



Impact of Business Incubation in the US
Case History Assessment and
Applications for Developing Countries

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FOOD INNOVATION CENTER

Mission

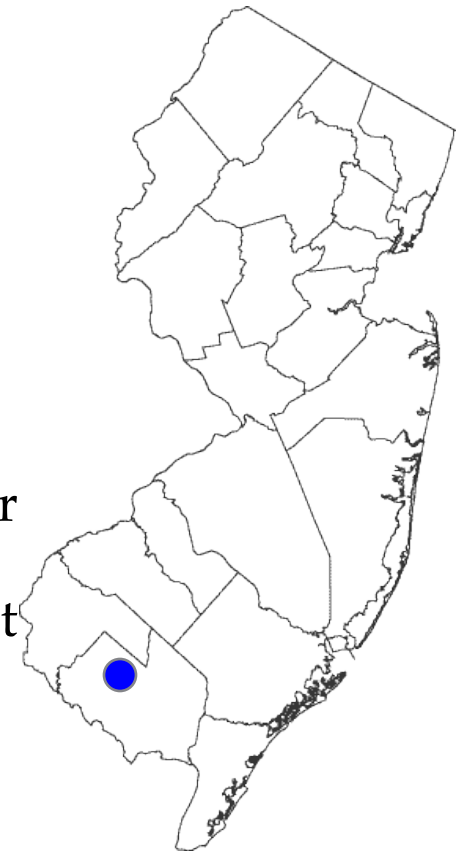
To stimulate and support sustainable economic growth and prosperity to the food and agricultural industries in the New Jersey region by providing businesses with innovative research, customized practical solutions, resources for business incubation and a trusted source for information and guidance

Vision

To serve as the catalyst that will promote a viable and prosperous food processing and agriculture base in New Jersey, translating into considerable benefits for the region, that will become recognized as a global model for regional economic development

Rutgers Food Innovation Center Origin and Geographic Base

- Rutgers Food Innovation Center began operations in 2001 with a service-centric program with offices in Bridgeton, in Cumberland County, in the hub of the agricultural and food processing industry of NJ and in an area that is very economically depressed
 - Among 566 municipalities in NJ, Bridgeton's per capita Income is 2nd lowest in state (\$10,917 vs. \$27,006 for state), and poverty level is 6th highest in state, with >26% of population in poverty (vs. 8.5% for state)
 - Cumberland County has lowest per capita income in the state- \$17,376 vs. NJ avg. of \$27,006 (and \$21,587 US avg.)



Background

New Jersey Food Industry Sector

- The Agriculture and Food Industry is one of New Jersey's leading industries, rivaling the pharmaceutical industry in size.
 - \$82 billion in direct sales (10% of state).
 - More than \$7.65 billion in wages (6% of state).
 - More than 26,000 firms (12% of state).
 - More than 375,000 jobs (11% of state).
- Critical to South Jersey economy
- Contributes to economic stability for entire state
- The New Jersey region has the wealthiest, highest population density, multi-ethnic consumer market in the world....*60 million consumers live within 6 hours driving time from New Jersey*

Background

New Jersey Agriculture Industry

- New Jersey Population - 8,414,350 - 9th
- NJ State land area (sq. miles) 8,722 - 47th
- Market value of agricultural products sold per acre - \$931 - 4th
- New Jersey agricultural production rankings, among all 50 states
 - 2nd in blueberry production (40.0 million pounds).
 - 3rd in bell pepper production (88.2 million pounds).
 - 3rd in cranberry production (48.0 million pounds).
 - 4th in head lettuce production (15.8 million pounds).
 - 5th in peach production (62.0 million pounds).
 - 6th in cucumber production (60.0 million pounds).
 - 7th in squash (summer and winter) production (31.4 million pounds)
 - 8th in tomato production (68.2 million pounds).
 - 9th in snap bean production (8.1 million pounds).

Background

Food & Agribusiness Industry Needs Assessment

In-depth study of food and agricultural industry by NJAES (1998)

- Need for **information** on business planning, market research, capital access, corporate governance, regulatory and permitting requirements, legal matters, quality assurance and food safety, product and process development, marketing and sales strategy
- Need to develop **value-added differentiated products**, as well as markets for off-grade raw materials, in order to compete in an increasingly complex retail and foodservice environment, which is undergoing significant industry consolidation
- Need to **reduce expense** associated with new product development, equipment costs, and market entry
- Need to **safely and legally** produce products in an FDA and USDA inspected facility

Clients Targeted

- **Farmers and Cooperatives** desiring to create new businesses based on value-added agricultural products and/or developing new markets for their existing commodities
- **Startup food companies** coping with challenges such as financing, technology, regulations, market development, and infrastructure requirements
- **Established food companies** seeking to introduce new products and processes, access new technologies, upgrade quality assurance capabilities, enter new markets with branded or private-label products, and expand and improve their operations
- **Retail and Food Service Establishments** seeking to improve their operations and purchase local NJ products

Vertical and Horizontal Client Linkages Result in Enhanced Impacts

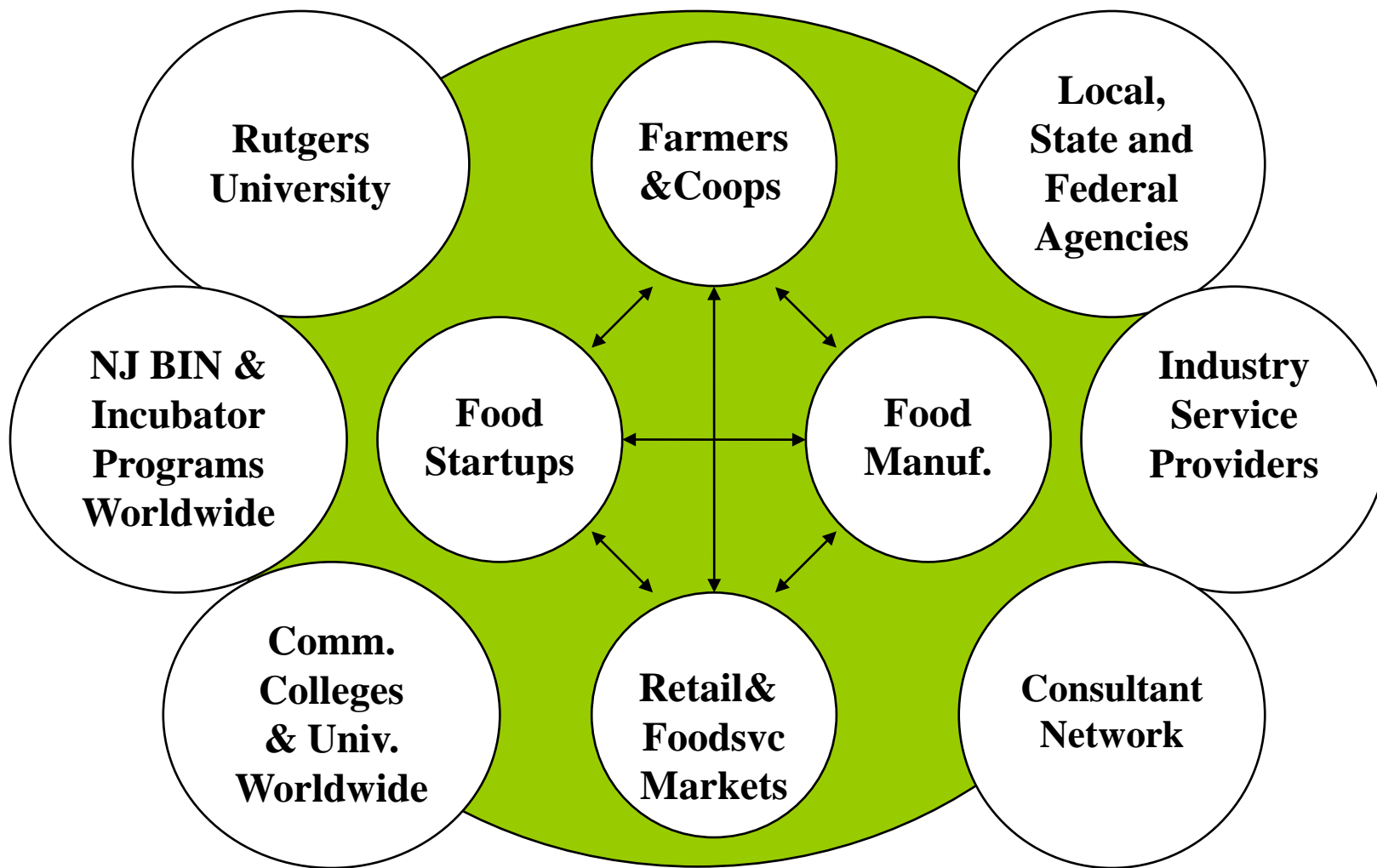
Service Network Utilized

- **Rutgers Food Innovation Center Team** with a broad array of food industry and entrepreneurial experiences
- **An Internal Network of Resources** throughout Rutgers University composed of a diverse array of departments and centers, and including faculty, staff and students
- **An External Resource Network** composed of federal, state, and county agencies, other educational institutions, commodity and trade associations, service providers, etc.

Vertical and Horizontal Resource Linkages Result in Enhanced Impacts and Multi-Disciplinary Approach to Clients

Food Innovation Center

Client and Resource Cluster Created For Food Industry Growth



A Taste of the Food Innovation Center's Clients & Products *Over 1,200 Companies and Entrepreneurs Assisted to Date*



'Incubators' help develop new food products, like goat meat
AP article in over 100 Newspapers – January 8, 2007

INTERNATIONAL
Herald Tribune
PUBLISHED WITH THE NEW YORK TIMES AND THE WASHINGTON POST

BusinessWeek

**Los Angeles
Times**

Seattle Post-Intelligencer

Forbes

The Miami Herald

CBS **msn.
Money**

The Washington Post

The Mercury News
The Newspaper of Silicon Valley

The★Star
THE KANSAS CITY STAR

The Philadelphia Inquirer





FOOD INNOVATION CENTER

Statewide, National, International Recognition

- Awarded *“Incubator of the Year,”* by NBIA in the services and manufacturing category, among incubators globally in 2007
- Awarded *“Partnership Award for Innovative Program Models”* by USDA-CSREES in 2007, for “achievement as a model for community and economic development and jobs creation”
- Awarded *“Agricultural Innovation Center Demonstration Program,”* by USDA RD, one of only ten such centers in US
- Recipient of the Rutgers Presidential Award for Research and Service to New Jersey in 2008
- Recipient of *Economic Development Achievement Award* from PlanSmart NJ in 2009



Food Business Incubator Facility

Grand Opening October, 2008



Enables Product Design, Development, Analysis, Commercialization, and Ongoing Manufacture of Products for Sale to Retail and Foodservice Markets

Food Innovation Center Facility Capabilities

- **Beverages and Hot Processing**
 - Beverages, Soups, Sauces, Stews, Salsas, Jams and Jelly, Grilled and Roasted Vegetables, and Prepared Entrees
 - Bottling line and cup/tray filling line will allow for automated production
- **Bakery and Dry Processing**
 - Pies, Breads, Cookies, and Confectionery products
 - Seasoning Blends, and Dehydrated Fruits & Vegetables
- **Fresh-Cut Processing (future)**
 - Post harvest preparation, cleaning, peeling, size reduction, microbial reduction technologies, and packaging
- **Cold Assembly/Clean Room**
 - Packaging of perishable products in HEPA-filtered clean room
- **Blast Chilling and Freezing**
- **Refrigerated, Frozen & Ambient Storage**



Food Innovation Center - Facility Capabilities

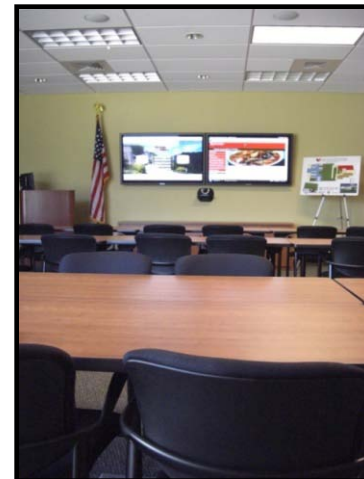
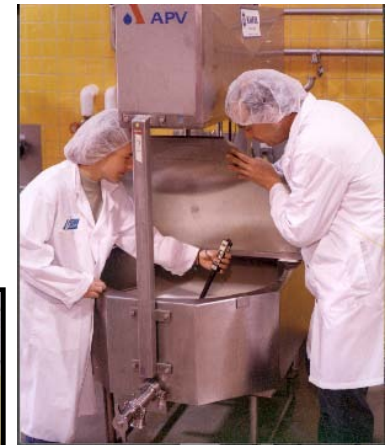


Food Innovation Center Services Provided

- **Business and Technical mentoring**
 - Business And Organizational Planning
 - Marketing, Product, Technology, and Sales Strategy
 - Quality Assurance And Food Safety Systems
 - Product, Package, and Process Development
 - Sensory Evaluation
 - Product Commercialization Testing

- **Product manufacturing for sale to public**
 - USDA and FDA inspected facility
 - Minimum Rental of Just one Day

- **Education and Training**
 - Business and Technical Seminars
 - Focus Groups and Consumer Testing
 - Workforce Development and Training



Support to Schar, USA

Food Innovation Center Case History

- **Engineering**

- Process Assessment
- Equipment needs and specification
- Equipment Installation and training

- **Food technology**

- Raw material sourcing
- Packaging sourcing
- Raw material and finished product specifications

- **Market Research**

- Focus Group Testing



- **QA and Food Safety**

- Gluten-testing methodologies
- QA and HACCP plan

- **Human Resources**

- Job Description Development
- Recruitment
- Training

- **Project Management and Administration**

- US Product Commercialization
- Site Selection
- Facility Design for “Graduation” in 2011

Support to Circle M Farms

Food Innovation Center Case History

- **USDA Grants**
 - Working Capital Grant to Commercialize Peach Cider
 - Planning Grant for Feasibility Study of Fermented and Distilled Peach Products – Included Market Research, Manufacturing and Regulatory Overview.
- **Commercialization**
 - Processor Identification
 - Label Development
 - Sensory Evaluation
 - Packaging Design
 - Revised Formula and Packaging for School Lunch Program
 - Quality Assurance
- **Marketing and Sales Support**
 - Label and Logo Design
 - Marketing Materials and Collateral
 - Public Relations Strategy



Food Innovation Center Impacts

Clients & Companies

- New Businesses Created
- Businesses Sustained in community, region, state
- Direct and Indirect Jobs Created/Retained
- Increased Client Revenue/Profits
- State/Federal, Venture and Private Equity Funding brought to Clients
- Domestic and International Companies that move to NJ
- Commercial Space taken in Community from Graduates
- Increased Community Wealth, and Rural/Urban Revitalization
- International Collaborations w/ Incubators and Universities Resulting in Knowledge Transfer and Regional Economic Dev.

Food Innovation Center Impacts *Communities & Citizens*

- *Community development* via best practices in farmers markets for municipalities and farmer/vendor participants; and via creation of year-round destination markets as vehicle for downtown revitalization
- *Food industry training for unemployed community residents*, via alliances with county Workforce Investment Boards
- *Workforce training for incumbent workers* at established food companies, via alliances with food processor organizations
- *Internships and experiential learning* opportunities for high school and college students
- *Community food security programs* via collaboration with food banks, in which incubator facility can process gleaned produce, create new branded products, etc.

Applications in Developing Countries

*Based upon Lessons Learned from
Experiences in Uganda and Nigeria*

Challenges Facing SMEs in Developing Countries

- Limited managerial capability
- Absence of mentoring and entrepreneurial networks
- Lack of business and market information
- Limited access to capital
- Poor access to markets
- Poor or declining infrastructure especially electricity
- Inconsistent and poor quality raw materials
- High cost of machinery/equipment
- Inconsistent government policies
- Uncoordinated institutional supports
- Lack of industrial site, enabling environment and business infrastructure (phone, internet, admin support, meeting rooms, commercialization support)
- Societal attitudes (preference for imported goods)



Feasibility Study – Overall Objectives

- **Poverty alleviation**
 - Markets for value-added agricultural products
 - Increase incomes of farmers and food processors
- **Nutrition enhancement and malnutrition eradication**
 - Technical, marketing and policy challenges of food fortification
- **Knowledge transfer catalyst**
 - Identify technologies and business skills that can be transferred from Makerere University to private sector agribusiness companies throughout Uganda



Potential Outlets for Technology Transfer

- Nutrient enhanced foods – fortified/blended foods, baby and healthy foods.
- Fully prepared foods and value-added products.
- Minimally processed foods e.g. bananas, pineapples, and other fruits
- Fruit juices and pulp including concentrates
- Wines and local beers
- Value-added peanut/ sesame products
- Packaging Technologies
- Fermented products
- Professional storage and ripening of fresh fruits
- Coating of passion fruits to extend shelf life

“One Village One Product”

A global model for cluster development, business incubation, and economic impact

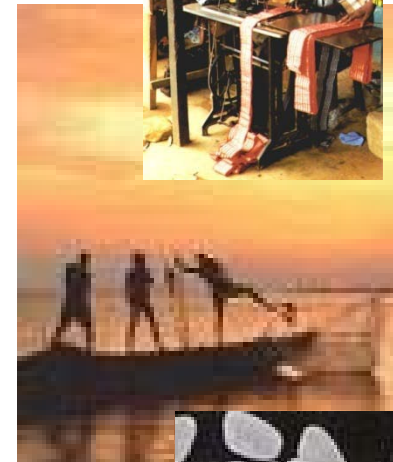
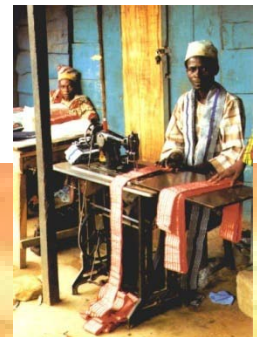
- First broadly initiated in 1979 in Oita Prefecture, Japan, by its Governor Morihiko Hiramatsu, as a means to promote regional revitalization
- Its goal is to encourage people to produce products using local materials, expertise and skills to bring self-reliance and sustainable income to their communities.
 - Business analysis of local resources which have potential for regional revitalization
 - Leadership team that integrates community, and focuses on product differentiation, consumer branding, and commercial success

“One Village One Product” Goals

- Income generation and poverty alleviation
- Increasing employment opportunities
- Community pride and community wealth
- Narrowing gap between urban and rural areas
- Mitigation of depopulation trends in rural areas
- Protection of environment
- Creation of a more stable and safe society

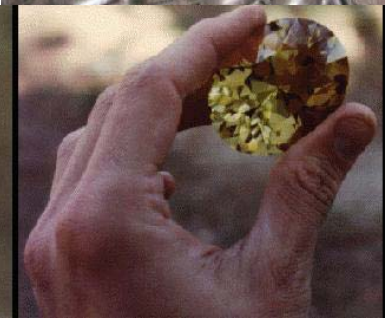
OVOP Potential SME's: *Agricultural*

- Consumer Food Products
 - Fruit Juice
 - Palm Oil
 - Cassava Starch
 - Cashew Nut Processing
 - Rubber Seed Oil
 - Vegetable Oil
 - Rice Milling and Polishing
 - Value-Added Meats/Seafood
 - Leather
 - Medicinal and Botanical Products
- Bioenergy
- Forestry Products
 - Furniture
 - Paper/Board
 - Wood Based Panels
- Clothing



OVOP Potential SME's: *Geological/Chemical*

- Sodium Silicate
- Industrial Minerals
- Granite Cutting and Polishing
- Calcium Carbonate
- Mini Cement
- Gemstone Cutting and Polishing
- Kaolin Processing
- Marble Tiles
- Coal Briquetting
- Lead Zinc/Ore Concentrate

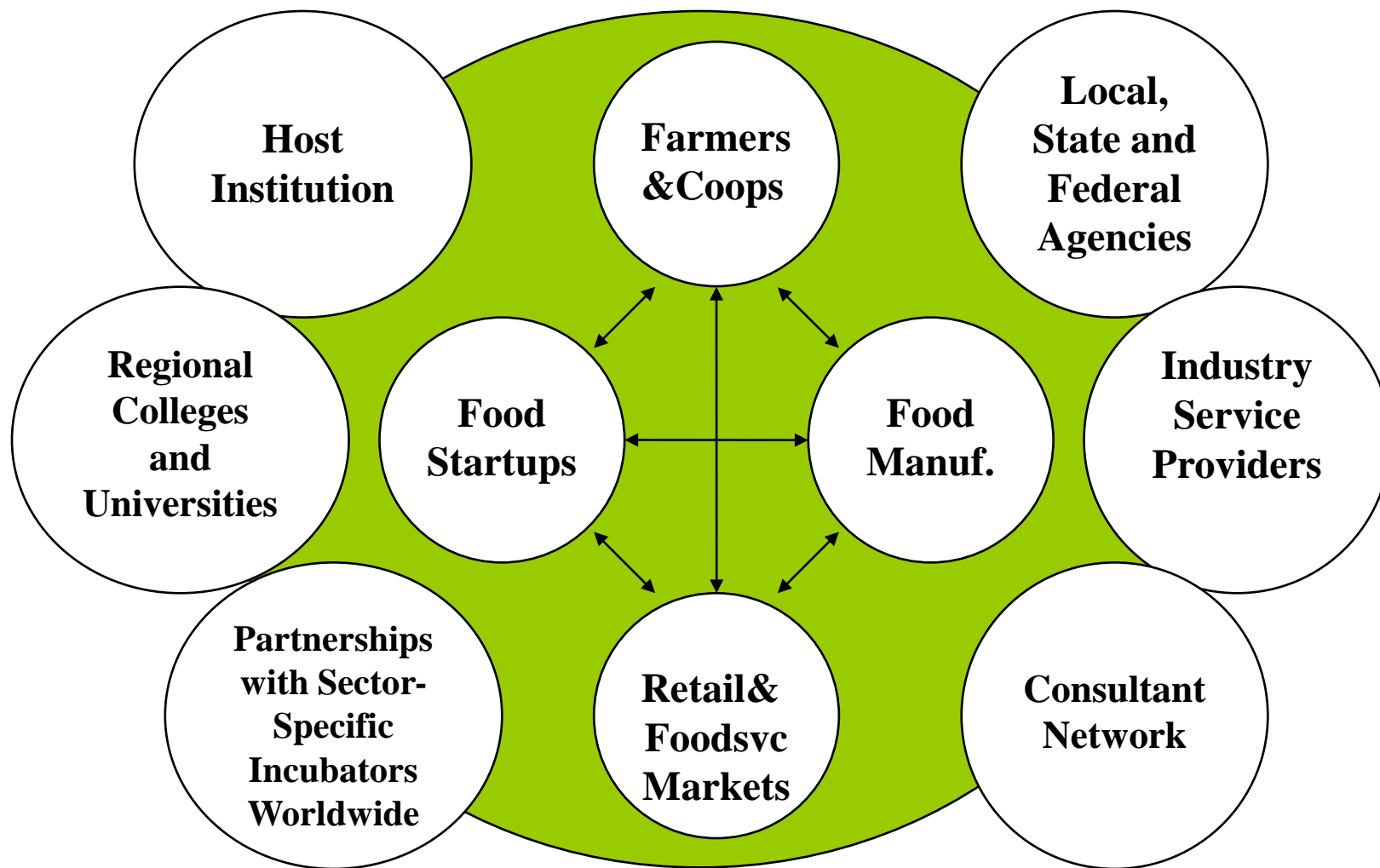


Other Value-Added Enterprises Facilitated by Incubators

- Tourism
- Art
- Sports
- Cultural
- Music
- Theatre



Incubators Serve as Industry Aggregator, Cluster Creator and Hub of Knowledge Transfer



Business Incubation in Developing Countries

- **Business Incubation is a tool that clearly *Supports* and/or *Enables* the five key areas of action identified in the World Bank Group Agriculture Action Plan FY2010-2012**
 - Raise agricultural productivity
 - Link farmers to market and strengthen value addition
 - Reduce risk and vulnerability
 - Facilitate agricultural entry and exit and rural nonfarm income
 - Enhance environmental services and sustainability



FOOD INNOVATION CENTER

Thank You!

For more information:

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