The Bay Area Food Economy:
Existing Conditions and Strategies for Resilience

Produced by
Sustainable Agriculture Education (SAGE)
and
American Farmland Trust (AFT)
for the
Association of Bay Area Governments
Comprehensive Economic Development Strategy

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Produced by Sustainable Agriculture Education (SAGE) and American Farmland Trust (AFT), with support from BAE Urban Economics, for the Association of Bay Area Governments' Comprehensive Economic Development Strategy. For questions, please contact: Sibella Kraus, SAGE, at sibella@sagecenter.org or Serena Unger, AFT, sunger@farmland.org

I. Introduction and Overview

The Bay Area has an extraordinarily rich and diverse food system that is an integral part of our region's economic prosperity, environmental sustainability, regional identity, and vibrant cultural life. Producers, processors, distributors, retailers, restaurants, and food services companies are food industry sectors that coordinate as part of a food industry cluster to bring us the food we eat every day. Located throughout the Bay Area, from iconic farmlands, to industrial districts, to downtowns and neighborhoods, the food supply chain is so interwoven with the economy and fabric of our built and natural environment, that we take the flow of food almost as for granted as running water.

The Bay Area has a thriving food economy, but one not without challenges and vulnerabilities. With an annual value of around $113 billion, the food economy employs close to half a million people, around 13 percent of the region's workforce. However, the average wage is 64 percent lower than the average regional wage. The hallmark of the food economy is the very wide spectrum of business opportunities. The 38,500 food establishments include businesses from micro-food enterprises to headquarters for global food and beverage corporations, from small urban-edge farms to farms growing for export, from local food coops to national grocery chains, and from neighborhood ethnic eateries to world class fine dining. However, even with the region's bustle of food enterprises, there are some cracks in the value chain such as food processing and distribution businesses that are being squeezed for affordable space in high value real estate markets; a shortage of qualified workers in many of the food sectors, and a dearth of food business incubators, which are in high demand for the growing number of small businesses striving to enter the marketplace.

The Bay Area is fortunate to be a place with range and farm lands that bring us a bounty of local produce, fresh meats and dairy products, and the inspiring landscapes and ecosystems that define our region. While roughly 40 percent of the land in the Bay Area is comprised of farmland and grazing land, our region's farmland is still at risk. Since 1984, more than 200,000 acres of agricultural land in the nine-county Bay Area have been lost to development. Much of the region's urban footprint was carved from irrigated farmland, the most productive and versatile land for food production. It is this high quality land that still remains the most vulnerable to development. Today, only 237,000 acres of prime farmland are still in production.

The assets, vulnerabilities, and complexity of the food supply chain and our dependence on having access to an abundance of fresh food daily require a more comprehensive understanding about our indispensable agricultural resources and food supply sectors. Equally important is understanding the interdependence of our food supply chain with regional issues such as urban and rural land use, jobs, education, transportation, goods movement, disaster preparedness, climate change and housing.

The purpose of this white paper is to highlight the economic and other contributions of our regional food economy, propose strategies and investments needed to protect and strengthen its

contributions, and encourage increased investment in the agricultural resources and food supply sectors that are a pillar of our regional resilience.

Over the last several decades, many Bay Area organizations and agencies have assessed the status of various agricultural and food-related sectors, both locally and regionally. This white paper synthesizes these findings and includes updated economic data to produce a comprehensive assessment of the region's food supply chain, from production through consumption, and spanning all urban and rural jurisdictions.

The white paper is documented in, and included as an appendix to, the Bay Area Comprehensive Economic Development Strategy (CEDS). The intention is to bring greater recognition of the role of the region's agricultural and food-related sectors as a key growth industry by placing an assessment of its contributions, vulnerabilities and opportunities in the context of a regional economic assessment. Without calling attention to these attributes and issues, the food sector stands to be an under-recognized asset among other leading growth industries in an economic development strategy for the region.

The white paper identifies strengths, weaknesses, opportunities, and threats among the agricultural and food sectors; specific strategies, actions, investment needs, and implementation agents necessary to build on existing assets; as well as ways to address critical barriers to continued economic prosperity among these sectors. Lastly, it provides a brief summary of best practices from other regions that have developed economic development strategies for their agricultural and food sectors.

The insights included in this white paper reflect data, concerns, goals, and recommendations drawn from dozens of studies and reflect additional input from key stakeholders. A strong theme among the stakeholders is an interest in framing common regional goals, identifying investment needs of regional significance, and developing collective action to leverage needed resources. With additional funding and technical assistance anticipated as a result of the CEDS process, a strengthened and more cohesive food value chain can help achieve key outcomes for the region: facilitate the growth of the Bay Area food economy in both rural and urban communities, create jobs, ensure regional resilience and a readily available supply of food, promote access to fresh foods, reduce greenhouse gas emissions, and support local farm and food enterprises that are an integral part of our region's identity and culture.

II. Defining the Food Economy

There are a number of approaches to defining a regional food economy: in terms of the North American Industry Classification system (NAICs) codes; as an industry cluster or set of industry clusters; and more colloquially, as a "food shed". This paper draws from all approaches, but primarily utilizes NAICs, a standardized system used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy.

NAICS Codes

NAICS classifies business establishments in terms of two-, three-, four-, five- and six-digit codes, with two-digit codes (of which there are a total of 24 classifications) being the most general and six-digit codes (of which there are thousands) being the most specific. To determine the best NAICS code definition of the Bay Area food economy, the consultant team reviewed the NAICS codes definitions used by a range of other food system studies both within the Bay Area and in other regions of the U.S. The team also identified additional NAICS codes not already captured, and considered the relevance of these other NAICS codes within the Bay Area context.

Table 1. Agricultural and Food-Related Industry Definitions and NAICS Codes

Food Production and Support Activities	
111	Crop Production
112	Animal Production and Aquaculture
1151	Support Activities for Crop Production
1152	Support Activities for Animal Production
Manufacturing	
311	Food Manufacturing (including animal food)
3121	Beverage Manufacturing
3253	Pesticide, Fertilizer, and Other Agricultural Product Manufacturing
Wholesale Trade	
42382	Farm and garden machinery and equipment merchant wholesalers
4244	Grocery and Related Product Merchant Wholesalers
4245	Farm Product Raw Material Merchant Wholesalers
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers
42491	Farm Supplies Merchant Wholesalers
42493	Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers
Warehousing and Storage	
49312	Refrigerated Warehousing and Storage
49313	Farm Product Warehousing and Storage
Retail Trade	
445	Food and Beverage Stores
446191	Food (Health) Supplement Stores
454210	Vending Machine Operators
44422	Nursery, Garden Center, and Farm Supply Stores
Food Services	
624210	Community Food Services
722	All Food Service and Drinking Places

Sources: North American Industry Classification System, 2012; AFT; BAE; SAGE; 2016.

Table 1 above displays the food-related industry sectors, defined for the purposes of the Bay Area Comprehensive Economic Development Strategy (CEDS) by NAICS code, grouped by major industry category. These NAICS codes establish a baseline for economic data collection from two primary sources: the Quarterly Census of Employment and Wages (QCEW); and the Dun & Bradstreet database.

The categories of agriculture and food-related industries above are also commonly referenced as follows: production; manufacturing (or processing); wholesale (or distribution), which can also include the warehousing and storage industries; retail; and food services and restaurants.

The *Food Production* sector encompasses the production and cultivation of crops, animal production and aquaculture, and support services. Support services are included as they are an

essential part of agricultural production. These support activities may be performed by the agriculture producing establishment or conducted independently as an alternative source of material and service inputs required for the production process for a given crop or animal business.

The *Manufacturing* sector encompasses the processing or manufacturing of a large range of products for human consumption, including: grains, edible oils, breakfast cereals, sugar, candy, fruits and vegetables (e.g. frozen, canned, dehydrated, cut, etc.), seasonings and dressings, meats and poultry, seafood, bakery goods, snack foods, coffee and tea, and fresh prepared foods. It also encompasses manufacturing of products for consumption by animals, including pets and livestock. The beverage manufacturing subsector encompasses breweries, wineries, and distilleries, as well as manufacturing of soft drinks, bottled water and ice. The agricultural product manufacturing subsector encompasses production of pesticides, fertilizers, agricultural chemicals and other agricultural products.

The *Wholesale-Trade* sector (also known as the distribution sector) of the food supply chain covers wholesale and distribution businesses that handle a wide range of food and beverage products. These include: fresh fruits and vegetables, nuts, dairy products, meat, seafood, poultry, bakery and confectionary products, grocery products, grains and field beans, frozen items, wine, beer and distilled beverages. Additional services can include processing, re-packing, warehousing and distribution.

The *Warehousing and Storage* sector covers businesses which provide dry and cold-storage facilities for food and beverage products.

The *Retail-Trade* sector has a primary subsector of Food and Beverage stores, which in turn has the following sub-categories: Supermarkets; Convenience Stores; Meat and Seafood Markets; Fruit and Vegetable Markets; Baked Goods; Confectionary and Nut Stores; Other Specialty Stores; and Beer, Wine and Liquor Stores. As in other sectors, there is considerable cross-over, with many retail stores also having additional wholesale or restaurant components. A much smaller subsector, and one somewhat tangential to food businesses, is Nursery, Garden Center, and Farm Supply Stores.

The *Food Service* sector includes Catering Services, Restaurants, and Bars & Nightclubs. The Community Food Services subsector covers food banks and programs such as Meals-on-Wheels.

While defining the food economy through the NAICS codes above is a best practice, is it nonetheless not an exact science. Some kinds of food-related businesses, such as research and development of new types of food, food tech, food e-commerce, and farmers' markets, are not picked up in the NAICS code approach. Other kinds of businesses that are picked up, such as pet food companies and agricultural chemical inputs, are not part of a common conception of the food industries. Section VI, Agriculture and Food Sector Economic Contributions, below, provides more detail about the types of businesses that are covered in each category.

Industry Clusters

Industry clusters, groups of interrelated industries concentrating in a geographic location, are another classification system that helps analysis of the Bay Area food economy. In April 2017, ABAG

produced *Bay Area Clusters*, another CEDS Background White Paper, which focuses on employment by industry cluster. The summary below draws from that paper.

Bay Area Clusters uses the U.S. Economic Development Administration Cluster Mapping Project classification system of clusters as well as its division of economic activity into two types of clusters, traded and local. Industries in traded clusters sell products and services outside of a region whereas industries in local clusters primarily serve a local market. Local clusters account for most of the employment in regional economies, but traded clusters register higher wages and higher levels of investment. Traded clusters are the engines of regional economies, supported by local clusters.[1]

The Cluster Mapping Project[2], a national economic initiative and data resource, also utilizes NAICS codes for industries, but instead of organizing the industries in terms of linear codes (111, 112, etc.), it organizes industries into clusters by function. In this system, food-related businesses get lumped with non-food-related businesses based on function, such as distribution.

There are a number of examples from the *Bay Area Clusters* paper that are relevant to this analysis of the Bay Area food economy.

- Distribution and Electronic Commerce is the second largest traded cluster in terms of regional employment. Within this cluster, Wholesale of Food Products is the fifth largest sub-cluster. Alameda County has over a third of the region's employment in Wholesale of Food Products.
- Hospitality and Tourism, which includes restaurants as well as accommodations, is the fifth largest traded cluster in terms of regional employment. San Francisco County has around a third of the region's employment in this sector.
- Food Processing and Manufacturing is the ninth largest traded cluster in terms of regional employment. Napa and Sonoma counties lead regional employment in this area.
- Local Hospitality Establishments and Local Food and Beverage Processing and Distribution, are respectively the largest and sixth largest local clusters. In six counties, Local Hospitality Establishments is the most important local cluster in terms of employment.

The takeaway here is that while the food economy can be analyzed in terms of its six NAICS code categories, it is also instructive to look at the whole food economy as part of a continuum of economic value and economic interdependence with a range of other industries. Cluster analysis is one way to do this; analyzing indirect and induced contributions (for example, through IMPLAN analysis) is another way.

Another perspective on the economics of food is understanding the food value chain as inseparable from environmental and social considerations, values, and analysis. The terms "foodshed" and "food system" are often used to connote these other environmental and social aspects of a regional food economy. Clearly, the Bay Area has a passionate and growing local food movement, a touchstone of which is appreciation of and demand for local food, which in turn helps drive production of local food for local consumption.

At the same time, due to its extraordinary agricultural land, benign climate, strong food and beverage production sector and its distribution infrastructure, the Bay Area sells a wide array of agricultural and processed products nationally and globally. And due to its location and cosmopolitan nature, the Bay Area sources its food regionally, nationally and globally.

All food businesses, from micro-food enterprise, to community food coop, to global corporations, are part of the regional food economy and in turn, the regional food economy is an integral part of the regional economy overall. Section III, Economic Trends, reflects this broad spectrum of the food economy. Sections IV and VI, the SWOT analysis and the strategy sections of this paper, reflect a more local bias, with a focus on those food industries that are most significantly invested in the Bay Area's unique agricultural resource base, food production, distribution, and consumption sectors. They are industries that have significant local presence and are critical to a diverse food sector that can sustain the Bay Area now and into the future.

III. Economic Trends – Establishments, Employment, and Wages

This section examines food business activity by sector, by looking at trends in the number of establishments, employment, and wages. To provide a sense of scale, this section also looks at the establishments, employment, and wages of the agricultural and food sectors compared to data for all industries in the region.

Establishment Trends

Table 2 summarizes county-level establishment data from the Quarterly Census of Employment and Wages (QCEW), furnished by the California Employment Development Department (EDD). Within the nine-county region, there were 25,331 agriculture and food-related businesses in 2015, an 11 percent increase from 1995. This growth is comparable to the 14 percent growth of the establishment count for other industries in the region.

The number of establishments in the groupings of Food Production and Support Activities, Warehousing and Storage, and Retail trade all dropped in the 20-year period, with 39 percent, 14 percent, and 10 percent declines, respectively. Most notable were the declines in Crop Production and Animal and Aquiculture Production sub-sectors, which both experienced 47 percent declines. The most notable growth in the number of establishments is seen in the Beverage Manufacturing (+202 percent), Beer, Wine, Distilled Alcoholic Merchant Wholesalers (+102 percent), and Farm Supplies Merchant Wholesalers (+181 percent) sub-sectors.

Table 2. Agricultural and Food Sector Establishments Trends, Bay Area, 1995-2015

NAICS Code		Total Establishments (a) 1995	2015	% Change 1995-2015
Food Production and Support Activities				
111	Crop Production	1,668	891	-47%
112	Animal Production and Aquaculture	374	199	-47%
1151	Support Activities for Crop Production	146	205	40%
1152	Support Activities for Animal Production	34	65	91%
	Subtotal	**2,222**	**1,360**	**-39%**
Manufacturing				
311	Food Manufacturing (including animal food)	1,070	780	-27%
3121	Beverage Manufacturing	311	938	202%
3253	Pesticide, Fertilizer, and Other Agricultural Product Manufacturing	-	-	n/a
	Subtotal	**1,381**	**1,718**	**24%**
Wholesale Trade				
42382	Farm and garden machinery and equipment merchant wholesalers	64	55	-14%
4244	Grocery and Related Product Merchant Wholesalers	988	986	0%
4245	Farm Product Raw Material Merchant Wholesalers	18	15	-17%
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	142	287	102%
42491	Farm Supplies Merchant Wholesalers	26	73	181%
42493	Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers	93	66	-29%
	Subtotal	**1,331**	**1,482**	**11%**
Warehousing and Storage				
49312	Refrigerated Warehousing and Storage	9	12	33%
49313	Farm Product Warehousing and Storage	5	-	-100%
	Subtotal	**14**	**12**	**-14%**
Retail Trade				
445	Food and Beverage Stores	3,919	3,455	-12%
446191	Food (Health) Supplement Stores	127	219	72%
454210	Vending Machine Operators	74	27	-64%
44422	Nursery, Garden Center, and Farm Supply Stores	208	173	-17%
	Subtotal	**4,328**	**3,874**	**-10%**
Food Services				
624210	Community Food Services	32	51	59%
722	All Food Service and Drinking Places	13,527	16,814	24%
	Subtotal	**13,559**	**16,865**	**24%**
Total, Ag and Food		**22,835**	**25,311**	**11%**
Total, All Industries		**253,185**	**289,007**	**14%**
Ag & Food-Related Establishments as % of Total Bay Area Establishments		9%	9%	

Sources: California Employment Development Department, QCEW, 2016; American Farmland Trust, 2016.
Notes:
a) Totals do not include estimates for industries with confidential information.

Employment Trends

Table 3, below, summarizes county-wide employment data. Within the nine-county region, food-related businesses employed over 468,000 persons, representing 13 percent of the region's total employment in 2015. The data indicate that food system-related employment has grown by 42 percent since 1995, which is almost double the rate of growth for all jobs in the region during the same period. Consequently, food system-related employment has expanded its share of overall employment, from 11 percent in 1995 to 13 percent in 2015.

Table 3. Agricultural and Food Sector Employment Trends, Bay Area, 1995-2015

NAICS Code		Total Employment (a) 1995	2015	% Change 1995-2015
Food Production and Support Activities				
111	Crop Production	16,758	11,133	-34%
112	Animal Production and Aquaculture	1,662	1,200	-28%
1151	Support Activities for Crop Production	2,408	6,489	169%
1152	Support Activities for Animal Production	135	268	99%
	Subtotal	**20,963**	**19,090**	**-9%**
Manufacturing				
311	Food Manufacturing (including animal food)	28,879	25,996	-10%
3121	Beverage Manufacturing	11,094	21,603	95%
3253	Pesticide, Fertilizer, and Other Agricultural Product Manufacturing	-	-	n/a
	Subtotal	**39,973**	**47,599**	**19%**
Wholesale Trade				
42382	Farm and garden machinery and equipment merchant wholesalers	516	439	-15%
4244	Grocery and Related Product Merchant Wholesalers	13,559	17,375	28%
4245	Farm Product Raw Material Merchant Wholesalers	68	69	1%
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	3,323	6,548	97%
42491	Farm Supplies Merchant Wholesalers	347	745	115%
42493	Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers	1,122	1,327	18%
	Subtotal	**18,935**	**26,503**	**40%**
Warehousing and Storage				
49312	Refrigerated Warehousing and Storage	309	219	-29%
49313	Farm Product Warehousing and Storage	88	-	-100%
	Subtotal	**397**	**219**	**-45%**
Retail Trade				
445	Food and Beverage Stores	62,114	77,992	26%
446191	Food (Health) Supplement Stores	773	1,834	137%
454210	Vending Machine Operators	570	139	-76%
44422	Nursery, Garden Center, and Farm Supply Stores	2,402	1,498	-38%
	Subtotal	**65,859**	**81,463**	**24%**
Food Services				
624210	Community Food Services	329	973	196%
722	All Food Service and Drinking Places	182,230	292,385	60%
	Subtotal	**182,559**	**293,358**	**61%**
	Total, Ag and Food	**328,686**	**468,232**	**42%**
	Total, All Industries	**2,964,060**	**3,666,533**	**24%**
Ag & Food-Related Employment as % of Total Bay Area Employment		11%	13%	

Sources: California Employment Development Department, QCEW, 2016; American Farmland Trust, 2016.
Notes:
a) Totals do not include estimates for industries with confidential information.

As of 2015, about two-thirds of food system-related employment in the region was in businesses classified as Food Service and Drinking Places (e.g., restaurants and bars). These businesses also represent the types of food-related businesses that grew employment most rapidly (+61 percent) between 1995 and 2015. Although it accounts for a much smaller portion of food system-related employment (only six percent), employment in the Wholesale Trade sector expanded by 40 percent during the period. This is credited mostly to employment growth in the Beer, Wine, Distilled Alcoholic Merchant Wholesalers sub-sector, which added 97 percent more jobs, and the Farm Supplies Merchant Wholesalers sub-sector, which added 155 percent more jobs. The Retail Trade and Manufacturing sectors saw employment grow at roughly the same rate as the region-wide average, +24 percent, and +19 percent, respectively. The Crop Production and Animal and

Aquaculture Production sub-sectors saw declines in employment by 34 and 28 percent, respectively. Meanwhile, Support Activities for Crop Production and Animal Production added 169 percent and 99 percent more jobs, respectively.

Table 4. Agricultural and Food Sector Wage Trends, Bay Area, 1995-2015

		Annual Avg Wage (a)		%Change
NAICS Code		1995 (2015$) (b)	2015	1995-2015
Food Production and Support Activities				
111	Crop Production	$25,833	$37,214	44%
112	Animal Production and Aquaculture	$88,349	$40,412	-54%
1151	Support Activities for Crop Production	$29,065	$36,760	26%
1152	Support Activities for Animal Production	$23,395	$33,809	45%
	Subtotal	**$31,145**	**$37,213**	**19%**
Manufacturing				
311	Food Manufacturing (including animal food)	$45,417	$49,624	9%
3121	Beverage Manufacturing	$49,866	$61,573	23%
3253	Pesticide, Fertilizer, and Other Agricultural Product Manufacturing	n/a	n/a	n/a
	Subtotal	**$46,652**	**$55,047**	**18%**
Wholesale Trade				
42382	Farm and garden machinery and equipment merchant wholesalers	$47,629	$60,077	26%
4244	Grocery and Related Product Merchant Wholesalers	$54,501	$59,653	9%
4245	Farm Product Raw Material Merchant Wholesalers	$46,467	$70,985	53%
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	$65,456	$85,948	31%
42491	Farm Supplies Merchant Wholesalers	$55,611	$71,664	29%
42493	Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers	$33,742	$38,456	14%
	Subtotal	**$54,998**	**$65,462**	**19%**
Warehousing and Storage				
49312	Refrigerated Warehousing and Storage	$55,400	$48,094	-13%
49313	Farm Product Warehousing and Storage	$32,002	n/a	n/a
	Subtotal	**$50,214**	**$48,094**	**-4%**
Retail Trade				
445	Food and Beverage Stores	$36,913	$32,338	-12%
446191	Food (Health) Supplement Stores	$32,199	$44,451	38%
454210	Vending Machine Operators	$39,628	$45,863	16%
44422	Nursery, Garden Center, and Farm Supply Stores	$32,897	$34,829	6%
	Subtotal	**$36,734**	**$32,680**	**-11%**
Food Services				
624210	Community Food Services	$26,606	$43,174	62%
722	All Food Service and Drinking Places	$17,782	$23,485	32%
	Subtotal	**$17,798**	**$23,550**	**32%**
Total, Ag and Food		**$28,135**	**$31,281**	**11%**
Total, All Industries		**$43,778**	**$87,368**	**100%**
Ag & Food-Related Employment as % of Total Bay Area Employment		64%	36%	

Sources: California Employment Development Department, QCEW, 2016; American Farmland Trust, 2016.
Notes:
a) Totals do not include estimates for industries with confidential information.
b) Adjusted for inflation using Bureau of Labor Statistics, Consumer Price Index. CPI-U 1995/(1.56

Wage Trends

Table 4, above, summarizes county-wide wage data. The overall average annual wage in the Bay Area agricultural and food sectors in 2015 was $31,200, making it 64 percent lower than the Bay Area average annual wage for all other industries. While wages in all other industries doubled in the 20-year period, agricultural and food-related wages grew by only 11 percent.

The most notable changes are in those sub-sectors that represent the largest employment. The food service and drinking places subsector, which represents 62 percent of total employment, has by far the lowest wage - $23,485, which puts in perspective the 32 percent increase seen over the last 20 years. The food and beverage stores subsector had a 12 percent decline in average wages, which is significant given that this subsector represents 17 percent of all employment. On the more positive side, the Food Production and Wholesale Trade sectors both had wage increases of 19 percent, the Manufacturing sector had a wage increase of 18 percent, and the Food Services sector saw a 32 percent increase in wages.

IV. Economic Contributions

Establishments and Employment Overview

This section looks at the direct economic contributions of food sectors by category and by county using individual firm-level data from Dun & Bradstreet for all Agricultural and Food Sector (food system) establishments located in the nine-county Bay Area region. Dun & Bradstreet maintains an up-to-date list of establishments, containing data relating to the establishment location, number of employees, estimated annual revenue, and NAICs category, among others. These data will vary from the information provided by the QCEW above, due to the different data collection methods used for the two data sets. Dun & Bradstreet collects its establishment data from a number of public and proprietary sources, including its own primary research conducted through interviews with business representatives. Information for individual businesses is updated on a rolling basis, so the data from Dun & Bradstreet represents the most recent business information available at the time the Dun & Bradstreet database is accessed, rather than a snapshot of business activity as of a specific point date in time. Nonetheless, this database provides a further understanding of the economic activity associated with Bay Area businesses within the Agricultural and Food Sector industries because it includes establishment level data with specific addresses and estimated revenues, among other data points.

Establishments

According to the Dun & Bradstreet data shown in Table 5, a total of 38,521 Agricultural and Food Sector establishments are located throughout the Bay Area. Alameda County and Santa Clara County contain the highest number of food system establishments, both containing roughly 7,500 total establishments and 19 percent of the total Bay Area count each. San Francisco County represents the third largest concentration, with approximately 6,400, or 16.5 percent of all Bay Area food system establishments, followed by Contra Costa County and Sonoma County, both containing approximately 4,100 establishments, and San Mateo County, with about 3,500 establishments. Napa, Solano, and Marin counties contain relatively small numbers of food system establishments, between 1,500 and 2,300 establishments per county. However, the food industry plays an important role in the identity and economy of each of these counties.

Table 5. Agricultural and Food Sector Establishments and Employees by County

	Agricultural and Food Sector			
County	Establishments	% of Total	Employment	% of Total
Alameda	7,433	19%	132,223	28%
Contra Costa	4,160	11%	50,109	10%
Marin	1,559	4%	15,838	3%
Napa	2,235	6%	21,207	4%
San Francisco	6,366	17%	66,740	14%
San Mateo	3,494	9%	40,488	8%
Santa Clara	7,490	19%	92,162	19%
Solano	1,720	4%	21,380	4%
Sonoma	4,064	11%	39,319	8%
Total, Bay Area	**38,521**	**100%**	**479,466**	**100%**

Sources: Dun & Bradstreet, 2017; BAE, 2017.

Employment

Dun & Bradstreet maintains establishment level data on two categories of employees: Total Employees and Employees at this Location. When establishments are listed as Headquarters, rather than Single Location, the number of Total Employees is often higher than the numbers of Employees at this Location. This analysis is based only on the data reflecting Employees at this Location.

As shown in Table 5, the Bay Area food system establishments employ roughly 479,500 workers. The concentration of food sector employment generally mirrors that of the establishments. A correlation exists between the population of each county and the numbers of food system employees. For example, Alameda and Santa Clara counties combined account for 46 percent of the Bay Area population, and account for just under 47 percent of Bay Area food system jobs.

Alameda County hosts the greatest number of regional food system employees. A notable observation is that while Alameda County accounts for 19 percent of the total establishments, the county holds approximately 28 percent of the total Bay Area food sector employment, or roughly 132,000 total employees. Upon further analysis, this is due to a high concentration of large firms in Alameda County. The two largest food system employers are Safeway Canada Holdings and Aryzta, a Europe-based food manufacturer. Four other large employers are The Wine Group, the world's second-largest wine producer by volume, Safeway, E-Brands Restaurants, Aidells Sausages (a firm which grew from a small artisan operation in Berkeley), and The Vons Companies.

Santa Clara County represents the second largest food job concentration, accounting for roughly 19 percent of the total Bay Area food system employment, or roughly 92,000 employees. Its largest employers are the American Restaurant Group, Compass Group (a food service company), and Sutter's Place, affiliated with the Bay 101 Casino. San Francisco represents the third largest food system job concentration, with 66,750 employees. Its two largest food system employers are Wilbur-Ellis Company (a leading international agricultural products and animal feed distributor), and The New French Bakery.

Contra Costa County has just over 50,000 food system employees. The largest employers are PacPizza, C&H Sugar Company, Kellogg Company, and Nancy's Specialty Foods (a frozen appetizer manufacturer started by Nancy Mueller). San Mateo County and Sonoma County both have roughly 40,000 food system employees. Boething Treeland Farms (a wholesale nursery), Host (an airline food service company), and See's Candy are the largest employers in San Mateo County. Amy's Kitchen (a prepared-foods manufacturer), Constellation Brands (a wine, beer and spirits producer), and Chick-Fil-A (a restaurant chain), are the largest employers in Sonoma County.

Similar to the distribution of establishments, Napa County, Solano County, and Marin County account for the smallest number of food system jobs, though the three counties each host between 15,000 and 22,000 food system employees. In Napa County, the largest employers are in the wine and hospitality sub-sector. In Solano County, the largest employers are a dried fruit packing company and a convenience store headquarters. In Marin County, the largest employers are the headquarters of a medium-sized grocery chain and the headquarters of a dessert-based restaurant chain.

Establishment Size

While large employers can have a significant impact on local economies, collectively, smaller size employers can have an equally important role in the local economy and are often considered important for economic growth, innovation, and diversity. Smaller businesses can also contribute to the social context of a place, since they often have deeper connections within a community by virtue of having local ownership and other ties. It is instructive to look at the number of people employed at establishments and understand the various types and sizes of these food businesses. As shown in Table 6, the large majority (84 percent) of the region's food businesses fall into the size of 1-14 employees. Business with 15-49 employees represent another 12 percent of the region's food businesses. The Food Services sector tends to have largest concentration of businesses in the smallest (under 14 employees) size category, while throughout the region almost half of large businesses (over 100 employees) tend to be Retail establishments.

Table 6. Food Sector Establishments by Size, Bay Area

	Number of Establishments							
# of Employees	Production	Manufacturing	Wholesale	Warehousing	Retail	Food Services	Total	% of Total
1-14	3,386	2,385	3,315	18	6,914	16,403	32,421	84%
15-49	133	352	345	3	394	3,332	4,559	12%
50-99	43	94	89	1	310	502	1,039	3%
100-299	18	81	32	-	187	117	435	1%
300+	3	20	12	-	15	17	67	0.2%
Total	**3,583**	**2,932**	**3,793**	**22**	**7,820**	**20,371**	**38,521**	**100%**

Sources: Dun & Bradstreet, 2107; SAGE, AFT, 2017

Revenue

Along with providing information about the total number of establishments and employees, the Dun & Bradstreet database presents firm-level annual revenue figures. One notable element of the revenue figures is that the Bay Area is home to many firm headquarter locations. The revenue

figures for the headquarters locations of most large firms reflect company-wide annual revenue figures. As a result, the revenue figures presented for the affected sectors within a county may be larger than anticipated. For example, as previously noted, Safeway Canada Holdings has its headquarters location in Alameda County, translating to a significant annual revenue total in the Food and Beverage Stores sub-sector in Alameda County. Similarly, See's Candies, a major chocolate confectionery manufacturer, has its headquarters in San Mateo County, thus increasing the revenue figures in the Food Manufacturing industry sub-sector for San Mateo County. While these figures likely overestimate the local and regional impact of the headquarters establishments, it is worth noting that these headquarters locations do employ a large share of companies' high-level employees and generate significant amounts of economic activity within the greater Bay Area through corporate spending.

Based on the Dun & Bradstreet data provided in Table 7, food system establishments generate roughly $113 billion in annual revenue across the entire Bay Area region.[3] Food and Beverage Stores generate roughly 42 percent of the regional food system revenue, while Grocery and Related Product Merchant Wholesalers generate 28 percent, indicating that roughly 70 percent of the total Bay Area food system revenue is generated by the retail and wholesale activity for grocery and beverage products. Food Manufacturing establishments generate another 12 percent of the Bay Area food system revenue, while about 8.6 percent is generated by Food Service and Drinking Places, which includes food service companies, caterers, restaurants and bars. The remaining industry sectors account for just nine percent of the total Bay Area food system revenue, the most significant of which includes $3.3 billion in annual revenue from Beverage Manufacturing establishments and $1.9 billion from all Food Production and Support Activities. Crop Production and Animal Production subsectors produce just a little over one percent of the total revenues for the Bay Area's food system. However, this may understate the importance of the regional food production activities, as food production is the beginning of the food chain, and locally sourced ingredients are an important component of the growing artisan food products industry, whereas much of the added value in the food chain is generated in processing, packaging, marketing, distribution, and retail activities that depend on raw food products as inputs.

Table 7. Adjusted Agricultural and Food Sector Revenue by Industry, Bay Area Counties (Part 1 of 2) (a)

NAICS Code		Total Revenue (Millions) Alameda County	Contra Costa County	Marin County	Napa County	San Francisco County
Food Production and Support Activities						
111	Crop Production	$49	$59	$30	$155	$84
112	Animal Production and Aquaculture	$18	$8	$16	$7	$4
1151	Support Activities for Crop Production	$108	$4	$3	$94	$45
1152	Support Activities for Animal Production	$4	$6	$2	$1	$3
Subtotal, Food Production and Support Activities		**$179**	**$77**	**$50**	**$257**	**$135**
Manufacturing						
311	Food Manufacturing	$2,548	$2,580	$35	$86	$4,279
3121	Beverage Manufacturing	$412	$14	$37	$1,525	$122
3253	Pesticide, Fertilizer, and Other Agricultural Product Manufacturing	$1	$4	$0	$0	$3
Subtotal, Manufacturing		**$2,962**	**$2,598**	**$73**	**$1,612**	**$4,404**
Wholesale Trade						
42382	Farm and Garden Machinery and Equipment Merchant Wholesalers	$21	$134	$19	$28	$7
4244	Grocery and Related Product Merchant Wholesalers	$7,936	$742	$193	$51	$929
4245	Farm Product Raw Material Merchant Wholesalers	$119	$7	$3	$2	$8
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	$117	$253	$88	$449	$252
42491	Farm Supplies Merchant Wholesalers	$166	$25	$11	$1	$184
42493	Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers	$49	$10	$0	$1	$61
Subtotal, Wholesale Trade		**$8,409**	**$1,171**	**$313**	**$532**	**$1,441**
Warehousing and Storage						
49312	Refrigerated Warehousing and Storage	$13	$0	$0	$3	$4
49313	Farm Product Warehousing and Storage	$0	$2	$0	$0	$0
Subtotal, Warehousing and Storage		**$13**	**$2**	**$0**	**$3**	**$4**
Retail Trade						
445	Food and Beverage Stores	$41,223	$2,860	$177	$299	$681
446191	Food (Health) Supplement Stores	$137	$23	$10	$1	$26
454210	Vending Machine Operators	$16	$3	$1	$3	$1
44422	Nursery, Garden Center, and Farm Supply Stores	$26	$45	$31	$11	$4
Subtotal, Retail Trade		**$41,402**	**$2,930**	**$219**	**$314**	**$712**
Food Service						
624210	Community Food Services	$2	$5	$1	$0	$23
722	Food Services and Drinking Places	$1,884	$1,162	$704	$178	$3,070
Subtotal, Food Service		**$1,886**	**$1,167**	**$705**	**$178**	**$3,092**
Total, All Food-Related Industries		**$54,850**	**$7,945**	**$1,359**	**$2,895**	**$9,788**

- *Continued on Next Page* -

Sources: Dun & Bradstreet, 2017; BAE, 2017.

Table 7. Adjusted Agricultural and Food Sector Revenue by Industry, Bay Area Counties (Part 2 of 2) (a)

NAICS Code		Total Revenue (Millions) San Mateo County	Santa Clara County	Solano County	Sonoma County	Total Bay Area
Food Production and Support Activities						
111	Crop Production	$221	$356	$54	$197	$1,205
112	Animal Production and Aquaculture	$8	$19	$8	$105	$191
1151	Support Activities for Crop Production	$2	$11	$129	$72	$467
1152	Support Activities for Animal Production	$2	$15	$2	$10	$44
Subtotal, Food Production and Support Activities		**$233**	**$401**	**$193**	**$383**	**$1,907**
Manufacturing						
311	Food Manufacturing	$2,352	$636	$530	$653	$13,699
3121	Beverage Manufacturing	$7	$67	$10	$1,095	$3,289
3253	Pesticide, Fertilizer, and Other Agricultural Product Manufacturing	$1	$975	$2	$6	$993
Subtotal, Manufacturing		**$2,360**	**$1,677**	**$541**	**$1,754**	**$17,981**
Wholesale Trade						
42382	Farm and Garden Machinery and Equipment Merchant Wholesalers	$1	$3	$11	$59	$284
4244	Grocery and Related Product Merchant Wholesalers	$19,915	$1,632	$103	$652	$32,153
4245	Farm Product Raw Material Merchant Wholesalers	$27	$9	$11	$29	$215
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	$217	$141	$235	$364	$2,115
42491	Farm Supplies Merchant Wholesalers	$26	$141	$115	$47	$716
42493	Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers	$17	$137	$7	$34	$318
Subtotal, Wholesale Trade		**$20,203**	**$2,065**	**$482**	**$1,185**	**$35,800**
Warehousing and Storage						
49312	Refrigerated Warehousing and Storage	$0	$1	$0	$1	$22
49313	Farm Product Warehousing and Storage	$0	$2	$0	$0	$4
Subtotal, Warehousing and Storage		**$0**	**$3**	**$0**	**$1**	**$26**
Retail Trade						
445	Food and Beverage Stores	$412	$930	$124	$488	$47,194
446191	Food (Health) Supplement Stores	$10	$17	$7	$15	$246
454210	Vending Machine Operators	$3	$32	$3	$7	$69
44422	Nursery, Garden Center, and Farm Supply Stores	$17	$58	$2	$25	$219
Subtotal, Retail Trade		**$441**	**$1,038**	**$137**	**$536**	**$47,728**
Food Service						
624210	Community Food Services	$0	$130	$1	$0	$162
722	Food Services and Drinking Places	$644	$1,455	$290	$398	$9,783
Subtotal, Food Service		**$644**	**$1,585**	**$291**	**$398**	**$9,945**
Total, All Food-Related Industries		**$23,881**	**$6,769**	**$1,643**	**$4,257**	**$113,388**

Notes:

(a) Revenue estimates not available for all establishments from Dun & Bradstreet. In these cases, BAE estimated revenues as the average from all non-headquarter establishments in the same County for the same industry sub-sector. In the limited cases where the specific County-wide average revenue per establishment was unavailable, BAE applied the Bay Area average non-headquarter revenue per establishment in the given industry sub-sector.

Sources: Dun & Bradstreet, 2017; BAE, 2017.

Based on the distribution of revenue by county, provided in Table 7, Alameda County generates the largest food system revenue among Bay Area counties at roughly $55 billion annually, the majority of which comes from Food and Beverage Stores and Grocery and Related Wholesalers. San Mateo County is the second highest food system revenue generating county, accounting for roughly 21 percent of the total Bay Area annual food system revenue, or $23.8 billion per year. Within San Mateo County, the Grocery and Related Product Merchant Wholesalers category accounts for the

majority of the total revenue generated countywide, while Food Manufacturing also generates a large amount of annual revenue. San Francisco County has the third highest food system revenue, with establishments generating approximately $9.8 billion annually, accounting for roughly nine percent of the total Bay Area food system revenue. Within San Francisco, Food Manufacturing accounts for the largest food system revenue generating industry, at roughly $4.3 billion annually. Although it is only the second-largest food system sector in San Francisco by annual revenues, the Food Services and Drinking Places sector, with $3.1 billion in annual revenues, generates notably higher revenues in San Francisco than in any other Bay Area county.

Contra Costa County has the fourth largest food system sector revenues by county, with just shy of $8 billion in annual revenue. Similar to most counties, Contra Costa is dominated by the Food and Beverages Stores, Food Manufacturing, and Food Services and Drinking Places industries, which combined account for 83 percent of Contra Costa's total food system revenue. Santa Clara County food sector establishments generate $6.8 billion in annual revenue, accounting for six percent of the total Bay Area revenue. Santa Clara County hosts Grocery and Related Product Merchant Wholesalers generating significant amounts of annual revenue, roughly $1.6 billion, and Food Services and Drinking Places, generating roughly $1.5 billion annually. It is worth noting that Santa Clara County accounts for almost all of the Bay Area's revenue generated in the Pesticide, Fertilizer, and Other Agricultural Product Manufacturing sectors.

Sonoma County and Napa County account for $4.2 billion and $2.8 billion in annual revenue, respectively. Both counties display similar distributions of food system revenue-generating industries, with large concentrations in the Beverage Manufacturing, and Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers industries as a result of the widely-recognized North Bay wine industry.

Lastly, Solano County and Marin County each generate less than $2 billion in annual food system revenue. Solano County has higher concentrations of establishment sales in the Food Manufacturing and Wholesale Trade sectors, which account for 62 percent of the total Solano Countywide food system revenue. Conversely, Marin County food system revenue is largely concentrated in the Food Services and Drinking Places, and Food and Beverage Stores sub-sectors.

Indirect and Induced Economic Contributions

Many assessments of regional food economies include information about indirect and induced economic contributions of industries within the local economy, often based on analysis using the IMPLAN regional input-output model, which considers the economic multiplier effects of business activities through spending in other related industries. While a full economic impact analysis for the regional food system is beyond the scope of this white paper, several counties have conducted such assessments for their agricultural sectors. For example, Santa Clara County estimated that its agricultural industries sector had a multiplier factor of 1.5, which contribute $830 million annually to the local economy in addition to the direct value of the County's agricultural production.

More general analysis posits that for every 100 jobs in agriculture, including the food industry, there are 94 additional jobs created throughout the state.[4] Beyond the indirect and induced

contributions of the food economy, as described above in Section II, Defining the Food Economy, the food supply chain has close linkages with many other industries, from closely allied industries such as the production of farm inputs and food processing inputs, to broader industry sectors such as hospitality, tourism, transportation, legal, marketing, and financial services.

Social and Environmental Contributions

While the economic contributions of the region's food business are indicative of the robustness of the Bay Area food economy, the social and environmental contributions, challenges, and opportunities are interrelated and, to some degree, drive the economic factors. These interconnected and codependent elements are evident as outlined in the SWOT Analysis in Section VI.

The mini-profiles of the food sector businesses below are intended to highlight some of the interrelated economic, social and environmental factors within the food system sectors, the critical links between different sectors of the food supply chain, and the integration of the food system with the region's overall economy and sustainability. Given the fact that there are almost 40,000 food businesses in the Bay Area, these few profiles are hardly representative. However, they do illustrate the kinds of businesses - the makers, connectors, transformers, and resource protectors - that create the culture of the region's food system. All quotes are from personal communication with SAGE, unless otherwise noted.

Taste Catering, San Francisco and San Mateo Counties

Established in 1978, Taste is women-owned and operated and has provided catering and event planning services for private and corporate clients in the San Francisco Bay Area for almost 40 years. Taste maintains it original facility in San Francisco. However, in order to accommodate growth (current annual revenues are in the tens of millions) and address challenges facing many food production businesses, it recently moved its production facility to Millbrae.

Asset: "Having access to locally grown organic and sustainable product."

Challenge: "How to help grow the supply of farmers."

Frog Hollow Farm, Contra Costa and San Francisco Counties

From 14 acres of organic orchards in 1980, to over 200 acres today, this Brentwood farm has become synonymous in the Bay Area with top-quality stone fruit. It also represents food supply chain connectedness with its café in the Ferry Building, line of value-added products, and a 'growing new farmers' program at the farm.

Asset: "Farming in an extraordinarily productive area and proximity to a market, highly receptive to product quality."

Challenge: "Invigorating ag-tourism and making on-farm direct marketing easier."

Whole Foods, Northern California Division Headquarters, Alameda and Contra Costa Counties

In around 30 years, Whole Foods' presence in Northern California has grown from a single store, to a chain of 44 stores (most of them in the Bay Area) served by a 120,000 square foot distribution center in Richmond that provides employment for over 9,000 people.

Challenges: "Our employees cannot afford to live where our stores are." "Sufficient supply." "Education and awareness about the values of local, sustainable food supply."

Russian River Brewing Company, Sonoma County

A company with 96 employees and a business model based on product scarcity, the Russian River Brewing Company has experienced a four-fold increase in production after ten years in operation. In 2016, the company's two-week event in downtown Santa Rosa brought in over 16,000 attendees, which had nearly $5 million in economic impact on the local economy. The company holds a month-long fundraiser in October to raise money for breast cancer research, and reports raising over $100,000 each year.

Assets: "Our employees enjoy working in this environment as evidenced by the low turnover numbers, which we believe is low relative to similar businesses." "[We] are not focused on expansion, but rather on upgrading the current equipment to improve the quality of our beers. We are not believers in rapid growth, but rather we want to focus on sustainable growth by remaining a boutique-type brewery and maintaining our commitment to quality."[5]

Dixon Ridge Farms, Solano County

The 1,250-acre Dixon Ridge Farms is a leading organic walnut grower, buyer, and processor based in Winters that works to grow, process, and market certified organic walnuts. The Lester family, which processes 1,500 tons of organic walnuts annually (most of California's market), has been in the business of family farming in California since 1883. They are the first on-site farm to use the BioMax 50, a 50kW biogas powered generator that converts walnut shells into renewable energy. This energy is then used to fuel the drying facility in the fall, generate electricity year-round including for its extensive freezer equipment, and heat buildings during the winter. They are also innovators in water-conserving drip irrigation and waste management, and are experimenting with adding the biochar byproduct to their orchard soils to enhance fertility and carbon sequestration.[6]

Asset: Taking a whole systems approach to sustainability.

Bi-Rite, San Francisco County

Bi-Rite Family of Businesses is an iconic chain of grocery stores, a creamery, a catering division, and an organic farm that employs a total of 300 people. They are Certified B Corporation, which means they align their business values to meet rigorous standards of social and environmental performance, accountability, and transparency. The company offers all staffers, including part-timers, health insurance, a 401(k) plan with a 4% match, and profit-sharing. As a pioneer in the farm-to-grocery-store movement, in 1997 owner Sam Mogannam took over his family's grocery store that opened in the 1960's. Within three years his business tripled and Bi-rite not only

transformed into a community institution showcasing California producers and specialty food makers, but it helped transform a neighborhood that was once an area of high crime to one of the most desirable neighborhoods in San Francisco. The market has been immensely popular, with revenue of $44 million in 2016. The market's impact on the community is significant, with 75% of their revenue dedicated to local vendors, staff wages, or supporting local organizations.[7,8,9]

Asset: "We focus on local food, traditional food, and responsible food, but it's about more than food. Our goal is to create community through food. We're creating honest, sincere, engaged, deep relationships with our entire community. Our staff members are people who grow, make, and craft our food. Our storefronts improve the neighborhoods."[10]

San Francisco Wholesale Produce Market, San Francisco County

The San Francisco Wholesale Product Market is located near the intersection of Hwy 280 and Hwy 101 on land owned by the City of San Francisco. The market was built by the City when the downtown Embarcadero location was razed to make way for the Embarcadero Center and related buildings development in the early1960s. The 25-acre facility includes 400,000 square feet of recently improved warehouse space and will total approximately 500,000 square feet, once the Market's Reinvestment Project is fully built out in the coming years. It is home to over 30 produce businesses offering a variety of produce products. Many of these produce businesses have been in operation for over 50 years. The Market has provided incubation space for companies that have grown to move into their own dedicated facilities and become some of the largest distributors in the Bay Area: Earls Organics, SF/LA Specialty Produce and Greenleaf Produce Company. The organization itself, in 2013, became its own nonprofit and is developing & implementing a mission-driven program that is supportive of farmers, work-force development, and food recovery.

Asset: "The Market provides affordable space for companies to start, grow and sometimes fail."

Challenge: "Finding the resources (to secure funding for the funding gap for the approximately $100M Reinvestment Project) to make the repairs and upgrades (Reinvestment Project) needed for the Market to continue to provide industry positioned spaces for wholesale produce businesses. Greater recognition of the value of these kinds of spaces."

Bassian Farms, Santa Clara County

Bassian Farms / Pangea Packing is a family-run meat packing company established in 1990. The company supplies grocers, food service companies and restaurants in Northern California with beef, poultry, pork, and seafood products, which it sources from farmers and other suppliers in California, the Midwest and internationally. It operates from a 20,000 square foot leased facility in an industrial area of San Jose. The company has 60 employees, many of them long-term, and has annual revenues of over $50 million. Bassian Farms prides itself on exceeding USDA meat-handling standards and in partnering with farmers and ranchers who produce top meat quality and subscribe to humane animal treatment, and livestock raised without the use of antibiotics or artificial growth hormones.

Bassian Farms is growing at the rate of 10 to 20 percent per year, and expects to outgrow its current facilities within the next couple of years. It is also concerned that its current location could be converted to non-industrial uses. The company is actively seeking permanent space of around 40,000 square feet and has already set aside several million dollars toward a future move. The company is open to being part of, investing in and helping develop a facility for multiple wholesale food companies.

Challenge: "Finding affordable space that we can invest in and that will allow our business to stay and continue to grow in San Jose."

Acme Bread, Alameda, San Mateo and San Francisco Counties

Steven and Suzie Sullivan founded The Acme Bread Company in 1983 to bake bread for restaurants and stores who wanted to offer better bread than was generally available on the wholesale market at the time. Acme is principally a wholesale bakery with production facilities in Berkeley and in South San Francisco from which it supplies bread to scores of restaurant and grocery store customers around the Bay Area. It also has two retail shops, one in Berkeley and the other is in San Francisco's Ferry Building Marketplace. The bakery offers more than a 100 different products, using primarily organic ingredients, and supplied from local sources as much as feasible. Acme's environmentally friendly procedures and technology include: photovoltaic panels on the wholesale facilities; fueling diesel trucks (and diesel generators) with "renewable diesel"; using only Certified Organic flour in their bread; using only 40% post-consumer-waste-content paper packaging for individual bread bags; and donating all leftover bread to charitable organizations, schools, and non-profits, with the remainder going into organic livestock feed.

Asset: "We're close to our production and distribution limits, making it difficult to accept new customers. A potential new customer may need a bread that, given our capacity, we cannot make more of at the time they need it, and we may not be in a delivery area at the time a customer needs the bread. There are more and more good, small local artisanal bakeries opening up."

Challenge: "It is harder to fill all shifts when unemployment is low; we look for people who are interested in baking and willing to work the (evening and early morning) schedules." "Congestion pricing has actually contributed to worsening traffic conditions since peak traffic now spreads out into the earlier and later hours when we do most of our deliveries."

KitchenTown, San Mateo and San Francisco Counties

Located in an industrial area of San Mateo, KitchenTown offers food startups and innovators a scale up production facility, and the opportunity to interact with a community of like-minded peers, industry experts, and investors to help scale their businesses. The fully licensed food production facility accommodates a wide variety of food and beverage product categories. From packaged goods, meal kits, and fresh food concepts to plant-based and functional foods, KitchenTown offers the necessary infrastructure for supporting the needs of food and beverage innovation. KitchenTown also provides food entrepreneurs with expert know-how in areas from supply chain management, to food safety, to sales and distribution. KitchenTown's recently opened innovation center in San Francisco has a Learning Lab which offers workshops and classes

for early stage companies, food policymakers, and others who want to learn more about food and food business.

Challenge: "KitchenTown can provide space for only around 10 percent of the businesses that apply for production space."

SF/LA Specialty Produce, Alameda County

SF/LA Specialty Produce is a wholesale business that started in Los Angeles over thirty years ago. About 20 years ago, the company added a Bay Area branch which was first located in the San Francisco Wholesale Produce Market and then moved to its own 13,000 square foot facility in Union City. In 2017, to accommodate continued growth, it is moving to a 260,000 square foot state of the art facility in Hayward. In addition to produce, the company offers dairy, condiment, baking and charcuterie products. The Bay Area branch buys products from small local farms as well as from the region's largest farmers. Selling exclusively to institutions and food service companies, it runs over 60 routes per day. SF/LA Specialty Produce has around $500 million in annual sales.

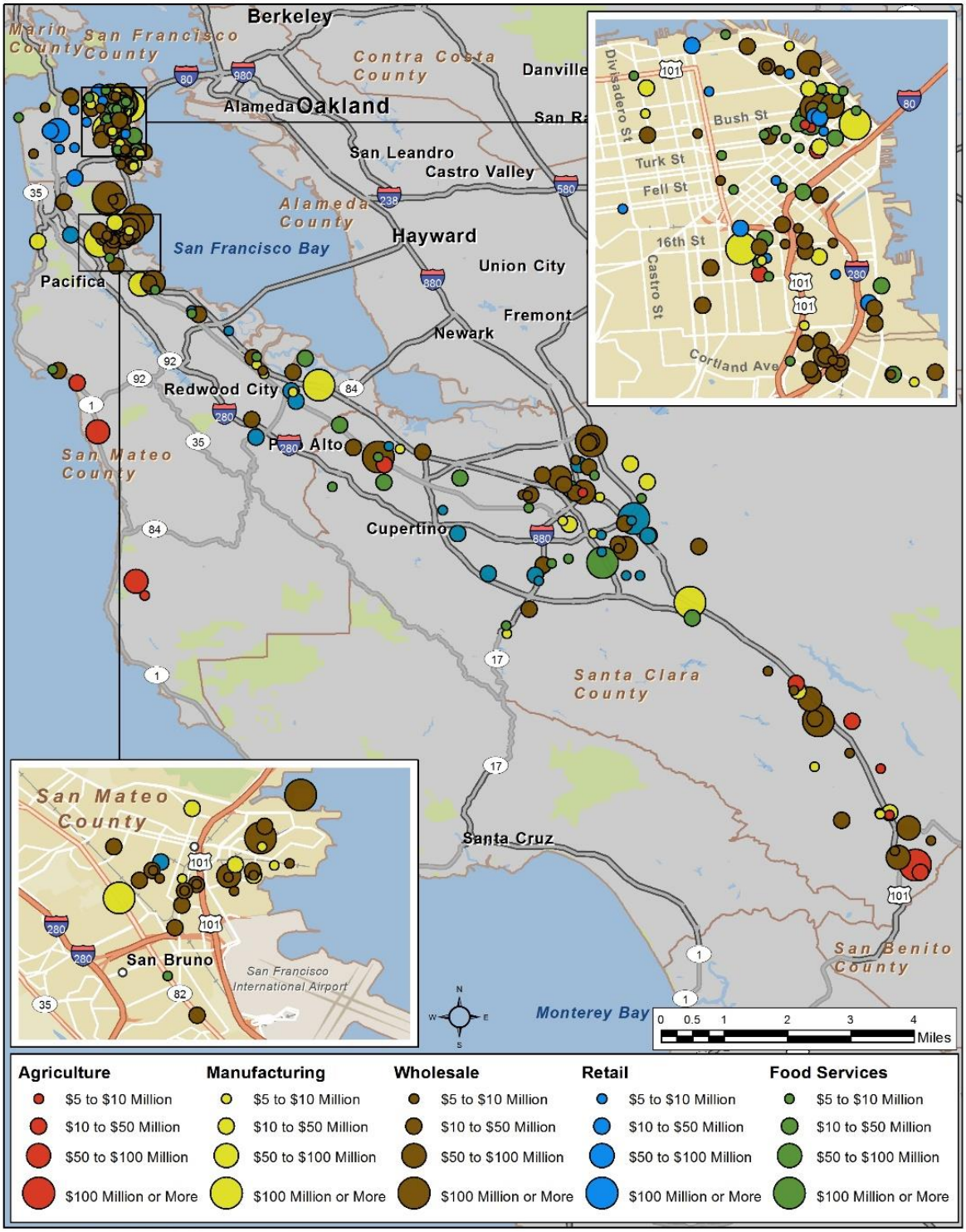
Asset: "Our employees and company culture; and the Bay Area's business climate.

V. Geographic Distribution of Ag and Food Sector Businesses

The economic analysis in the Economic Contribution Section above shows that the highest concentration of food sector establishments is in urban areas. The same is true for the establishments with the largest revenues and highest number of employees. This is not surprising, considering that grocery stores and restaurants are where urban residents get their food every day.

The three maps below illustrate the locations of establishments by food sector and by revenue category. It is notable that, in addition to the concentration of establishments in urban cores (in industrial, downtown and residential areas), there is also a considerable concentration of larger establishments along transportation corridors. Follow-up research is needed to better understand the relationship of the locations of food sector establishments, to industrial land pressures, transportation pressures, jobs/housing pressures, distressed communities, and to PCA, PDA and PPA designations.

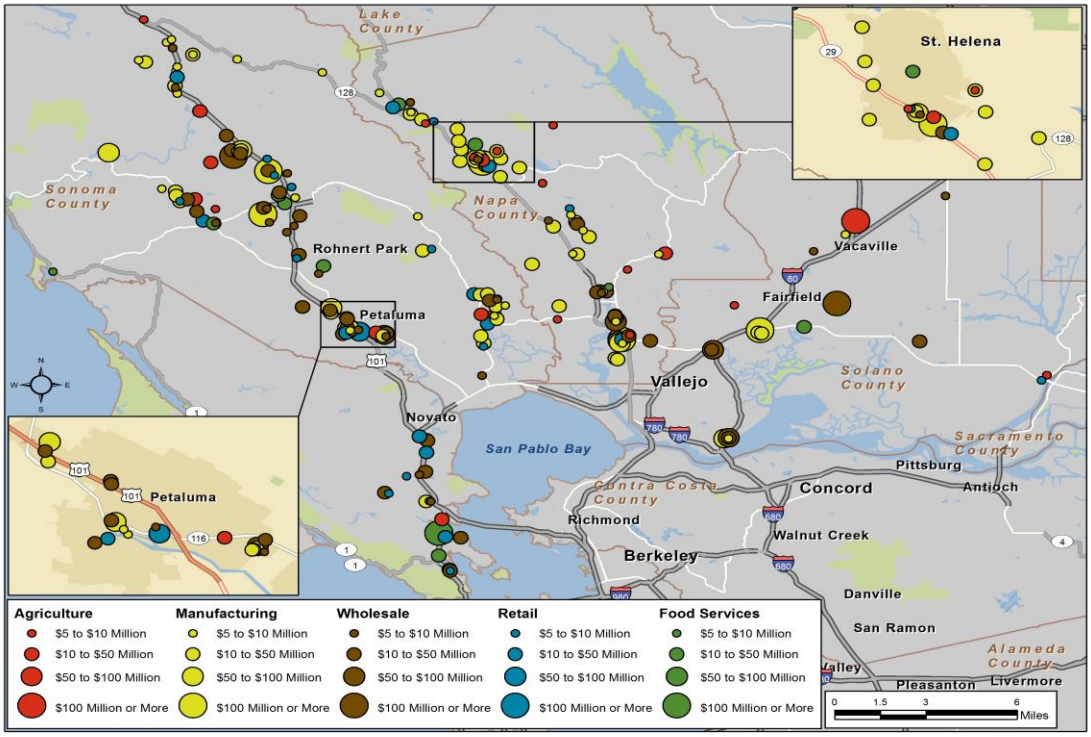
Figure 1. Locations of Establishments in the West and South Bay by Food Sector and Revenue Categories



Sources: Dun & Bradstreet, 2016; BAE, 2016.

Note: Based on Dun & Bradstreet data for establishments with 11 or more employees.

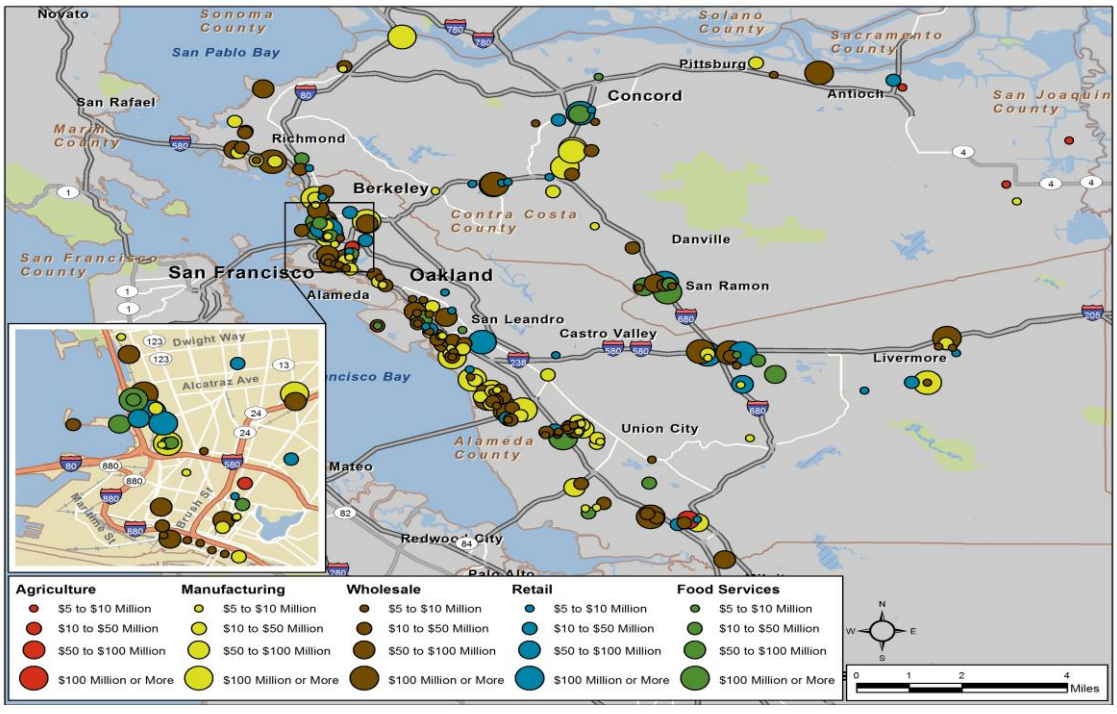
Figure 2. Locations of Establishments in the North Bay by Food Sector and Revenue Categories



Sources: Dun & Bradstreet, 2016; BAE, 2016.

Note: Based on Dun & Bradstreet data for establishments with 11 or more employees.

Figure 3. Locations of Establishments in the East Bay by Food Sector and Revenue Categories



Sources: Dun & Bradstreet, 2016; BAE, 2016.

Note: Based on Dun & Bradstreet data for establishments with 11 or more employees.

VI. Bay Area Food Economy SWOT Analysis

This analysis of the strengths, weaknesses, opportunities and threats of the Bay Area food economy is based on a review of current economic data, approximately 40 existing studies (listed in Appendix A), and around 20 interviews (listed in Appendix B) with stakeholders in production agriculture, value-add processing, distribution, retail, and county economic development.

While the economic data captures information about the food system sectors across scales and types and in some ways emphasizes the global, national, and commodity-based businesses that make the largest economic contributions, the studies and interviews have a built-in regional and local bias. Many of these studies assess conditions and analyze challenges and opportunities for one or more specific food system sectors and for a specific Bay Area city or county or for the region. Many also look at social and environmental issues in the food system in addition to economic factors. Likewise, the interviewees, both food sector business leaders and public agency staff, were selected based on their knowledge of and/or their businesses' contributions - social as well as economic - to the regional food system.

This SWOT Analysis section summarizes themes that emerged throughout the process of analyzing the economic data and studies, and conducting interviews. The findings shaped the recommended strategies and actions in the next section of this paper as well as helped to identify implementation agents necessary to build on existing assets. This SWOT analysis has a bias towards local-scale businesses.

<u>Strengths</u>

- *Food economy of growing importance for jobs.* The 468,000 food jobs represent 13 percent of all jobs in the region.[11] The 42 percent rate of growth for food jobs is almost double the rate of growth for all jobs in region.[12]
- *Food economy has substantial revenue.* Annual revenues are over $113 billion for food sector businesses in the Bay Area.
- *Food and Beverage P&D can be a key part of a production economy.* Nearly one in four production and distribution jobs in San Francisco are in the food and beverage P&D cluster.[13]
- *Solano County has a strong distribution sector.* Generating $2.5 billion in 2009, Food Chain activities represent 10 percent of total Solano and Yolo regional output. Distribution accounted for nearly one third of food chain output and has tripled in value since 1990.[14]
- *Expanding markets for Bay Area goods*. Markets for several of the top crops in Solano and Yolo Counties are expanding not only regionally, but also internationally. As consumer demand evolves and new markets emerge, there are opportunities for development in production and vending.[15]
- *Ag tourism.* The prevalence of agricultural land and food production provides ample opportunity for growth in agricultural tourism and recreational services.[16]
- *Bay Area is well known for being a leader on many food issues*, including sustainable agriculture, municipal composting and small to mid-size food manufacturing.[17]

- *Increased demand*. Bay Area trends show increased demand of local food, organic production, direct marketing, and agricultural tourism.[18]
- *Employment growth and training.* Agriculture supply support, distribution, and processing and packaging jobs in the Bay Area pay higher wages than any other region in the state.[19]
- *Career advancement.* Food businesses can provide a career ladder for workers who may have limited skills and experience, but can progress to higher skilled positions and even business ownership. [20]
- *Support organizations.* A variety of organizations exist to assist agricultural producers and food businesses with innovation, networking, business planning, and marketing, include UC Cooperative Extension, resource conservation districts, open space districts, county farm bureaus, small business development centers (SBDCs), economic development corporations, community colleges, county agricultural commissioners, and others. These resources have filled the role of economic development, training, and technical assistance expertise in the agricultural and food sector.[21]
- *Remaining land base.* Roughly 40 percent of the land in the Bay Area is comprised of farmland and grazing land.[22] The region has 570,000 acres of farms (40 percent of this is irrigated prime farmland) and 1.7 million acres of ranchlands.
- *Provision of eco-systems services.* Agriculture can be viewed as self-financing open space, providing important ecosystem service values to Bay Area residents, including flood control, ground water recharge, water quality, pollination, biodiversity, and open space.[23]
- *Policy support.* Existing planning, policy and strategy documents for many jurisdictions include references to the role of food and food-related activities in fostering public health, environmental stewardship, community economic development, placemaking, resilience, identity, culture and quality of life.

<u>Weaknesses</u>

- *Labor challenges.* Labor is one of the five top five challenges identified by food and beverage manufacturers in San Francisco. The issues are cost of labor on one hand, and availability of skilled, low-wage workers on the other.[24] One of the region's largest food service companies, with large operations in several counties, similarly reports that their biggest challenge is labor, from managers and chefs to hourly employees. There is also a shortage of skilled, low-wage labor in the agricultural and food service sectors.
- *Need for technical and financial assistance.* There is a critical need for targeted technical assistance for newer start-ups in food related businesses (business planning, basic accounting, legal issues, cash flow management, bilingual general business counseling, etc.). Investors are reticent to lend to new businesses with unconventional business models or that do not exhibit basic business acumen.[25]
- *Transportation infrastructure.* Potential for deterioration of transportation infrastructure, if maintenance and expansion do not occur. The lack of convenient and well-kept roads, highways, airports, ports, bridges will deter new businesses and industries from establishing in the area.[26]

- *Traffic challenges.* Distribution businesses are affected by the traffic pressures facing all movement of goods in the Bay Area.

Opportunities

- *The food story.* The food system is evolving towards delivering the "story behind the food" and a full accounting about how food is produced, in response to growing consumer demand.
- *Opportunities at all scales.* The region is receptive to food supply chain businesses across all sectors and is notable for having a wide range of businesses at scales that are economically feasible, from owner/operator start-ups to international corporations
- *Agglomeration of Food and Beverage P&D firms adds value*. Geographic concentrations of interconnected food and beverage businesses, suppliers, service providers, and associated institutions create added value for the industry.[27]
- *Growing demand for co-locating and co-packing operations.* There are marketing, equipment, labor, and other efficiencies that come with co-locating for food entrepreneurs in operations such as brick and mortar incubator spaces; kitchens; and workforce development programs with physical food production/manufacturing locations.[28] Likewise, co-packing facilities help enterprises to scale production and can save on start-ups costs for equipment, rent, labor and certifications.
- *Institutional Purchasing Policy and Infrastructure.* Large, "economies of scale" type purchasers such as schools, hospitals and jails have the potential to greatly impact the demand for local food. However, most are locked into low cost contracts through subsidized government programs. Unlocking the potential with these large purchasers through advocacy around "local purchase" targets can jumpstart investment in the entire value chain. Focusing on aggregators who can tap local supply to meet institutional demand for all food related products (not just produce) will provide stability for local food businesses.[29] Better connecting farmers to local markets fosters increased revenue and diversified revenue streams, e.g. through direct marketing, food hubs, institutional procurement of local food, etc.[30]
- *Consumer demand.* The research firm Mintel produces U.S. Food Service Reports that study national industry trends in food service. In 2014, these reports suggested the biggest trends are customer demand for speedy service; healthy and ethically sourced foods and accommodation of dietary restrictions; incorporation of technology into the ordering, serving, and outreach processes; and appealing to certain customer niches.[31]
- *A wide range of job opportunities*. Occupations associated with these areas of business activity represent an array of fields, levels of training, and earnings potential. In every segment, training and requirements vary from on-the-job training to graduate degrees. For example, in distribution, jobs range from machinists to logisticians. Additionally, with changes in agriculture technology, there is a growing need for horticulturalists and chemical engineers.[32]
- *A wide range of educational opportunities*. The region offers a variety of vocational, certificate and professional education and training programs that prepare for entry or

transition into food sector employment. In Solano County, there is a strong educational infrastructure at each level of schooling to produce the workforce required by the county's expanding food sector.[33] Still, educational programs need to keep pace with the evolving skills needs of businesses and development programs to match those needs.

- *Better conditions and wages* for farmworkers and food workers have potential to create a more stable food sector workforce.

Threats

- *Competitive and expensive industrial real estate market.* Food and Beverage P&D firms at all business stages face a challenging real estate environment when seeking to start, remain, or expand in the region's largest cities. Industrial rents in San Francisco rose by 13 percent in 2013, and are roughly double the asking amount for equivalent spaces in Alameda and Contra Costa Counties.[34] Wholesale businesses often require 24-hour operations, large building footprints, circulation for large trucks and access to freeways. Space for wholesale and distribution businesses is being squeezed by low vacancy rates for industrial buildings, demand from tech industries which can afford higher rental rates, and conversion of some industrial zoned land to residential zoning. Vacancy rates for industrial land in San Jose are around 1%.[35]
- *High land prices threaten agricultural viability*. Farmers may see greater gains by selling their land than by farming it. This often includes disinvestment in their farming operations – either as a farmer, by forgoing capital improvements or investment in high-value crops, or as a landlord, by not renewing leases to tenant farmers. As a result, the profitability of a farm may decrease, selling the farm to a developer may become a more enticing option than before, and speculative land purchasing by developers seeking to convert farmland to other uses may increase.[36]
- *Urban development continues to impact farmland.* In the past two decades, more than two-thirds of the development in the Bay Area took place atop agricultural land, with losses of the best-quality cropland outpacing the loss of lower quality cropland.[37]
- *Rural ranchette development.* Agricultural Zoning (minimum lot sizes) has done little to dampen the infiltration of rural home sites and corresponding increases in agricultural land prices in the region.[38]
- *Implications for shifts in climate.* In the Bay Area's wine grape and forage production areas (cattle ranching), climate change sensitivities will effect subtle nuances of production. In a future with higher temperatures and altered precipitation patterns, ranchers will need to consider management options for grazing shorter or less-reliable seasons and for forage of questionable nutritional content. Winegrowers will need to find ways to reduce heat stress of their berries or face lower values for their product.[39]

VII. Key Strategies for the Agriculture and Food Sectors

The Bay Area is in a unique position to develop a regional economic development strategy for its key clusters, including the food system sectors. Across the region, there are opportunities for city and county policies and actions to spur economic activity all along the food value chain. As a region of creativity and innovation, there are many other actors – food and allied businesses, advocacy organizations, and educational and research institutions – to support pioneering business models and approaches to food system challenges.

The region's food sectors businesses and related business sectors are no exception to the regional culture of innovation. They look for opportunities to add value to farm products, and they develop technologies that add efficiencies across the supply chain and systems that meet demands of our diverse and growing communities. This innovation is guided in part by the need to develop new business models and operations systems that respond to labor supply issues, new regulations, and infrastructure bottlenecks and barriers.

Advocacy organizations and their networks and educational and research institutions similarly conduct analyses and propose solutions that address the many social and environmental challenges of the region's food system, including inequitable and insufficient food access, diet-related health issues, strains on water supply, pressures on farmland from urbanization and climate change, and a growing population.

The region has much to gain from tackling challenges and supporting opportunities with strategic economic development and investment in the agriculture and food sectors.

The CEDS process includes key strategies and actions for its four overarching goals. The following are proposed strategies specific to the regional food economy and are a synthesis of analyzing the strengths, weaknesses, opportunities, and threats of the food system sectors. Each strategy and its associated actions intend to build upon existing assets and address critical barriers to continued economic prosperity among these sectors. The strategies are summarized in terms of the established CEDS goals, with a set of recommended actions following each strategy.

A list of key implementation agents follows this section.

<u>Goal 1. Business Climate</u>

Objective 1.1. Support key clusters that drive the economy.

New Strategy. Facilitate connectivity between key clusters and between key clusters and regional workforce, transportation, housing, workspace, and infrastructure initiatives.

Action: Establish a regional agriculture and food economic development program to facilitate knowledge-sharing and collaboration among cross-cutting issues that impact agriculture and the food sector and to attract public investment for agriculture and food sector infrastructure, land conservation and public education.

New Strategy. Invest in catalytic Bay Area food and farming businesses that create and expand market opportunities for regional agricultural and food operations.

Action: Raise private funds and leverage public investment to develop a private, nonprofit loan fund that fills that gap in the Bay Area lender landscape for debt capital to existing, start-up, and transformational food and agricultural operations (e.g. production, processing, storage, distribution, food service, and retail).

New Strategy. Recognize the important role the agriculture and food sector plays in the Bay Area.

Action: Conduct a region-wide economic impact analysis for agricultural production and food sector industries to demonstrate direct and indirect economic contributions and to set a baseline for measuring progress.

Action: Develop a strategic plan and a regional roadmap for expanding agricultural and food sector economic development opportunities that includes regional and local priorities.

New Strategy. Support the development of business incubators for key clusters of the food sector.

Action: Attract public and private investment and develop partnerships for incubators that facilitate agricultural and food sector technical assistance and business development and expansion.

Action: Develop designated agricultural enterprise areas that provide resources for a critical mass of co-located farms, support businesses and public education programs.

Objective 1.3. Strengthen the economic development capacity of local jurisdictions by sharing best practices and data.

New Strategy. Promote best practices and policies that address barriers to retention and growth of small businesses, especially those in key clusters (e.g. the food sector).

Action: Create a regional clearinghouse to share information among jurisdictions about existing food industry infrastructure, the needs of food businesses and potential market opportunities, demand for certain types of facilities (including for cannabis production and processing).

Action: Identify and analyze opportunities for agri-tourism and value-added production and develop policies that promote these opportunities.

New Objective 1.4. Support value chain climate resilience to help regional industries manage climate impacts, adopt best practices, innovate, and manage business risks and opportunities associated with climate change.

New Strategy. Foster programs that work with businesses on addressing climate-related risks throughout their value chains, identify where emerging market opportunities exist, identify needed incentives, and take into account community needs.

Action: Promote research and identify potential funding sources for technological breakthroughs and facility design for increased efficiencies that save businesses costs in energy and water use and treatment of wastewater and other wastes.

Action: Promote carbon farming planning practices and seek investments that allow agricultural operations to increase carbon sequestration and reduce greenhouse gas emissions while improving soil health, water holding capacity, and crop and forage production.

Action: Promote research of eco-systems services provided by farm and ranch lands that support climate change adaptation and mitigation and identify potential funding sources for eco-systems services payments.

Action: Analyze market opportunities and encourage best practices and incentives for minimization of food waste.

Goal 2. Workforce

Objective 2.1. Enhance quality of K-12 education to meet the changing needs of the population and businesses.

New Strategy. Support eco-literacy, nutrition and agricultural education programs.

Action: Identify organizations that provide training and education programs, where eco-literacy, nutrition, and agricultural education could be expanded with additional funding and resources.

Objective 2.2 Reform California's higher education system to generate a globally competitive workforce.

New Strategy. Support training and education programs to provide the workforce needed for continued success of the region's food value chain.

Action: Identify organizations that provide training and education programs where food value chain workforce training could be expanded with additional funding and resources. Match business workforce needs to those programs.

Objective 2.3 Support economic growth and economic mobility for low- and moderate-wage workers of all.

New Strategy. Support career ladder approaches for jobs in the food value chain.

Action: Identify organizations and businesses that provide training and education programs, where career ladder approaches could be expanded with additional funding and resources.

Goal 3. Housing and Workspace

Objective 3.1. Enhance Plan Bay Area (PBA) to ensure a land use pattern with space for all activities that contribute to the regional economy.

New Strategy. Gather information on land use issues of key cluster businesses and develop a strategic approach to PDA, PCA and PPD designations that bolsters the viability of these businesses.

Action: Identify PDR spaces that are suitable and affordable for agglomeration of food manufacturing and distribution functions and identify unmet local and regional needs for such spaces.

Action: Develop policies, facilitate private-public partnerships, and encourage funding for supporting the development of dedicated space for co-located food manufacturers and wholesalers.

New Strategy. Encourage the protection of the region's most productive agricultural lands to support their economic viability.

Action: Identify priority prime farmland, funding gaps, and potential funding sources for the permanent preservation of those lands.

Objective 3.2. Provide enough housing to meet the needs of the Bay Area's current and future population.

Strategy 3.2.3 Retain the existing stock of affordable housing and build additional affordable housing.

Action: Conduct a regional farmworker housing study to identify needs, evaluate best practices, identify funding sources, and support local efforts for the development of safe and sufficient farm worker housing.

Objective 3.3. Ensure local regulations and permitting processes support retention and expansion of local business and infill development.

Strategy 3.3.2 Develop more consistent and streamlined regulations and permitting procedures across jurisdictions, while allowing flexibility for regional differences and industry dynamics where appropriate.

Action: Promote best practices and policies to streamline development of on-farm and mobile processing facilities for both livestock and crops.

Goal 4. Infrastructure

New Objective 4.6. Facilitate development and enhancement of goods movement infrastructure, especially for key clusters.

New Strategy: Reduce barriers that impede goods movement for key clusters.

Action: Identify critical road deterioration and traffic issues that negatively impact farming operations.

Action: Research two-way impacts of regional food goods movement and traffic and pursue policy development to mitigate these impacts.

Action: Research best practices for food goods movement including solutions to last mile distribution, off-peak time distribution, and adoption of green fleet and autonomous vehicle technology, and facilitate information-sharing and adoption.

Bay Area Food and Agriculture Sector Key Implementation Agents

Government
Association of Bay Area Governments
Bay Area City and County Economic Development Departments
Bay Area City and County Planning Dept's
Bay Area City and County Public Health Dept's
Bay Area County Agriculture Commissioners
Bay Area County Boards of Supervisors
Bay Area LAFCOs
Bay Area Resource Conservation Districts
California State Coastal Conservancy
Napa-Sonoma Small Bus. Develop. Center
Sonoma County Economic Develop. Board
Santa Clara Valley Open Space Authority
Sonoma County Agriculture and Open Space Preservation District

NGOs
Ag Innovations
American Farmland Trust
Bay Area Open Space Council
Bay Area Farm Bureaus
Bay Area land trusts
California Climate & Agriculture Network
California Farmlink
Center for Ecoliteracy
Changelab Solutions
Committee for Green Foothills
Community Alliance with Family Farmers
Friends of the EarthGreenbelt Alliance
Kitchen Table Advisors
Natural Resources Defense Council
PlaceMade
Roots of Change; CA Food Policy Council
SPUR
Sustainable Agriculture Education (SAGE)
TomKat Ranch Educational Foundation

Academic Institutions
Berkeley Food Institute
Stanford FEED Collaborative
Stanford Woods Institute for the Environment
Sonoma State University
UC Cooperative Extension, County Offices
UC Division of Ag and Natural Resources

Funders
11th Hour Project
California Foodshed Funders
Gaia Fund
Moore Foundation
TomKat Foundation

Business Community
Leading food sector businesses
Trade associations
Lenders

VIII. Best Practices – What Other Regions Are Doing

Regions throughout the U.S. have developed food system assessments and strategic action plans and are implementing initiatives to enhance their food systems. Some of these efforts are based in a broader CEDS framework; others have been initiated through various sustainability processes and frameworks. A few of the exemplary plans and initiatives that could inform efforts to elevate the Bay Area regional food and agriculture sector are briefly outlined below.

Region	Lead	Initiative	Approach/Impact
Sacramento region, CA 6 counties	Valley Vision	Sacramento Region Food System Action Plan, 2015	Identified needs for strategic leadership and investment in all aspects of the food system.
	Valley Vision	Next Economy, 2017. Identified Ag as a key business cluster	Will analyze workforce skills gaps; and develop targeted workforce action plans for each cluster.
	Valley Vision with CDFA, Econ. Devel. Agencies	Central Valley AgPlus Food and Beverage Manufacturing Consortium; designated as an IMCP[40] in 2015	Will foster the growth and creation of food and beverage businesses and middle-skills manufacturing jobs in the Central Valley.
Seattle, WA Puget Sound region	Puget Sound Regional Council (PSRC)	Regional Food Policy Council 2014 - 2017 Action Plan	Food Policy Council is a sub-entity of the PSRC and has government support, influence and legitimacy.
Greater Portland, ME	Greater Portland Council of Gvrnmts (GPCOG)	Economic Development Action Plan for 2014-2018 (CEDS)	Identified sustainable food production as a key industry cluster.
	GPCOG	Greater Portland Sustainable Food Production Cluster designated as an IMCP in 2014	$1 M plus in federal funding for various projects; wide-ranging technical assistance.
Madison, WI 8 county region	Madison Regional Econ. Partnership (MadREP)	Agriculture, Food & Beverage Industry Cluster Analysis, 2014	Comprehensive industry analysis that identifies its potential comparative advantages.

	Madison Regional Econ. Partnership (MadREP)	Designated as an IMCP in 2015; agriculture, food and beverage manufacturing is a key industry sector	$120 M of active and ready-to-go projects in work-force, R&D, sites & infrastructure, international, supply chain, access to capital/resources.
State of Vermont	Vermont Sustainable Jobs Fund (VSJF)	Vermont Farm to Plate Strategic Plan	Collective Impact model, coordinated by VSJF, emphasizes shared leader-ship amongst 350+ organizations; has 25 goals to be reached by 2020.
Vancouver, BC region	MetroVancouver	Metro Vancouver 2040 Plan includes a Food System Strategy	Funding and coordination from Agriculture Advisory Board; supports regular regional roundtables.

IX. Next Steps

As mentioned in the introduction, the intention of this white paper is to bring greater recognition of the role of the region's agricultural and food-related sectors as a key growth industry, assessing its contributions, vulnerabilities, and opportunities in the context of a regional economic assessment. This paper calls attention to these attributes and issues to elevate the importance of the food economy among other leading growth industries in an economic development strategy for the region.

SAGE and AFT will take several next steps to promote collective action by continuing engagement with stakeholders and the implementation agents listed in Section VII in order to identify specific, shovel-ready projects and potential funding from public and private sources that can help leverage future EDA funding.

To further refine common regional goals, SAGE and AFT intend to organize a workshop with city and county agencies, elected officials, and business and community leaders in the nine county region to gain buy-in and stimulate support for implementing the recommended actions. The buy-in and involvement of these community leaders is key to building effective private-public partnerships. The workshop will be framed as a call-to-action around implementation of specific strategies that these leaders can undertake to create jobs, facilitate the growth of the Bay Area food economy in both rural and urban communities, ensure regional resilience and a readily available supply of food, promote access to fresh foods, and support local farm and food enterprises that are an integral part of our region's identity and culture.

A longer-term goal is to establish a regional agriculture and food economic development program to oversee and facilitate implementation of the strategies and actions outlined above, and refined in in the workshop. The expected outcomes are greater public and private investment in our regional food economy and a dynamic collective impact initiative ensuring that Bay Area’s agriculture and food sectors are a pillar of our regional resilience.

Appendix A – Bibliography for SWOT Analysis

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Appendix B – Interview Informants

Pete Aiello, Uesugi Farms, General Manager

Dan and Lee Bassian, Bassian Farms, Co-owners

Chris Charlesworth, SF Specialty Produce Company, Director

Al Courchesne, Frog Hollow Farm, Founder and Co-owner

Janet Griggs, Taste Catering, Co-owner

Michael Janis, San Francisco Wholesale Produce Market, General Manager

Al Lerma, Sonoma County Economic Development Board (SCEDB), Director of Business Development and Innovation

David Lewis, University of California, Cooperative Extension Marin County, Director

Anni Minuzzo, Sonoma Napa Small Business Development Corporation, Specialty Food Specialist

Rusty Schwartz, KitchenTown, Co-Founder and CEO

Steve Sharp, Sonoma County Economic Development Board (SCEDB), Special Project Analyst

Steve Sullivan, Acme Bread Company, Founder and Co-Owner

Ric Tombari, Cooks Produce Company, Founder and Co-owner

Rob Twyman, Whole Foods Northern California Division, Regional President

End Notes

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[38] Ibid
[39] Climate Change and the Agricultural Sector in the San Francisco Bay Area. Prepared for the California Energy Commission by University of California, Berkeley, 2012
[40] Investing in Manufacturing Communities Partnerships (IMCPs), a U.S. Economic Development Administration (EDA) designation that awards grants and recognition to communities that demonstrate best practices in attracting and expanding manufacturing. Regions awarded the designation are tasked with increasing investments in their manufacturing ecosystem and receive the support of 11 federal agencies and preferential consideration for federal funding opportunities ($1.3 B in 2015).