scott, A., Smalley, S. (2010). Michigan Good Food Charter. East Lansing, MI: C.S. Mott Group for Sustainable Food Systems at Michigan State University, Food Bank Council of Michigan, Michigan Food Policy Council.

The Michigan Good Food Charter presents a vision for Michigan's food and agriculture system to advance its current contribution to the economy, protect our natural resource base, improve our residents' health and help generations of Michigan youth to thrive. www.michiganfood.org

Step 2: Mapping Assets and Gaps: Inventory Food Related Assets and an Asset-Gap Map

1) Cochran, Jim and Larry Yee. 2011. *The Food Commons 2.0: Imagine, Design, Build*.

Innovative framework for thinking about food system as a set of assets that are the foundation for a food commons. http://www.thefoodcommons.org/images/FoodCommons_2-0.pdf

2) Griffin, Toni et al. 2012. *Detroit Future City: Detroit Strategic Framework Plan*. Detroit Works Project.

Excellent systemic vision for future Detroit that includes a well-developed, asset-based food system plan centered on the Eastern Market. http://detroitworksproject.com/wp-content/uploads/2013/01/The-DFC-Plan.pdf

3) Nourishing Ontario Sustainable Local Food Systems Research group asset gap mapping methodology.

One of the best and most useable descriptions of what could be included in food system asset gap map by an Ontario food research group. http://nourishingontario.ca/swot-analysis-and-asset-gap-mapping/

4) Vancouver, City of. 2013. *What Feeds Us: Vancouver Food Strategy*.

A recent example of a comprehensive metropolitan food system plan that uses the compilation of an asset inventory as its foundation. http://vancouver.ca/files/cov/vancouver-food-strategy-final.PDF

Step 3: Assess Options: Individual, Multiple or Clusters of Projects

1) Hagan, Erin and Victor Rubin. 2013. *Economic and Community Development Outcomes of Healthy Food Retail.* Oakland: PolicyLink.

One of the best recent explorations of the economic and community development benefits of food retail investments. http://www.policylink.org/atf/cf/{97c6d565-bb43-406d-a6d5-eca3bbf35af0}/FINAL%20HER%20ECONOMIC%20WHITE%20PAPER%20FINAL_1%2018%2013.PDF

2) O'Hara, Jeffrey. 2011. *Market Forces: Creating Jobs through Public Investment in Local and Regional Food Systems*. Washington DC: Union of Concerned Scientists.

A seminal work on how public investment in local and regional food systems can create jobs and also have broader economic development benefits. http://www.ucsusa.org/assets/documents/food_and_agriculture/market-forces-report.pdf

3) Slaper, Timothy, and Hall, Tanya. 2011. *The Triple Bottom Line: What Is It and How Does It Work*. Indiana Business Review.

Excellent summary on how to integrate social, economic and environmental factors in reporting and evaluation. http://www.ibrc.indiana.edu/ibr/2011/spring/pdfs/article2.pdf

Step 4: Plan and Implement Food Sector Investment: Partners, Tools and Strategies

1) Hagey, Allison, Solana Rice and Rebecca Flournoy. 2012. *Growing Urban Agriculture: Strategies and Policies for Improving Access to Healthy Food and Revitalizing Communities*. Oakland: PolicyLink.

A survey of approaches to urban agriculture throughout the nation and policy tools and strategies to support their implementation. http://www.policylink.org/atf/cf/{97C6D565-BB43-406D-A6D5ECA3BBF35AF0}/URBAN%20AG_FULLREPORT_WEB2.PDF

2) Hodgson, Kimberley. 2012. *Planning for Food Access and Community-based Food Systems: A National Scan and Evaluation of Local Comprehensive and Sustainability Plans*. Chicago: American Planning Association.

A comprehensive study based on extensive survey data that evaluates the national range in local planning efforts to support some or all aspects of the food system.
http://www.planning.org/research/foodaccess/pdf/foodaccessreport.pdf

3) Newman, Kathe, Benjamin Faust, Joshua Jensen, Brandon McKoy and Charlene Sharpe. 2012. *Community Economic Development Impacts of the Rutgers Food Innovation Center: Community Food Security and Economic Development*. Edward J. Bloustein School of Planning and Public Policy, Rutgers University.

A thorough case study of the Center, the local and federal tools and policies that were used to support its development, its function as a centerpiece for a food tech cluster, and its local economic development benefits.
http://www.foodinnovation.rutgers.edu/FIC_Final%20Report_high%20quality.pdf

4) Raja, Samina, Branden Born and Jessica Kozlowski Russell. 2008. *A Planners Guide to Community and Regional Food Planning: Transforming Food Environments, Facilitating Healthy Eating*. Chicago: American Planning Association. Report Number 554.

A guide to planning, policy and zoning strategies for shaping urban food environments focusing on six case studies.
http://phillyfoodjustice.files.wordpress.com/2011/06/2008_apa_planners-guide-to-food-planning.pdf

Step 5: Evaluate: Project, Cluster and Food System Metrics

1) Anderson, Molly, John Fisk, Michael Rozyne, Gail Feenstra and Stephanie Daniels. 2009. *Charting Growth to Good Food: Developing Indicators and Measures of Good Food*. Final Project Report. Arlington: Wallace Center at Winrock International.

Highly useful guidance about food system indicator development and evaluation approaches. http://www.wallacecenter.org/our-work/past-initiatives/sustainable-food-indicators/sustainable-indicators-report/CHARTING%20GROWTH%20BOOK%20final%20with%20charts.pdf

2) Lerman, Sharon. 2012. *City of Seattle Food Action Plan*. City of Seattle Office of Sustainability and Environment.

A recent example of a comprehensive metropolitan food system plan that outlines types of indicators to use to measure outcomes. http://www.seattle.gov/environment/documents/Seattle_Food_Action_Plan_10-24-12.pdf

3) Vancouver, City of. 2013. *What Feeds Us: Vancouver Food Strategy*.

One of the few metropolitan food system plans that outlines a broad evaluation approach and types of indicators to use to measure outcomes. http://vancouver.ca/files/cov/vancouver-food-strategy-final.PDF

ENDNOTES

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iv Astor, Adina, Karen Karp, Teresa Lynch, and Jim Miara (2012) "The Time is Right to Grow the Urban Food Industry Cluster." *EDNow (Economic Development Now)*. July 2, 2012. Volume 12, Issue 13.
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vi Hagey, Allison, Solana Rice and Rebecca Flourney (2012) *Growing Urban Agriculture: Strategies and Policies for Improving Access to Healthy Food and Revitalizing Communities*. Oakland: PolicyLink.
vii Cochran, Jim and Larry Yee (2011) *The Food Commons 2.0: Imagine, Design, Build*. Accessed via the web on February 5, 2013
[viii] http://nourishingontario.ca/swot-analysis-and-asset-gap-mapping/
[ix] It is important to note that mobile food entrepreneurs (caterers, food trucks) have requirements better met by separate dedicated facilities.
[x] The highly visible "restaurant row" approach functions only occasionally in cities and often with high turnover of tenants.
[xi] Some land use plans and zoning regulations necessitate that types of food businesses cannot locate near each other or that some more innovative types of food operations that either combine multiple functions (e.g., distribution and a restaurant) or use newer production technologies (e.g. indoor aquaculture or rooftop commercial greenhouse production) are not allowed in some or most parts of a city. Production of fruits and vegetables on vacant lands and also "cottage" production in residential areas is common. This approach is best suited to small businesses rather than larger enterprises that can significantly affect a city's food supply or local economy.
[xii] See Balanced Score Card or Priorities as determined by Food Scan Steering Committee, January 2013
[xiii] See Balanced Score Card or Priorities as determined by Food Scan Steering Committee, January 2013
[xiv] Healthy Urban Food Enterprise Development (HUFED) Conceptual Framework, Wallace Center, 2011

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