

Developing a Sustainable Foods Business Cluster Roadmap for Cuyahoga County

FINAL REPORT

May 2014

Completed on behalf of The City of Cleveland Mayor's Office of Sustainability, Ohio State University Extension, Cuyahoga County, and the Cleveland-Cuyahoga County Food Policy Coalition

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This document reviews Cuyahoga’s sustainable food business cluster roadmap findings and recommendations

Table of Contents

Section	Content	Page
Analysis and Findings	Objectives and Scope	2
	Roadmapping Approach	3
	Summary of Findings	4
	Regional Asset Findings	5
	Market Assessment Findings	9
	Competitiveness Findings	15
	Sustainability Impact	17
Proposed Interventions	Trade Show and Match-Maker	19
	Nutrition Access	20
	Anaerobic Digestion	21
	Intermodal Transport	22
	Specialty Cheese	23
	Craft Beer	24
	Energy Efficiency	25
	Workforce Development	26
	Opportunities to Watch	27
	Interventions Summary	28
Next Steps	29	
Appendix	Roadmapping Approach Overview	31
	Advisory Committee	36
	Working Group	37
	Expert Interviewees	38
	Sources Consulted	39

The objective of this roadmap is to increase regional jobs, revenue, and sustainability by supporting local food business

Objective

The City of Cleveland Mayor's Office of Sustainability, Ohio State University Extension, Cuyahoga County, and the Cleveland-Cuyahoga County Food Policy Coalition have developed a sustainable food cluster roadmap in Cuyahoga county, with a core objective to **increase regional jobs, revenue, and sustainability by supporting local food and beverage businesses.**

This roadmap is a five-year plan, centered on competitively advantaged clusters, or “geographic concentrations of interconnected businesses, suppliers, service providers, and associated institutions in a particular sector.”¹ A dedicated Advisory Committee and Working Group helped to narrow focus to specific industries within the food sector where potential advantage was deemed the greatest, based on a deep understanding of regional assets, regional and national market dynamics, and Northeast Ohio's competitive standing relative to other regions.

Bush Consulting Group, specialists in industry driven economic development strategies, was engaged to determine exactly what Cuyahoga County and Northeast Ohio's food businesses need to be more competitive. The targeted actions recommended are based in financial analysis and have been heavily vetted with regional experts and industry leaders.²

¹Brookings Institution Metropolitan Policy Program, [Clusters and Competitiveness: A New Federal Role for Stimulating Regional Economies](#), 2008

²The report Appendix contains additional information about the roadmapping process, based on *InSeven* by *NorTech*®, as well as a full list of the individuals and sources which informed these recommendations.

³Fund for Our Economic Future, [Defining Northeast Ohio Cluster Opportunities in the Ag-Bioscience Sector](#), 2013

Scope

Bush Consulting Group has identified actions to leverage specific regional food business strengths or remove regional barriers in each of the following areas:

- **Replacing Imported Products:** Meeting more of the region's food and beverage demand with Northeast Ohio products.
- **Expanding Exported Products:** Increasing the export of certain food and beverage products out of Northeast Ohio to a broader US market.
- **Sustainable Economic Development:** Improving the regional food businesses' environmental and social impact in ways that strengthen their financial performance as well as the region's attractiveness as a business climate.

This roadmap articulates a role for Cuyahoga County industry leaders as part of a broader Northeast Ohio food sector. Recommended interventions assume implementation and impact concentrated within the county, but target food and beverage businesses strengths to benefit *both* Cuyahoga and the larger 16-county region. The roadmap builds on a broader regional assessment of ag-bioscience cluster opportunities completed in 2013.³

Targeted interventions were narrowed based on existing assets, champions, market opportunity and competitiveness

Criteria for Focusing Regional Cluster Development Interventions

The Advisory Committee and Working Group¹ used the data analysis summarized in this report to answer the following questions:

#1 Scale and Concentration

- Is there enough regional activity to drive growth?
- Is the activity represented by more than 1 company?
- **General Rule:** should represent 1% or more of sector activity from at least 2 companies

#2 Company Champions

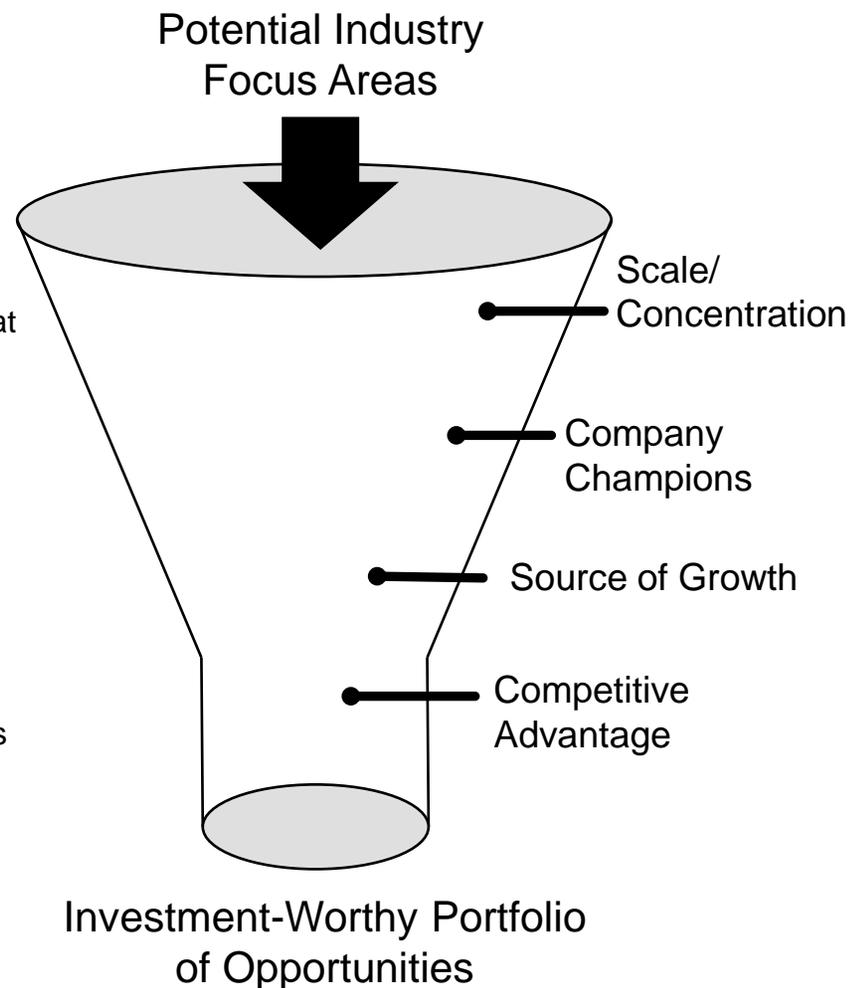
- Are companies within potential focus area willing to participate?
- **Needed:** at least one company within a focus area committed to participate

#3 Source of Growth

- Is potential focus area growth outpacing the sector and economy?
- Is growth likely to come from local or non-local sales?
- **Desired:** High potential growth; mix of import and export businesses preferred

#4 Competitive Advantage

- Do strengths confer differentiated position for region?
 - How will the region's products compete for greater market share?
 - Can regional intervention increase the sustainability of growth?
- **Seeking:** Potential advantage in one or more bases of competition



¹The report Appendix contains additional information about the roadmapping process, and full acknowledgement of the Working Group, Advisory Committee, expert interviewees, and secondary sources which informed these recommendations.

Eight industry-identified interventions can support nearly 6% job growth in 5 years across 11 targeted product categories

Summary of Findings¹

- Approximately \$10.7B is spent on food and beverages each year in Northeast Ohio, of which 30% is estimated to be spent in Cuyahoga County based on U.S. Census Bureau population data. An estimated \$4.3B in revenue is realized by regional, non-retail food businesses across nearly 50 individual industries, with 34,000 regional employees. Cuyahoga County accounts for \$1.3B of this non-retail revenue, and nearly 11,000 employees. Of those regional revenues, approximately \$1.9B is concentrated in food and beverage assets targeted for regional support by this roadmap, including:

Breads and tortillas	Cheese	Sausage and processed meats
Packaged snacks	Butchered and fresh meats	Specialty vegetables
Sauces, spreads, and salsas	Baked desserts	Craft beers
Specialty fruits	Ice cream	

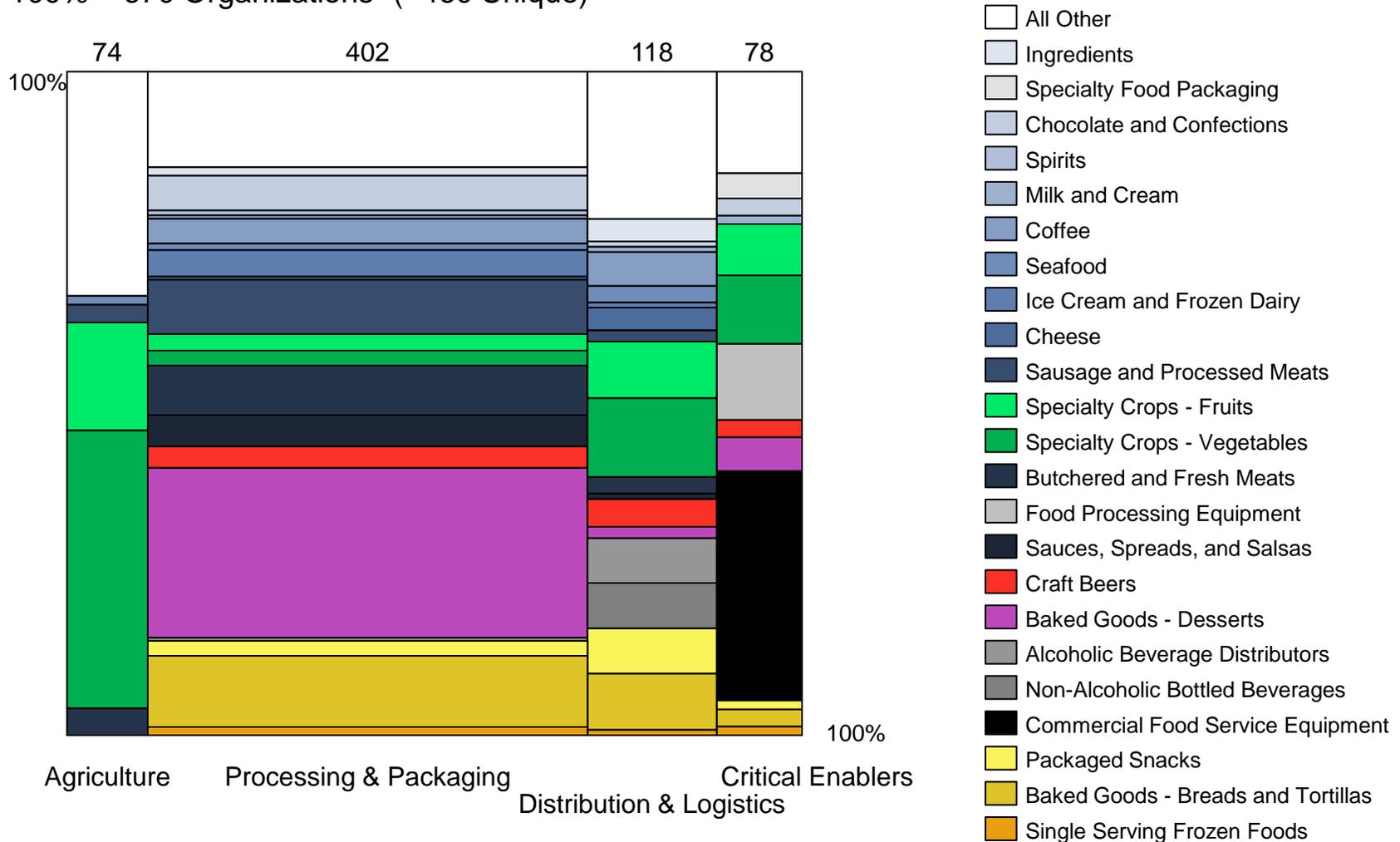
- 82% of the \$10.7B in regional sales are captured by food stores, warehouse clubs, and restaurants, with the rest divided among numerous outlets. Only 4% flows through institutions such as schools and hospitals. A majority of the \$4.3B realized by non-retail suppliers flows through third party aggregators, brokers, or wholesale distributors.
- The magnitude of job growth feasibly affected by shifting demand toward Northeast Ohio products by 10% above existing market shares is ~1,500 (from a baseline of nearly 17,000) across 11 product categories within 5 years.
- Regional industry partners called out 8 priority interventions to support local food and beverage businesses via import substitution, regional export, and sustainable development strategies.
- These interventions represent job growth potential of 700-1,000 (close to 6% of the 17,000) within 5 years, and offer additional opportunities to improve the financial, environmental, and social sustainability of regional food businesses.

¹The analysis and sources behind these findings are explained in the remainder of this report, and cited fully in the Appendix.

Cuyahoga's 460 food businesses span nearly 50 industries, with concentration in baked goods and specialty crops

Cuyahoga Organization Count By Industry and Value Chain Position¹

100% = 670 Organizations² (~460 Unique)



¹Industries illustrated include only those representing ≥1% of Cuyahoga's food sector employment; complete industry list, value chain definitions, and source list for this asset inventory included in the Appendix

²Some organizations reflected in multiple categories

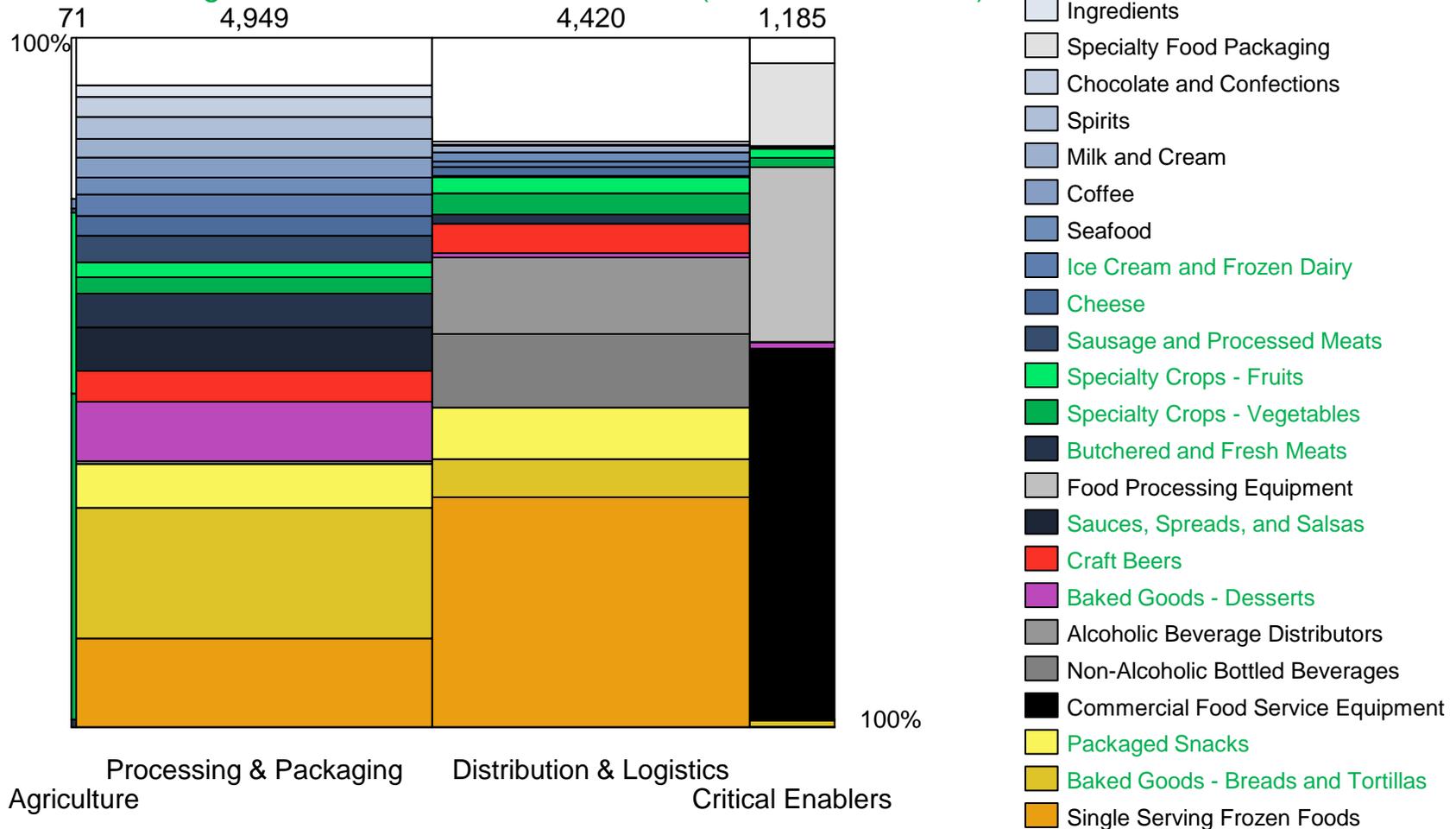
NOTE: Retail Not Shown

The largely urban county's commercial food employment is concentrated in processing, packaging, and distribution

Cuyahoga Employee Headcount by Industry and Value Chain Position¹

100% = 10,600 FTE² (representing ~\$1.3B in revenue)

Industries Targeted for Intervention = 4,470 FTE (~\$560MM revenue)

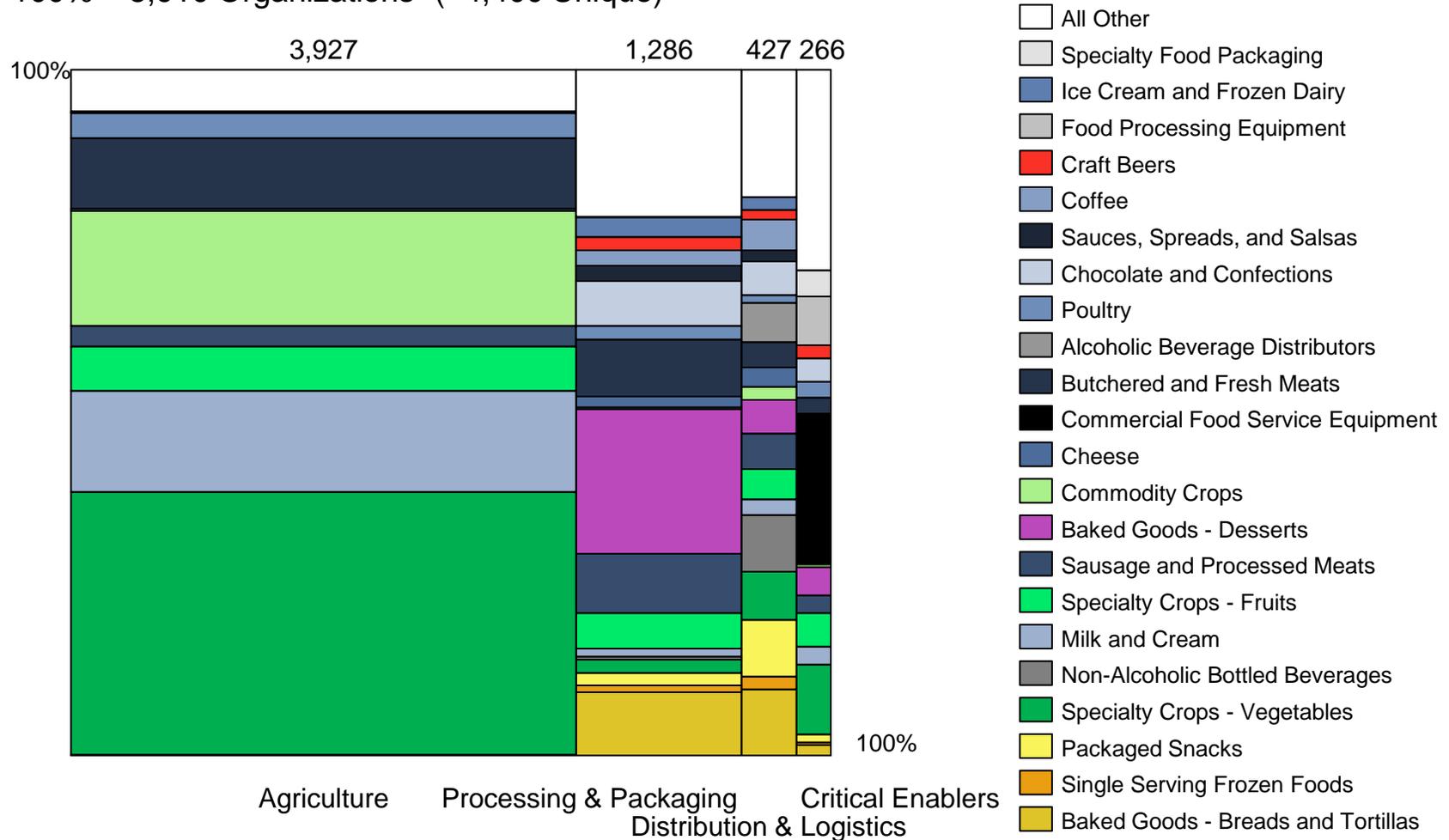


¹Industries illustrated include only those representing ≥1% of Cuyahoga's food sector employment; complete industry list, value chain definitions, and source list for this asset inventory included in the Appendix
²If an organization participates in multiple categories, an estimated % of relevant employment is allocated to each

The broader region's 4,400 food suppliers include a more substantial agricultural base from which Cuyahoga can draw

Northeast Ohio¹ Organization Count By Industry and Value Chain Position²

100% = 5,910 Organizations³ (~4,400 Unique)



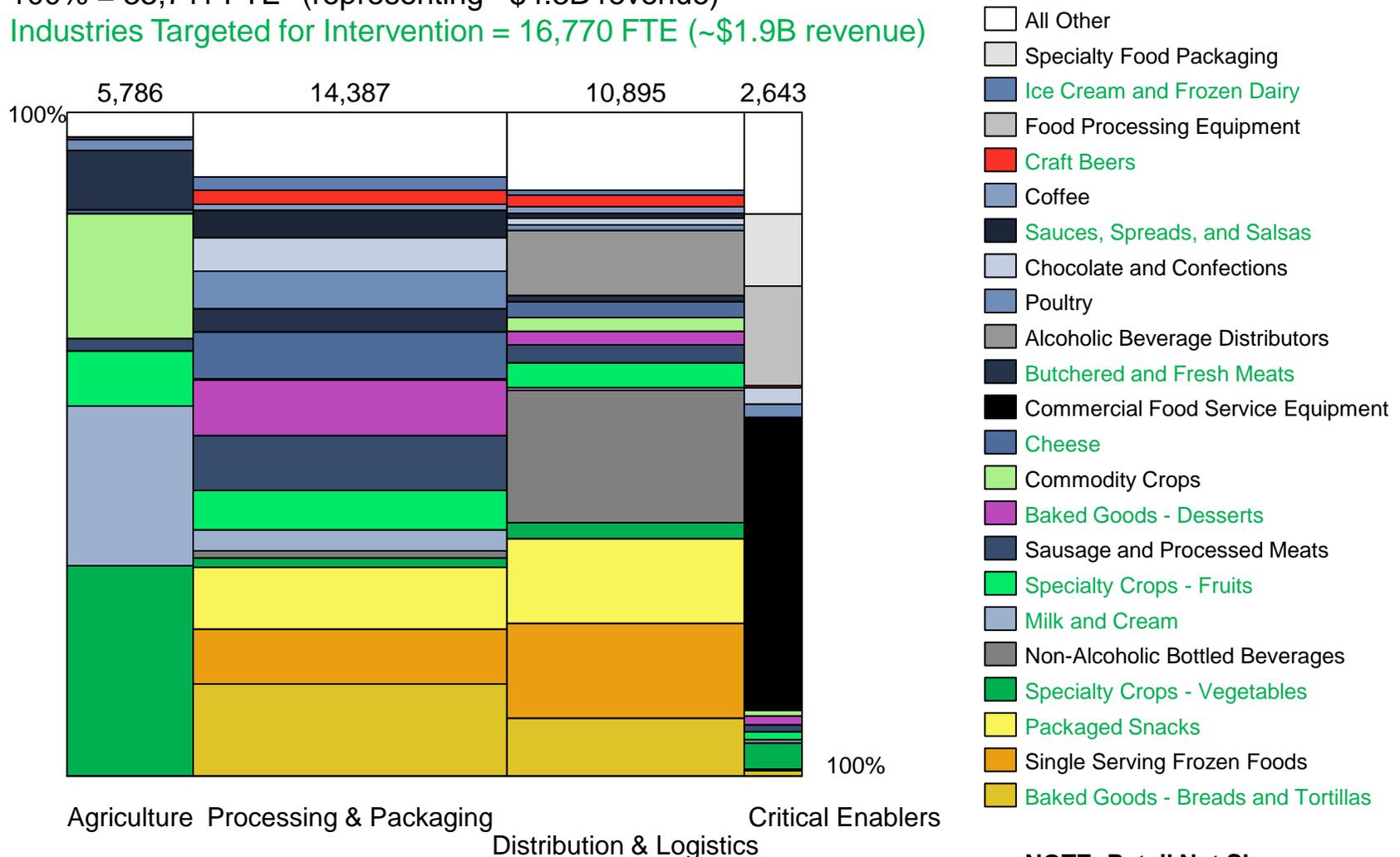
¹16-county region including Ashland, Ashtabula, Carroll, Columbiana, Cuyahoga, Geauga, Lake, Lorain, Mahoning, Medina, Portage, Richland, Stark, Summit, Trumbull, and Wayne
²Industries illustrated include only those representing ≥1% of regional food sector employment; complete industry list, value chain definitions, and source list for this asset inventory included in the Appendix
³Some organizations reflected in multiple categories

Regional food and beverage assets targeted for intervention represent nearly 17,000 employees and \$1.9B revenue

Northeast Ohio¹ Employee Headcount by Industry and Value Chain Position²

100% = 33,711 FTE³ (representing ~\$4.3B revenue)

Industries Targeted for Intervention = 16,770 FTE (~\$1.9B revenue)



¹16-county region including Ashland, Ashtabula, Carroll, Columbiana, Cuyahoga, Geauga, Lake, Lorain, Mahoning, Medina, Portage, Richland, Stark, Summit, Trumbull, and Wayne

²Industries illustrated include only those representing ≥1% of regional food sector employment; complete industry list, value chain definitions, and source list for this asset inventory included in the Appendix

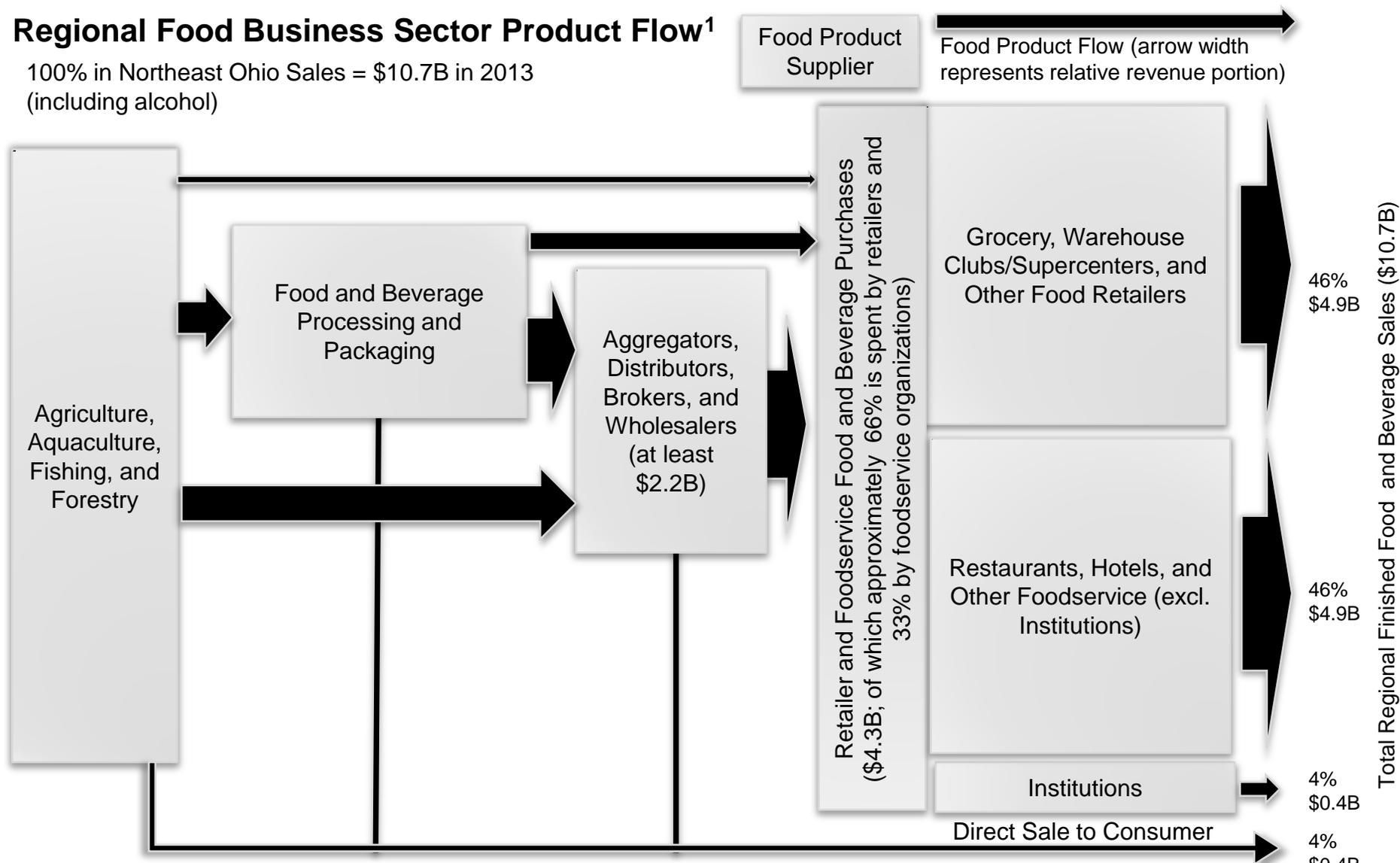
³An estimated % of relevant employment is allocated to each category in which an organization participates

NOTE: Retail Not Shown

These products often move through wholesale aggregators, with final sales split evenly between foodservice and retail

Regional Food Business Sector Product Flow¹

100% in Northeast Ohio Sales = \$10.7B in 2013
(including alcohol)

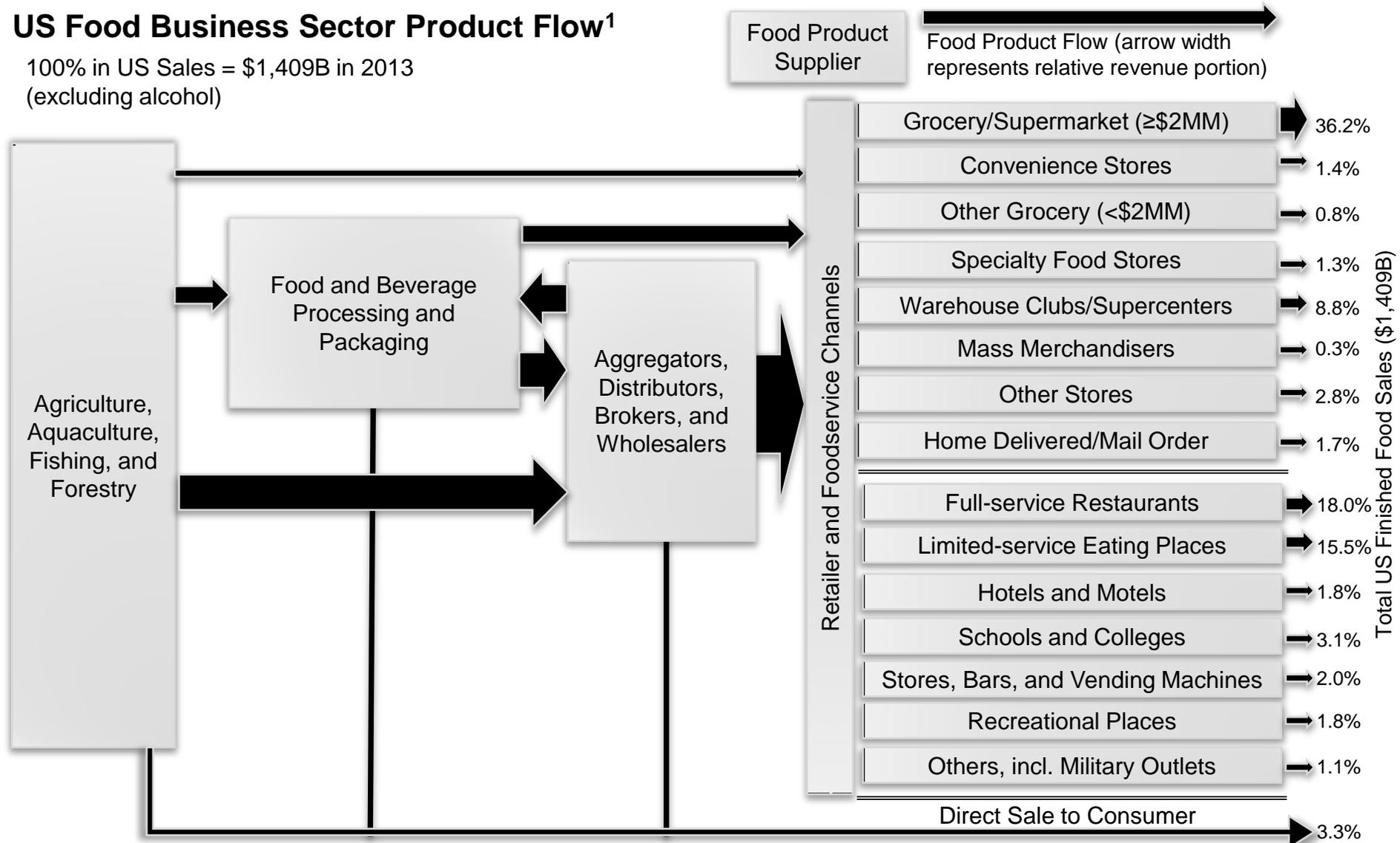


¹The diagrams on pages 9 and 10 were developed using USDA ERS estimates of proportional expenditures in varying retail settings. The regional flow-out incorporates asset inventory findings, expert input, and regional Nielsen product data, as cited in the Appendix, and USDA ERS retail proportions have been adjusted to include alcohol sales.

Federal expenditure data identify grocery stores, restaurants, and warehouse clubs as critical food channels

US Food Business Sector Product Flow¹

100% in US Sales = \$1,409B in 2013
(excluding alcohol)



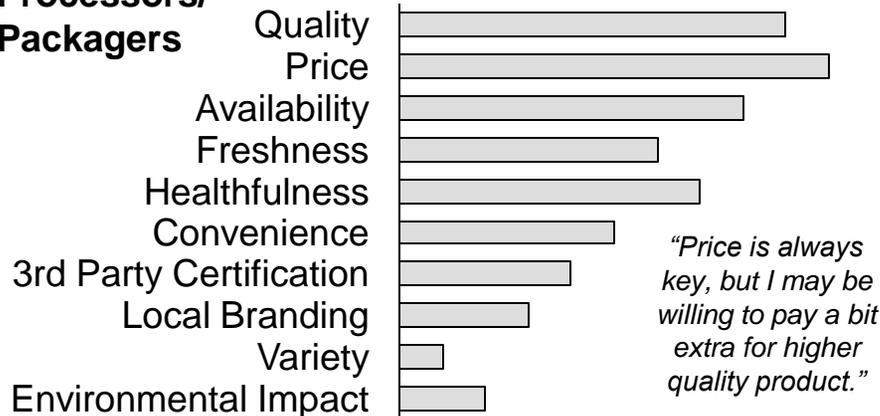
¹The diagrams on pages 9 and 10 were developed using USDA ERS estimates of proportional expenditures in varying retail settings. Total U.S. food sales are from recently released 2013 historical food sales data, while the retail flow-out is based on 2012 data. The US flow-out excludes alcohol, allowing a more detailed understanding of various retail types.

Local sourcing falls behind quality, price, and availability in its influence on businesses' food purchasing decisions

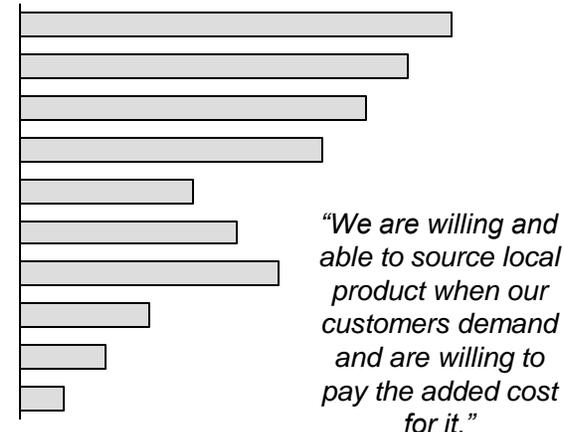
Relative Rank by Influence On Business Food Purchasing Decisions

Bars reflect scale of 1 (lowest influence) to 10 (strongest)

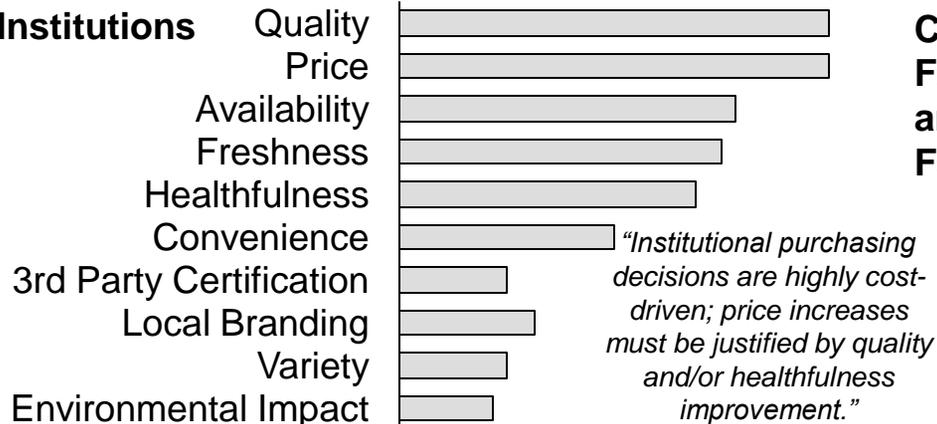
Processors/ Packagers



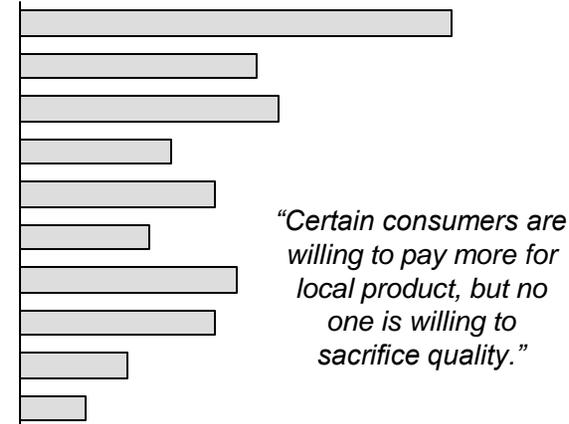
Aggregators/ Distributors



Institutions



Consumer-Facing Retail and Foodservice



Strength of Influence on Purchasing Decisions

Source: Bush Consulting Group analysis; aggregate across value chain informed by business-oriented (not consumer-oriented) customer interviews in which some customers ranked categories, while others offered qualitative insight

Health snacks, craft beers, and specialty cheeses stand out as category leaders and represent high growth opportunities

Summary of Market Data and Assumptions for Targeted Industries

Industries Targeted for Intervention	Regional Employment (FTE)	2013 Regional Market (\$MM)	2018 Regional Market (\$MM)	Current Regional Share ¹ (%)	2013 Rest of US Market (\$MM) ²	2018 Rest of US Market (\$MM) ²	Current Rest of US Share (%) ³	CAGR ⁴ 2013-2018 (%)	Average Production Wage in NEO (\$)
Breads/Tortillas	2,940	720	850	17-22%	28,500	33,680	0.8	3.4	31,600
Packaged Snacks	2,770	1,020	1,290	4-8%	53,210	67,200	0.6	4.8 (7.8 health)	37,200
Craft Beers	490	100	190	34-49%	1,680	3,050	1.0	12.6	34,900
Baked Desserts	1,430	250	260	40-43%				1.0	31,600
Sauce/Spread/Salsas	680	620	700	7%	29,840	33,760	0.1	2.5	49,000
Fresh Meats	1,120	110	120	24-25%				1.3	41,000
Vegetables	2,300	1,410	1,640	10%				3.0	56,800
Fruits	1,740	930	1,080	10-11%				3.0	56,800
Processed Meats	1,590	860	930	10-12%				1.5	41,000
Cheese	1,310	700	820	11-13%	36,420	42,430	0.2	3.1 (led by specialty)	60,600
Ice Cream	400	260	290	13-15%	16,360	18,230	0.1	2.2	53,400
TOTAL	16,770	6,980	8,170	11-14%	166,010	198,350	0.4	3.6	43,700

Sources: Bush Consulting Group Analysis using Asset Inventory data, MarketLine and IBISWorld Industry reports, Nielsen Cleveland Market point of sale data, and Cleveland State University QCEW data

¹Range reflects impact of local distribution, which may or may not be of locally sourced items

^{1,3}Share calculated as 2013 local revenue (from asset inventory data) divided by total 2013 market (extrapolated from Nielsen point of sale data), using an assumption for each industry about the percentage of Northeast Ohio product sold regionally vs. exported to a "rest of US" market

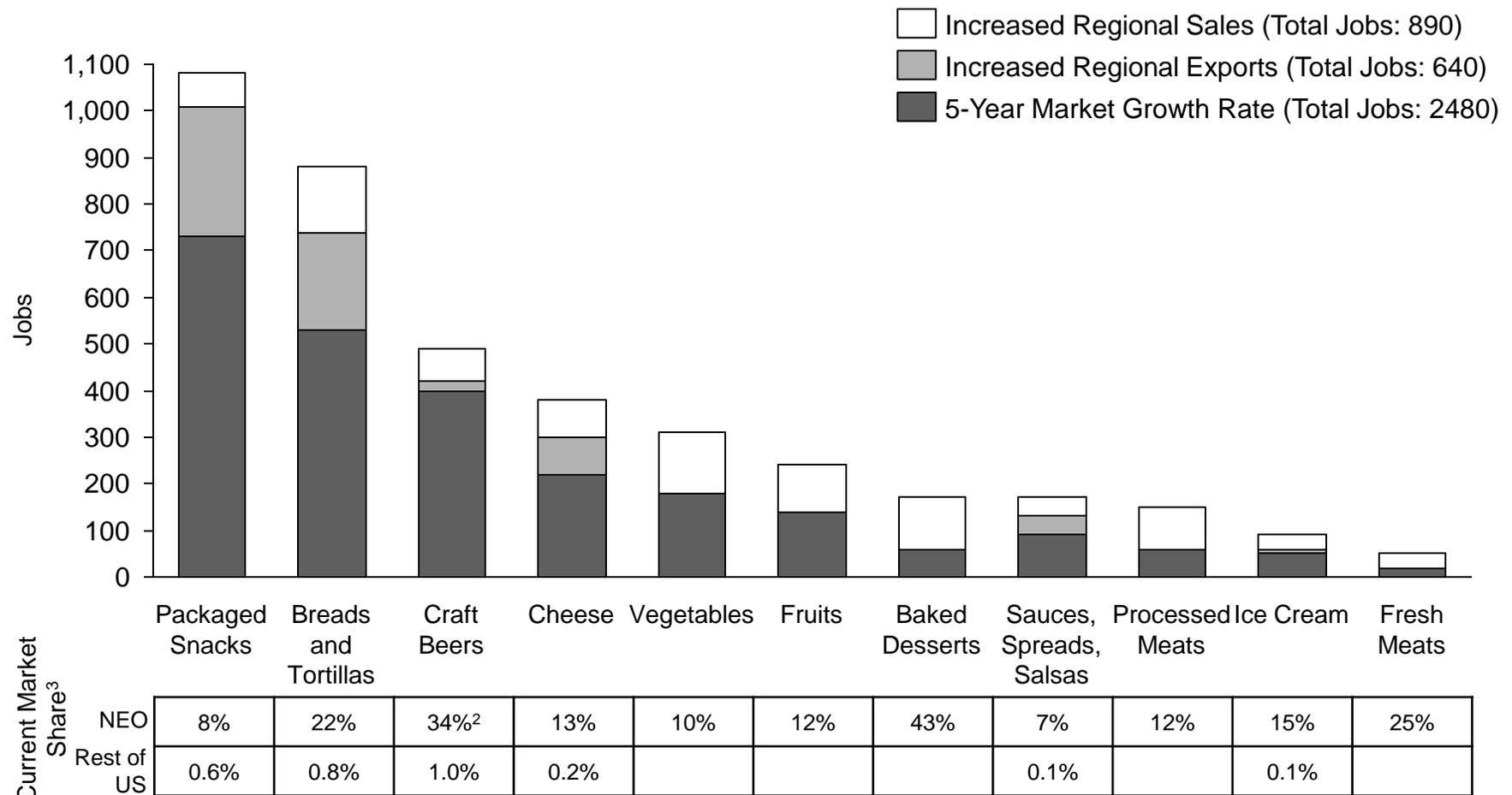
²Certain industries were not evaluated for export given the likelihood of most regional suppliers focusing on a mostly regional market

⁴Compound Annual Growth Rate represents projected year over year growth of the US market for each industry

Projected market growth for targeted industries will drive job growth more than plausible increases in market share

Regional Job Growth Scenario for Targeted Industries

Applies category growth rates¹ and assumes 10% increases in regional and U.S. market shares (when applicable)², Total Potential Growth = 4,010 jobs

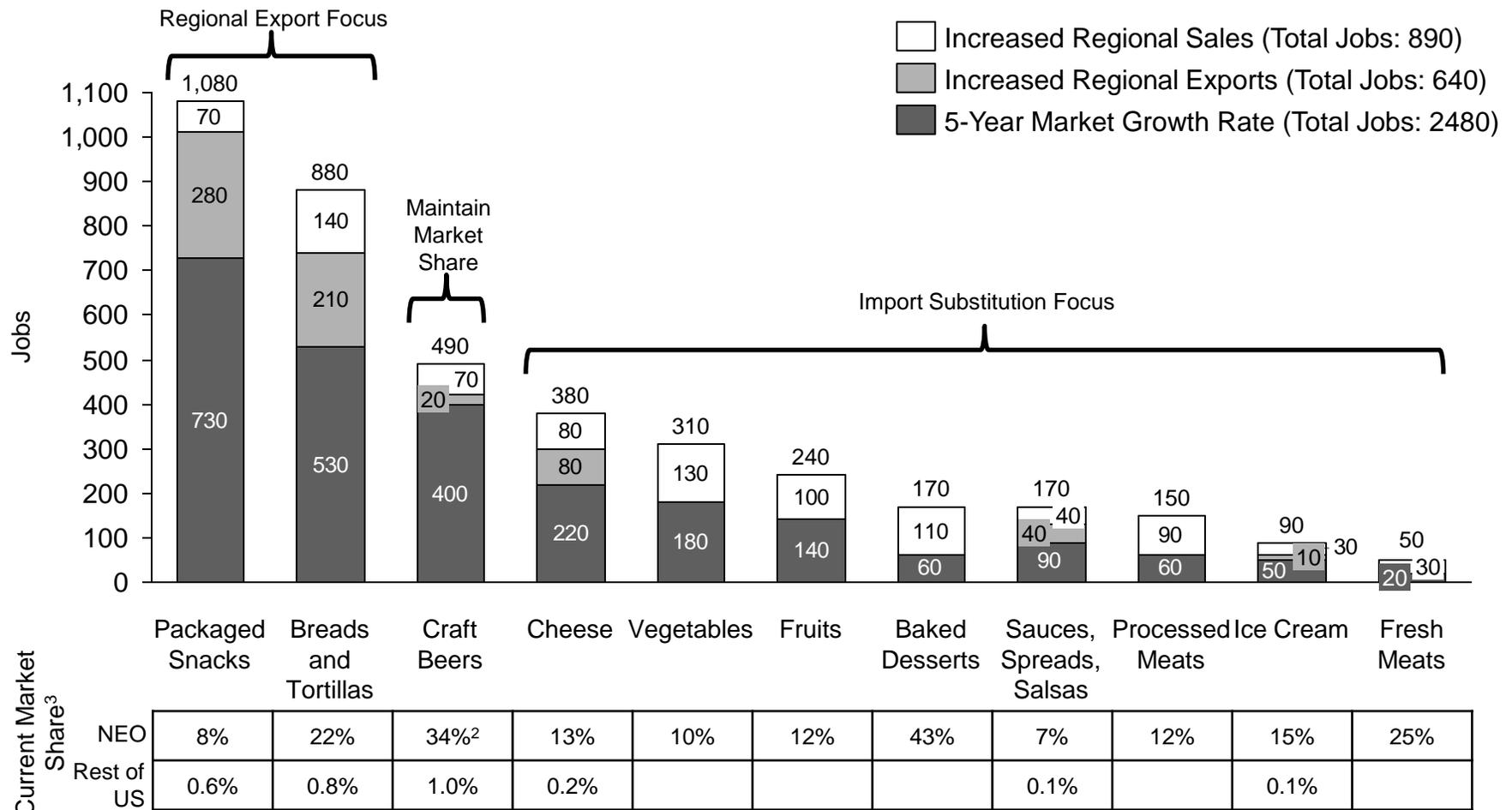


¹MarketLine, IBISWorld, Brewers Association and Demeter Group reports, cited fully in Appendix
²For example, if current breads and tortillas NEO share is 22%, a 10% increase would put NEO share at 24% in 2018, resulting in 140 jobs attributable to increase regional sales.
³Market shares used for job projections include distribution. However, the craft beer regional share estimation is communicated as 34% (the figure excluding distribution) in the remainder of this report as a clearer picture of the regional market share held by Northeast Ohio craft beers (vs. craft beers and craft beer distributors)

Specific interventions will target regional exports, import substitution, or share protection to capture part of the growth

Regional Job Growth Scenario for Targeted Industries

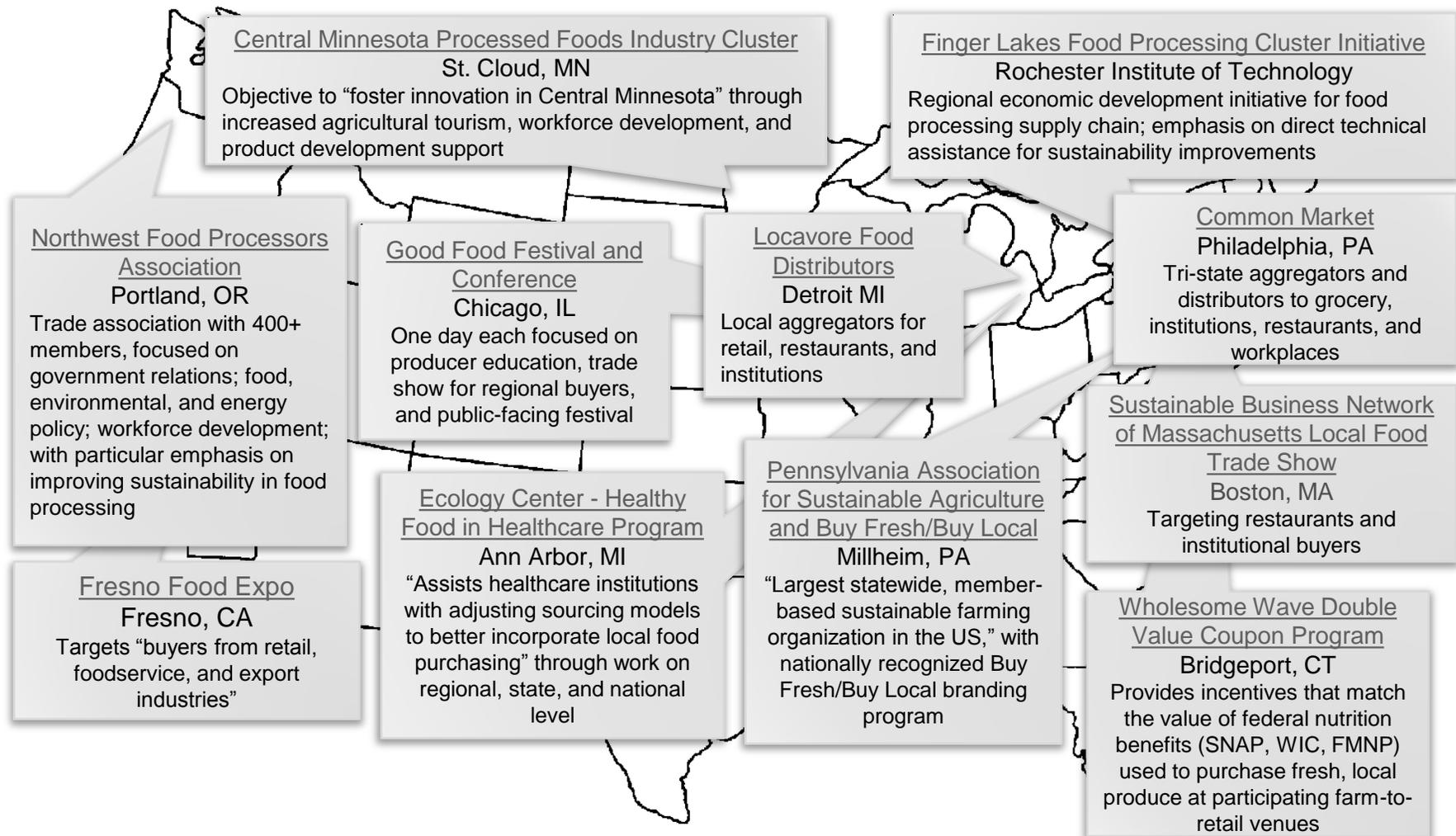
Applies category growth rates¹ and assumes 10% increases in regional and U.S. market shares (when applicable)², Total Potential Growth = 4,010 jobs



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Other regions effectively support local food via sustainability clusters, trade shows, aggregators, and consumer education

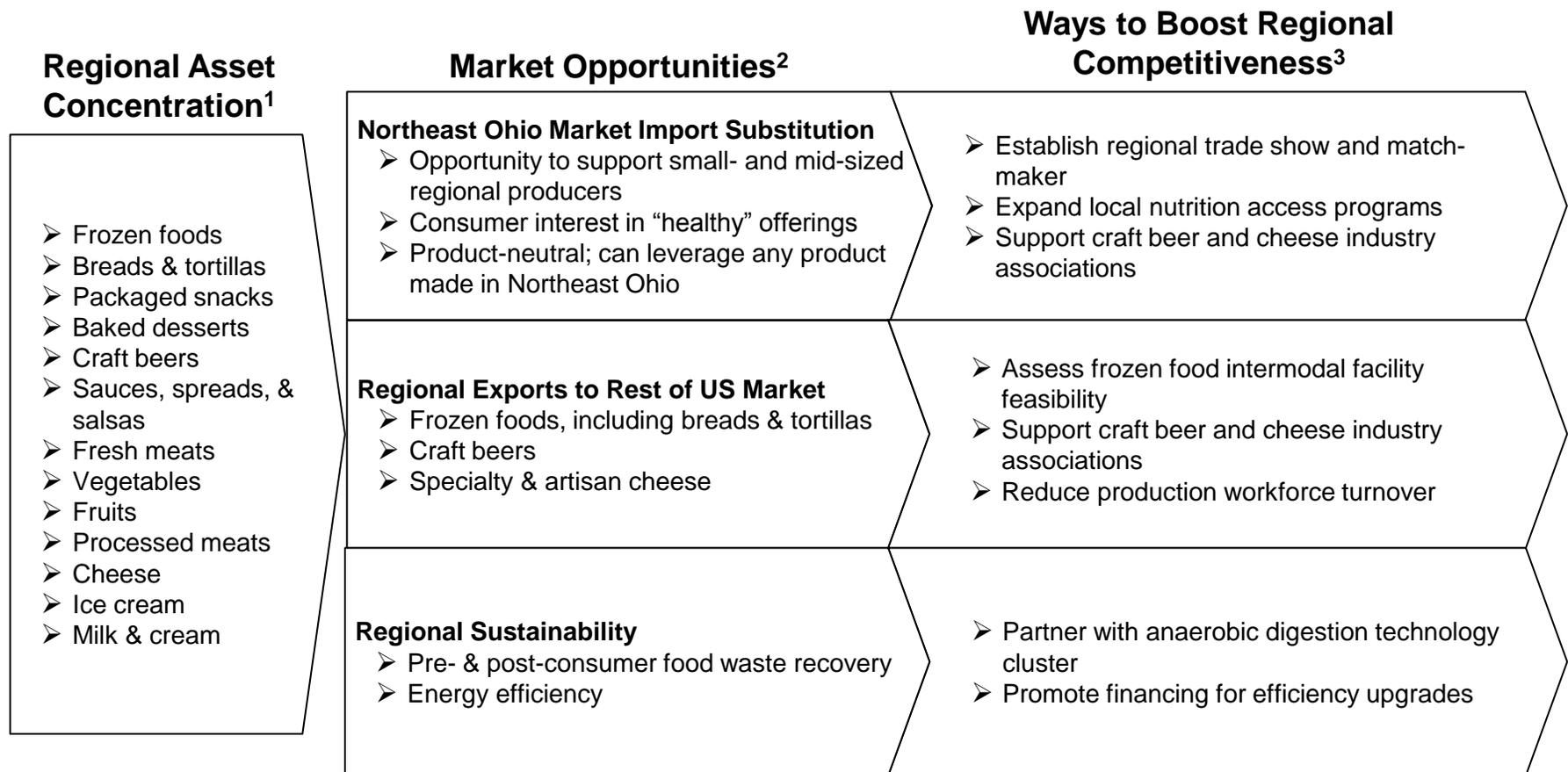
Example Regional Best Practices Reviewed for Relevance to Northeast Ohio¹



¹Example efforts shown are import substitution models selected for review based on their relevance to specific Northeast Ohio strengths for and barriers to local sourcing; they are not an exhaustive representation. Competitive regions were similarly considered for industries in Northeast Ohio which could target increased regional exports; these findings are communicated as relevant within specific interventions.

Industry leaders prioritized a portfolio of eight interventions to meet Northeast Ohio’s specific competitiveness objectives

Summary of Analysis Supporting Strategic Intervention



¹Asset categories listed represent at least 1% of food sector employment in Cuyahoga **and** 16-county Northeast Ohio region; listed from highest to lowest Cuyahoga County employment; while frozen foods and milk & cream were not selected as initial areas of focus or sized for growth opportunity, the interventions identified may benefit established regional businesses in these industries as well

²Based on projected US market and associated regional job growth from protecting or capturing market share

³Opportunities to leverage strengths or remove barriers specific to Northeast Ohio businesses in target industries/markets

These Cuyahoga-based interventions will support broader regional job growth and food business sustainability

Summarized Sustainability Impacts of Recommended Interventions

Economic:

Revenue growth of \$90-128MM supporting 700-1,000 new jobs over the next five years¹; plus any reduced costs which may be attributable to local sourcing and efficiency measures²

Social:

Promotion of healthful, local food and beverage products; stabilization of existing jobs; potential job opportunity development for difficult-to-place populations

Environmental:

Food waste recovery, energy and water efficiency, alternative energy generation, and transportation efficiency

¹Based on average productivity of \$128,000 per FTE, as calculated from 2013 regional job and revenue data

²These do not have a measurable value in aggregate, as they will vary by organizational sourcing decisions and efficiency improvements made. In addition, some organizations choose to source locally due to a revenue opportunity or commitment to the broader sustainability value, even if costs will increase for the organization. Cost reduction should be viewed as a potential upside, rather than a net quantifiable benefit for regional organizations.

Proposed Interventions

Industry leaders cited a regional trade show and full time match-maker as most critical

Intervention 1: Establish NEO Food Expo and regional match-maker to help shift \$100 million in regional food business spend (2% of total) to local producers.

Regional Strengths to Leverage:

- Range of food businesses increasingly sourcing locally
- High-quality producers in growing categories of craft beer, specialty cheese, value-added produce, and health snacks
- Large scale production of apples, sweet corn, organic milk, processed meats, ice cream, and broiler chickens
- Early stage food business incubators
- Media buzz around local foods movement
- Availability of regional food supply data which could be best leveraged by an individual tasked with relationship building

Regional Barriers to Remove:

- Communication barrier between food suppliers seeking channels to market and retailers looking for differentiated local offerings
- Vetting needed for early stage food businesses to demonstrate commercial readiness
- Seasonality and available land limits production of fresh, local produce
- Awareness of smaller businesses having competitive product and financing or scale-up needs of available regional resources

Timeline:

- By 2015, hire a seasoned food procurement professional to act as regional match-maker between Northeast Ohio food and beverage producers and customers; this professional will also be positioned to connect regional organizations to other implemented interventions
- By 2017, establish a self-sustaining, annual regional trade show¹ for Northeast Ohio food and beverage producers and customers

Recommended Implementation Partners:

- ECDI and the Cleveland Culinary Launch + Kitchen
- Institutions (e.g., UH and Cleveland Clinic)
- Financing community
- Regional ag-bioscience efforts (e.g., JumpStart, OARDC)
- Retailers (e.g., Heinen's, Whole Foods, Chipotle)
- Other working group members

Associated Opportunities to Watch:

- Expo expansion to include a public-facing festival
- Institutional demand aggregation
- Data collection for better tracking of local sourcing

Impact: 300-400 new jobs at food and beverage businesses

Anticipated Investment: \$1.25MM over 5 years (including the trade show *and* match-maker)

Estimated Return: ~\$3,600 invested per incremental job

¹Explore Chicago's Good Food Festival and Conference and Boston's Sustainable Business Network of Massachusetts as best practice examples. The first trade show can be launched at a smaller scale in the nearer term, but the objective is for the show to have a self-sustaining revenue stream by 2017.

The Farm Bill provides a timely opportunity to connect new populations with local, healthful, value-added foods

Intervention 2: Expand nutrition access partnerships to new products and retailers to drive consumption of local, healthy, value-added foods via a federally funded pilot.

Regional Strengths to Leverage:

- Existing strong partnerships¹ and legislative advocates position the region well to receive federal Farm Bill funding² to creatively pilot program expansion
- Existing regional Community Supported Agriculture organizations (such as Fresh Fork and City Fresh) have established relationships with fresh produce and value-added food suppliers
- Regional healthcare experts are interested in developing and implementing healthfulness certification of local foods
- Regional entrepreneurs offer a range of relevant products (e.g., health bars, granola, juices, other health snacks) that would benefit from exposure to new markets

Regional Barriers to Remove:

- Retailers struggle to effectively track and label food items as “locally sourced” and/or “healthful,” limiting their ability to participate in low-income food benefits matching efforts
- Fresh produce is an important starting point for nutrition access, but including value-added foods helps extend beyond the growing season, benefits additional regional businesses, and meets additional nutrition access needs

Timeline:

- By 2015, coordinate regional organizations and outline concept for piloting nutrition access expansion
- By mid-2015, vet with national partners, legislative champions, and Farm Bill administrators to prepare for Farm Bill funding
- By 2016, develop and implement system for labeling and tracking value-added products as “locally sourced” and “healthful” by pilot CSA partner(s)
- By 2017, offer benefits matching through partner(s) and report impact in new dollars spent with CSA, producers benefitted, and consumers reached

Recommended Implementation Partners:

- OSU Extension and Cleveland-Cuyahoga County Food Policy Coalition
- Wholesome Wave
- Local and state legislators
- Fresh Fork, City Fresh, and other CSAs

Associated Opportunity to Watch:

Expansion of benefits matching program to traditional grocery retailers

Impact: Double the number of SNAP participants in Wholesome Wave program (600 new, 1% growth)

Anticipated Investment: \$0.5MM over 5 years, with some or all contributed by Federal Farm Bill program funds

Estimated Return: Demonstrate new market opportunity for locally produced health foods

¹See [Wholesome Wave](#) and [OSU Extension – Cuyahoga County](#) for existing program information

²See <http://sustainableagriculture.net/blog/2014-farmbill-local-rd-organic/> for a summary of relevant provisions in new Farm Bill

Unique regional technology assets can be wielded to address commercial-scale food waste management challenges

Intervention 3: Develop an anaerobic digestion partnership for food waste recovery to divert 20% of annual business food waste.

Regional Strengths to Leverage:

- NEO has differentiated waste and biomass-to-energy technology cluster and anaerobic digestion supply chain; less energy intensive, odorous, and water polluting technology than commercial-scale composting
- Previously successful partnerships between cluster and regional food processors, institutions, and public agencies to manage pre- and post-consumer organic waste

Regional Barriers to Remove:

- Larger food processors seek to reduce organic waste to avoid water treatment and landfill tipping fees
- High initial investment of anaerobic digestion systems
- Challenges with post-consumer food waste management
- Economic payback for smaller-scale digesters

Sustainability Opportunity:

- Organic landfill waste accounts for 16% of U.S. methane emissions¹, and burdens local water sources and sewer systems through stormwater runoff and infiltration
- Anaerobic digestion can generate energy from this waste

Timeline:

- By 2016, determine available food waste recovery capacity of existing regional anaerobic digestion facilities, and match with appropriate pre-consumer food waste sources
- By 2017, assess requirements for additional anaerobic digestion capacity, appropriate food waste partners, and/or necessary changes to waste management practices
- By 2020, complete food waste recovery capacity expansion

Recommended Implementation Partners:

- NorTech and relevant cluster members
- UH and Cleveland Clinic
- Mid-sized and larger food processors
- Other working group members
- Logistics coordinators

Associated Opportunity to Watch:

Composting may be a viable alternative to consider for added capacity

Impact: 45,000 tons of eliminated waste; 1.3MW incremental renewable power generation; 20 to 30 direct jobs

Anticipated Investment: \$6.0MM over 7 years + ongoing Operations and Maintenance costs

Estimated Return: Predominantly environmental

¹NRDC Issue Paper, *Wasted: How America is losing Up to 40 Percent of Its Food from Farm to Fork*, August 2012

Intermodal transport may reduce logistics costs for regional frozen food exports if adequate transfer storage is available

Intervention 4: Assess frozen food intermodal facility feasibility for increasing rail shipments in and out of the region to drive export growth.

Regional Strengths to Leverage:

- Large regional employment base in frozen food processing and packaging
- Shift of large, traditionally fresh food producers toward frozen foods to capitalize on export opportunities
- Presence of third-party logistics firms and rail capacity to arrange refrigerated rail transport

Regional Barriers to Remove:

- Truck transport of frozen product is expensive and limits regional export opportunities
- Rail transport is often inaccessible to small- or mid-sized regional manufacturers without appropriate storage and aggregation options, such as intermodal transfer facilities

Opportunity to Validate:

- Growth enabled by increased regional export of frozen foods in several industries may support 500-600 new jobs
- Additional intermodal transport capacity may be valuable in attracting new manufacturers, given questions asked by businesses considering locations in Northeast Ohio
- Lower cost refrigerated transport options may facilitate freezing of fresh produce to extend beyond growing season

Timeline:

- By 2015, determine existing rail infrastructure capacity for frozen food shipping into and out of the region, including capacity for intermodal transfer
- By 2015, identify whether aggregation of incoming and outgoing frozen food shipping demand will justify the expense for increasing this capacity
- By 2016, engage regional businesses interested in aggregating demand and matching logistics supply to implement the recommendations of the feasibility assessment

Recommended Implementation Partners:

- Frozen food manufacturers (e.g., breads, ice cream, single serving meals)
- Food manufacturers using frozen food inputs
- Economic development (e.g., TeamNEO, NEOTEC, County Development Boards)
- Logistics firms (e.g., InterChez, D&S Distribution Inc.)
- ODOD

Impact: Hundreds of new jobs (likely need minimum of 500 to 600 to be viable, to be validated by feasibility)

Anticipated Investment: \$0.25MM over 2 years for feasibility; potentially millions for intermodal facility

Estimated Return: Feasibility assessment to determine

The recently formed Ohio Cheese Guild is organizing to promote local, high quality specialty cheese producers

Intervention 5: Support strategic initiatives of the Ohio Cheese Guild, as roughly 70 new jobs can result from each additional point of attained regional market share.

Regional Strengths to Leverage:

- Miceli's, a major supplier to regional grocery, restaurants, and food processors, HQ and manufacturing operation in Cleveland
- Several nascent NEO artisan cheeses are high quality, award-winning, and viewed as on par with European premium cheeses
- The Ohio Cheese Guild has organized and engaged industry leaders to tackle the specific needs of specialty cheese producers – such as assistance with regulatory requirements, scaling, or branding

Regional Barriers to Remove:

- Specialty and artisan cheese markets continue to become crowded, though they drive cheese market growth rates
- Stringent dairy industry regulations result in high barriers to entry and high costs of expansion
- Goat milk is a very costly input for artisan cheese

Anticipated Investment and Timeline: To Be

Determined. The organization is modeled after other best practice cheese guilds in Vermont, Oregon, and California. By collaborating with these guilds through the American Cheese Society, the Ohio Cheese Guild works to “broaden exposure for the region and keep its finger on the pulse of trends and issues on a national level.”¹ Board elections were held in April, and the guild plans to participate in numerous regional events in the coming year, such as the Garlic Festival in Northeast Ohio.

Associated Opportunity to Watch: Connection to Ohio Cheese Guild through the Food Expo and Regional Match-Maker, Nutrition Access Program, and Food Waste Recovery efforts.

Impact: Each incremental share point above current 13% share of local cheese is worth about 70 new jobs

Anticipated Investment: TBD, dependent on initiative

Estimated Return: TBD, dependent on initiative

¹Statement from the Ohio Cheese Guild board.

The Ohio Craft Brewers Association will meet many of the stated needs of local craft brewers in a crowded market

Intervention 6: Support strategic initiatives of the Ohio Craft Brewers Association to help maintain currently high regional market share of local craft beer.

Regional Strengths to Leverage:

- Great Lakes Brewing Co. is 19th largest craft brewer in the US; recognized regional sustainability leader
- Two dozen regional brewers offer beer on site or distribute around the region
- OSU Extension hops research offers unique, but early stage, local sourcing potential
- Craft beer has been a well-publicized part of neighborhood revitalization in Cleveland
- Brewers cite Lake Erie water as important, high quality beer input
- Association has organized to promote Ohio Craft Beers in a crowded national landscape; is addressing appropriate state-level policy needs (such as the ability to sell craft beers at local farmers' markets)

Regional Barriers to Remove:

- Crowded market with beers and regions working to differentiate themselves and compete for market share
- Market saturation driving some local brewers to diversify beyond beer, creating risk via diminished focus

Anticipated Investment and Timeline: To Be Determined - recently hired Executive Director has been tasked with establishing the group's strategic plan

Associated Opportunities to Watch:

- Multiple opportunities cited as benefiting from a regional craft brewer sustainability network, such as: using brewers' spent grains for local farming fertilizer to grow specialty beer ingredients; measuring and communicating environmental, social, and financial impact to demonstrate differentiating regional collaboration; and other peer learning opportunities to facilitate water reuse, heat recovery, etc.
- OSU South Centers and OARDC in Wooster are conducting research and business case development for local hops production, which is of interest to local craft brewers, and may merit future investment or partnership
- Connection to Ohio Craft Brewers Association through the Food Expo and Regional Match-Maker, and possibly food waste recovery efforts

Impact: Each incremental share point above current 34% share of local craft beer is worth about 20 new jobs; maintaining high share of local beers will generate 300 incremental jobs through market growth

Anticipated Investment: TBD, dependent on initiative

Estimated Return: TBD, dependent on initiative

Regional energy efficiency financing resources can be leveraged to support food manufacturers

Intervention 7: Refer manufacturers to existing regional energy efficiency financing resources.

Food processors and retailers, like many businesses, have financial impetus to improve their energy efficiency, but may need financing or funding for initial capital investments. Many regional and state sources of this capital exist, and the Cleveland Mayor's Office of Sustainability is already developing a "one stop shop" to ensure businesses know and can access the resources applicable to them.

Associated Opportunity to Watch: Expansion of financing options to include water efficiency upgrades, which are particularly salient to food and beverage manufacturing.

Example Energy Efficiency Financing Sources and Programs to Leverage

(Illustrative, not exhaustive)

- Council of Smaller Enterprises energy assessments
- DOE State Energy Program/Ohio Advanced Energy Fund Energy Efficiency Program
- Ohio Development Services Agency Energy Loan Fund
- Energy Services Company energy savings performance contracts
- DOE Independent Assessment Centers audits (University of Michigan and Morgantown centers cover part of Northeast Ohio region)
- Cleveland-Cuyahoga County Port Authority Manufacturers' Assistance Program
- PACE and Energy Special Improvement Districts (status in Northeast Ohio to be determined)

These opportunities may be identified and leveraged as part of implementing other priority interventions.

Regional workforce development efforts can support career pathways and reduced turnover in food processing

Intervention 8: Refer manufacturers to existing regional workforce development efforts to improve employee retention.

The food and beverage sector represents a diversity of businesses and associated employment opportunities – from family farms, to entrepreneurial small businesses, to larger manufacturing settings with jobs in higher quantities but pathways beginning with lower wages. This roadmap’s recommendations will influence the full range of these diverse opportunities. However, one critical need has been made clear by both employers and those representing prospective employees – to improve retention in food processing jobs in order to reduce turnover costs and strengthen those positions as pathways to family-sustaining employment.

OhioMeansJobs Cleveland-Cuyahoga County (formerly Employment Connection) helps food businesses in all parts of the value chain find qualified local employees, as well as identify strategies to address high turnover rates associated with food processing and other low-wage manufacturing and retail positions. These turnover rates are costly, given average training costs of \$3,000-\$6,000¹ per food production worker.

Associated Opportunities to Watch:

- Partnership between local food processors and OhioMeansJobs to explore relaxing criminal background and/or GED requirements for certain entry level production jobs, providing pathways to stable income for workers who are difficult to place.
- Cost-analysis of non-wage benefits (including education support) which may make low-wage jobs more attractive to processing employees.
- Additional training specific to food manufacturing, especially when new food safety regulations are clarified.

These opportunities may be identified and leveraged as part of implementing other priority interventions.

¹Based on average value of OhioMeansJobs on-the-job-training matches.

Several interventions common to other regions exist already in Northeast Ohio or are valuable opportunities to watch

Northeast Ohio Context Behind Prioritization Decision

Already in Place

Community kitchens and food incubators in Northeast Ohio, such as:

- Cleveland Culinary Launch and Kitchen
- Shaker Launch House
- Economic and Community Development Institute (ECDI) – Cleveland

Local food aggregators and distributors

serving a range of customers, including institutions, such as:

- Fresh Fork Market
- Produce Packaging
- Sirna & Sons
- Sysco Local Crop

Examples not exhaustive.

Need Stronger Business Case

Specific co-packing facilities

At present, sufficient regional demand for any single co-packing type does not exist to warrant additional investment. Regional processors often make extra capacity available to local producers for a fee, which can be identified by local resources.

Institutional demand aggregation

Demand aggregation has been most successfully pursued in larger geographic regions to source *healthy* food products in response to regulation. The case for *local* sourcing is largely built within institutions, in partnership with existing suppliers, to find healthful, cost-competitive options. This report's recommendations will help connect regional institutions, aggregators, and producers to facilitate local sourcing to the extent that it drives purchasing decisions.

Each intervention's anticipated return supports a portfolio approach or could be implemented independently

Portfolio of Priority Interventions

Intervention	Competitive-ness Strategy	Anticipated Investment	Investment Timeline (yrs)	Job Growth	Additional Sustainability Impact? (beyond job growth)		
					Financial	Environmental	Social
Regional Food Trade Show & Match-Maker	Import Substitution	\$1.25MM	5	300-400		<input checked="" type="checkbox"/>	
Expanded Nutrition Access Programs	Import Substitution; Sustainability	\$0.5MM	5	Minimal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Anaerobic Digestion Partnership	Sustainability	\$6MM	7	20-30	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Frozen Food Intermodal Feasibility Study	Export	\$0.25MM (study) \$MMs (facility)	<2 (study) TBD (facility)	N/A (study) 500-600 (facility)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Ohio Cheese Guild	Import Substitution; Export	TBD	TBD	100-200	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ohio Craft Brewers Association	Import Substitution; Export	TBD	TBD	300	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Energy Efficiency Referrals	Sustainability				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Workforce Development Referrals	Sustainability				<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>

Available resources will determine final prioritization of the interventions and their implementation

Next Steps

A dedicated Advisory Committee, industry-led Working Group, and dozens of food and beverage industry experts contributed to the findings and recommendations in this roadmap – please see the Appendix for a list of their names. Prioritization for implementation of these recommendations will be determined in the coming months based on resource availability. While recommended implementation partners have been listed based on expressed interest or expert reference, each priority will require participation of a range of regional stakeholders to succeed.

Please watch <http://cccfoodpolicy.org/> for information about, and opportunities to engage with, implementation of the recommended interventions.

Appendix

Roadmapping Approach Overview

Advisory Committee Members

Working Group Members

Expert Interviewees

Sources Consulted

The roadmapping approach followed here has its roots in technology-based cluster development work with NorTech

Bush Consulting Group's Roadmapping Approach

The process – developed in 2010 as InSeven by NorTech® – is a systematic approach to accelerating economic growth and job creation in industry clusters, centering on a data-driven understanding of a region's competitive advantage. Having applied this strategic roadmapping technique to eight technology sectors in Ohio already, results have been extremely positive; the Brookings Institute called it out as a best practice in one of its recent publications. One of the keys to its success has been its ability to facilitate buy-in from the business community, who cite its focus on specific, actionable outcomes; consensus-building among organizations with disparate financial motivations; and credible, fact-based conclusions specific to the region as benefits of the approach.

Bush Consulting Group partnered with NorTech to develop the InSeven® approach, and is now exclusively licensed to deliver the methodology to regions across the country. The firm also completed a foundational investigation of Northeast Ohio's ag-bioscience activity for The Fund for Our Economic Future to help inform this effort.

For Northeast Ohio's sustainable foods business cluster roadmap, the process answers the questions: "What focus areas make the most sense for a sustainable foods business cluster?" "What is the potential opportunity to be captured?" and "What priority investments and interventions will most effectively leverage regional strengths or remove barriers to the growth of this cluster?" This effort develops an extensive analysis of focus areas of critical mass, regional market opportunity, and competitiveness within those areas. The analysis is used to articulate clear business cluster priorities for the city, county, and region, and relevant roles in implementing these recommendations.

The approach involves three phases with key decision-making meetings at the conclusion of each

Bush Consulting Group's Roadmapping Approach (cont'd)



¹List of participants on page 36

²List of participants on page 37

To quantify activity, food sector organizations are classified by their activity in one or more parts of the value chain

Value Chain Definitions

- Agriculture: Produces raw material through farming, forestry, or aquaculture
- Processing and Packaging: Converts raw material or ingredients into value-added food product
- Distribution and Logistics: Aggregates, transports, or stores food products before shipping them to another organization for processing or retail; includes all shipping systems, whether product is shipped to another organization or the consumer
- Retail: Sells or provides food directly to the consumer; retail activity categorized as processing when a farmer/manufacturer sells immediately to the customer (e.g., farm stands, retail bakeries, butchers)
- Critical Enabler: Provides a product or service which is not physically part of the food product, but significantly contributes to its production, value, or sales (e.g., food processing or safety equipment, farming equipment or inputs, breeding services)

Food sector organizations are also classified according to their industry or potential focus area

Food Sector Industries/Potential Focus Areas (Organized Alphabetically)

Agricultural Equipment	Maple Syrup
Agricultural Inputs	Milk and Other Dairy
Alcoholic Beverage Distributors	Mushrooms
Baked Goods - Breads and Tortillas	Neutraceuticals
Baked Goods – Desserts	Non-Alcoholic Bottled Beverages
Baked Goods – Donuts	Pastas
Baked Goods – Pierogi	Poultry
Baked Goods – Unclassified	Salty Snacks
Butchered and Cut Meats	Sauces, Spreads, and Salsas
Cheese	Sausage and Processed Meats
Chocolate and Confections	Seafood
Coffee	Single Serving Frozen Foods
Commercial Food Service Equipment	Single Serving Refrigerated Foods
Commodity Crops	Soups, Salads, and Sides
Craft Beers	Specialty Crops - Fruits
Eggs	Specialty Crops - Garlic and Herbs
Food Processing Equipment	Specialty Crops - Grains
Food Safety/Testing Equipment	Specialty Crops - Vegetables
Food Service Distributor/Wholesale	Specialty Food Packaging
Granola Snacks and Health Bars	Specialty Transport and Storage
Honey	Spirits
Ice Cream and Frozen Dairy	Teas
Ingredients	Wines

Non-profits, educators, and key influencers are not quantified here, but will likely be important to implementation

Non-Profits, Educators, and Key Influencers

Ag Success Team of Wayne County	Double Harvest, Inc.	NEO Food Tours
Ag-Bio Industry Cluster Leadership Council	Eden Project, The	New Agrarian Center
Ag-Link Agricultural Linked Deposit Program (Ag-LINK)	Edible Schoolyard	North Union Farmers Market
Agricultural Technical Institute	EDWINS Leadership & Restaurant Inst.	Oberlin Project, The
Bainbridge Area Food For Friends	Farm Bureau	Oberlin Student Cooperative Association
Beginning Entrepreneurs in Agricultural Networks (BEAN)	Farm Link Program	Ohio Agricultural Research and Dev't Center
Bread of Life Food Pantry	FDA	Ohio City Near West Development Corp
Bridgeport Café & CornUcopia Community Kitchen	Flying High	Ohio Dept of Ag - Office of Sustainable Ag
Case Western Reserve University - Cleveland Corner Store	Future Farmers of America	Ohio Ecological Food and Farm Association
Chef 2 Chef Foods	Galleria Gardens Under Glass	Ohio Food Policy Advisory Council
City of Cleveland Mayor's Office of Sustainability	Gardening for Greenbacks	Ohio Proud
City of Cleveland Planning Department	Gather 'round Farm	Ohio State University Extension Agencies
City of Macedonia Parks & Recreation	Gennesareth II Orchard	Ohio Wine Producers Association
City Rising Farms (Hough)	Goodness Grows	Old Hushers Farm
Cleveland Clinic	Grow Youngstown	Prevention Res Ctr for Healthy Neighborhoods
Cleveland Culinary Launch and Kitchen	Growhio	Rising Harvest Farms
Cleveland Department of Public Health	Highhopesheightunnels	Sharon Glaspie
Cleveland Foodbank	Hummingbird Project, The	Slow Food Northern Ohio
CMHA Refugee Response Program	IBH Garden CSA	Small Farm Institute
Cleveland State Northeast Ohio Regional Food Congress	Innovative Farmers of Ohio	STEM Program in Cleveland
Cleveland Urban Agriculture Incubator Pilot Project	Intergenerational School	Steps to a Healthier Cleveland
Cleveland Urban Design Collaborative	Jim Fry	StrawVille
Cleveland-Cuyahoga County Food Policy Coalition	John Hay HS Fresh Food Collaborative	Sustainable Street Food Pilot Program
Common Wealth Farmer's Market	Kelvin Egner	Terra Local, LLC
Countryside Conservancy	Kent State Cleveland Urban Design Ctr	University Hospitals
Crown Point Ecology Center	Kiwanis Food Pantry	USDA
Cuyahoga Community College	Lakewood Earth and Food Community	Watterson-Lake School garden
Cuyahoga County Board of Health	LAND Studio	West Side Market, The
Cuyahoga County Health and Land-Use Initiative	Lorain County Community College	Wooster College
Cuyahoga County Land Bank	Mahoning Valley Organizing Collab	Youngstown Neighborhood Development Corp
Cuyahoga Valley National Park Association	MetroHealth	4H
	Neighborhood Progress Inc.	

An advisory committee of regional leaders provided critical support and oversight to the roadmap's development

Advisory Committee Members

Name and Title	Organization
Floyd Davis, Owner	The Red Basket Farm
Randy DeMers, Regional Vice President	Bon Appétit Management Company
Shilpa Kedar, Program Director for Economic Development	The Cleveland Foundation
Jenita McGowan, Chief of Sustainability	City of Cleveland Mayor's Office of Sustainability
John Mitterholzer, Senior Program Officer for the Environment	The Gund Foundation
Emily Garr Pacetti, Director of Research and Evaluation	The Fund for Our Economic Future
Mary Helen Petrus, Outreach Manager	Federal Reserve Bank of Cleveland
Carrie Rosenfelt, VP Community Development Relationship Manager, Northeast Ohio	Huntington Bank
Kevin Schmotzer, Executive Small Business Development	City of Cleveland Economic Development
Morgan Taggart, Extension Education, Community Development	Ohio State University Extension, Cuyahoga County
Walter Wright, Project Director, Greater University Circle Community Wealth Building Initiative	The Cleveland Foundation

An industry-led working group vetted the analysis and drove development of recommendations for regional intervention

Working Group Participants

Perspective	Name and Title	Organization
Processing	Daniel Holan, VP Administration	Orlando Baking Company
	Carolyn Priemer, Director	Cleveland Culinary Launch & Kitchen
Specialty Logistics and Aggregation	Greg Fritz, President	Produce Packaging
	Robert Stockham, Marketing and Communications Manager	Fresh Fork Market
Retail	Dan Farrell, District Manager	Bon Appetit Management Company
	Amanda Dempsey, Executive Director	The West Side Market
	Aparna Bole, Sustainability Director	University Hospitals
	Greg Sotka, Director, Category Management	Heinen's
Regional Perspective	Brian Gwin, FFEF Portfolio Manger	Wayne County and Regional Agriculture Activity
	Brad Masi, Regional Expert	Oberlin Activity and Past Studies
Policy	Morgan Taggart, Extension Education, Community Development	OSU Extension – Cuyahoga County and Cleveland-Cuyahoga County Food Policy Coalition
	Morgan Bulger, Research Associate	
	Jenita McGowan, Chief of Sustainability	City of Cleveland Mayor's Office of Sustainability
	Cathi Lehn, Sustainable Cleveland Coordinator	
	Joanne Neugebauer, Sustainable Cleveland Assistant	
Dan Milo, Food Safety Supervisor	Ohio Department of Agriculture	

Dozens of additional experts informed an understanding of opportunities to boost regional competitiveness

Expert Interviewees

Perspective	Name and Title	Organization
Agriculture	Brad Bergefurd, Horticulture Specialization Educator – Hops Research Director	OSU Extension Scioto County & South Centers
	Maggie Fitzpatrick, REAP Manager	Refugee Response Refugee Empowerment Ag Program
Processing	John Anthony Orlando, EVP Operations	Orlando Baking Company
	Nick Orlando, Jr., VP Sales and Marketing	
	Sam McNulty, Founder	Market Garden Brewing Co., et al.
	Andrew Tveekram, Brewmaster	
	Matt Chappel, Brewmaster and Owner	Indigo Imp Brewery
	Joel Warger, Brewer	Great Lakes Brewing Company
	Scott Hamilton, VP Manufacturing and Plant Operations	King Nut
Specialty Logistics and Aggregation	Jean Mackenzie, Founder and President	Mackenzie Creamery (and Ohio Cheese Guild)
	Tony DiNovo, President	DNO Produce
	Carlos Fuentes, VP Corporate and Governmental Affairs	InterChez
	Matt Szugye, Co-Founder and Board Member	Fresh Fork Market
	Joe Uniatowski, Executive Chef	Sysco Cleveland, Inc.
Retail and Foodservice	Randy DeMers, Regional VP	Bon Appetit Management Company
	Chris Oppewall, Director of Operations	Hospitality Restaurants of Cleveland
	Dan Ballard, Director of Nutrition	University Hospitals
	Chad Fleischer, Director of Contracting and Strategic Sourcing	
	Matthew Pietro, Sustainability Specialist	
	Jon Utech, Sr. Director, Office for a Healthy Environment	The Cleveland Clinic
	Jill McCarthy, Coordinator of Mission and Purpose	Whole Foods
	John Kucinski, Store Team Leader, Chagrin	
Regional Economic Development	Rich Connolly, District Manager	Sodexo
	Eric Diamond, VP Cleveland Market	Economic Community Development Institute
	Emily Sullivan, Operations Coordinator Cleveland Market	
	Mary Martineau, Executive Director	Ohio Craft Brewers Association
	Brian Snyder, Executive Director	Pennsylvania Association for Sustainable Agriculture
	David Reines, Executive Director	OhioMeansJobs Cleveland-Cuyahoga
	Anthony Fluellen, Business Services Manager	(formerly known as Employment Connection)
	Jay Foran, SVP Business Attraction	TeamNEO
	Christine Nelson, VP Regional Business Development	
	Bernardine van Kessel, Director, Int'l Business Attraction	
Michael Lalich, Associate, Research		
Walter Wright, Project Director, Greater University Circle Community Wealth Building Initiative	The Cleveland Foundation	

Hundreds of secondary resources were reviewed as part of the asset inventory, market, and competitiveness analysis

Sources Consulted

Abraham, Lisa. The Akron Beacon Journal. "[Bessemer Farms calls it quits, says new farm rules too cumbersome.](#)" July 7, 2013.

Alexander, Dan. Forbes. "Beer Entrepreneurs Fuel Comeback of Struggling Cleveland Neighborhood." November 26, 2013.

ACI Financial Advisors, "[Jobs & Investment Bond Fund & Property Assessed Clean Energy \(PACE\).](#)" November 2013.

Ag Decision Maker. "Romace vs. Reality: Hard Lessons Learned in a Grass-Fed Beef Marketing Cooperative." Reprint from Agricultural Marketing Resource Center, Iowa State University. April 2010.

Agri-Food Canada: International Markets Bureau, "[American Eating Trends Report.](#)" October 2012.

Aguero, Tom. Queen City Drinks, "[Ohio Hop Farm Research.](#)" August 19, 2013.

Aguero, Ton. Queen City Drinks, "[3 Tier System: Distributors.](#)" September 18, 2013.

Akron Beacon Journal. "[Bear Treasure Map.](#)" 2013.

AIB International, "White Bread Statistics and Trends." October 24, 2013.

Alaskan Brewing Co., "[Sustainable Brewing.](#)" 2013.

American Grassfed Association. "[Producer-Profiles.](#)" November 2013.

Ames Carr, Kathy. Crain's Cleveland Business, "[Taking Stock of the Food Economy.](#)" November 6, 2011.

Appalachian Mountain Brewery, "[Stewardship.](#)" 2014.

Armstrong, Peggy. International Dairy Foods Association, "[Ice Cream Sales & Trends.](#)" 2014.

Azteca Foods, Inc., "[Our History.](#)" 2014.

Baird Market Analysis. "Health, Nutrition & Fitness Report: Growth Opportunities Presented by the Current Focus on Healthier Living." Spring 2012.

Barnes, Steve. Times Union, "[Shmaltz tastes regional success.](#)" July 31, 2013.

Barr, Alistair. USA Today. "Amazon said to launch Pantry to take on Costco, Sam's" December 12, 2013.

Barrow, Olivia. Dayton Business Journal. "Investors buy former SuperValu Warehouse for \$4.3M." December 19, 2013.

Beer Institute. "Beer Industry Economic Impact in Ohio." 2013.

Beer Institute, "[Beer Resource Center.](#)" 2014.

Beer Institute, "[Brewer's Almanac 2013.](#)" March 28, 2013.

Bell's Brewery, Inc., "[Sustainability.](#)" 2013.

Bimbo Bakeries USA, "[Our History.](#)" 2014.

Blue Diamond Growers, "[Blue Diamond Growers: Our Centennial Celebration.](#)" 2014.

Blue Point Brewing Company, "[Blue is the New Green: Sustainability Report.](#)" 2014.

BOMA International, "[BOMA Energy Performance Contracting Model.](#)" September 2013.

Bona, Marc. The Plain Dealer, "[Craft Brewers Affected By Federal Government Shutdown.](#)" October 9, 2013.

Bona, Marc. The Plain Dealer. "The Bruery offers Autumn Maple – Crack One Open." November 5, 2013.

Boston Beer Company. "[2013 Annual Report.](#)" 2014.

Boston Local Food Festival, "[Boston Local Food Festival Presented by Sustainable Business Network of Massachusetts.](#)" 2014.

Hundreds of secondary resources were reviewed as part of the asset inventory, market, and competitiveness analysis

Sources Consulted

- Boston Local Food, "[SBN Local Food Trade Show](#)." 2013.
- Boulevard Brewing Company, "[Sustainability](#)." 2013.
- Brewers Association. "2012 Stewardship Report." 2013.
- Brewers Association, "[Brewer's Almanac 2013](#)." 2013.
- Brewers Association, "[Craft Brewing Facts](#)." 2013.
- Brewers Association, "[Dollar Growth Up 14% in First Six Months of 2012; Total Brewery Count Hits 125-Year High](#)." August 6, 2012.
- Brewers Association. Export Development Program. "New Quality Control Guide Released." November 2013.
- Bricker & Eckler, "[Property Assessed Clean Energy \(PACE\) Financing: The Ohio Story](#)." February 18, 2011.
- Brookings Institution Metropolitan Policy Program, "[Clusters and Competitiveness: A New Federal Role for Stimulating Regional Economies](#)." 2008.
- Bulger, Morgan. Cleveland-Cuyahoga County Food Policy Coalition, "[Cleveland Metropolitan School District and the FPC Explore School Gardening and Local Procurement for the Farm to School Initiative](#)." August 19, 2013.
- Business Wire, "[Fresno Food Expo, Nation's Largest Regional Food Show Opens Registration for July 24 Expo, Inclusion of 2,500 Fresh Produce Growers and Packers in California's San Joaquin Valley](#)." January 29, 2014.
- Buzalka, Mike. Food Management. "[Food Hubs Help Solve Local Sourcing Issues](#)." March 20, 2014.
- Byard, Katie. Akron Beacon Journal. "[Schwebel bakery in Cuyahoga Falls to close](#)." November 7, 2013.
- California Craft Brewer's Association, "[Who We Are](#)." 2013.
- California FreshWorks Fund, "[California FreshWorks Fund: What the California FreshWorks Fund Can Mean to Our State](#)." 2012.
- Canning, Patrick, Ainsley Charles, Sonya Huang, Karen Polenske, and Arnold Waters. United States Department of Agriculture, "[Energy Use in the U.S. Food System](#)." June 2010.
- Carr, Kathy Ames. Crain's Cleveland Business. "Local scene appealing to national audience." October 31-November 6, 2011.
- Carr, Kathy Ames. Crain's Cleveland Business. "Market Garden brewmaster blends 'art and science' at Ohio City pub." December 8, 2013.
- Carr, Kathy Ames. Crain's Cleveland Business. "[Ohio's craft brewers are a productive lot](#)." October 14, 2013.
- Chase, Craig. Leopold Center for Sustainable Agriculture, Iowa State University Extension & Outreach. "Local Food & Farm Program: Preliminary Report to the Iowa Legislature." January 2012.
- Chavez, Jon. The Blade, "[Return of Wonder, Hostess Brands to Region Uncertain](#)." November 18, 2013.
- Chris, Kick. "[Ohio Specialty Crop Hops Could Make a Return](#)." Farm and Dairy. September 23, 2013.
- Christie, Margaret. Community Involved in Sustaining Agriculture, "[Scaling Up Local Food Investing in Farm & Food Systems Infrastructure in the Pioneer Valley](#)." October 17, 2011.
- City of Cleveland. "[Application Summary – Miceli-Lograsso Development Company III Expansion Project](#)." 2013.
- Clark, Jill K., Shoshanah Inwood, and Jeff S. Sharp. Ohio State University Department of Agricultural, Environmental, and Development Economics and Social Responsibility Initiative. "Scaling-up Connections between Regional Ohio Specialty Crop Producers and Local Markets: Distribution as the Missing Link." August 1, 2011.

Hundreds of secondary resources were reviewed as part of the asset inventory, market, and competitiveness analysis

Sources Consulted

- Cleveland Clinic Wellness, "[Go! Healthy Foods for You.](#)" 2014.
- Cleveland Independents. "[Restaurants.](#)" September 2013.
- Cleveland Land Lab at the Cleveland Urban Design Collaborative, Kent State University. "[Re-Imagining a More Sustainable Cleveland: Citywide Strategies for Reuse of Vacant Land.](#)" December 19, 2008.
- Cleveland Land Lab at the Cleveland Urban Design Collaborative, Kent State University. "[Re-Imagining Cleveland: Ideas to Action Resource Book.](#)" January 2011.
- Clifford, Stephanie. The New York Times. "Wal-Mart to Buy More Local Produce: The local-and-sustainable food movement has spread to the nation's largest retailer." October 14, 2010.
- CNBC Consumer Staples. "Food Fight: Wal-Mart Vows to Guarantee Groceries, Buy Local." June 3, 2013.
- Coalition of Ohio Land Trusts, Ohio Ecological Food and Farm Association, and Ohio State University Sustainable Agriculture Team. "The 2013 Ohio Sustainable Farm Tour and Workshop Series." 2013.
- Colyn, Joe. Originz, LLC and Sysco/H.A. Wallace Center. "Success for Family Farms Project." Webinar for National Good Food Network. July 2009.
- [Common Market Philadelphia Website.](#) December 2013.
- Community Science. "SNAP Healthy Food Incentives Cluster Evaluation: 2013 Final Report." December 2013.
- Companies and Markets, "[US Craft Beer Production Market to Reach \\$4.1 Billion.](#)" 2013.
- Congressional Research Service, "[The Role of Local Food Systems in U.S. Farm Policy.](#)" January 20, 2012.
- Connelly, Karen. "[Recipe For Success: Food-Based Startups Face Unique Challenges.](#)" *freshwatercleveland.com* (blog), October 10, 2013.
- Coolidge, Alexander. Cincinnati.com. "Kroger execs talk deals, data and private labels." October 30, 2013.
- Council of Smaller Enterprises (COSE), "[Energy Efficiency Program.](#)" 2014.
- Countryside Conservancy. "[Countryside Farmers' Markets.](#)" November 2013.
- Craft Beer Analytics. "Beer Research and Insights." Issue 2: April 2012.
- Craft Brew Alliance. "Investor Presentation." August 2013.
- Crain's Cleveland Business. "[Crain's Directory of NE Ohio's Food Economy.](#)" August 2013.
- Crowell, Chris. Craft Brewing Business. "Craft beer distribution: Study the market, distributors, and your own operations." September 10, 2013.
- Crowell, Chris. Craft Brewing Business, "[Craft Beer Market Strong, Getting Stronger Says Investment Bank Report.](#)" March 1, 2013.
- Culinary Incubator, "[The Source in Shared Part Time Commercial Kitchens.](#)" October 2013.
- Cuyahoga County Board of Developmental Disabilities. "[Growing in so many ways.](#)" November 2013.
- Day, Jennifer, Justin Dahlmeimer, and Jeffrey Schmedeke. St. Cloud Area Economic Development Partnership, "[Central Minnesota Processed Foods Industry Cluster Report.](#)" May 2010.
- Deller, Steven, and David Williams. The University of Wisconsin-Extension, Cooperative Extension Program Areas of Agriculture and Natural Resources, and Community, Natural Resource and Economic Development, "[The Economic Impacts of Agriculture in Wisconsin Counties.](#)"

Hundreds of secondary resources were reviewed as part of the asset inventory, market, and competitiveness analysis

Sources Consulted

Demeter Group Investment Bank. "Craft Beer Industry 2011 Mid-Year Review and Outlook." 2011.

Demeter Group Investment Bank. "State of the Craft Beer Industry." 2013.

Demeter Group Investment Bank. "State of the Spirits Industry." 2013.

Demeter Group Investment Bank. "State of the Wine Industry." 2013.

Demeter Group Investment Bank. "Why Craft Beer is Next." April 25, 2013.

D'Innocenzio, Anne. Huffington Post Business. "Walmart to Purchase Produce Directly from Local Growers." September 16, 2013.

Diamond Foods. "[FY2013 Annual Report](#)." 2014.

Dunnhumby. "Consumer Centricity Index: US Food Service Retailers." June 2013.

Durkay, Jocelyn. National Conference of State Legislatures, "[State Energy Savings Performance Contracting](#)." November 15, 2013.

Deschutes Brewery, "[Sustainability](#)." 2013.

Dsire: Database of State Incentives for Renewables and Efficiency, "[Ohio Incentives/Policies for Renewables and Efficiency](#)." February 18, 2014.

Eatwild.com. "[Pastured Products Directory – Ohio](#)." November 2013.

Ecology Center. "Healthy Food in Health Care. Promising Approaches: A Food Prescription Presentation." February 5, 2013.

Ecology Center Ann Arbor Michigan, "[Signing the Pledge](#)." October 2012.

Edible Cleveland Magazine. Summer 2013 Issue.

Energy Star Building Manual. "[Financing](#)." Chapter 4. 2007.

Eng, Dinah. Fortune Magazine. "Jim Koch: Samuel Adams's Beer Revolutionary." March 21, 2013.

EPD News "[Sidebar: Sustainable Craft Brewers](#)." October 3, 2013.

Fabulous Food Show: I-X Center, "[Fabulous Food Show](#)." 2013.

FamilyFarmed and the Wallace Center, "[Webinar: The Business of Food Hubs: Planning Successful Regional Produce Aggregation Facilities](#)." November/December 2013.

FamilyFarmed, "[Good Food Festival and Conference Chicago](#)." 2013.

Farm to Consumer Foundation, "[The Grand Splash of Craft Beer in America](#)." July 18, 2013.

Farmanddairy.com. "[Ohio Markets](#)." May 2013.

Farms Reach, "[Building Regional Produce Supply Chains: Helping Farms Access & Sell to Multiple Channels, Helping Large Volume Buyers Access Regional Foods](#)." August 2011.

Feast Local Food Network, "[FEAST Local Food Network](#)." 2013.

Fisk, John. "[Starting A Food Hub: Successful Hubs Share Their Stories](#)." Wallace Center at Winrock International Recorded May 16 2013. National Good Food Network.

Fletcher Allen Health Care: In Alliance with the University of Vermont, "[Fletcher Allen Wins National Awards for Sustainable Food Leadership](#)." October 11, 2011.

Flower Foods, "[About Flowers Foods](#)." 2014.

Hundreds of secondary resources were reviewed as part of the asset inventory, market, and competitiveness analysis

Sources Consulted

Fresh Fork Market. "[Farms & Suppliers](#)." September 2013.

Fresno Food Expo, "[Your Connection to the Freshest Ideas in Food!](#)" 2013.

Fund for Our Economic Future, "[Defining Northeast Ohio Cluster Opportunities in the Ag-Bioscience Sector](#)." 2013.

Full Sail Brewing Company, "[Sustainability](#)." 2013.

Galarneau, Andrew Z. The Buffalo News. "[Chow Down on Lake Erie](#)." February 2013.

Galinato, Suzette, Ann George, and Herbert Hinman. "2010 Estimated Cost of Producing Hops in the Yakima Valley, Washington State." 2010.

Goldschmidt, Bridget, Jenny McTaggart, and Jim Dudlicek. Progressive Grocer. "Knowing Your Shopper - 2013 Category Captains." November 2013.

Gorton, Laurie. Baking Business. "Shearer's Foods moves fast into the future." March 26, 2013.

GRACE Communications Foundation, "[Local & Regional Food Systems](#)." 2013.

Grazier, Steven M. Canton Repository. "[Heinz plans \\$28 million expansion in Massillon](#)." November 18, 2013.

Great Lakes Brewing Company, "[Sustainability](#)." 2013.

Grind2Energy. "Case Study: Strategies for Organic Food Waste Management at The Ohio State University." July 2013.

Gruma Corporation, "[About Gruma](#)." 2013.

Guerin-Calvert, Margaret E., and Guillermo Israilevich. Compass Lexecon. "Assessment of Cost Trends and Price Differences for U.S. Hospitals." March 2011.

Gunders, Dana. NRDC Issue Paper. "[Wasted: How America is Losing Up to 40 Percent of Its Food from Farm to Fork to Landfill](#)." August 2012.

Guth, Douglas J. Freshwater. "[Business of Beer: New Breweries Lift Neighborhoods on Rising Tide of Craft Beer](#)." December 12, 2013.

Guthrie, Joanne, Constance Newman, Mark Prell, and Michael Ollinger. United States Department of Agriculture Economic Research Service. "[Nutrition Standards for Competitive Foods in Schools: Implications for Foodservice Revenues](#)." June 2013.

Hagan, Erin and Victor Rubin. PolicyLink. "Economic and Community Development Outcomes of Healthy Food Retail." 2013.

Hale, Todd. Nielsen. "Small Format Evolution in the U.S." 2012.

Harpoon Brewery, "[Harpoon and Our Environment](#)." 2012.

Harris, Diane, Megan Lott, Velma Lakins, and Joel Kimmons. "[Farm to Institution: Creating Access to Healthy Local and Regional Foods](#)", Advances in Nutrition: An International Review Journal. 2012.

Harvard Food and Law Policy Clinic: Massachusetts Farm to School Project and Farm to Institution New England, "[Tools for Advocates: Increasing Local Food Procurement by State Agencies, Colleges, and Universities](#)." July 2012.

Headen, Raymond, Bricker & Eckler LLP, "[Energy SIDs and PACE Financing In Ohio](#)." January 12, 2011.

Higgins, Kevin. Food Processing. "Cheese processor Selects Electrical Generation as Biogas Go-To Option." 2013.

Higgins, Kevin. Food Processing. "Food Plants of the Future: Not Bigger, Just Smarter." 2013.

Higgins, Kevin. Food Engineering, "[Plant of the Year: Shearer's Foods Rethinks the Food Plant](#)." April 1, 2011.

Hop Growers of America. "2012 Statistical Report." January 2013.

Hundreds of secondary resources were reviewed as part of the asset inventory, market, and competitiveness analysis

Sources Consulted

Hoovers, A D&B Company. [Full Business Database](#). October 2013-March 2014.

Hudson Valley Economic Development Corporation, "[Best Cheese Corporation Joins Hudson Valley Food & Beverage Alliance](#)." May 1, 2012.

Huntrods, Diane. Agricultural Marketing Resource Center, "[A National Information Resource for Value-Added Agriculture](#)." April 2013.

IBISWorld. "[BBQ Sauce Production in the US: Market Research Report](#)." December 2013.

IBISWorld. "[Fruit and Vegetable Markets in the US: Market Research Report](#)." March 2014.

IBISWorld. "[Hot Sauce Production in the US: Market Research Report](#)." March 2014.

IBISWorld. "[Pre-Made Salsa Production in the US: Market Research Report](#)." December 2012.

IBISWorld. "[Seasoning, Sauce and Condiment Production in the US: Market Research Report](#)." December 2013.

Ingredients and Innovative Delivery Formats. "[The Bar Market Is Blurring the Line Between Meals and Snacks](#)." October 2013.

Innovation Center for U.S. Dairy. "Welcome to Cleveland! Diverting Food Waste from Landfills to Produce Sustainable Energy and Natural Fertilizer." 2013.

Innovative Farmers of Ohio. "[Annual Conference](#)." December 2013.

Inside Business. "[2013 Weatherhead 100 – List](#)." December 2013.

International Markets Bureau. "Consumer Trends Salty Snack Food in the United States." April 2011.

ISWM-TINOS. "Development and implementation of a demonstration system on Integrated Solid Waste Management for Tinos in line with the Waste Framework Directive." December 2011.

Joannides, Jan. Southern Minnesota Initiative Foundation and the McKnight Foundation, "[Local Food Systems as Regional Economic Drivers in Southern Minnesota](#)." June 2012.

John Dunham and Associates and the Ohio Grocers Association. "The Grocery Retail Industry in Ohio – Impact Study." March 2, 2011.

Johnson, Allen. The Columbus Dispatch, "Kasich Plans to Privatize Food Service at Prisons." February 8, 2013.
<http://www.dispatch.com/content/stories/local/2013/02/08/kasich-plans-to-privatize-food-service-at-prisons.html>.

Johnson, Renee, Randy Alison Aussenberg, and Tadlock Cowan. Congressional Research Service. "The Role of Local Food Systems in U.S. Farm Policy." March 12, 2013.

Jones, Lester. Beer Institute. "Beer Institute Research – Draft Beer Industry Update." 2012.

Joseph Campione, "[Authentic Hearth Baked Garlic Bread and Texas Toast](#)." March 2014.

Kema Nut Company, "[About Krema](#)." 2014.

King, Robert P., et al. United States Department of Agriculture Economic Research Service. "Comparing the Structure, Size, and Performance of Local and Mainstream Food Supply Chains." ERS Report Number 99. June 2010.

KPMG LLP, "[2013 Food and Beverage Industry Outlook Survey](#)." 2013.

Kyle, Sharp. "[Locally Grown Hops a Possibility for Ohio's Booming Microbreweries](#)." OSU Extension. September 7, 2012.

La Tortilla Factory, "[Products](#)." 2012.

Lagunitas Brewing Co. "[No Farm. No Beer. From Volatile to Sustainable](#)." 2013.

Hundreds of secondary resources were reviewed as part of the asset inventory, market, and competitiveness analysis

Sources Consulted

Larrick, Don. Policy Research and Strategic Planning, Ohio Department of Development, "[Gross Domestic Product From Ohio](#)." August 2012.

Legislative Information Systems, "[Senate Bill 58](#)." 2014.

Lindsey, Timothy C. Illinois Department of Commerce and Economic Opportunity et al. "[Building Successful Food Hubs: A Business Planning Guide for Aggregating and Processing Local Food in Illinois](#)." January 2012.

Local Food Cleveland. "[Local Food Guide](#)." May 2012.

[Local Harvest Website](#). November 2013.

Local Roots Wooster. "[Food Cooperative Producer Members](#)." October 2013.s

Mailler, Carl. American Farmland Trust and the Community Involved in Sustaining Agriculture. "Increasing Local Milk Processing Capacity: Benefits to Pioneer Valley Consumers and Communities." January 2011.

Major, Meg. Progressive Grocer. "Crunching the numbers." 2013.

Major, Meg and Jim Dudlicek. Progressive Grocer. "Swirling Fortunes: While retail sales gains remain the focus of the main course, economic agita simmers as grocers seek new ingredients to keep the pot steaming." April 2013.

Maplehurst Bakeries, LLC, "[Maplehurst Bakeries the Bakery Specialists](#)." 2014.

Marketline Industry Profile, "Alcoholic Drinks in the United States." November 2013.

Marketline Industry Profile, "Baby Food in the United States." March 2013.

Marketline Industry Profile, "Beer in the United States." August 2013.

Marketline Industry Profile, "Biscuits in the United States." March 2013.

Marketline Industry Profile, "Bread & Rolls in the United States." August 2013.

Marketline Industry Profile, "Breakfast Cereals in the United States." November 2013.

Marketline Industry Profile, "Canned Food in the United States." September 2013.

Marketline Industry Profile, "Chilled & Deli Food in the United States." August 2013.

Marketline Industry Profile, "Chocolate Confectionery in the United States." November 2013.

Marketline Industry Profile, "Dairy in the United States." September 2013.

Marketline Industry Profile, "Frozen Food in the United States." September 2013.

Marketline Industry Profile, "Ice Cream in the United States." January 2013.

Marketline Industry Profile, "Meat in the United States." January 2012.

Marketline Industry Profile, "Meat, Fish & Poultry in the United States." February 2013.

Marketline Industry Profile, "Milk in the United States." September 2013.

Marketline Industry Profile, "Organic Food in the United States." November 2012.

Marketline Industry Profile, "Potato Chips in the United States." August 2013.

Marketline Industry Profile, "Ready Meals in the United States." February 2013.

Marketline Industry Profile, "Savory Snacks in the United States." October 2013.

Hundreds of secondary resources were reviewed as part of the asset inventory, market, and competitiveness analysis

Sources Consulted

- Masanet, Eric, Peter Therkelsen, and Ernst Worrell. Ernest Orlando Lawrence Berkeley National Laboratory. "Energy Efficiency Improvement and Cost Saving Opportunities for the Baking Industry." December 2012.
- Masi, Brad, Leslie Schaller, and Michael Shuman. Cleveland Foundation, ParkWorks, Kent State University Cleveland Urban Design Collaborative, Neighborhood Progress Inc., and Cleveland-Cuyahoga County Food Policy Coalition, "[THE 25% SHIFT The Benefits of Food Localization for Northeast Ohio & How to Realize Them](#)." December 2010.
- Matts, Colleen, and Susan Schmidt. W. K. Kellogg Foundation Food & Community Program, "[Institutional Food Purchasing: Michigan Good Food Work Group Report Series](#)." November 2010.
- McCafferty, Rachel Abbey. Crain's Cleveland Business. "Nestle USA to move pizza operations, 250 jobs to Solon." October 30, 2013.
- McFee, Michelle Jarboe. The Plain Dealer. "Walmart Supercenter in South Euclid aims to be retail giant's first LEED-certified store." October 17, 2013.
- McLaughlin, Katy. Wall Street Journal Online. "[Micro-Bakeries Offer Bread That's Truly Fresh](#)." August 16, 2013.
- Menashe, Jeff. Demeter Group, "[State of the Craft Beer Industry 2013](#)." 2013.
- Meridian Pint, "[About](#)." 2013.
- Meter, Ken. Crossroads Resource Center. "Ohio's Food Systems – Farms At The Heart of It All." March 30, 2011.
- Metzger, Scott. The New Brewer. "What Does Your Beer Really Cost? Establishing an Effective Beer Costing Program in the Brewpub." January/February 2012.
- Miller, Jay. Crain's Cleveland Business. "Anatomy of a deal: Move of Nestle USA's pizza division to Solon took thousands of hours of work." December 8, 2013.
- Miller, Jay. Crain's Cleveland Business. "Nestle keeps adding to Northeast Ohio empire." December 8, 2013.
- Mintel Group, Ltd., "[Ice Cream and Frozen Novelties - US - July 2012](#)."
- Nathan, Jason. Dunnhumby. "Ranging: The Economics of Customer-Oriented Product Ranging Decisions." 2013.
- National Center for Chronic Disease Prevention and Health Promotion, "[The CDC Guide to Strategies to Increase the Consumption of Fruits and Vegetables](#)." 2012.
- National Good Food Network. "[Food Hub Center](#)." October 2013.
- National Good Food Network. "Towards Local and Regional Sourcing: Chipotle and Sysco." 2009.
- National Institute for Animal Agriculture. White Paper. "Living in a World of Decreasing Resources and Increasing Regulation: How to Advance Animal Agriculture." March 2012.
- National Restaurant Association. "2013 Restaurant Industry Pocket Factbook." 2013.
- National Restaurant Association. "Ohio: Restaurant Industry at a Glance." 2013.
- National Sustainable Agriculture Coalition. "[2014 Farm Bill Drilldown: Local and Regional Food Systems, Healthy Food Access, and Rural Development](#)." February 2014.
- National Sustainable Agriculture Coalition. "Guide to USDA Funding for Local and Regional Food Systems." First edition, April 2010.

Hundreds of secondary resources were reviewed as part of the asset inventory, market, and competitiveness analysis

Sources Consulted

National University System Institute for Policy Research, "[The Economic Impact of Craft Breweries in San Diego.](#)" 2012.

Natoli, Cori Anne. The (Wilmington, Del.) News Journal. "Wonder bread back on store shelves." October 6, 2013.

Neiburg, Oliver. Bakery and Snacks, "[Bimbo Bakeries to Build \\$75 M Factory in US.](#)" May 12, 2012.

NEO Advanced Energy District, "[PACE.](#)" 2010.

New America Foundation – Markets, Enterprise, and Resiliency Initiative. "A King of Beers? Concentration of Power Over America's Alcohol Markets Is Bad for Consumers. It also Imperils Constitutional and Moral Balances." December 2012.

New Belgium Brewing Company, "[Sustainability.](#)" 2013.

New England Food Show, "[New England Food Show Expo.](#)" 2013.

[New Glarus Brewing Company Website.](#) 2013.

New Seasons Market, "[Our Story.](#)" 2014.

New Yorker, "[Mapping the Rise of Craft Beer.](#)" March 2014.

Nielsen Product Data for Cleveland Region, Groceries larger than \$2MM in Annual Revenue. November 2012-November 2013.

North Union Farmers Market. "[About Our Markets.](#)" November 2013.

[Northern Nut Grower's Association, Inc. Website.](#) September 7, 2013.

Northwest Food Processors Association, "[History.](#)" 2013.

Northwest Food Processors Association, "[NW Food Processors Expo and Conference.](#)" 2013.

Nutra Ingredients. "[Top Selling Nutrition Bar Beats Giants.](#)" November 01, 2001.

Ohio Craft Brewers Association. "[The Official Site of the Ohio Craft Brewers Association.](#)" 2013.

Ohio Dairy Association. "[Ohio's Dairy Industry: An Essential Part of Our State's Success.](#)" April 23, 2013.

Ohio Dairy Industry Online Resources Center. "[Milk Haulers and Processors.](#)" May 2012.

Ohio Development Services Agency, "[Advanced Energy and Efficiency Programs.](#)" February 18, 2014.

Ohio Development Services Agency, "[Advanced Energy and Efficiency Programs for Manufacturers.](#)" February 18, 2014.

Ohio Development Services Agency. "[Energy Loan Fund.](#)" October 2013.

Ohio Department of Agriculture. "2010 Annual Report." 2010.

Ohio Department of Agriculture. "2011 Annual Report." 2011.

Ohio Department of Agriculture. "[Ohio Aquaculture Industry Analysis.](#)" 2010.

Ohio Department of Agriculture. "Office of Farmland Preservation Annual Report." July 2012.

Ohio Department of Development and Ohio Department of Agriculture. "[Ohio Agriculture and Food Processing Industry.](#)" September 2012.

Ohio Department of Education. "[School Funding by District.](#)" 2013.

Ohio Department of Health, "[Ohio Hospital Compare.](#)" July 6, 2011.

Ohio Ecological Food and Farm Association. "[Good Earth Guide to Organic and Ecological Farms, Gardens and Related Businesses.](#)" November 2013.

Hundreds of secondary resources were reviewed as part of the asset inventory, market, and competitiveness analysis

Sources Consulted

- Ohio Environmental Protection Agency, "[Siting Criteria](#)." August 2006.
- Ohio Environmental Protection Agency, "[State Composting Regulations](#)." July 2013.
- Ohio Environmental Protection Agency Division of Materials and Waste Management, "[Odor Management Practices For Composting Facilities](#)." September 1999.
- Ohio Environmental Protection Agency Division of Materials and Waste Management, "[Ohio Food Scraps Composting Facilities](#)." July 2012.
- Ohio Farm Bureau. "[Our Ohio Buying Local Directory](#)." September 2013.
- Ohio Grape Industries Committee and MFK Research, LLC. "The Economic Impact of Wine and Winegrapes in the State of Ohio 2008." 2008. [Ohio MarketMaker Website](#). November 2013.
- Ohio Revised Code, "[Chapter 6111: Water Pollution Control](#)." October 2013.
- Ohio State University Extension – Cuyahoga County. "[Produce Perks](#)." April 2014.
- Ohio Third Frontier. "[Current Programs](#)." November 2013.
- Ohio University, "[Ohio University to Save an Estimated \\$38 Million Through Energy Performance Contract with Constellation](#)". September 27, 2014.
- Ohio's Quarterly Census of Employment and Wages, 2007 and 2012 quarter 1
- Organic Seed Alliance. "[Seed Producers Database](#)." November 2013.
- Owens, Nora, and Kelly Verel. Project for Public Spaces and Wholesome Wave, "[SNAP/EBT at Your Farmers Market: Seven Steps to Success](#)." July 2010.
- PACE Now, "[Financing Energy Efficiency](#)." 2012.
- Pennsylvania Association for Sustainable Agriculture, "[Pennsylvania Buy Fresh/Buy Local](#)." 2013.
- Pennsylvania Association for Sustainable Agriculture. Passages: Sustainable Food and Farming Systems. "The PASA Model Defined." July/August 2012.
- Pepperidge Farm, Inc., "[Frozen Bread and Rolls](#)." 2013.
- Perez, Agnes and Kristy Plattner. United States Department of Agriculture Economic Research Service. "Fruit and Tree Nuts Outlook." July 26, 2013.
- Port of Cleveland, "[Development Finance: Financing for Manufacturers](#)." February 18, 2014.
- PRNewswire, "[Technomic to Explore Craft Beer and Cider Opportunity in Restaurants and Bars](#)." November 21, 2013.
- Progressive Grocer, "[Crunching the Numbers](#)." April 2011.
- Project for Public Spaces and Wholesome Wave. "SNAP/EBT at Your Farmers Market: Seven Steps to Success." July 2010.
- PRWeb Online Visibility from Vocus, "[Strong Pour: Craft Beer Production in the US Industry Market Research Report Now Available from IBISWorld](#)." February 11, 2014.
- QSR Magazine, "[Quick-Service Industry to Grow by 4.9 Percent in 2013](#)." December 11, 2012.
- Reid, Neil and Michael C. Carroll. "[Using Cluster-Based Economic Development to Enhance the Economic Competitiveness of Northwest Ohio's Greenhouse Nursery Industry](#)." 2009.

Hundreds of secondary resources were reviewed as part of the asset inventory, market, and competitiveness analysis

Sources Consulted

- Reinvestment Fund, The. "[Understanding the Grocery Industry.](#)" September 30, 2011.
- Research and Markets, "[Craft Beer Market in the US 2012-2016.](#)" August 01, 2013. Accessed 09/13/2013.
- Research and Markets, "[Craft Beer Market in the US 2012-2016.](#)" August 2013.
- Research and Markets, "[Ice Cream in the United States: Forecasts to 2016.](#)" April 11, 2013.
- Researchmoz, "[Craft Beer Market in the US 2012-2016.](#)" October 30, 2013.
- Restaurant Hospitality. "Technomic: 10 Trends to Watch." November 14, 2013.
- Risley Schroeder, Alex. Massachusetts Workforce Alliance, "[Local Food, Local Jobs: Job Growth and Creation in the Pioneer Valley Food System.](#)" February 2013.
- Robson, James. Cheese Market News. "Formula for the Future: Understanding the Growing Specialty Cheese Market." March 16, 2012.
- Rochester Institute of Technology, "[Finger Lakes Food Processing Cluster Initiative.](#)" March 2013.
- Rose, Maryanne. Restaurant Hospitality! "10 tips to manage commodity cost swings." August 8, 2012.
- Rowe, Audrey. USDA Blog, "[Expanding SNAP Farmers Market Access through Innovative Partnerships.](#)" January 2014.
- Rushing, John E. Department of Food Science. "[Choosing and Using a Copacker.](#)" October 2013.
- Runyon, Luke. The Salt. "Forget Golf Courses: Subdivisions Draw Residents with Farms." December 17, 2013.
- Sanner, Anne. Seattle Times, "[Prisons Look to Share Food Costs with Ohio State.](#)" March 25, 2011.
- Scott-Thomas, Caroline. Food Navigator-USA, "[US Ice Cream and Frozen Desert Market Tops \\$25bn.](#)" May 07, 2012.
- Shearer's. "Shearer Perfection: Innovation, expansion, and teamwork keep the company focused on its vision." Fall 2011.
- Shuman, Michael, Alissa Barron, and Wendy Wasserman. Wallace Center at Winrock International. "Community Food Enterprise: Local Success in a Global Marketplace." 2009.
- Sierra Nevada Brewing Co., "[Sustainability.](#)" 2013.
- Slama, Jim, & Nyquist, Kathy. "Webinar: The Business of Food Hubs: Planning Successful Regional Produce Aggregation Facilities." Wallace Center at Winrock International and the Business Alliance for Local Living Economies. Web Southeast Regional Fruit and Vegetable Conference, "[Southeast Regional Fruit and Vegetable Conference.](#)" 2013.
- Slama, Jim, and Kathy Nyquist. FamilyFarmed and the Wallace Center, "[Local Food System Assessment for Northern Virginia.](#)" August 2010.
- [Slow Food Northern Ohio Website.](#) November 2013.
- Smith, Chad. Ohio Development Services Agency, "[Office of Energy: Technical and Financial Resources.](#)" October 2013.
- Snack Food and Wholesale Bakery, "[General Mills Nutritionally Improves Nearly Three-Quarters of Its U.S. Retail Sales Volume.](#)" November 6, 2013.
- Snook, Debbi. The Plain Dealer at Cleveland.com. "[Places selling pierogi available all year.](#)" March 24, 2010.
- Snook, Debbi. The Plain Dealer at Cleveland.com. "[Tortilleria La Bamba satisfies Cleveland's hunger for freshly made tortillas.](#)" March 23, 2011.
- Sodexo, "[Sodexo's Better Tomorrow Commitment to Local Sourcing.](#)" 2013.
- Sporleder, Thomas L. "NEOHFOOD: A Northeast Ohio Food Industries Input-Output Model." Version 1.0, December 2007.

Hundreds of secondary resources were reviewed as part of the asset inventory, market, and competitiveness analysis

Sources Consulted

- Sporleder, Thomas L. "OHFOOD: An Ohio Food Industries Input-Output Model." Version 6.0, June 2003.
- Standing Stone Brewery Co., "[Sustainability](#)." 2013.
- State Board of Equalization, "[Dining and Beverage Industry](#)." July 2012.
- Statistica: The Statistics Portal, "[Sales of the Leading 10 Snack Nuts Brands Of the United States in 2012 \(In Million U.S. Dollars\)](#)." 2014.
- Stoessel, Eric. Restaurant Hospitality. "Local, local, and more local top NRA's 2014 trends." December 3, 2013.
- Sustainable Cleveland 2019. "Action and Resources Guide: Building an Economic Engine to Empower a Green City on a Blue Lake." September 8, 2010.
- Swenson, Dave. Department of Economics, Iowa State University. "Selected Measures of Economic Values of Increased Fruit and Vegetable Production and Consumption in the Upper Midwest." March 2010.
- Sysco Corporation. 2011 Sustainability Report. "Our Values: We do what is right to serve our customers, associates, investors and society." 2011.
- Taxel, Laura. Cleveland Magazine. "[Hatching New Plans and Players](#)." May 29, 2013.
- Technomic, Inc., "[Technomic Top 15 Power Distributors](#)." January 2014.
- Technomic, Inc., "[U.S. Foodservice Industry Forecast](#)." January 2014.
- Theiss, Evelyn. The Plain Dealer. "Cleveland-made Good Greens nutrition bars take off." November 19, 2012.
- Time Out New York, "[New Beer Trends: Suds Experts Forecast Brew Guzzling For 2013](#)." February 12, 2013.
- Toops, Diane. Food Processing, "[Snacking Could Be the Future of Eating Consumer Time and Health Push Snack Foods to the Forefront for Many Packaged-Food Companies](#)." 2012.
- Trattner, Douglas. Freshwater Cleveland. "[La Bamba Tortilleria Cooks Up Fresh Tortillas, Local Jobs](#)." (Blog), December 2, 2010.
- Tri-State Food Expo, "[The Tradeshow for Tri-State Foodservice & Retail Professionals](#)." 2013.
- Trophy Nut, "[About Trophy Nut](#)." 2014.
- United States Bureau of Labor Statistics. "Table 1800. Region of residence: Annual expenditure means, shares, standard errors, and coefficient of variation, Consumer Expenditure Survey." 2012.
- United States Census Bureau, "[Advanced Monthly Sales for Retail and Food Services](#)." November 2013.
- United States Census Bureau. "[American FactFinder – Annual Population Estimates](#)." July 2013.
- United States Census Bureau, "[The 2012 Economic Census](#)." 2013.
- United States Department of Agriculture, "[Choose My Plate](#)." 2014.
- United States Department of Agriculture, "[Determining Product Eligibility for Purchase with SNAP Benefits](#)." January 26, 2010.
- United States Department of Agriculture, "[EBT Learn About SNAP Benefits at Farmers' Markets](#)." December 2013.
- United States Department of Agriculture. "[Farm Family Income](#)." September 2013.
- United States Department of Agriculture. "[Farmers Markets Search](#)." November 2014.
- United States Department of Agriculture. "Grains & Oilseeds Outlook." February 22, 2013.
- United States Department of Agriculture. "Regional Food Hub Resource Guide." April 2012.

Hundreds of secondary resources were reviewed as part of the asset inventory, market, and competitiveness analysis

Sources Consulted

United States Department of Agriculture, "[Retail Store Eligibility USDA Supplemental Nutrition Assistance Program.](#)" 2013.

United States Department of Agriculture, "[Rural Cooperatives: Growing a Cleveland Renaissance.](#)" November/December 2013.

United States Department of Agriculture, "[Supplemental Nutrition Assistance Program \(SNAP\) Eligible Food Items.](#)" March 2014.

United States Department of Agriculture, "[Supplemental Nutrition Assistance Program \(SNAP\) Electronic Benefits Transfer \(EBT\) Fact Sheet for New Retailers.](#)" July 2013.

United States Department of Agriculture, Agricultural Marketing Service. "World Agricultural Supply and Demand Estimates. WASDE – 523. November 8, 2013.

United States Department of Agriculture, Economic Research Service. "[Food Expenditure Data.](#)" Tables 1-4; 14-15; and 36. February 2014.

United States Department of Agriculture, Economic Research Service. "[Meat Price Spreads.](#)" May 2014.

United States Department of Agriculture, Economic Research Service, "[National School Lunch Program.](#)" July 23, 2013.

United States Department of Agriculture Economic Research Service. "[Price Spreads from Farm to Consumer.](#)" April 2014.

United States Department of Agriculture, Food and Nutrition Service, "[Data and Statistics.](#)" 2013.

United States Department of Energy, "[Advanced Manufacturing Office: Industrial Assessment Centers \(IACs\).](#)" February 8, 2013.

United States Department of Energy: Energy Efficiency and Renewable Energy, "[Building Technologies Program.](#)" 2014.

United States Department of Energy, "[Industrial Assessment Centers Database.](#)" April 26, 2012.

United States Department of Energy, "[Industrial Assessment Centers Field Manager: IAC Case Studies-Eaton Corporation.](#)" 2013.

United States Environmental Protection Agency, "[Permitting Practices for Co-digestion Anaerobic Digester Systems.](#)" 2013.

University of New Mexico Sustainability Studies, "[Local Food Festival and Field Day.](#)" October 13, 2013.

University of Purdue, "[Office of University Sustainability: Food Systems.](#)" 2013.

University of Toledo Urban Affairs Center. "Sustainability Family Style: Documenting the Lives of Growers, Gardeners, and Family Farmers in Northwest Ohio." July 2009.

University of Wisconsin, "[What Works for Health: Policies and Programs to Improve Wisconsin's Health.](#)" June 11, 2013.

Upland Brewing Company, "[Team Upland Sustainable Cycling.](#)" 2013.

US Food and Drug Administration, "[Guidance for Industry: A Food Labeling Guide.](#)" January 2013.

[USASpending.gov Website.](#) Accessed November 11, 2013.

Vanac, Mary. The Columbus Dispatch. "Colorado brewer New Belgium to roll Fat Tire, other craft beers into Ohio." November 6, 2013.

Vanac, Mary. The Columbus Dispatch. "Researchers have high hopes for hops grown in Ohio." June 23, 2013.

Vibrant NEO 2040. "[NEO Regional Assets.](#)" November 2013.

Victory Brewing Company, "[Victory for the Environment: Green Initiatives.](#)" 2013.

Washington Artisan Cheesemakers Festival, "[Washington Artisan Cheesemakers Festival.](#)" October 2013.

West Virginia Food and Farm Coalition, "[Local Food Expo gets 'Thumbs Up;'](#)" Huntington Buyer Grower Directory released." October 23, 2013.

West Side Market. "[Market Vendors.](#)" November 2013.

Hundreds of secondary resources were reviewed as part of the asset inventory, market, and competitiveness analysis

Sources Consulted

Western Montana Grower's Cooperative, "[About](#)." 2013.

Wholesome Wave, "[Double Value Coupon Program: The Double Value Coupon Program Provides Consumers With Incentives That Match The Value Of Their Federal Nutrition Benefits When Used To Purchase Fresh, Local Produce At Participating Farm-To-Retail Venues](#)." 2013.

Wholesome Wave, "[Maryland Hunger Solutions and Appalachian Sustainable Development win Wholesome Wave Partner Media Challenge](#)." April 2012.

Wright, Kevin. CraftBeer.com. "Getting a Boot in the Brewhouse Door." November 2012.

Wyatt, Sally Lyons. Symphony IRIGroup. "State of the Snack Industry." 2013.

In addition to sources listed here, thousands of company websites were reviewed as a part of vetting commercial organizations for inclusion in the asset inventory. It is impractical to list them all in this report, but they are included in the asset inventory database on file with the Cleveland-Cuyahoga County Food Policy Coalition.