



Food Cluster: A Strategy for Job Growth in North Minneapolis

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Recommendations Summary

To spur job growth in North:

1. Develop a North Minneapolis food cluster
2. Find a high production, commercial urban ag. business to anchor the food cluster
3. Find smaller urban farming businesses to serve middle market needs



"Welcome to North Minneapolis"
Charles Caldwell

Agenda

- What is a Food Cluster?
- Building a Minneapolis Food Cluster
- Exploring Urban Production
- Anchoring a Food Cluster
- Secondary Food Cluster Businesses
- Recommendations



Business Clusters Drive Economic Growth

- **Business Cluster:** a geographic concentration of interconnected businesses, suppliers, and associated institutions
 - Opens new sources of innovation and development
 - Draws attention to the region from larger audiences
 - Curbs delocalization by centralizing production components
- A business cluster can create many new jobs while simultaneously addressing market needs

Economic Benefits of Food Clusters



Reduces energy use



Saves farmers money



Creates jobs

Cities/regions with successful food clusters

- Boston
- New York Finger Lakes Region
- Chicago
- North Carolina – AgriVentures

Food Clusters' Unique Value

Urban agriculture food clusters offer unique value:

- Food production not limited by seasonality
- Improved access to distribution and markets
- Create a job generating business ecosystem

Secondary benefits

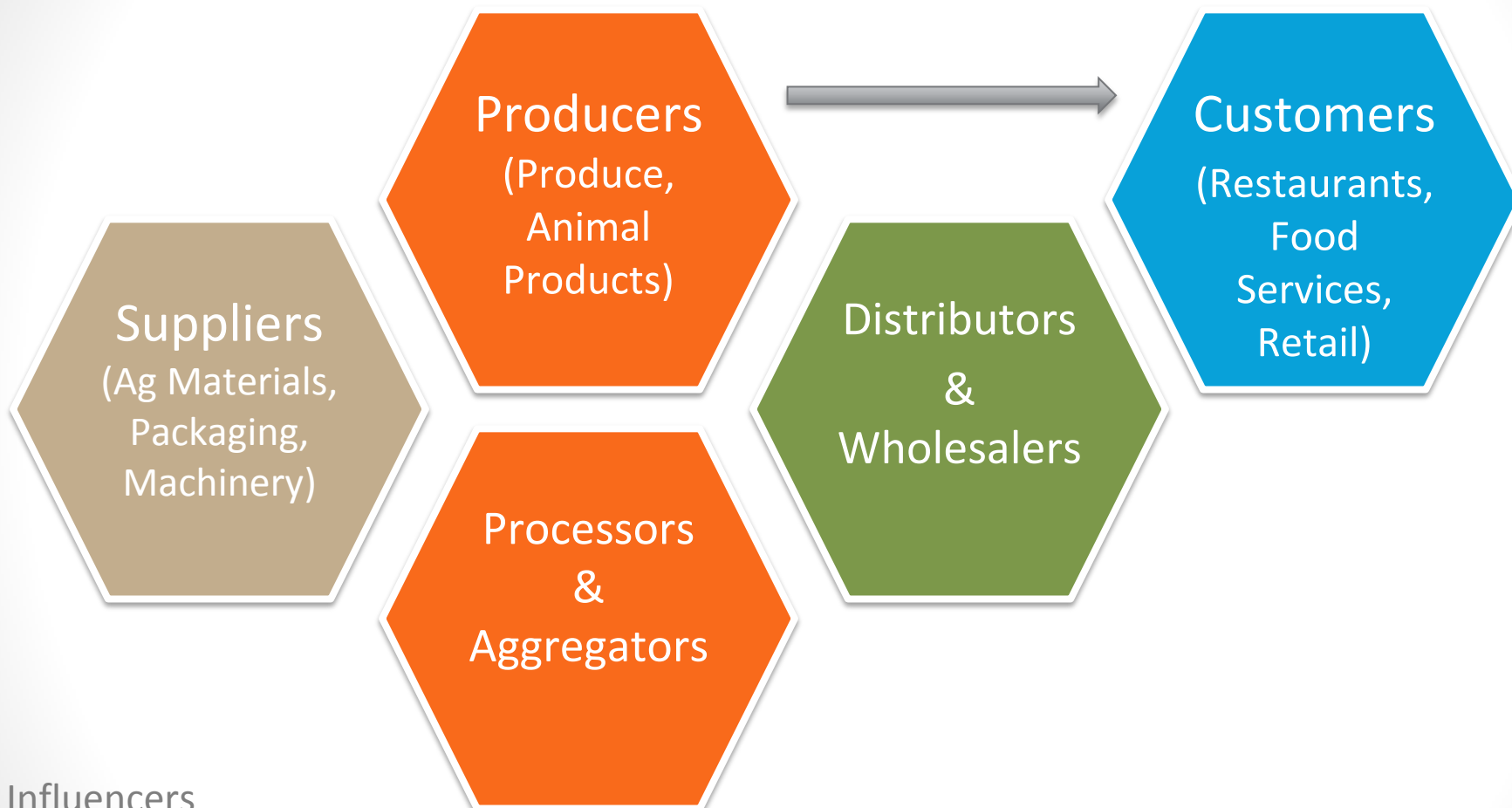
- Social: can improve access to fresh, healthy food
- Economic: can increase property values

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Components of a Food Cluster



Influencers

Government
(Subsidy Programs, Regulations)

Advocates
(Food Access and Ag Nonprofits)

Social Trends

Minneapolis Has Many Pieces in Place

Processors



Distributors



Retailers



Important Food Cluster Influencers

Government



Advocates

The St. Paul
Growers Association

Homegrown Minn.



Trends

Health conscious
communities

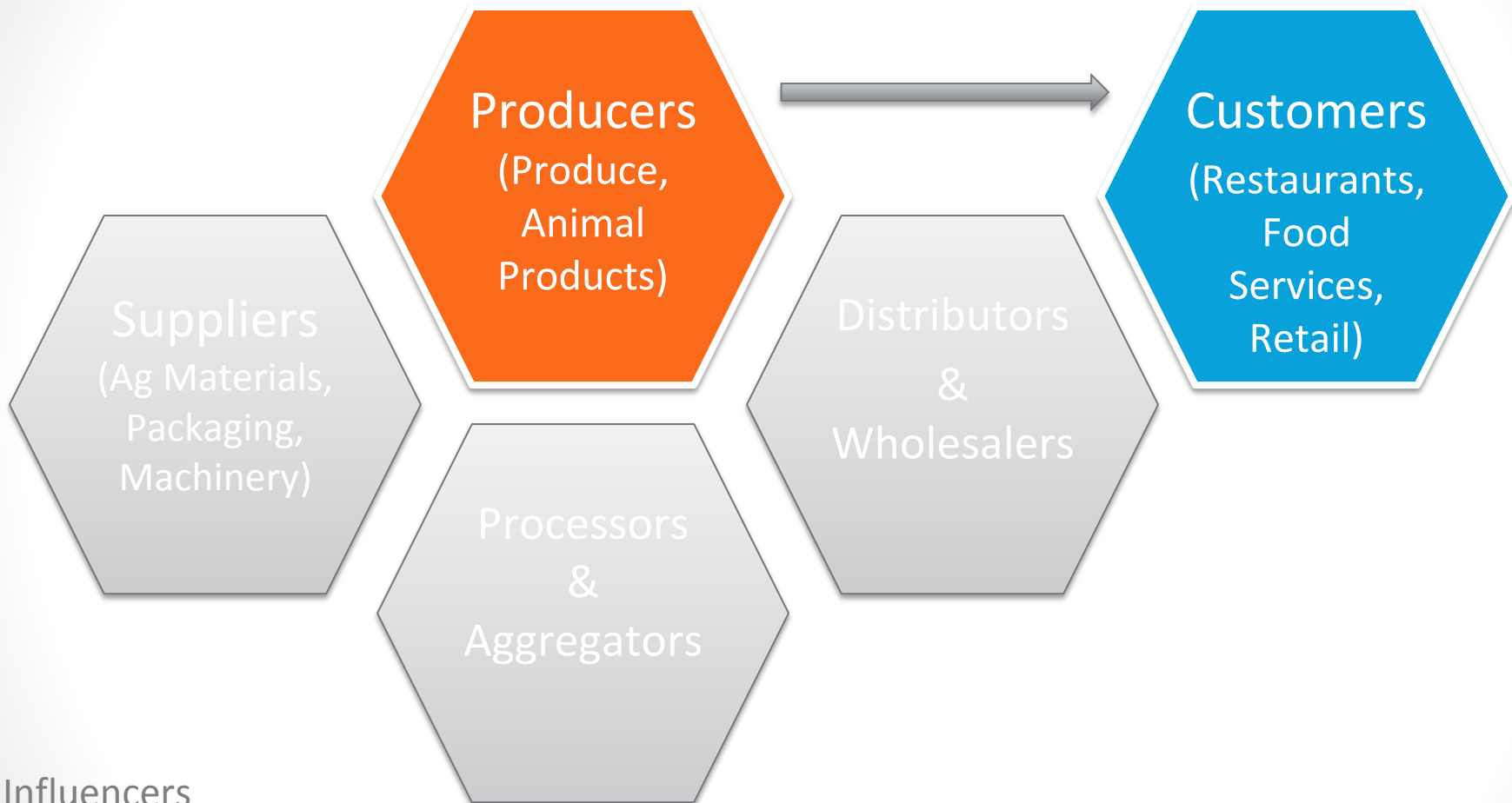
Increased consumer
interest in local and
organic food

Growth of organic
food retail options:
Kowalski's, Seward
and Wedge co-ops,
etc.

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Building a Food Cluster: Getting Started



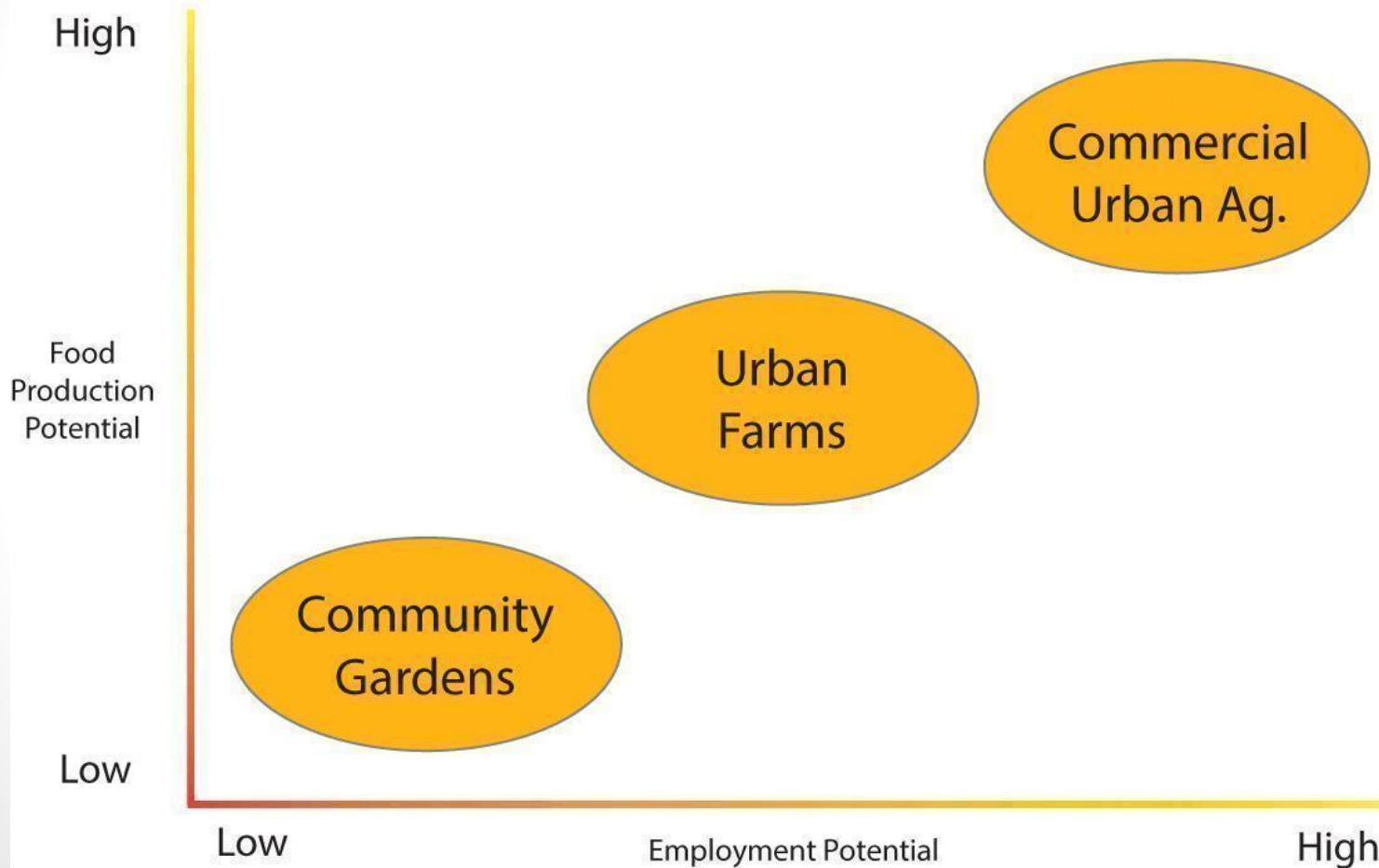
Influencers

Government
(Subsidy Programs,
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Social Trends

Types of Urban Producers



Benefits of Commercial Urban Agriculture



-  Capable of meeting large demand
-  Unaffected by seasons
-  Can grow variety of produce

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Food Cluster Anchor Business

Commercial urban agriculture operations are key anchor businesses

- High volume production potential
- Able to meet needs of large institutional customers
- Greatest low-skill employment potential

Examples

- Hydroponics, aeroponics businesses






Hydroponics



Aeroponics

Anchor Food Cluster with Aeroponics Business



-  Requires low-skill labor
-  Faster production cycle
-  Reduced material & energy costs

Aeroponics Fulfills Market Opportunity

Key benefits of aeroponics

- Far more efficient production (200 – 1 ratio for production compared to traditional farming)
- Able to compete on price
- On-demand farming: traditional crop rotation and seasonality constraints do not apply

Large market opportunity for aeroponics products

Leafy greens & fresh herbs

- Production of 60,000 lbs per month = 1% of MN Market

Flowers

- The majority of flowers are imported into MN
- High volume local production = competitive advantage

Market Opportunity for Aeroponics

Real

- Interviews indicate significant demand for aeroponics products
- Decades of research and development prove aeroponics to be a viable production process

Win

- Aeroponics has superior engineering and logistical capabilities
- Products offer a significant advantage over traditional produce
 - “On-Demand Farming”
- Distribution capacity needs to be tackled early on though

Worth

- Has high job growth potential
- Aeroponics presents opportunities for long-term partnerships and growth
- Forecasted returns are much higher than the costs associated with production

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Strengthen Food Cluster Ecosystem by Promoting Urban Farming

Aeroponic Production

- High Volume Customers
- High Profit Potential

Urban Farming Production

- Low to Mid Volume Customers
- High Community Impact

Aeroponics can smooth out seasonality of Urban Farming production

Urban Farming can leverage community relationships & expand Aeroponic's local impact and image

Promote Urban Farms to Expand Community Impact

- Grow on small, outdoor urban lots
- Seasonal production
- Small & Mid-Size Customers (Farmer's markets; Restaurants, CSA)
- Revitalizes vacant lots
- Community Facing; Strong Local Connections



Urban Farming Example

Stone's Throw Farm

- Network of urban farms in Minneapolis and St. Paul
- Farming collective is able to provide a steady supply of seasonal produce
- Farm 16+ formerly vacant lots in South MPLS & Frogtown neighborhood
- Strong Reputation
- Named “2013 Best Urban Farm” (Twin Cities’ City Pages)



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Recommendations



Jump start the development of a local food cluster by supporting the relocation of an Aeroponics company to North Minneapolis



Maximize community impact by encouraging Urban Farming organizations, such as Stone Throw Urban Farms, to expand into North Minneapolis



Additional Considerations

Use less traditional distribution channels to differentiate oneself

- **Mobile Markets: Focus sales in Food Desert locations**
 - Proof of Concept in Nashville
 - Low overhead; Low cost; Low-skilled labor
 - EBT Payment Options align with Consumers Needs
- **Farm-to-Nonprofits (Open Arms of MN)**

Create Northside Food Hub

- One central hub where customers can source produce
- Helps control producers' customer portfolio mix to reduce risk
 - Balance large customers & small customers
- Facilitates community support & relations
- Proactively attracts businesses to North Minneapolis



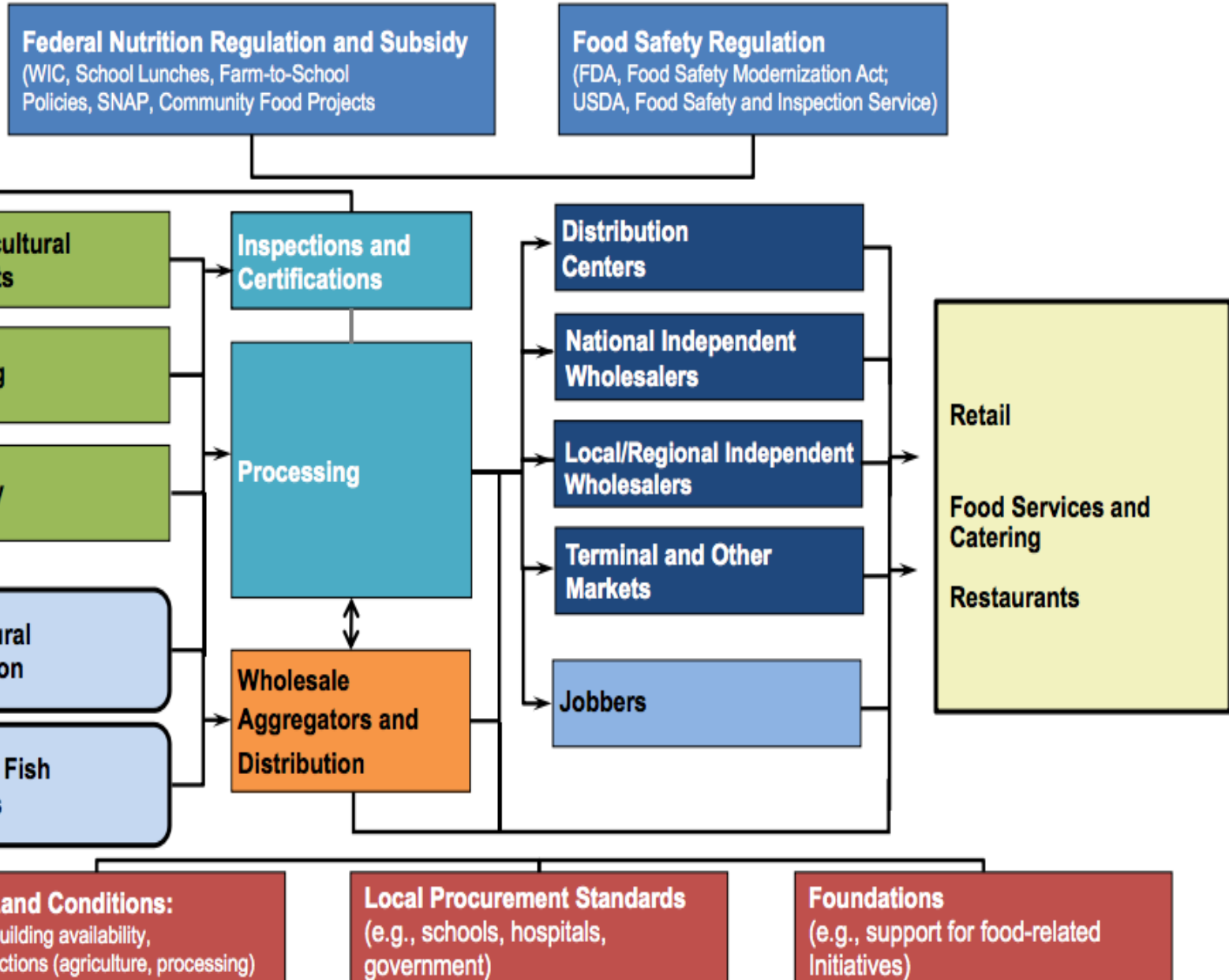


Questions?



Appendix

What is a Cluster?: Example of the Food Cluster



Best Practices from Other Clusters

- **The Finger Lakes Food Processing Cluster, a model providing learning on logistical aspects for the food cluster:** The food processing cluster of Finger Lakes supports close to 14 thousand jobs and has 730 establishments. Its size is definitely huge compared to the plans in North Minneapolis but the learnings are important to see how it is managing the cluster actors. This cluster comprise of different actors ranging from farm to fork. These include farms, food processors, packaging and equipment manufacturers, waste to energy providers, distributors, and retail outlets. There is a long history of agribusiness and enough supply of skilled manpower. There is a huge surplus of water and producers do not face any kind of water rationing. The cost of land is also among the lowest in the nation. The region also has strong emphasis on education which helps in development of human resource. Further the Genesee Valley Agri-Business Park, a 202-acre industrial park in Batavia, NY, is located close that has a major infrastructure for food and beverage companies. Some of the major food processors/distributors located in Finger Lakes region include Frito-Lay, Kraft, Mott's among others.

Lessons for North Minneapolis:

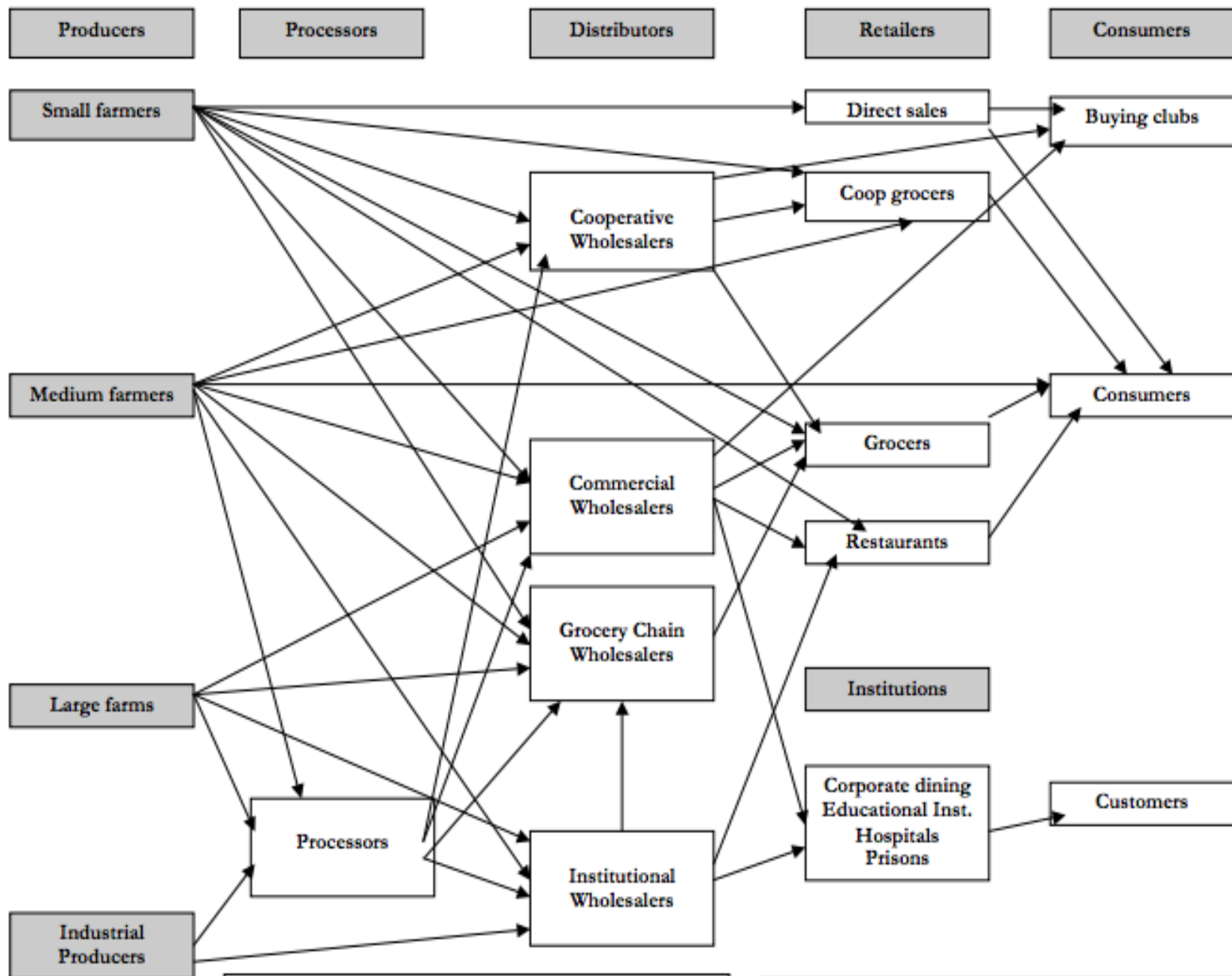
1. Check water availability and match with the company's requirement?
2. Find some ready buyers and get data on how much capacity do they have?

Examples of Successful Food Clusters

- Boston
- Finger Lakes Region
- Chicago
- North Carolina – AgriVentures
- European Food Cluster Initiative



Value Structures in Minnesota's Food Industry



by Ken Meter, Crossroads Resource Center, October 2008

Representative transactions only — not all are shown

Food Processing (Processors)

- General Mills
- Green Giant
- Del Monte
- Lakeside
- SnoPac

Food Distribution (Distributors)



CO-OP PARTNERS
WAREHOUSE



Food Manufacturers (Industrial Producers)

- Albertsons
- American Fish and Seafood
- Aramark
- Avendra
- Bix Produce
- Bon Appetit
- Brooks
- Coastal Seafoods
- Coop Partners Warehouse
- J&J Distribution
- J&B Distribution
- Metro Produce
- Morey's Seafood International
- Sodexo
- United Natural Good, Inc
- Upper Lakes Foods

Food Manufacturing

- Anheuser – Busch Inc
- Archer Daniels Midland Co
- ADM Milling Co
- Cargill Inc
- CHS Inc
- Conagra Foods Inc
- Dakota Premium Foods
- Dean Foods Co
- Dr Pepper-Seven Up Bottling
- Farmland Foods Inc
- Freto-Lay Inc
- General Mills Inc
- Gruma Corp
- Keebler Co
- Kemps LLC
- Kraft Foods Global Inc
- Schwan's Food Service Inc



Interview with Seward Coop

- **Seward Coop:** During the interview with the produce manager, Travis, we were told that the organization has a preference for local produce. They are currently buying bulk leafy greens from urban organics. They are looking for more quantity and also more options for different growing seasons. They also get produce from California through a distributor but looking to get local food if the cost can be reduced. Really interested in aeroponics. He is also happy to send initial forms for vendor. Infact he has already sent it to the Carlson Team. He is also willing to show products that he buy from hydroponics company.
- We also heard from their florist who had following to say: *“I would be very interested in what you would have to offer in regards to flowers - especially mixed bouquets. Right now I get all my consumer bunches from a local grower in Plymouth MN, but the mixed bouquets are from imports. It would be great to be able to get these from a local source. I usually go through 50 bunches of mixed flower bouquets a week - depending on the time of year - holiday times are more. I would consider other flower options as well”*

Interview with Kowalski

- **Kowalski's:** Tremer who is a produce manager with Kowalski's shared some insights on their buying requirements. The company is currently sourcing organics from J&J distribution company in St. Paul. The produce is coming from California and Mexico. They would be willing to shift their sourcing requirements to locally produce. If this also qualifies as organic then they also are willing to explore opportunities to exclusively market the produce. They are willing to send vendor form whenever needed

Interview with Wedge Coop

Wedge Coop: The company has their own farm in Northfield Minnesota (Garden of Eagen) and own warehouse. For winters they have three hydroponics suppliers arm in Northfield Minnesota. The produce currently bought by them are lettuce and greens (one farm), tomato and basil (2 farm). All three hydroponics suppliers are in Minnesota. The market is quickly flooding with tomatoes and basils grown from hydroponics/aquaponics. They get a lot of phone calls from hydroponics suppliers but they do not have excess capacity to buy and also do not want to switch to new suppliers even if there is low marginal low price. They have a long standing relationship with the growers (5- 8 years). Quantities currently bought: Lettuce: 48 heads of five different varieties i.e. 240 heads combined per week, Greens (Asian Greens and Mustard Greens): 40 heads per week. They are 95% organic. Dean, the person from their produce also said that the buying requirement of organic sellers are already full (they have established growers) and a new aeroponics producer should also consider competing with the traditional buyers and also mixed buyers like Lund & Byerly's.





Some Keys to Success

- You need water availability and air quality
- A shared distribution system
- Large buyers support
- Cost leadership compared to those from California/Mexico

City-Owned Lots Available for Community Gardens

(www.minneapolismn.gov/sustainability/homegrown/dfs_gardeners)

- 29 lots available for community gardens in North Minneapolis on a year-to-year basis
- If one of these lots is leased by a community garden, the City will assist in testing the soil for lead



Breakdown of Urban Producers

Community Gardens

- Characteristics: small urban plots gardened by individuals, families, or small community groups. Grow produce to supplement household food supply or as a hobby. No commercial market or employment potential.

Urban Agriculture

- Characteristics: Small businesses managed by an individual or small group of individuals. Business managers sell grow wide variety of produce for profit to local restaurants, CSAs, or co-ops, small grocers. Highly responsive to individual customer produce demands (serve locavore movement). Agriculture takes place outdoors only, limited by seasonality. Not easy to scale.

Commercial Urban Agriculture

- Characteristics: Mostly indoor, high volume operations. Offer limited produce selectivity for large commercial processors and retail chain customers. Not limited by seasonality. Examples include hydroponics, aeroponics, and aquaponics businesses. Employs 10-50 employees depending on scale of operations, both low skill and high skill labor.



Interview with Living Greens

Pros

- Efficient production (200x production capability compared to traditional farming)
- Able to compete on price
- Expertise on Team
- Received regulatory approval
- Proof of production
- Proof of sales

(Customers: Hy-Vee Grocery ; Carleton College)

- Gained Stakeholder Support

(Secured a \$20 million loan; Won MN Cup)

- Creates 15 low skilled operations jobs + 15 additional low skilled jobs if they expand into distribution
- Have vision of MN location being the monitoring hub of national expansion (through skilled labor call center)

Cons

- Risk of losing crop if monitoring system fails

(If system goes down, only 2 hour window before crop is lost)

- Young company, not completely established

(no consistent operations yet)

- With capacity for mass production to meet high volume orders, there is little incentive to target small volume, community-based customers that could help strengthen the image of North Minneapolis and lead to increased community impact
- Food Industry is Highly Regulated



Best Practices from Other Ponics Companies

Gotham Greens, New York's first rooftop hydroponics startup: The company is working to build a 12,000 square-foot greenhouse. The project has an estimated cost of \$1.4 million, will be powered by 2,000 sq ft of solar panels and will capture rainwater for irrigation. They got a grant of \$400,000 from New York State Energy Research and Development Authority. The farm is expected to yield 30 tons of fruits and vegetables each year. The company also plans to deliver their own produce via biodiesel based vans as it accounts for a 10-15% markup.

Lessons for North Minneapolis Food Cluster Team:

Develop own distribution system. A best way would be to have a common distribution system serving the entire cluster to have economies of scale

<http://www.treehugger.com/green-food/new-york-citys-first-rooftop-hydroponic-farm-to-yield-30-tons-of-produce-annually.html>

FarmedHere LLC Success Story

- Nation's largest vertical farm
- Will provide approx. 200 jobs, many of them through a partnership with Windy City Harvest



Examples of Aeroponics Equipment Suppliers

1. **Future Growing LLC:** The company has been the world leader in vertical aeroponics food farms for over 9 years. It has implemented over 100 successful aeroponics projects across North America. The company is led by CEO Tim Blank, a hydroponics expert, and 12-year hydroponics veteran with the Walt Disney World Company. <http://futuregrowing.com/>

2. **Agrihouse Brands Ltd:** The company is a leading agri-biotechnology company offering patented and patent pending products to deliver cost effective ecologically beneficial solutions to boost food production and harvest yields.

<http://www.agrihouse.com/larry-forrest.php>

3. **Aerofarms (Earlier Great Veggies which failed):** The company initially started up as an aeroponics company selling the green leafy to various restaurants and distributors. It could not scaled beyond 3,000 lbs of leafy greens over a 4-year period due to investor funding restraints. Now the company operates as an equipment maker that sells advanced aeroponic systems and comprehensive business solutions to urban agriculture entrepreneurs.

<http://seedstock.com/2011/03/29/startup-profile-aerofarms-systems-urban-agriculture-aeroponics/>

<http://aerofarms.com/>