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

Funding for this roadmap was provided by The Cleveland Foundation, The George Gund Foundation, and Saint Luke's Foundation

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Economic Insights for Strategy

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

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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]

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]

[1]Brookings Institution Metropolitan Policy Program, Clusters and Competitiveness: A New Federal Role for Stimulating Regional Economies, 2008
[2]The 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.
[3]Fund for Our Economic Future, Defining Northeast Ohio Cluster Opportunities in the Ag-Bioscience Sector, 2013

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 Group[1] 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

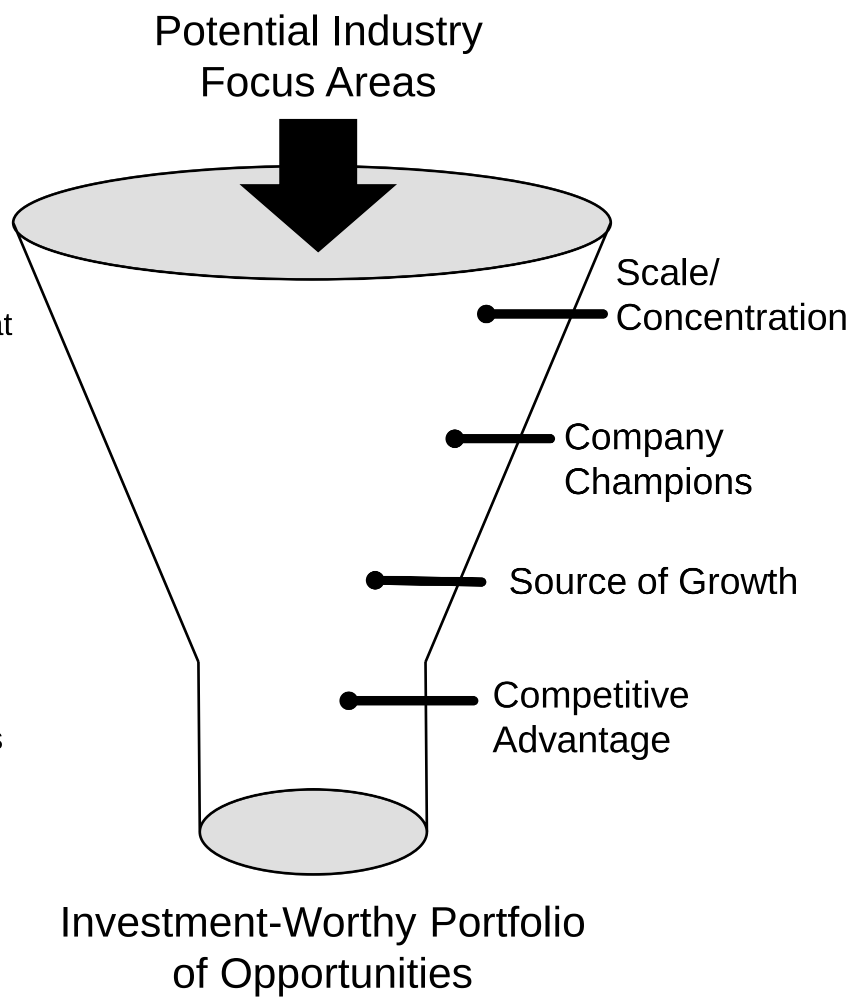
- Are companies within potential focus area willing to participate?
- **Needed:** at least one company within a focus area committed to participate

#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



[1]The 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 Findings[1]

- 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.

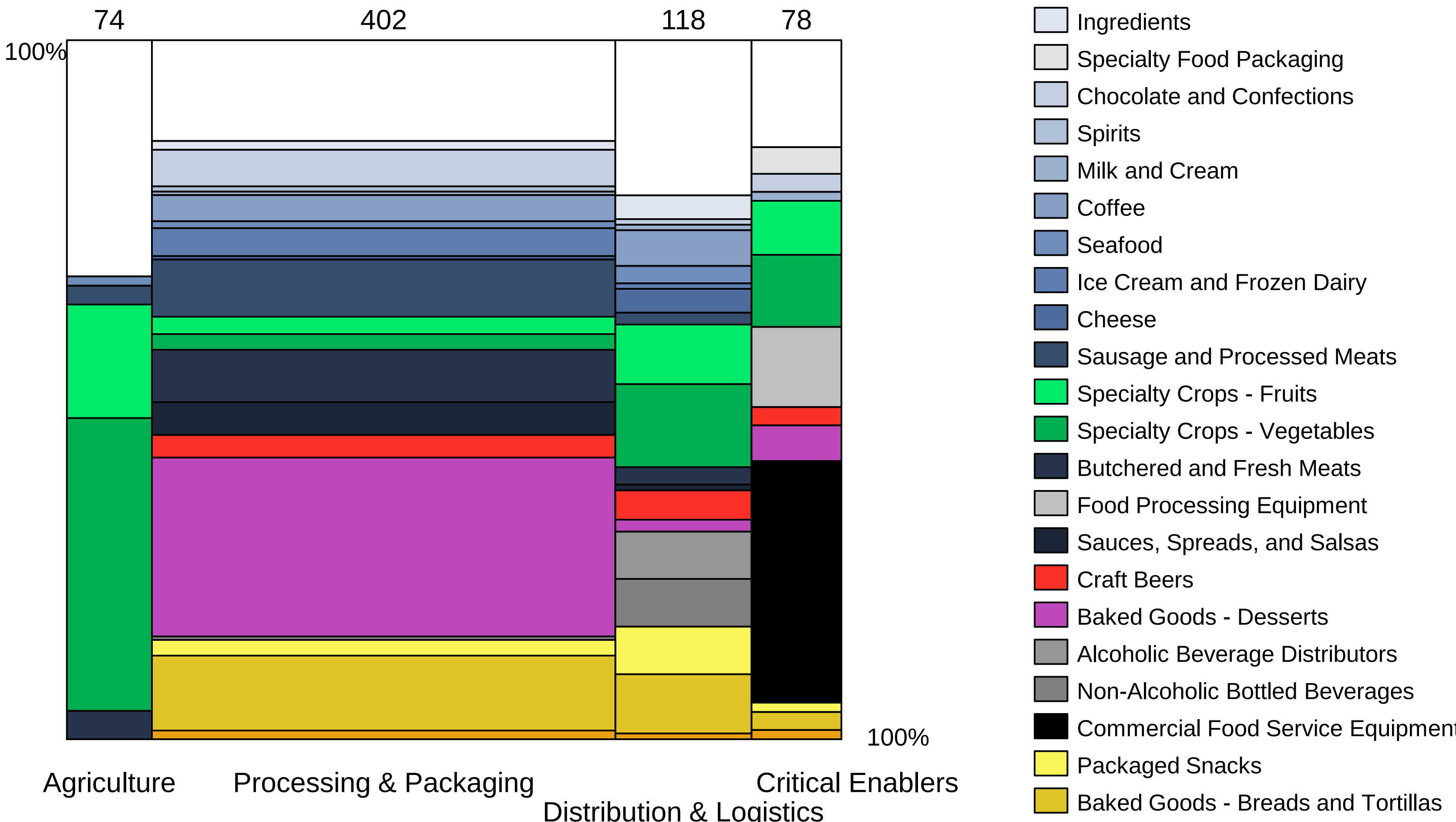
- These interventions represent job growth potential of 700-1,000 (close to 6% of the 17,000) within 5 years, and offer additional opportunities to improve the financial, environmental, and social sustainability of regional food businesses.

[1]The 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 Position[1]

100% = 670 Organizations[2] (~460 Unique)



NOTE: Retail Not Shown

[1]Industries 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
[2]Some organizations reflected in multiple categories

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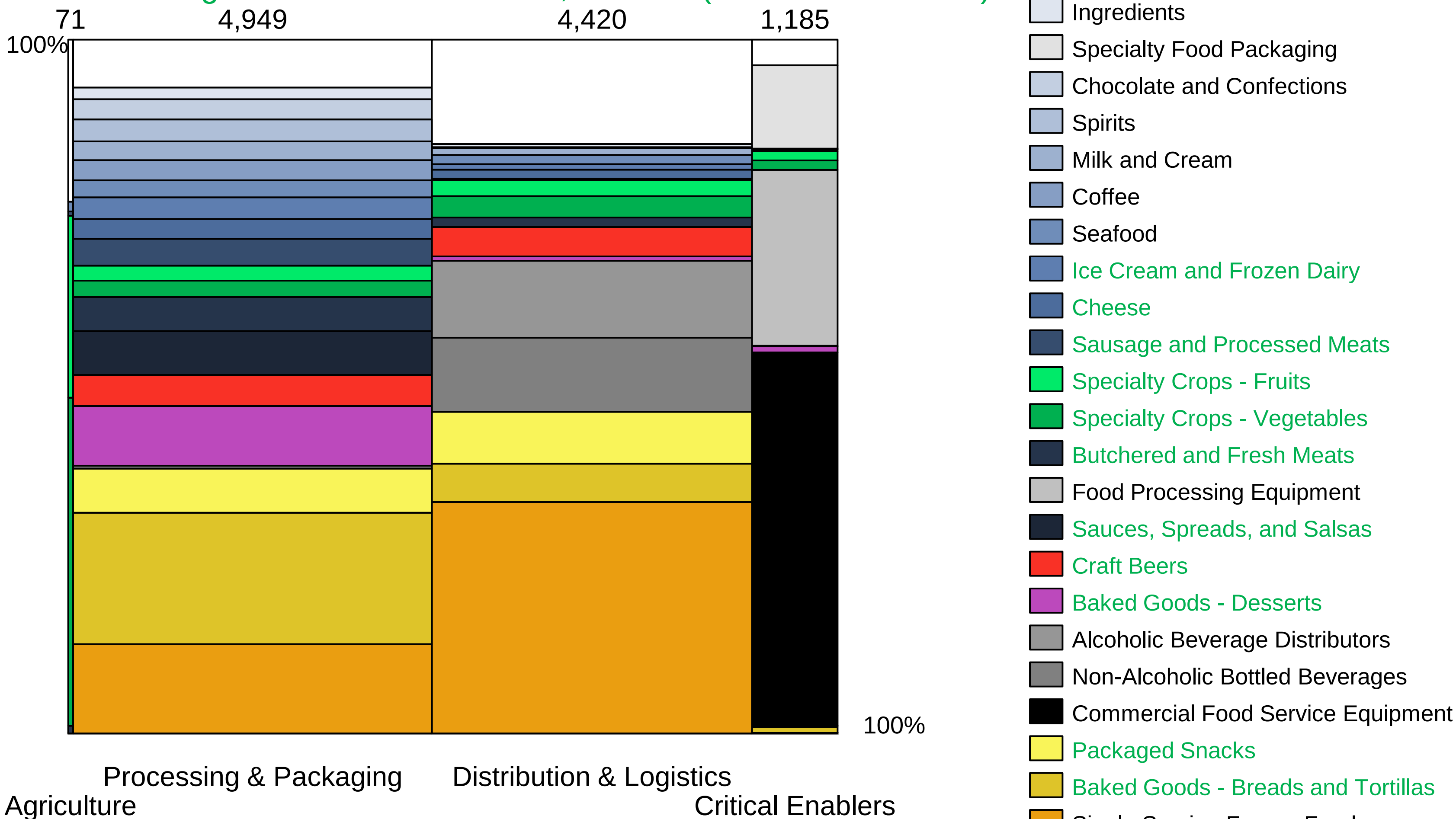
The largely urban county's commercial food employment is concentrated in processing, packaging, and distribution

Cuyahoga Employee Headcount by Industry and Value Chain Position[1]

100% = 10,600 FTE[2] (representing ~$1.3B in revenue)

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



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[2]If an organization participates in multiple categories, an estimated % of relevant employment is allocated to each

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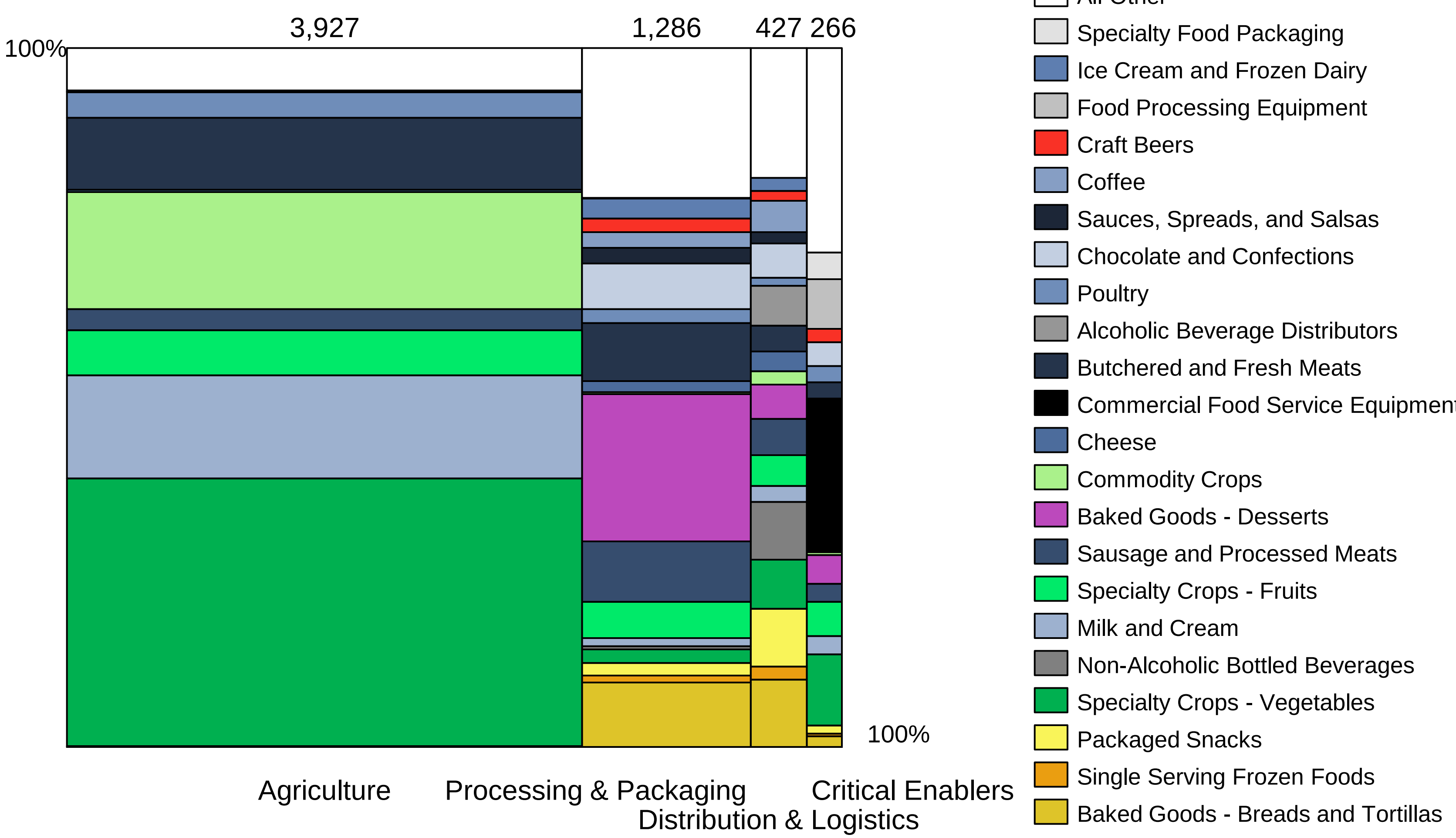
The broader region's 4,400 food suppliers include a more substantial agricultural base from which Cuyahoga can draw

Northeast Ohio[1] Organization Count By Industry and Value Chain Position[2]

100% = 5,910 Organizations[3] (~4,400 Unique)



NOTE: Retail Not Shown

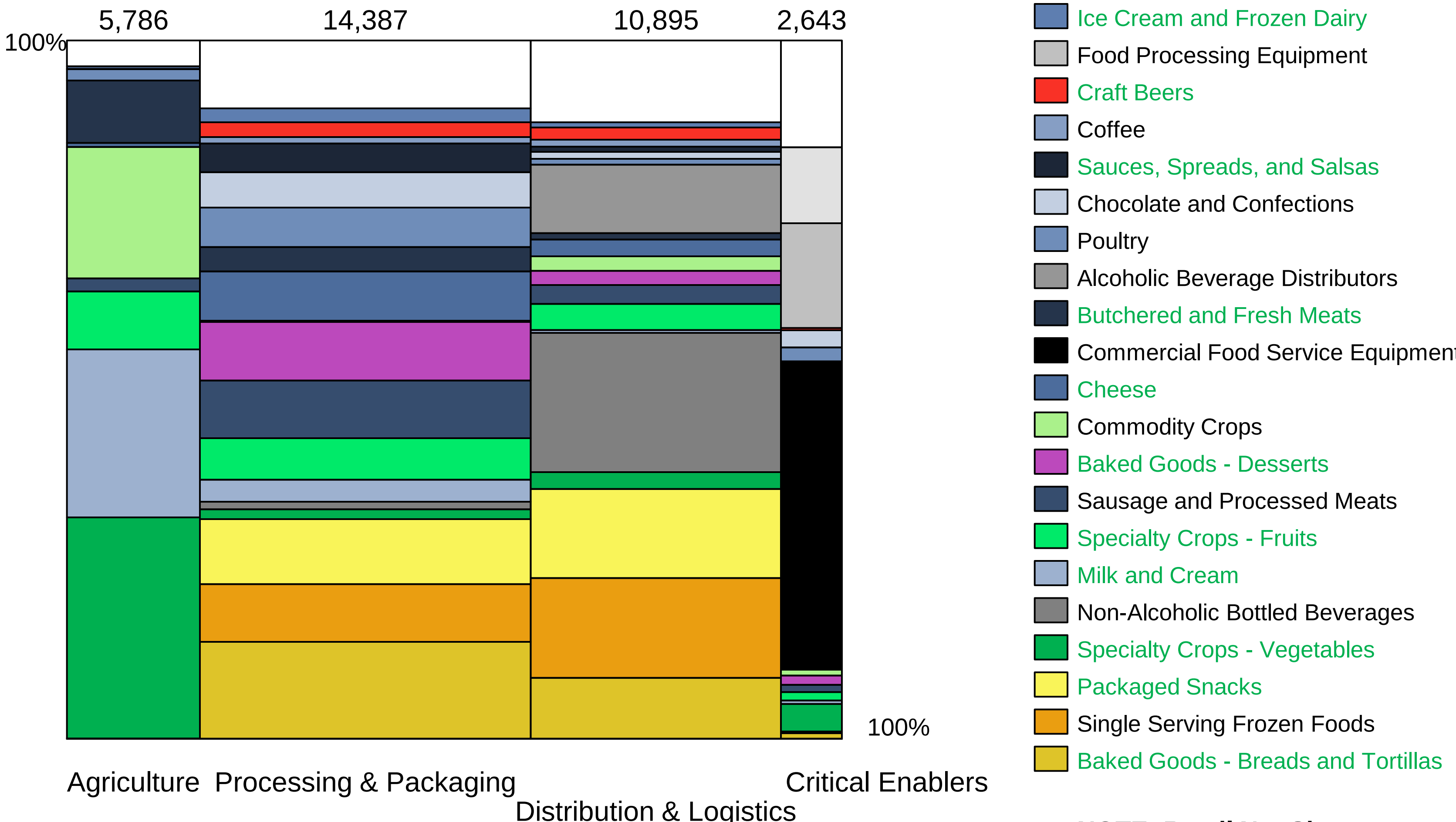
[1]16-county region including Ashland, Ashtabula, Carroll, Columbiana, Cuyahoga, Geauga, Lake, Lorain, Mahoning, Medina, Portage, Richland, Stark, Summit, Trumbull, and Wayne
[2]Industries illustrated include only those representing ≥1% of regional food sector employment; complete industry list, value chain definitions, and source list for this asset inventory included in the Appendix
[3]Some organizations reflected in multiple categories

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

Northeast Ohio[1] Employee Headcount by Industry and Value Chain Position[2]

100% = 33,711 FTE[3] (representing ~$4.3B revenue)

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



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

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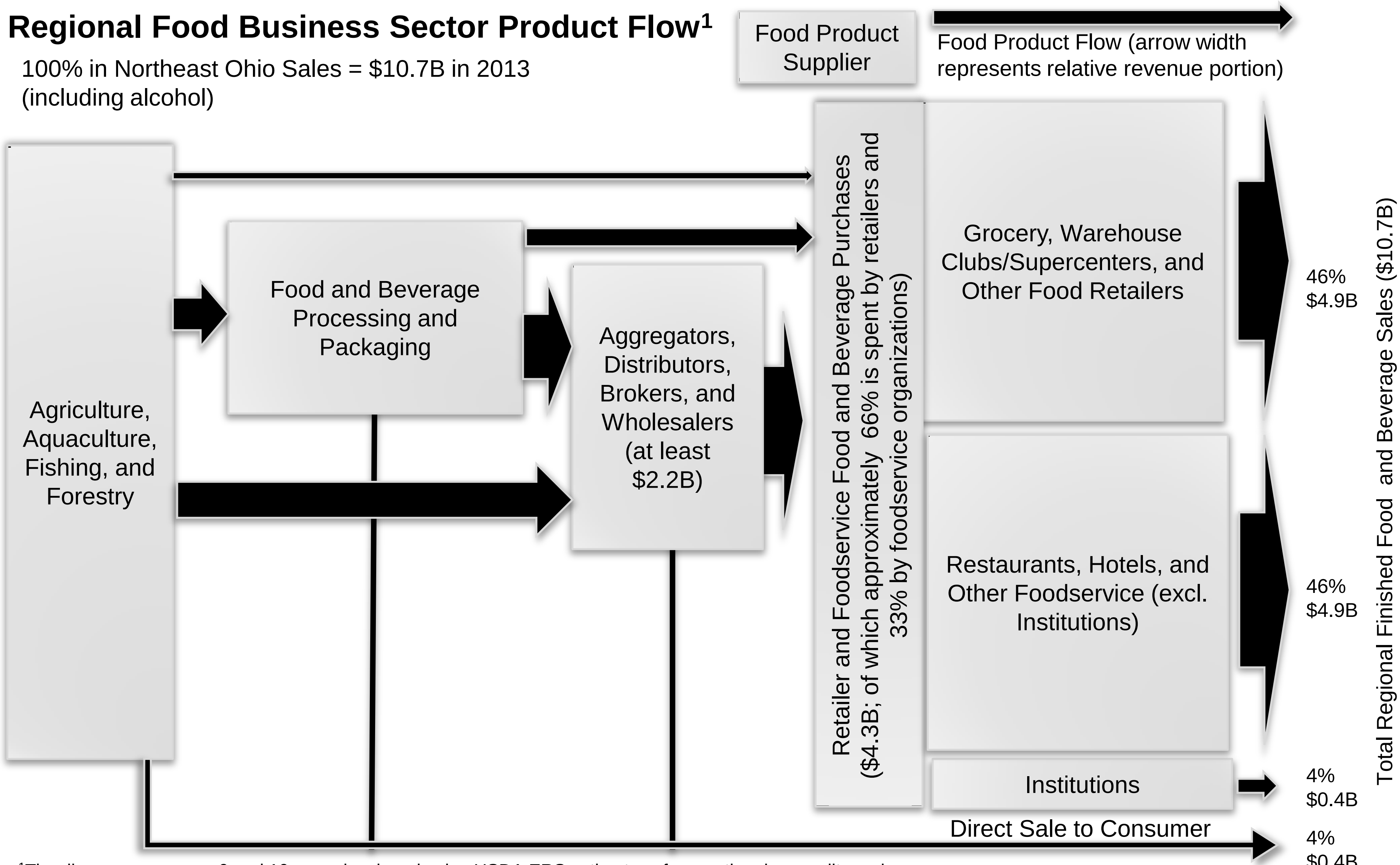
These products often move through wholesale aggregators, with final sales split evenly between foodservice and retail

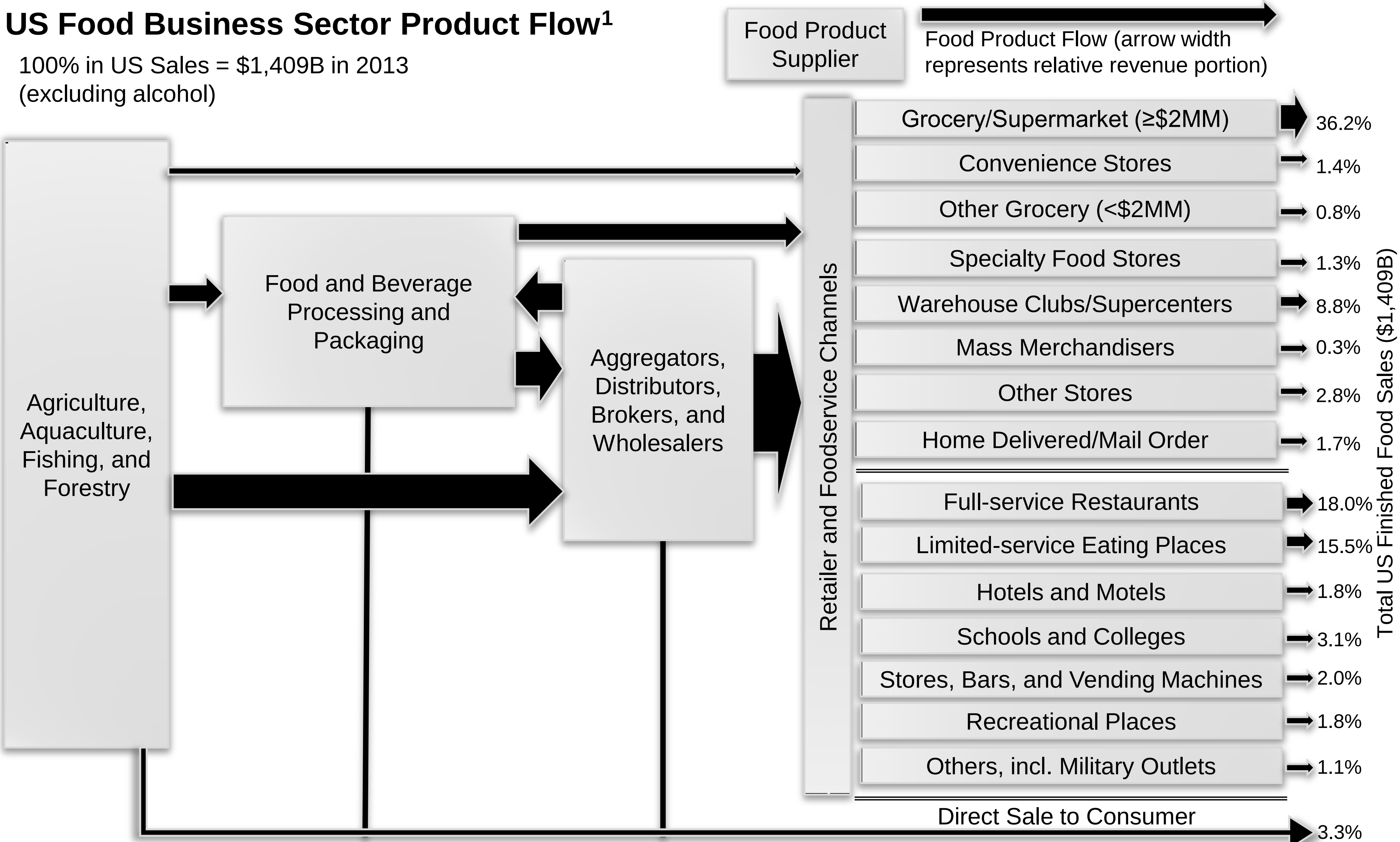


[1]The diagrams on pages 9 and 10 were developed using USDA ERS estimates of proportional expenditures in varying retail settings. The regional flow-out incorporates asset inventory findings, expert input, and regional Nielsen product data, as cited in the Appendix, and USDA ERS retail proportions have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

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

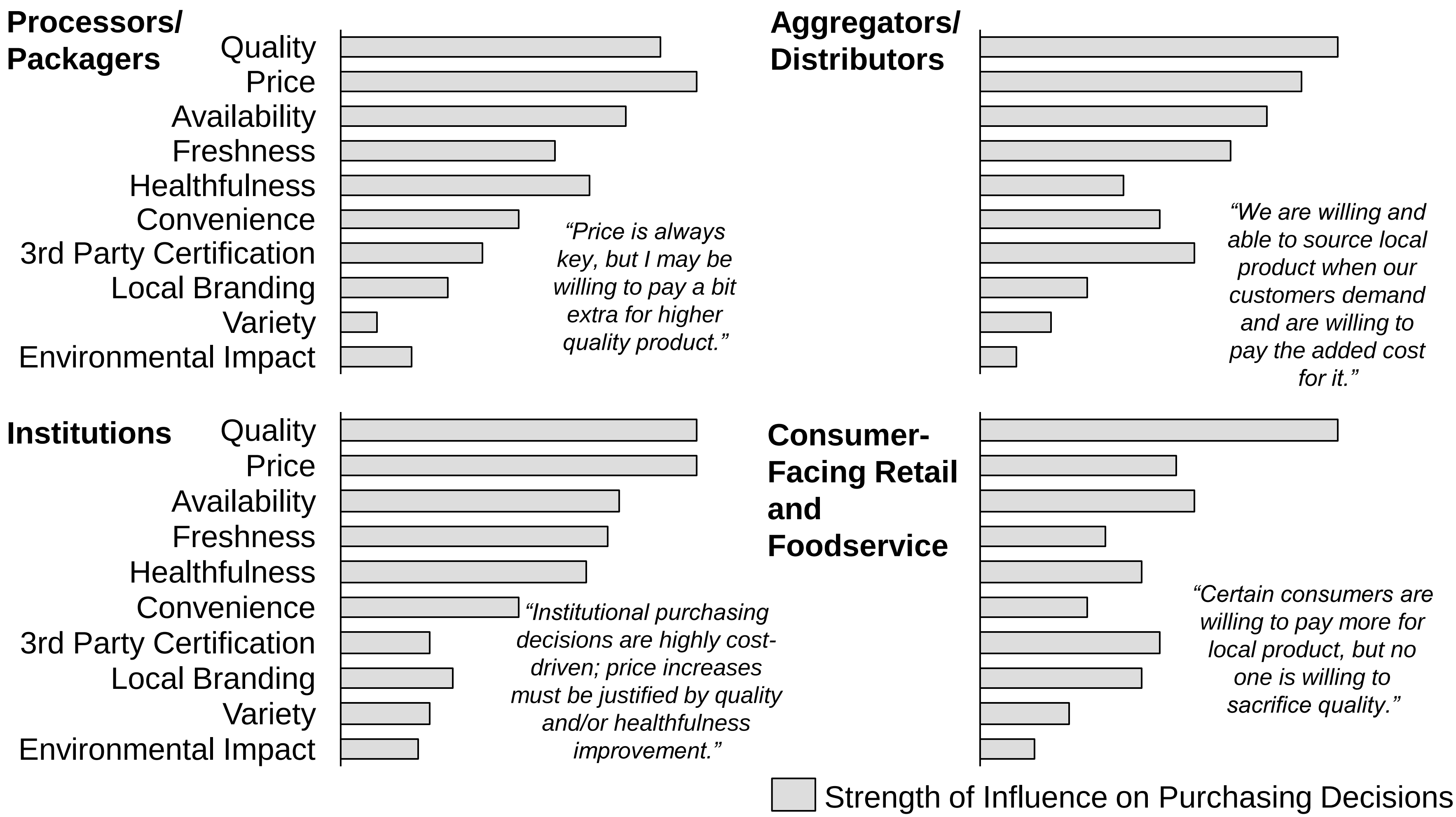


[1]The diagrams on pages 9 and 10 were developed using USDA ERS estimates of proportional expenditures in varying retail settings. Total U.S. food sales are from recently released 2013 historical food sales data, while the retail flow-out is based on 2012 data. The US flow-out excludes alcohol, allowing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



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

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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

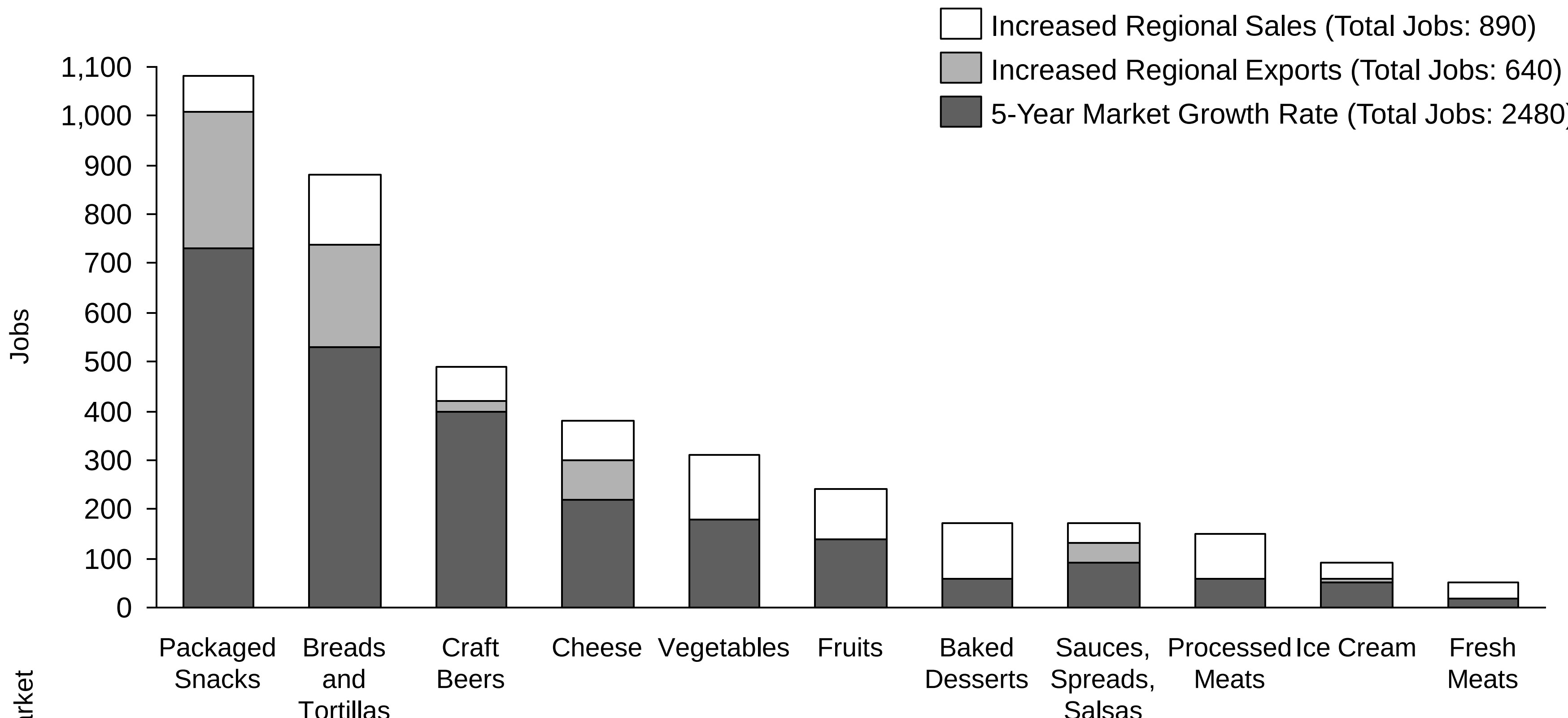
Industries Targeted for Intervention	Regional Employ-ment (FTE)	2013 Regional Market ($MM)	2018 Regional Market ($MM)	Current Regional Share[1] (%)	2013 Rest of US Market ($MM)[2]	2018 Rest of US Market ($MM)[2]	Current Rest of US Share (%)[3]	CAGR[4] 2013-2018 (%)	Average Produc-tion Wage in NEO ($)
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
[1]Range 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
[2]Certain industries were not evaluated for export given the likelihood of most regional suppliers focusing on a mostly regional market
[4]Compound 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 rates[1] and assumes 10% increases in regional and U.S. market shares (when applicable)[2],Total Potential Growth = 4,010 jobs



Current Market Share[3]	Packaged Snacks	Breads and Tortillas	Craft Beers	Cheese	Vegetables	Fruits	Baked Desserts	Sauces, Spreads, Salsas	Processed Meats	Ice Cream	Fresh Meats
NEO	8%	22%	34%[2]	13%	10%	12%	43%	7%	12%	15%	25%
Rest of US	0.6%	0.8%	1.0%	0.2%				0.1%		0.1%	

[1]MarketLine, IBISWorld, Brewers Association and Demeter Group reports, cited fully in Appendix
[2]For 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.
[3]Market 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

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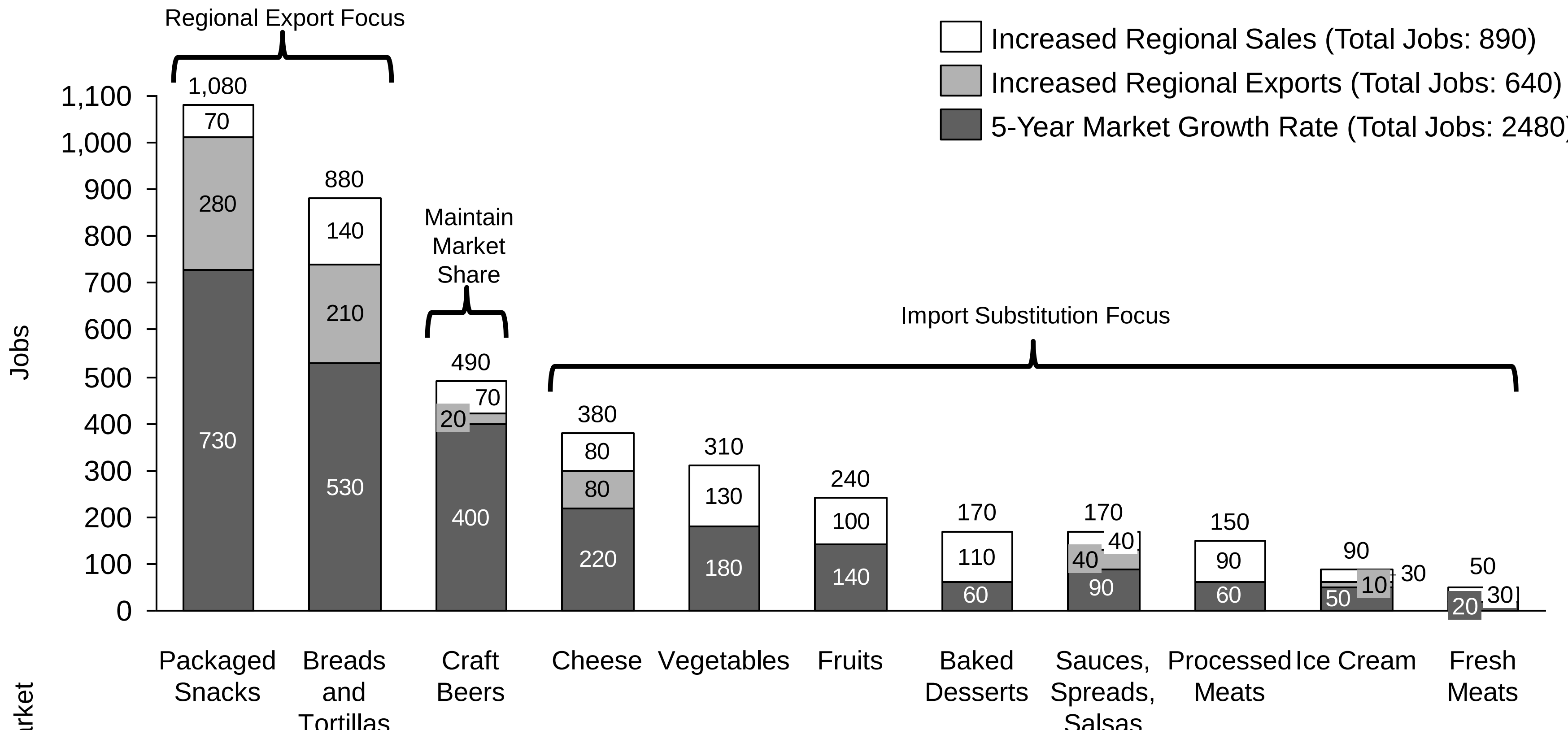

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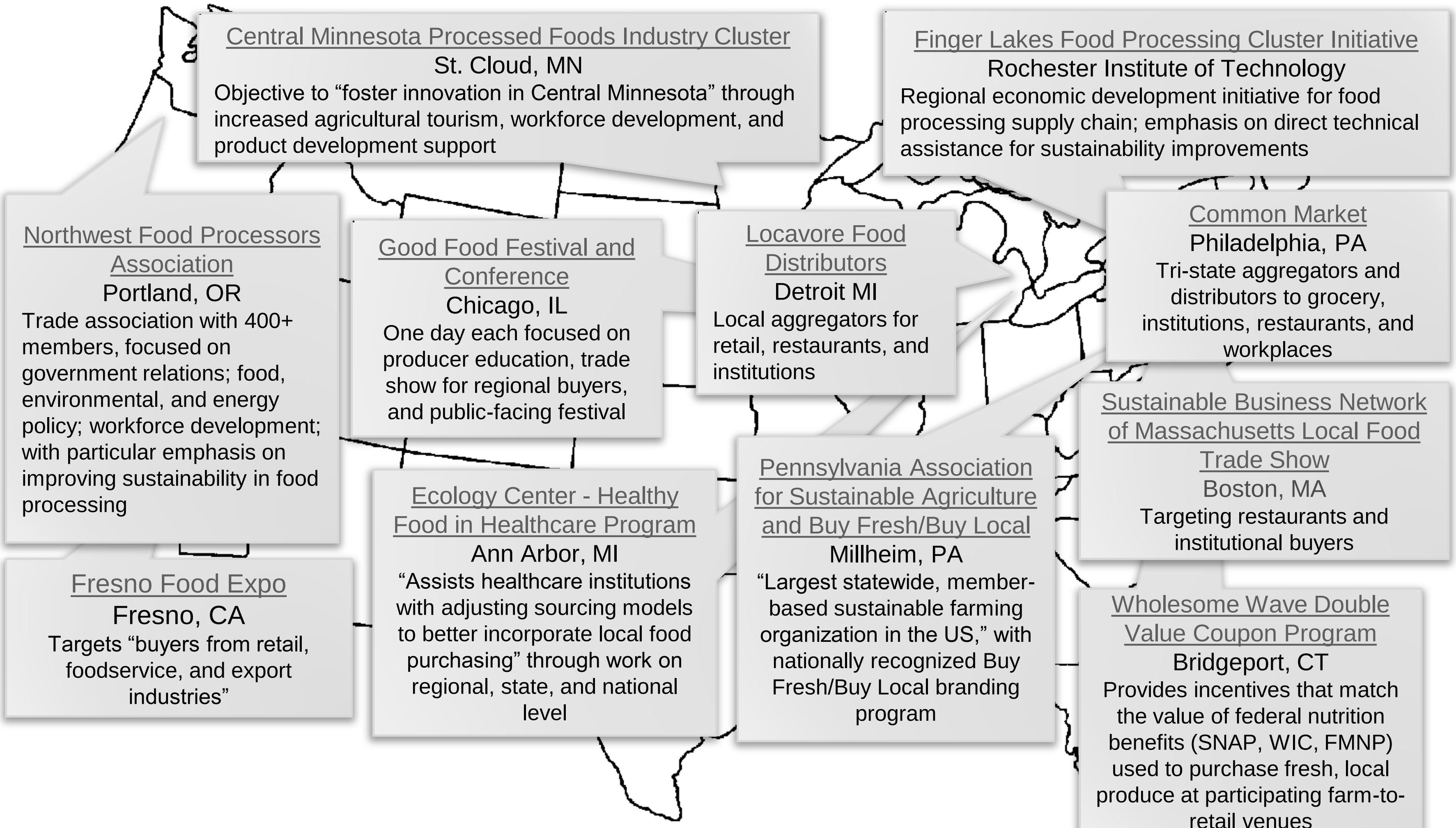
Other regions effectively support local food via sustainability clusters, trade shows, aggregators, and consumer education

Example Regional Best Practices Reviewed for Relevance to Northeast Ohio[1]



[1]Example 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

Regional Asset Concentration[1]

- Frozen foods
- Breads & tortillas
- Packaged snacks
- Baked desserts
- Craft beers
- Sauces, spreads, & salsas
- Fresh meats
- Vegetables
- Fruits
- Processed meats
- Cheese
- Ice cream
- Milk & cream

Market Opportunities[2]	Ways to Boost Regional Competitiveness[3]
Northeast Ohio Market Import Substitution ➢ Opportunity to support small- and mid-sized regional producers ➢ Consumer interest in "healthy" offerings ➢ Product-neutral; can leverage any product made in Northeast Ohio	➢ Establish regional trade show and match-maker ➢ Expand local nutrition access programs ➢ Support craft beer and cheese industry associations
Regional Exports to Rest of US Market ➢ Frozen foods, including breads & tortillas ➢ Craft beers ➢ Specialty & artisan cheese	➢ Assess frozen food intermodal facility feasibility ➢ Support craft beer and cheese industry associations ➢ Reduce production workforce turnover
Regional Sustainability ➢ Pre- & post-consumer food waste recovery ➢ Energy efficiency	➢ Partner with anaerobic digestion technology cluster ➢ Promote financing for efficiency upgrades

[1]Asset 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
[2]Based on projected US market and associated regional job growth from protecting or capturing market share
[3]Opportunities 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 years[1]; plus any reduced costs which may attributable to local sourcing and efficiency measures[2]

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

[1]Based on average productivity of $128,000 per FTE, as calculated from 2013 regional job and revenue data
[2]These 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 show[1] 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

[1]Explore 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 partnerships[1] and legislative advocates position the region well to receive federal Farm Bill funding[2] 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(sand 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

[1]See Wholesome Wave and OSU Extension – Cuyahoga County for existing program information
[2]See 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 emissions[1], 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

[1]NRDC 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

[1]Statement 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-$6,000[1] 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.

[1]Based 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	Invest-ment 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		✓	
Expanded Nutrition Access Programs	Import Substitution; Sustainability	$0.5MM	5	Minimal	✓	✓	✓
Anaerobic Digestion Partnership	Sustainability	$6MM	7	20-30	✓	✓	✓
Frozen Food Intermodal Feasibility Study	Export	$0.25MM (study) $MMs (facility)	<2 (study) TBD (facility)	N/A (study) 500-600 (facility)	✓	✓	
Ohio Cheese Guild	Import Substitution; Export	TBD	TBD	100-200	?	?	?
Ohio Craft Brewers Association	Import Substitution; Export	TBD	TBD	300	?	?	?
Energy Efficiency Referrals	Sustainability				✓	✓	
Workforce Development Referrals	Sustainability				✓		✓

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)

Phase I

- Step 1: Prepare for Launch
- Step 2: Define the Industries and Segments at Play
- Step 3: Develop an Asset Inventory

Review Asset Inventory Findings with Advisory Committee[1] and Convene Working Group[2]

Phase II

- Step 4a: Analyze Local Market Demand for Import Substitution
- Step 4b: Assess Export Demand Potential
- Step 4c: Assess Opportunities for Technology Development Within the Region
- Step 5: Assess the Region's Competitiveness

Review Market and Competitive Assessments with Working Group and Advisory Committee to Narrow Target Industries

Phase III

- Step 6: Establish Recommendations and a Plan for Action
- Step 7: Syndicate Findings and Finalize Roadmap

Convene Final Working Group Meeting to Establish and Prioritize Targeted Interventions; Vet with Additional Regional Stakeholders and Advisory Committee, and Syndicate Roadmap

[1]List of participants on page 36
[2]List 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
Agricultural Inputs
Alcoholic Beverage Distributors
Baked Goods - Breads and Tortillas
Baked Goods – Desserts
Baked Goods – Donuts
Baked Goods – Pierogi
Baked Goods – Unclassified
Butchered and Cut Meats
Cheese
Chocolate and Confections
Coffee
Commercial Food Service Equipment
Commodity Crops
Craft Beers
Eggs
Food Processing Equipment
Food Safety/Testing Equipment
Food Service Distributor/Wholesale
Granola Snacks and Health Bars
Honey
Ice Cream and Frozen Dairy
Ingredients
Maple Syrup
Milk and Other Dairy
Mushrooms
Neutraceuticals
Non-Alcoholic Bottled Beverages
Pastas
Poultry
Salty Snacks
Sauces, Spreads, and Salsas
Sausage and Processed Meats
Seafood
Single Serving Frozen Foods
Single Serving Refrigerated Foods
Soups, Salads, and Sides
Specialty Crops - Fruits
Specialty Crops - Garlic and Herbs
Specialty Crops - Grains
Specialty Crops - Vegetables
Specialty Food Packaging
Specialty Transport and Storage
Spirits
Teas
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
Ag-Bio Industry Cluster Leadership Council
Ag-Link Agricultural Linked Deposit Program (Ag-LINK)
Agricultural Technical Institute
Bainbridge Area Food For Friends
Beginning Entrepreneurs in Agricultural Networks (BEAN)
Bread of Life Food Pantry
Bridgeport Café & CornUcopia Community Kitchen
Case Western Reserve University - Cleveland Corner Store
Chef 2 Chef Foods
City of Cleveland Mayor's Office of Sustainability
City of Cleveland Planning Department
City of Macedonia Parks & Recreation
City Rising Farms (Hough)
Cleveland Clinic
Cleveland Culinary Launch and Kitchen
Cleveland Department of Public Health
Cleveland Foodbank
CMHA Refugee Response Program
Cleveland State Northeast Ohio Regional Food Congress
Cleveland Urban Agriculture Incubator Pilot Project
Cleveland Urban Design Collaborative
Cleveland-Cuyahoga County Food Policy Coalition
Common Wealth Farmer's Market
Countryside Conservancy
Crown Point Ecology Center
Cuyahoga Community College
Cuyahoga County Board of Health
Cuyahoga County Health and Land-Use Initiative
Cuyahoga County Land Bank
Cuyahoga Valley National Park Association
Double Harvest, Inc.
Eden Project, The
Edible Schoolyard
EDWINS Leadership & Restaurant Inst.
Farm Bureau
Farm Link Program
FDA
Flying High
Future Farmers of America
Galleria Gardens Under Glass
Gardening for Greenbacks
Gather 'round Farm
Gennesareth II Orchard
Goodness Grows
Grow Youngstown
Growhio
Highhopeshightunnels
Hummingbird Project, The
IBH Garden CSA
Innovative Farmers of Ohio
Intergenerational School
Jim Fry
John Hay HS Fresh Food Collaborative
Kelvin Egner
Kent State Cleveland Urban Design Ctr
Kiwanis Food Pantry
Lakewood Earth and Food Community
LAND Studio
Lorain County Community College
Mahoning Valley Organizing Collab
MetroHealth
Neighborhood Progress Inc.
NEO Food Tours
New Agrarian Center
North Union Farmers Market
Oberlin Project, The
Oberlin Student Cooperative Association
Ohio Agricultural Research and Dev't Center
Ohio City Near West Development Corp
Ohio Dept of Ag - Office of Sustainable Ag
Ohio Ecological Food and Farm Association
Ohio Food Policy Advisory Council
Ohio Proud
Ohio State University Extension Agencies
Ohio Wine Producers Association
Old Hushers Farm
Prevention Res Ctr for Healthy Neighborhoods
Rising Harvest Farms
Sharon Glaspie
Slow Food Northern Ohio
Small Farm Institute
STEM Program in Cleveland
Steps to a Healthier Cleveland
StrawVille
Sustainable Street Food Pilot Program
Terra Local, LLC
University Hospitals
USDA
Watterson-Lake School garden
West Side Market, The
Wooster College
Youngstown Neighborhood Development Corp
4H

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 Morgan Bulger, Research Associate	OSU Extension – Cuyahoga County and Cleveland-Cuyahoga County Food Policy Coalition
	Jenita McGowan, Chief of Sustainability Cathi Lehn, Sustainable Cleveland Coordinator Joanne Neugebauer, Sustainable Cleveland Assistant	City of Cleveland Mayor's Office of Sustainability
	Dan Milo, Food Safety Supervisor	Ohio Department of Agriculture

Bush Consulting Group
Economic Insights for Strategy

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 Nick Orlando, Jr., VP Sales and Marketing	Orlando Baking Company
	Sam McNulty, Founder Andrew Tveekram, Brewmaster	Market Garden Brewing Co., et al.
	Matt Chappel, Brewmaster and Owner	Indigo Imp Brewery
	Joel Warger, Brewer	Great Lakes Brewing Company
	Scott Hamilton, VP Manufacturing and Plant Operations	King Nut
	Jean Mackenzie, Founder and President	Mackenzie Creamery (and Ohio Cheese Guild)
Specialty Logistics and Aggregation	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 Chad Fleischer, Director of Contracting and Strategic Sourcing Matthew Pietro, Sustainability Specialist	University Hospitals
	Jon Utech, Sr. Director, Office for a Healthy Environment	The Cleveland Clinic
	Jill McCarthy, Coordinator of Mission and Purpose John Kucinski, Store Team Leader, Chagrin	Whole Foods
	Rich Connolly, District Manager	Sodexo
Regional Economic Development	Eric Diamond, VP Cleveland Market Emily Sullivan, Operations Coordinator Cleveland Market	Economic Community Development Institute
	Mary Martineau, Executive Director	Ohio Craft Brewers Association
	Brian Snyder, Executive Director	Pennsylvania Association for Sustainable Agriculture
	David Reines, Executive Director Anthony Fluellen, Business Services Manager	OhioMeansJobs Cleveland-Cuyahoga (formerly known as Employment Connection)
	Jay Foran, SVP Business Attraction Christine Nelson, VP Regional Business Development Bernardine van Kessel, Director, Int'l Business Attraction Michael Lalich, Associate, Research	TeamNEO
	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

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