

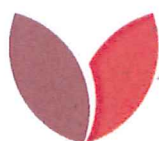
Paterson Food Hub
Feasibility Study
For
Paterson Restoration Corporation



Final Report
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RUTGERS
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EXECUTIVE SUMMARY

The Paterson Restoration Corporation (PRC) is establishing a food business incubation program in the City of Paterson, New Jersey, and has acquired a building to be utilized for this purpose located at 163-177 Pennsylvania Avenue. The PRC has also gained funding towards equipment purchase and building renovation, enabling this project to go from its feasibility stage to its implementation strategy quite quickly. The Rutgers Food Innovation Center (FIC) was selected to perform a feasibility analysis that assesses global best practices in business incubation, and to determine the business model that will best maximize economic impacts and sustain such an incubation facility in the City of Paterson. In addition, the FIC staff redesigned the entire layout of the current facility, and identified specifications for all major pieces of equipment.

Paterson was a center for manufacturing until the mid-20th century, but has become economically challenged in recent decades. The per capita income for residents in Paterson is one of the lowest in New Jersey (at \$16,259), and about 28.4% of the population is considered to be in poverty and only 11% of the population has completed college. The City of Paterson is home to about 52 different ethnic groups, and therefore represents an extremely diverse population.

Business incubation is a globally recognized tool for regional economic growth. Business incubators create public-private partnerships and nurture the development of entrepreneurial companies and provide them with the expertise, networks and tools they need to make their ventures successful. The sustainability and continued success of a food business incubator in the City of Paterson, or albeit any US location, relies on operators going beyond simply providing shared space by also offering a more diverse set of resources such as mentoring, access to resources, and access to capital.

To address this need we are highly recommending a clustering strategy for the City of Paterson, and have proposed naming the incubator the "Paterson Food Hub". A clustering strategy creates concentrations of interconnected companies, suppliers, service providers and associated institutions. The Paterson food incubator can facilitate a regional food industry cluster, where the entire food industry value chain is aggregated and where a network of resources connect and co-exist to meet the diverse needs of the clientele. Upon forming a resource hub or cluster, it helps all members succeed. Through the very nature of a business incubator, increased interaction between producers and suppliers is forged, knowledge is shared and opportunity awareness increased.

The Paterson food incubator, in accomplishing its mission, can aggregate the entire food industry value chain in Passaic County and the surrounding region, which will include the following six groups: **Startup Food Company Entrepreneurs** desiring to create new prepared food business ventures; **Established Small and Mid-sized Food Companies** seeking to expand operations or enter new markets; **Retail and Foodservice Markets**, including farm market operations, specialty food stores, and restaurants, seeking to market locally-produced products or introduce their own

products into new channels of distribution that will diversify their operations; **State, County and Community Agencies** seeking to provide healthy meals for local residents; **Students** that can gain experiential learning opportunities with food industry clients and work in a team-consulting environment, and create opportunities for future employment; and **Community residents** interested in learning about opportunities in the food industry, obtaining industry-recognized certifications, and obtaining employment.

These linkages will result in enhanced impacts and a needed multi-disciplinary approach to clients. In this cluster model, the Paterson Food Hub provides resources that “surround” its clients, and include: universities and community colleges; food industry trade associations; industry service providers; venture capital firms and investor groups; economic development agencies and partners; and business mentors and network of consultants that will need to be developed.

Primary market research conducted with food entrepreneurs and service providers in the City of Paterson, complemented by the expertise of the staff at the Rutgers Food Innovation Center, **strongly supports** the establishment of a food business incubator and processing facility in the City of Paterson. Interest is very strong for a facility that will support new companies, as well as established businesses in the local community.

It has been suggested that the long-term leadership for the Paterson Food Hub consist of three components:

- **The Paterson Food Hub Team**, which will include a dedicated but lean organization that has broad food industry and entrepreneurial experiences, and will manage all day-to-day operations. It is recommended that this team be contracted and managed by a third-party organization. A list of possible companies that can provide this management are provided in this report.
- **A Resource team from the Rutgers Food Innovation Center (RFIC) that will provide food industry subject matter expertise.** The RFIC can be contracted by the PRC to provide ongoing one-on-one business and technical mentoring to Paterson Food Hub clients, and manage a number of other functions of the Paterson Food Hub going forward.
- **An External Resource Network** composed of federal, state, and community agencies, venture capital associations and investor groups, commodity and trade associations, service providers, industry consultants, etc. from Passaic County and the surrounding region. Examples of these key organizations are identified in this report

Next steps have been incorporated in this report, and include: immediately developing an RFP for the third party organization that will manage the day-to-day operations; determine a potential ongoing role of the Rutgers FIC for continuing with the development and implementation of the strategy for the Paterson Food Hub, and for providing ongoing subject matter expertise to clients in the region. If these actions occur relatively quickly, and the equipment purchases and building renovations occur within the next few months, it is reasonable that the Paterson Food Hub can open for its initial operations during Q1 or Q2 of 2017.

1.0 INTRODUCTION AND BACKGROUND

1.1 Project Overview

The Paterson Restoration Corporation (PRC) contracted with the Rutgers Food Innovation Center (FIC) for a project entitled “Development of a Comprehensive Feasibility Study for a Food Business Incubation Program and Facility in the City of Paterson, NJ”. The PRC acquired a building to be utilized for this purpose, which was closed on March 24, 2015, and is located at 163-177 Pennsylvania Avenue in Paterson. The PRC has also gained funding towards equipment purchase and building renovation, enabling this project to go from its feasibility stage to its implementation strategy quite quickly.

The overall goal of the feasibility study is to support the interest of the PRC to determine if a certified, commercial, shared use kitchen and food business incubation facility located in Paterson is possible, practical, viable and can be successful and, if so, to ascertain the business model that will best sustain such an incubation facility. As part of this study, the Rutgers FIC assessed opportunities for this business incubation program that would be made available for use by businesses, entrepreneurs, and citizenry throughout the region beyond the City of Paterson border’s encompassing surrounding municipalities within a 30-40 mile radius. This project commenced in December 2015, and incorporated an assessment of a wide array of tasks, which are identified in the Table of Contents identified on page 1 of this report.

The Rutgers FIC has great expertise in conducting this feasibility study. The Rutgers FIC is a food business incubation and economic development accelerator program of the New Jersey Agricultural Experiment Station (NJAES) at Rutgers, The State University of New Jersey. The FIC services food industry and agribusiness entrepreneurs throughout the entire state and region, and provides extensive programs in training and workforce development; customized and comprehensive business and technical mentoring services; and a 23,000 sq. ft. USDA- and FDA-inspected facility that enables design, development, analysis, commercialization and manufacture of value-added food products for sale to retail and foodservice markets. The FIC has served over 1,500 clients since its formation in 2001 and has been named “Incubator of the Year” by the International Business Innovation Association (InBIA) and an “Agricultural Innovation Center Demonstration Program” by the USDA. The FIC has also created a food business accelerator program that services its high-growth “gazelle” clients with strategic mentoring and access to funding, which was recognized by the US SBA in its first Growth Accelerator Fund Competition. In addition, the FIC offers an international business attraction “Soft Landings” program that has been recognized by the InBIA as the only program *in the world* that focuses on the food industry. The FIC is located within a federal Empowerment Zone and a State UEZ, in the rural community of Bridgeton, NJ. Bridgeton has the second lowest per capita income of New Jersey’s 565 municipalities, and is within Cumberland County that has the lowest per capita income of New Jersey’s 21 counties.

1.2 Overview of Paterson Region and Demographics

The City of Paterson, located on the Passaic River in New Jersey was once one of the mightiest industrial cities of the United States. It has a rich history as the Nation's first planned industrial city, as well as containing some of the country's oldest textile mills and businesses. Paterson is known as the "Silk City" for its dominant role in silk production during the latter half of the 19th century. Today, Paterson has evolved into a very diverse urban environment, and a major destination for Hispanic immigrants, as well as for immigrants from Arab and Muslim nations.

According to the 2015 US Census, there are almost 150,000 residents within Paterson, which makes it the third most populated city in New Jersey. Paterson is located within Passaic County, and makes up about 29% of the population of the entire county. The population of Paterson is estimated to be about 58% Hispanic/Latino, 32% African American, and 9% White, according to the U.S. Census¹, however this may not reflect the actual ethnic groups represented in this diversified city. According to city government officials, Paterson has 52 different ethnic groups and nationalities that are reflected in its overall population.² About one-third of the population in Paterson is foreign-born, and almost 62% of the populations speak a language other than English at home. Over 72% of the population has completed high school, but only 11% have completed college. The per capita income for residents in Paterson is one of the lowest in New Jersey, at \$16,259, and about 28.4% of the population is considered to be in poverty. Minorities own an estimated 72% of all businesses, and there are a high percentage of women-owned firms in Paterson as well (42%, vs. about 32% for the populations in all of Passaic County). Census data for Paterson as well as that of all of Passaic County is shown below:

	Passaic County	Paterson
<i>Population and Geography</i>		
Population estimates, July 1, 2015	510916	147754
Population per square mile, 2010	2715.3	17346.8
Land area in square miles, 2010	184.59	8.43
<i>Race and Ethnicity</i>		
Black or African American alone, percent, 2010	12.8	31.7
Asian alone, percent, 2010	5.0	3.3
Two or More Races, percent 2010	3.7	5.3
Hispanic or Latino, percent, 2010	37.0	57.6
White alone, not Hispanic or Latino, percent, 2010	45.3	9.2
<i>Population Characteristics</i>		
Foreign born persons, percent, 2010-2014	28.6	33.1
Language other than English spoken at home, 2010-2014	47.7	61.7

¹ <http://www.census.gov/quickfacts/table/PST045215/3457000>

² <http://www.northjersey.com/news/political-battle-brewing-over-paterson-s-plans-for-hispanic-heritage-month-event-1.1096285>

Education

High school graduate or higher, % 25 years+, 2010-2014	82.5	72.2
Bachelor's degree or higher, % 25 years+, 2010-2014	26.2	10.7

Health, Income and Poverty

Persons without health insurance, under age 65 years, %	15.9	26.7
Median household income (2014 dollars), 2010-2014	59513	33964
Per capita income past 12 months (2014 dollars), 2010-2014	27795	16259
Persons in poverty, percent	18.2	28.4

Businesses

All firms, 2012	45724	10323
Men-owned firms, 2012	27089	5328
Women-owned firms, 2012	14529	4388
Minority-owned firms, 2012	16478	7413
Nonminority-owned firms, 2012	27674	2657

The New York Metropolitan Statistical Area (MSA) is the premier gateway for legal immigration to the United States, with the largest foreign-born population of any metropolitan region in the world. Paterson is located central to the New York MSA, that includes the most populous city in the US (New York City); Long Island and the Mid- and Lower Hudson Valley in the state of New York; the six largest cities in New Jersey (Newark, Jersey City, Paterson, Elizabeth, Edison and Woodbridge) and their vicinities; and six of the seven largest cities in Connecticut (Bridgeport, New Haven, Stamford, Waterbury, Norwalk and Danbury) and their vicinities. As per the 2015 Census estimates, the New York Metropolitan Statistical Area (MSA) is, by a significant margin, the most populous MSA in the United States, with 20.2 million residents.³

Census data shows a strong concentration of ethnic population within a forty-mile radius of the Paterson incubator location. For example, the New York MSA is home to the largest ethnic Chinese population outside of Asia, constituting the largest metropolitan Asian American group in the United States and the largest Asian-national metropolitan diaspora in the Western Hemisphere. Also, persons of Hispanic origin are another very important group who live in the greater New York region, encompassing a diversity of geographic origins (and a similar diversity in food preferences) that include: Puerto Rico, Mexico, Dominican Republic, and many other countries. Two other notable groups in the New York MSA are people of Jewish and Muslim faith. There are between 1-2 million Jews in the New York MSA - the 2nd largest Jewish population of any Metropolitan area in the world⁴. Additionally, Metro New York is home to nearly 1 million Muslims⁵, making it one of the largest Muslim enclaves in the Western Hemisphere.

³ <http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>

⁴ <http://www.wsj.com/articles/SB10001424052702304373104579109671933282670>

⁵ <http://www.nycreligion.info/muslims-nyc-area/>

Many neighboring cities to Paterson have specific ethnic populations. Garfield, for example, has a high concentration of Polish and Eastern European populations. As another example, fifteen miles east of the Paterson incubator location are towns like Cliffside Park and Fort Lee, which have high concentrations of Greeks, Turks, and Koreans. Less than thirty miles south of Paterson, the Iselin/Metuchen/Edison area is home to one of the largest Indian concentrations in Metropolitan New York.

1.3 Incubator Name and Mission

Because of the tremendous diversity of the population in Paterson and in the surrounding region, particular focus needs to be placed on the requirements for food entrepreneurs within these communities. There is a tremendous need for information, guidance, and resources to these communities, so it is believed that a “hub” will be needed to attract and service these populations. As a hub is known to be the focal point and the center of activity, it is proposed that the Paterson food incubation program be called the “Paterson Food Hub”.

The USDA defines a “food hub” as a centrally located facility with a business management structure facilitating the aggregation, storage, processing, distribution, and/or marketing of locally/regionally produced food products. By actively coordinating these activities along the value chain, food hubs are providing wider access to institutional and retail markets for small to mid-sized producers, and increasing access of fresh healthy food for consumers, including underserved areas and food deserts.⁶

The USDA further identifies a food hub as a means to support a food industry value chain, and addressing customers’ desire to promote social improvement. They incorporate social or environmental mission values within the traditional scope of product differentiation strategies, focusing on such issues as supporting the local economy, and expanding community access to local and fresh food. By offering a combination of aggregation, distribution, and marketing services at an affordable price, food hubs make it possible for many producers to gain entry into new larger-volume markets.⁷ As a result, these small companies have an opportunity to scale up their production and boost their income, which would not otherwise be available without this food incubation program.

The following is proposed as a mission statement for the Paterson Food Hub:

The mission of the Paterson Food Hub is to nurture, support, and sustain the diverse needs of food entrepreneurs within the City of Paterson, Passaic County, and the surrounding region. We will create economic growth, by our support to these entrepreneurs with business and technical training and resources for product development and commercialization. We will also serve our communities, with educational programs and with access to healthy and locally prepared foods.

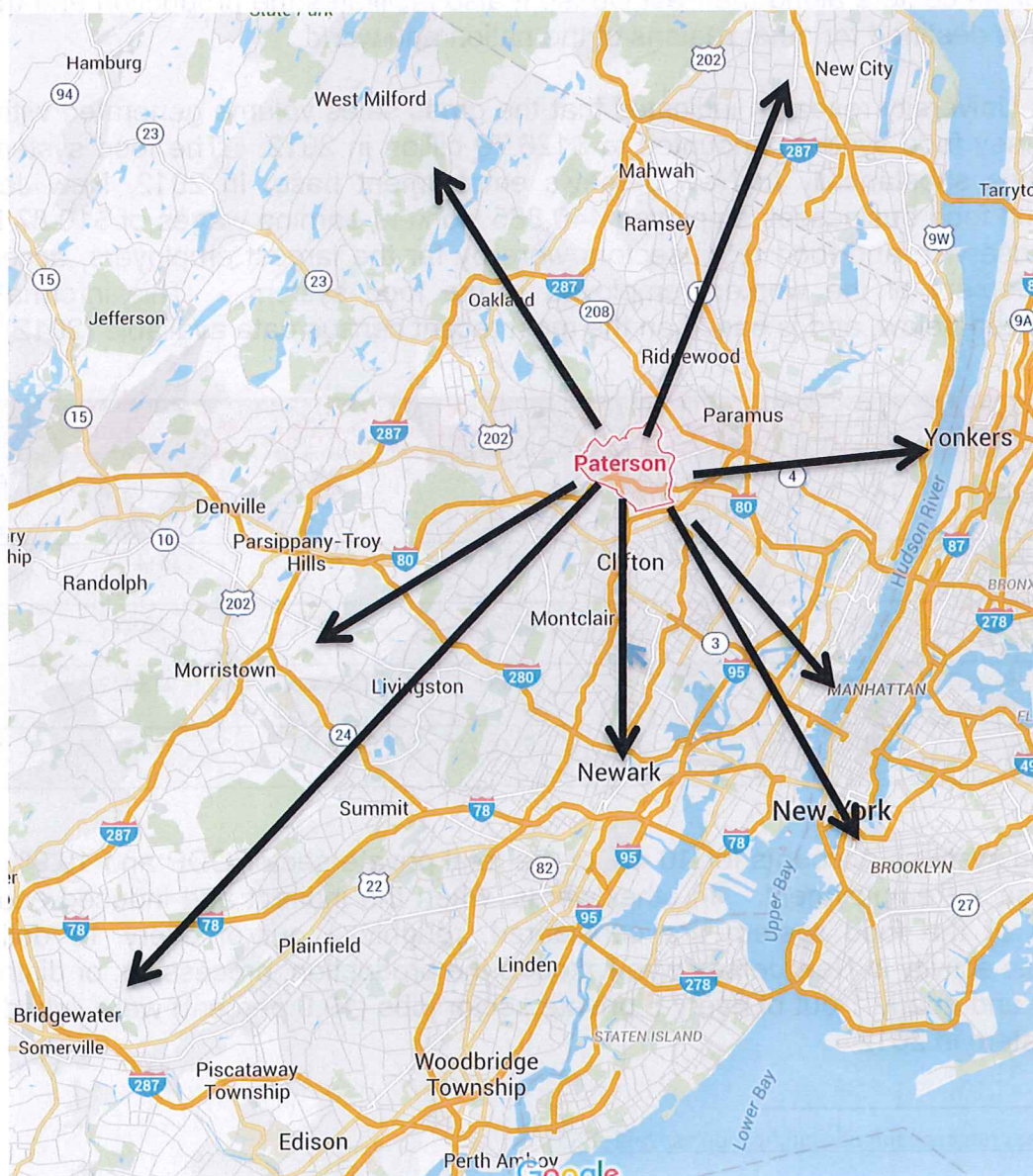
⁶ <http://blogs.usda.gov/2010/12/14/getting-to-scale-with-regional-food-hubs/>

⁷ <https://www.ams.usda.gov/services/local-regional/food-hubs>

1.4 Primary Geographic Reach of Paterson Food Hub

The Paterson Restoration Corporation purchased a facility located at 163-177 Pennsylvania Avenue in Paterson to serve as its location for the food business incubator. Based on the diversity of the population in the region and their relatively close geographic proximity, we believe that the Paterson Food Hub will support the food industry within the City of Patterson, all of Passaic County, and cities within a 30-40 mile radius, including the regions that correspond with the illustration below, including:

- Mahwah, NJ, and New City and Monsey, NY to the north (15 – 30 mile distance)
- Yonkers to the East (25 mile distance)
- Manhattan and Brooklyn to the Southeast (20 – 35 mile distance)
- Newark and Woodbridge to the South (15-25 mile distance)
- Bridgewater to the southwest (40 mile distance)
- Morristown and Parsippany to the west (17 -22 mile distance)
- Oakland and West Milford to the northwest (10 – 25 mile distance)



2.0 REGIONAL FOOD INDUSTRY OVERVIEW

2.1 Overview of New Jersey Food Industry

The Paterson Food Hub will be geographically positioned to meet the significant demand and the growing needs of consumers within the regional communities of Paterson and Passaic County, and throughout the New York MSA.

New Jersey's agricultural and food production, processing, and distribution industries support the continued accessibility to food for the state's 8.9 million residents. The importance of New Jersey's food system extends well beyond the state's borders, directly serving the needs of consumers in New York City, Philadelphia, and other major metropolitan centers along the East Coast. It also facilitates the production and trade of food items destined for other regions of the nation and world.

Rutgers University research indicates that the gross sales volume generated within the New Jersey food system amounted to \$126.79 billion in 2012. □The food system also contributes substantially to New Jersey's employment base. In 2012, New Jersey's farms and food businesses employed 440,885 workers earning wages of \$10.87 billion. The foodservice and food retail sectors were by far the largest employers, accounting for 77 percent of the workers employed in the food system. This information is summarized below, and is based on the most recent census data available (2012)⁸

	Production Agriculture	Food & Beverage- Manufacturing	Food & Beverage Wholesale	Food & Beverage Retail	Foodservice & Drinking Places	TOTAL Food System
Firms/Farms (Number)	9,071	1,913	3,267	11,006	27,765	43,951 firms 9,071 farms
Total Industry Output (\$ billion)	\$1.01	\$14.86	\$72.00	\$24.50	\$14.42	\$126.79
Direct Value Added (\$ billion)	\$0.54	\$4.24	\$8.90	\$5.01	\$8.09	\$26.78
Paid Employees* (Number)	24,561	30,333	47,634	104,425	233,932	440,885
Payroll (\$ billion)*	\$0.27	\$1.34	\$3.06	\$2.46	\$3.74	\$10.87

The food systems accounts for 10.4% of the total private sector GDP and 19.9% of the private sector employment. In other words, when the indirect and induced economic impacts of the food system are considered, roughly 1 out of every 10 dollars of economic activity in New Jersey was linked to the production, processing, or distribution of food, and nearly 1 out of every 5 private sector jobs (19.9 percent) were linked to the food system in 2012.

⁸ <http://njaes.rutgers.edu/pubs/publication.asp?pid=E355>

Comparison with a 2007 economic impact assessment (Schilling and Sullivan, 2011) shows that total food system output (sales) increased in New Jersey by approximately \$21.42 billion from 2007 to 2012 (an increase of 20.3 percent). This translates into an expansion of 8.7 percent in real (inflation-adjusted) terms. The direct value added to New Jersey's economy by the food system similarly increased by 25.7%, from \$21.31 billion to \$26.78 billion. This equates to a real economic expansion within the industry of 13.5% and stands in stark contrast to the 1.9% real decline in New Jersey's private sector GDP economy in this five-year period. Direct employment also rose from 431,765 workers to 440,885 workers over the period (a 2.1 percent increase). This growth in food sector jobs compares to a 4.4 percent decline in total (non-farm) private sector employment between 2007 and 2012.⁹

2.2 Secondary Market Research

The categories of food products that are typically marketed by food entrepreneurs, and are of particular relevance to marketers of ethnic products (which will likely be highly desirable by entrepreneurs that utilize the Paterson Food Hub) are referred to as "specialty foods". Specialty Foods are foods and beverages that exemplify quality, innovation and/or style in their category. Their specialty nature derives from some, or all, of the following characteristics: originality, authenticity, ethnic or cultural origin, specific processing, ingredients, variety, limited supply, distinctive use, extraordinary packaging or specific channel of distribution or sale. By virtue of the differentiation in their categories, such products maintain a high-perceived value and often command a premium price.¹⁰

According to "The State of the Specialty Food Industry 2016", produced by the Specialty Food Association and Mintel,¹¹ specialty food sales were \$120.5 billion in the US in 2015. This figure represents 21.2% dollar sales growth and 13.7% unit sales growth since 2013. Retailers account for the largest share of specialty food sales (\$94 billion; 78%) however, food service venues although smaller (\$26 billion; 22%), are now growing at a faster rate. This phenomenon is being driven by the fact that more US consumers are dining out and seeking high-quality flavorful foods when doing so.

Fifty-eight out of the 61 specialty food categories included in the Specialty Food Association's 2016 study grew between 2013 and 2015, many by double digits. Two categories—refrigerated Ready-to-Drink (RTD) tea and coffee and eggs—leapt by triple digits. Fresh foods, proteins and convenience are three trends holding steady. Retailers continue to believe that locally made products offer their customers a unique point of difference. Community farmers markets, grocery retailers, specialty food stores, restaurants and just about any food retail venue is promoting the locally-made attribute whenever possible.

⁹ <http://njaes.rutgers.edu/pubs/publication.asp?pid=E355>

¹⁰ <http://www.preparedfoods.com/articles/113949-targeting-the-gourmet>

¹¹ https://www.specialtyfood.com/media/finder_public/c8/f7/c8f79048-0861-4175-8939-0aeb7b55a015/2016_soi_8pg.pdf

The top ten categories of specialty foods sold at retail in 2015, including their growth rate change over the past three years, are summarized as follows:

Product category	2015 \$ million	Change 2013-2015
Cheese and cheese alternatives	4,312	14.7
Frozen and refrigerated meat, poultry and seafood	3,631	23.1
Chips, pretzels and snacks	3,448	22.3
Coffee, coffee substitutes and cocoa (non-RTD)	3,183	17.3
Bread and baked goods	2,578	14.7
Candy and individual snacks	2,160	21.4
Frozen Lunch and Dinner entrees	1,891	21.4
Condiments, dressings and Marinades	1,862	10.4
Yogurt and kefir	1,819	27.6
Refrigerated entrees and prepared meals	1,743	34.5

The top five categories of specialty foods that showed the highest sales growth, between 2013-2015, are as follows:

Product category	\$ Sales % Change	Unit Sales % Change
Refrigerated RTD Tea and Coffee	262.2	301.6
Eggs	218.2	162.3
Jerky and other Meat Snacks	68.4	60.1
Refrigerated pasta	58.3	49.7
Water	51.4	43.9

A summary of other key findings of this study is as follows:

- Though mainstream retailers account for the largest share of specialty food sales, they are growing at an almost equal rate as specialty food and natural food stores. According to supply chain data, sales potential may be biggest in natural stores.
- Specialty food sales through foodservice are growing faster than retail sales: 27 percent versus 19.7 percent. More U.S. consumers are dining out and seeking high-quality, flavorful foods when doing so.
- Fifty-eight out of 61 specialty food categories enjoyed double-digit sales growth in 2015, and two categories grew by more than 200 percent. Fresh, protein, and convenience are three trends holding steady as evidenced in the specialty food categories showing the most sales growth: refrigerated RTD tea and coffee; eggs; jerky and other meat snacks; refrigerated pasta; and water.
- The supply chain has embraced the importance of e-commerce as a way to sell directly to consumers. Eighty-five percent of manufacturers sell via their own website and 49 percent use a third-party platform like Amazon.

- Manufacturers say retail sales—whether through distributors or direct—are their biggest and fastest-growing sales channel. However, they are enjoying success via the foodservice market as well, with an almost equal amount of sales coming from products made exclusively for foodservice as products also sold to retail.
- Many in the supply chain believe non-GMO will be a product claim of growing importance to consumers. Forty-nine percent of manufacturers plan to introduce products that are non-GMO in 2016.
- Local products are still an important way retailers differentiate their offerings.

2.3 Primary Market Research

As part of this feasibility study to support the interest of the Paterson Restoration Corporation (PRC) to determine if a certified commercial shared use kitchen and food business incubation facility located in Paterson is possible, practical and viable, the Rutgers Food Innovation Center (FIC) conducted exploratory research with business members of the community.

The Rutgers FIC designed and conducted the research, managed the registration process and addressed community and participant inquiries. The meetings were held the Hamilton Club at Passaic County Community College on February 23, 2016. A press release was prepared and promoted via local media. The release was also posted on the PRC and FIC websites. Recruitment was also handled through word of mouth.

Upon arrival, participants were asked to complete a survey to provide the Food Innovation Center team with unbiased insight into the opinions and needs for the community. The sessions then began with an introduction to the Rutgers Food Innovation Center and a description of the Paterson facility to stimulate thinking and generate feedback. Participants were then led in a discussion to best understand their needs and aspirations so that the program and facility can be designed to best address the needs of the community.

Participants in the exploratory research consisted of two distinctive groups:

- Food business entrepreneurs and established food businesses (Group 1), in which 21 attendees participated. This group consisted of a mix of individuals presently in business and those also thinking of starting a food business. Approximately 30% of attendees represented established food companies, while approximately 24% of attendees represented pre-launch and early launch companies. It was important to obtain this business stage mix to best understand the particular needs of these various stage businesses.
- Service providers and local business support teams (Group 2), in which 27 attendees participated. These individuals were targeted to enable the research team to better understand the needs of the community through the point of view of local providers.

Specific goals of the research included:

- An overview of business incubation and its benefits, and a presentation of a conceptual program that can be located in Paterson, including a preliminary design of a facility layout
- Address whether this concept would provide new resources that meet the needs of the community
- Understand the needs of the food business community through the voice of the food entrepreneur/business and through the opinions and observations of the business community support team
- Begin to gain insight into the type of resources needed by the community – equipment and services
- Gain an understanding of the challenges faced by small and established food businesses in the region
- Begin to determine the scope of services, facility design, layout and equipment and additional operational requirements that address the needs of the community and that will ultimately lead to a successful and sustainable program.

Through the initial research conducted as part of the Informational Meeting that occurred on February 23, findings expressed definitive interest in the creation of a Food Business Incubation facility. Interest is very strong for a facility that will support new companies, as well as established businesses in the local community. It is clear that the businesses will welcome a physical structure containing production, packaging, and storage capabilities, as well as a venue for presentations and additional commercial food processing needs. At least initially, there appears to be a mix of needs between businesses desiring dedicated space that they would lease on an annual basis and others who are looking for daily or less than annual rental terms.

As can be seen in Appendix 1 of this report, this initial research also identified the critical need for food business mentorship and training. Business representatives shared the need to tap into the expertise of experienced food professionals. The area of greatest need is in food marketing, sales and distribution, while also recognizing the need for training and mentorship with food safety regulations, food technology and other business related topics.

There is an extensive support system in the community for business growth. The programs and resources are available, but according to these community partners themselves, they believe that the organizations need to work more effectively together as opposed to running their programming “in silos”. All of the service providers who attended the exploratory session agreed the facility and program are greatly needed in the community. In fact, some individuals feel the facility should be larger and accommodate a greater number of individuals than depicted.

Cost for services and usage of the facility were queried but not discussed in detail during this session. It will be critical to identify a pricing structure that is acceptable and affordable by the community as a follow-up stage to this research.

Some of the specific findings from these two group discussions are as follows:

Group 1: Food Business Entrepreneurs and Established Food Businesses

The food business participants were very interested in the concept of the Food Incubator facility, and were also quite interested in the support and training that it could provide. The qualitative exploratory discussion highlighted the following community business needs:

- Strong interest in both dedicated kitchen space and community kitchen rented by the day/hour for small businesses
- Test market capabilities that can be utilized for established food companies – ice cream, sauces, fruit bases, etc.
- Interest in a demo/presentation kitchen
- Pop-up facilities for bakery, restaurant, and food truck needs
- Blast freezing and cooling capability
- Business Mentoring – with an emphasis on food marketing, sales and distribution; financial management; food safety training; How to get started
- Storage capacity – ambient, refrigeration and freezer

Potential participants aired questions on subjects that included: facility scheduling process, management of allocated time to each producer, food security and security in general, equipment maintenance assistance, receiving ingredients and other materials, inventory accountability and janitorial practices.

It became clear that potential users of the facility, especially start-up companies, are in need of mentoring resources, as well as a production facility. During the session they shared it is difficult to get answers locally pertaining to questions specific to the food industry. Either they receive conflicting responses or simply cannot locate a resource that is knowledgeable in a particular area. The preliminary survey identified mentoring topics as the most critical resource needed by the food business community. In addition, the participants voiced a need for assistance with regulatory training, such as, HACCP, FSMA etc., analytical and microbiological testing, food labeling – nutrition facts, ingredient statements, etc., and shelf life testing.

A robust website focused on critical information for food entrepreneurs was also seen as a valuable tool by the participants. These individuals are hungry for information and are having difficulty finding answers to their questions.

One particular opportunity that stands out, as a potential “low-hanging” opportunity for the Paterson Food Hub is a USDA-inspected operation for the processing of meat and poultry products within the incubator. Due to the high level of food safety and regulatory compliance required to operate a USDA facility, very few entrepreneurs have access to such a facility now, and there are no food incubators with USDA meat processing capability in the greater Paterson region. A USDA facility capable of producing food products that meet dietary requirements for the Jewish population (Kosher) and Muslim population (Halal) could offer Paterson Food Hub a unique space in the shared kitchen and food incubator landscape.

Group 2 – Service Providers and Local Business Support Teams

The service providers were also highly interested in establishing a food-processing incubator in the City of Paterson. As quoted by one participant, “This is great – Should have had it years ago!” They recognize the lack of services specific to the food industry and believe this resource will greatly address a wide range of business needs. These participants also emphasized the need to provide mentorship and guidance for the small and medium size businesses. Topical areas they believe in greatest need are:

- Understanding the food industry and distribution
- Government regulations, business planning – start-up costs and capitalization, cash flow, staff training, market research/segmentation
- Capitalization – identification of start-up and sustainable capital requirements
- Food marketing
- Logistics such as transportation in and around city and beyond to distribution locations
- Equipment ownership vs. rental
- Understanding the basics of food business – need to prepare the participants before they jump in

There appears to be an underlying tone that suggests concern over the local community being able to afford the facility and program. Some of the comments that suggest this concern are:

- Currently there is office space available for \$100/month yet the space is not occupied
- Need to provide scholarship opportunities
- Need to offer incentives
- Challenge is capital
- There is a lack of capital for buildings and programs

Other topics of discussion with this cohort included the need to better work together. One participant specifically stated that they cannot continue to work in silos. The group commented on the great cultural diversity in Paterson and the program needs to keep the community complexion in mind. The program needs to address the many cultures living in the community. Comments were also made that it would be beneficial if the facility and program can serve to bring cultures and people together – perhaps through establishing itself as a community meeting venue, provide training and classes that appeal to the community at large, forging the wide diversity of cultures and diminishing language barriers. The Service Providers do agree that this facility needs to preserve the richness and variety of culture of the entire City of Paterson

3.0 BUSINESS INCUBATION STRATEGY

3.1 Business Incubation Overview

When developing a business incubation program for the Paterson Food Hub, it is important to understand and communicate the business incubation model, and global best practices that have been determined, which will be described in this section.

Business incubation is a proven tool for regional economic growth that provides knowledge transfer to entrepreneurs, and small and medium sized enterprises worldwide. Business incubators create public-private partnerships and nurture the development of entrepreneurial companies and provide them with the expertise, networks and tools they need to make their ventures successful. The incubation model has been adapted to meet a variety of needs worldwide, which includes increasing employment and entrepreneurship in economically distressed communities, creating more locally-produced, value-added products that results in greater food security, and serving as an investment vehicle for private-sector corporations. Incubation is a globally recognized tool for economic growth, and the International Business Innovation Association (InBIA) estimates that there are over 1,250 business incubators in North America and about 7,000 that exist worldwide.¹²

Business incubation programs accelerate the successful development of entrepreneurial companies through an array of business support resources and services, developed or orchestrated by incubator management and offered both in the incubator and through its network of contacts. The goal is to produce successful firms that will leave the program financially viable and freestanding. These incubator graduates have the potential to create jobs and wealth, revitalize neighborhoods, commercialize new technologies and strengthen local and national economies.

Incubation programs commonly provide clients access to rental space and/or flexible leases for their administrative, R&D, commercialization, and/or ongoing processing needs, and may also assist with other services necessary for company growth.

Government subsidies for well-managed business incubation programs represent strong investments in local and regional economies. Research has shown that for every \$1 of estimated public operating subsidy provided the incubator, clients and graduates of InBIA member incubators generate approximately \$30 in local tax revenue alone. Furthermore, the impact on the local economy of business incubation is quite significant, as InBIA members have reported that 84 percent of incubator graduates stay in their communities.¹³

¹² International Business Innovation Association, <https://www.inbia.org/resources/business-incubation-faq>

¹³ National Business Incubation Association, Extracted from Data in “Business Incubation Works” publication, http://www.nbia.org/resource_library/faq/index.php#9

Entrepreneurial companies are increasingly important drivers of innovation; an area historically dominated by large companies and their substantial R&D budgets. These small firms are also an essential mechanism for commercializing breakthrough discoveries and new technologies. It has been demonstrated by many governments worldwide that micro, small, and medium enterprises (SMEs) are engines of employment, poverty alleviation, and broad-based economic growth. In the U.S., small business is the engine of economic growth and private sector development. The U.S. Small Business Administration (SBA) has determined that small firms

- Represent 99.7% of all employer firms
- Generate 63% of net new private-sector jobs
- Employ about 49% of all private-sector employees
- Pay about 42% of total private-sector payroll
- Make up 98 percent of firms that export goods, and 33% of exporting value¹⁴

3.2 Business Incubation Best Practices

InBIA research has consistently shown that entrepreneurial support programs that adhere to industry best practices generally outperform those that do not. Successful business incubation program that adopt industry best practices, as defined by the InBIA:

1. Commit to the two core principles of business incubation:
 - The program aspires to have a positive impact on its community's economic health by maximizing the success of emerging companies; and
 - The program is a dynamic model of a sustainable, efficient business operation.
2. Obtain consensus on a mission that defines the program's role in the community and develop a strategic plan containing quantifiable objectives to achieve the program mission.
3. Structure for financial sustainability by developing and implementing a realistic business plan.
4. Recruit and appropriately compensate management capable of achieving the mission of the incubator and having the ability to help companies grow.
5. Build an effective board of directors committed to the program's mission and to maximizing management's role in developing successful companies.
6. Prioritize management time to place the greatest emphasis on client assistance, including proactive advising and guidance that results in company success and wealth creation.
7. Develop the facility, resources, methods and tools that contribute to the effective delivery of business assistance to client firms and that address the developmental needs of each company.
8. Seek to integrate the program and activities into the fabric of the community and its broader economic development goals and strategies.
9. Develop stakeholder support, including a resource network that helps the program's client companies and supports the program's mission and operations.
10. Maintain a management information system and collect statistics and other information necessary for ongoing program evaluation, thus improving a program's effectiveness and allowing it to evolve with the needs of the clients.¹⁵

¹⁴ Retrieved from https://www.sba.gov/sites/default/files/FAQ_March_2014_0.pdf

3.3 Food Incubation Overview and Business Strategy

Currently, no food formal food business incubation program exists in Paterson, Passaic County and within a 30-mile radius, in which professional services and mentoring, research and development capabilities, and a shared-use food processing facility are provided. Without such facilities, local food entrepreneurs lack the expertise, equipment, facilities and organizational resources to develop products that provide higher profit margins and access to new markets

Food business incubation programs deploy a wide variety of business models, and can focus on one or more sectors within the food industry. In general, food-processing business incubation programs are designed to minimize or eliminate the hurdles associated with food industry entrepreneurship. They provide critically needed:

- *Services* that consist of assistance by a network of industry professionals in areas that may include business planning, market research, marketing and sales strategy, capital access, corporate governance, regulatory and permitting requirements, legal matters, product and process development, quality assurance and food safety, ingredient and packaging sourcing, nutrition analysis, analytical testing, assessment of distribution channels, entrepreneurial and workforce training, etc.; and
- *Space* that consists of a shared-use food processing environment that is equipped to meet the varied processing needs of clients, and is U.S. Food and Drug Administration (FDA) and U.S. Department of Agriculture (USDA) inspected and “best in class” in terms of sanitary design, fit and finish, and operating protocol.

According to a recent report (March 2016) prepared by Econsult Solutions, titled “U.S. Kitchen Incubators- an Industry Update”¹⁵ between August 2013 and March 2016, the number of kitchen incubators in America has increased by more than 50% to over 200 facilities. Of 61 facilities surveyed, 82% say their revenue has increased over the past three years and 84% are breaking even or making money. Food business incubators are evolving. Original concepts included a few basic pieces of food service equipment; basically a simple commercial kitchen for rent. Today kitchen incubators have become larger and more sophisticated, as demonstrated by the Rutgers Food Innovation Center – a 23,000 square foot facility designed with training and conference rooms, microbiological and analytical labs, product development test kitchen, a commercial processing facility housing a commercial bottling line, 80 gallon kettles, blast coolers and freezers, etc. Other examples of more sophisticated facilities include CommonWealth Kitchen, a 36,000 square-foot facility in Dorchester MA and LA Prep a 56,000 square-foot facility in Los Angeles, California, housing 54 commercial kitchens. But these programs are more recent and the minority. Most incubators are relatively small at 5,000 square-feet or less.

¹⁵ <https://www.inbia.org/resources/for-program-managers/program-best-practices>

¹⁶ <http://www.econsultsolutions.com/report/us-kitchen-incubators-industry-update/>

Best practices in food incubation have determined that the success of incubators is not dependent on size but is highly dependent on mentorship, training and partnerships available to clientele. Getting started as a manufacturer in the food industry requires knowledge in a wide range of topics. Some include food technology, food safety and quality assurance, food regulations, food marketing and marketing research, sales, logistics, accounting and finance etc. Food business incubators that offer services in many of these areas have a much higher likelihood of success and for mentoring food entrepreneurs to successful businesses.

According to the Econsult study, the greatest percentages of food incubators are located in urban areas (52%), with 27% in suburban areas and 21% in rural locations. It comes as no surprise with the dense population of the region and the growing interest for artisan, local, ethnic foods that New York houses the greatest number of food Incubators by state. There are 12 active incubators in the New York City region alone.

Although there are many similarities across incubators nationally, it is important to design and market an incubator based on the needs of the local community. For example, in urban areas many food incubators are supporting the growth of the food truck industry. According to state health food regulations, food trucks must have a home base in NJ, providing opportunities for commercial kitchens and food incubators and supporting this type of venue. This strategy may not be as viable in a rural location where far fewer food trucks exist.

Another example includes USDA inspection. Very few food incubation facilities in the nation are under USDA inspection. In order to process meat, poultry and egg products, a certified USDA facility is required.

With the growing trends of specialty foods and the fact that small producers are looking for venues to produce food products, there is risk in operating a food business incubator. The operation is complex and often the margins are low. The success of kitchen incubators continues to rely on operators going beyond simply providing shared space and offering a more diverse set of resources for entrepreneurs. These resources typically include small business counseling and technical assistance, connecting with affordable capital, and providing access to new markets and contract opportunities. The assistance must be vast, from product idea to selling strategy. A small but growing set of kitchen incubators are part of multi-faceted facilities that also include retail, clustered commercial food producers, public markets, food distributors and job training.

As noted, many kitchen incubators today are small facilities with over one-third occupying less than 3,000 square-feet and over 80% occupying less than 10,000 square-feet. Most facilities offer cold, dry and freezer storage, as well as packaging and food truck commissary facilities. As noted, most kitchen incubators include equipment common to a food service kitchen, such as convection ovens, preparation tables, mixers and ranges. More sophisticated equipment such as large-scale kettles and rack ovens are less frequently provided in these smaller facilities, making it more difficult for these incubator programs to maintain their clients long-term as they grow in scale.

Storage is a key requirement for food incubators. Most facilities offer refrigerated, freezer and ambient storage. It should be noted however, that most incubators underestimate storage requirements. Some incubators rely on client-dedicated space for their storage needs. Other

programs use a central storage facility, such as walk in storage coolers where client ingredients and finished product is carefully separated and inventoried and palletized together.

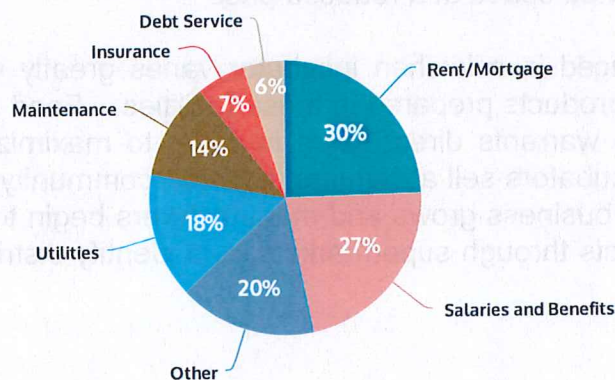
The overall type of facilities offered by food incubators varies greatly. The chart below summarizes the facilities available and the percentage of facilities that offer the service. Incubator facility offerings, as determined by the Econsult survey, include the following:

Incubator Facility Potential Functions	% Offering
Shared cold storage	87
Shared dry storage	85
Shared freezer storage	83
Packaging area	63
Food truck commissary	60
Shared prep space	53
Event space	52
Classroom space	47
Permanent food production space	47
Shared bakery	45
Office space for tenants	45
Food retail on premises	30

It is highly common for kitchen incubators to maintain minimal staff, similar to other styles of incubators. Most commonly, there is a full time manager running the program. This employee wears many different hats from managing the operation, to counseling clients, receiving deliveries and performing accounting tasks. Minimal staff is primarily driven by the operating budget. Approximately half of food incubators operate on less than \$100,000. As described earlier, with expansion of services, staffing and revenue is trending up. Those with a budget of \$100,000 to \$249,999 enjoyed the greatest revenue growth - 6% between 2013 and 2016.

The highest operating costs for incubators are rent/mortgage, salaries and benefits, with other expenses such as utilities, maintenance, insurance and debt service comprising smaller, but significant portions of costs. This is described in the following graphic:

Average Total Operating Cost by Type



Leasing shared space is the primary revenue source for most incubators, averaging about 58% of total revenue. Leasing permanent space makes up a high portion of revenue for incubators and is an important strategy for creating an “anchor” tenant. In the Econsult study, revenues derived from leasing permanent space made up for 24% of all revenues in their national survey. Other revenue sources include classes and training, other event space rental, operation of a copacking operation, and operation of a distribution operation on behalf of clients.

Incubators vary greatly in the number of tenants they support. However, on average most incubators house between 20-29 tenants in a given period. It is important to note that many incubators support multiple businesses concurrently; which means that several producers can utilize the facility at the same time. Multiple clients may use areas such as dishwashing, storage, and packaging on the same day. Tenants simply learn to work around each other and effective facility scheduling is critical to efficient and safe production.

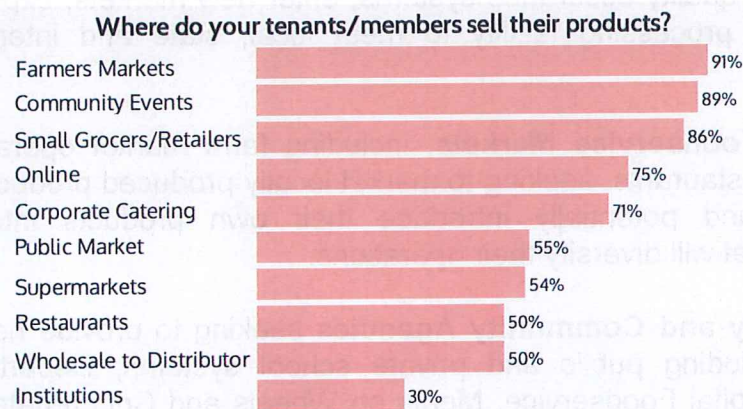
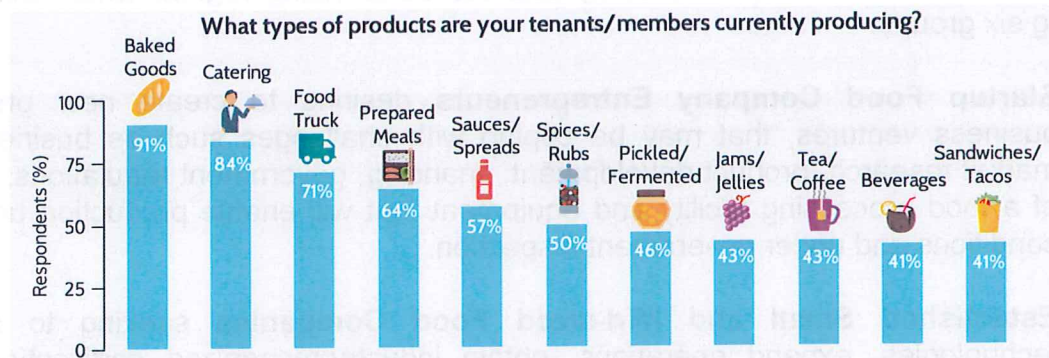
Management of these programs is responsible to assist food entrepreneurs and established businesses with attaining the next step in their production. It is understood that the client company may outgrow the incubator; in fact it is a goal of most incubators to graduate clients and assist them with establishing a facility for their increased growth phase. Most incubators will allow clients to remain in their facility until their production needs impede the entry of several new start-ups. On average, seventy-five percent of tenants will remain in an incubator for one year or longer, with almost 50% remaining one to three years.

Tenant rates have been increasing in the last few years. Eighty-four percent of food incubator facilities have seen an increase in tenant participation in the past three years. Approximately one third of tenants lease full-time dedicated production space, with the remaining 2/3 renting on a daily basis. Once a company has grown to support a full time space, there are distinctive benefits to leasing in this fashion. Some of the benefits include:

- Cost efficiencies
- Schedule flexibility – Many incubators allow clients to work 24/7 at one inclusive rate
- Dedicated storage – ambient for shelf-stable ingredients, packaging materials, etc.
Space for dedicated refrigeration and freezing
- Shared kitchen capabilities – Some incubators allow tenants to share space, providing the benefits of dedicated space at a reduced price

The type of products produced in a kitchen incubator varies greatly with baked goods and catering the most common products prepared in these facilities. Food artisans quickly realize that small batch production warrants direct sales in order to maximize profits. Most small producers working out of incubators sell at farmers markets, community events, small grocers, online and via catering. As business grows and manufacturers begin to scale production, it is more common to sell products through supermarkets, and identify distributors who will greatly expand retail opportunities.

The following two illustrations provide insight into the types of products currently being produced by clients/tenants/members at food incubation programs nationwide, and the types of venues in which these products are being sold.



Most kitchen incubators operate at an affordable hourly rate. It is common to offer blocks of time, such as 2-4 hours or 4-8 hours, for scheduling efficiency. Some incubators offer an off-peak rate, which is attractive to producers who may work a full time job.

According to the Econsult study, average hourly rate averages about \$21.50. Rates have been identified as low as \$8.00/hour and as high as \$42.00/hour. It should be noted that the Rutgers Food Innovation Center, which was not profiled in this study, charges an effective hourly rate that is higher than any other incubator program in this study, and may also provide more sophisticated equipment and support than any other incubation program in this study.

Some food incubators charge their lease tenants utility fees. They can be evenly dispersed across tenants or in some cases utility usage is monitored by unit and charged back for the specific usage incurred. Another common fee charged by many incubators are storage fees. Storage is charged primarily to those who utilize shared storage. Refrigerated and frozen storage usually represents a higher rate than ambient storage.

Most rent is paid on a monthly basis (80%). It is common to provide a discounted rate to companies who rent a higher degree of hours or at off-peak hours.

3.4 Client Focus

The Paterson food incubator, in accomplishing its mission, can aggregate the entire food industry value chain in Passaic County and the surrounding region, which will include the following six groups:

- A. **Startup Food Company Entrepreneurs** desiring to create new prepared food business ventures, that may be coping with challenges such as business planning, market research, product development, financing, government regulations, and the lack of a food processing facility and equipment that will enable production under sanitary conditions and under government inspection.
- B. **Established Small and Mid-sized Food Companies** seeking to access new technologies, expand operations, obtain industry-recognized certification programs, upgrade their quality assurance systems, enter new markets, export products or utilize an incubator processing facility to meet local, state and international food safety standards.
- C. **Retail and Foodservice Markets**, including farm market operations, specialty food stores, and restaurants, seeking to market locally-produced products, improve their own operations, and potentially introduce their own products into new channels of distribution that will diversify their operations.
- D. **State, County and Community Agencies** seeking to provide healthy meals for local residents including public and private school systems, Department of Corrections facilities, Hospital Foodservice, Meals on Wheels and Congregate Living programs for seniors, etc.
- E. **Students** that can gain experiential learning opportunities with food industry clients and work in a team-consulting environment, and create opportunities for future employment. Students may be enrolled, for example, in the following type of programs:
 - Culinary Arts
 - Food Science
 - Business

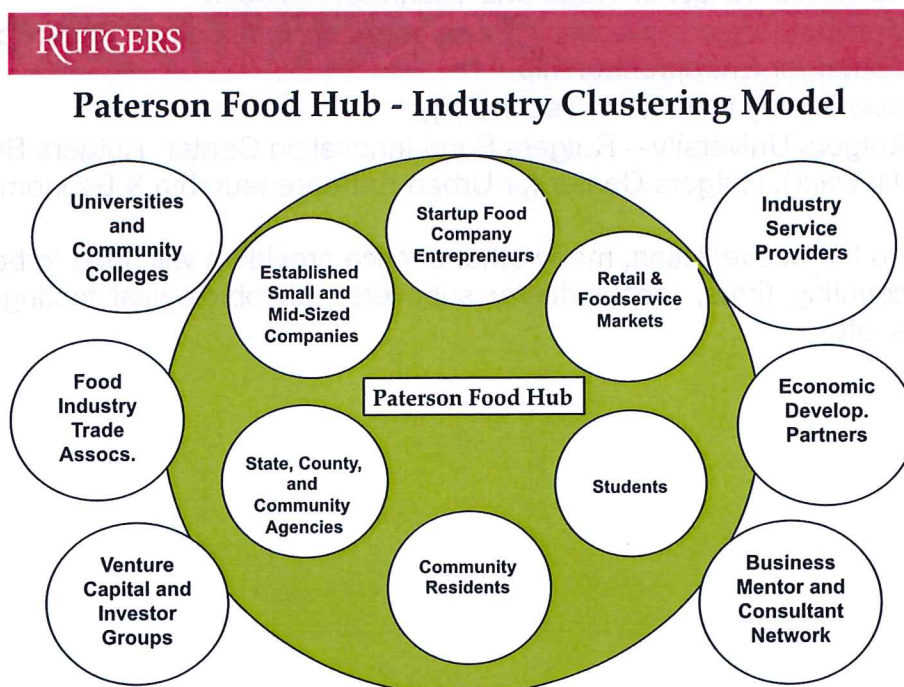
The incubator facility can become an outstanding resource for students, and can provide a unique opportunity to gain practical hands-on experience through internships, cooperative education, class projects, and potential employment in the food industry. Opportunities for students will exist in areas as diverse as business plan development, market research, economic analysis, food science, nutrition science, quality assurance, food security, package engineering, industrial and process engineering, package design, public policy, etc.

- F. **Community residents** interested in learning about opportunities in the food industry, obtaining industry-recognized certifications, and obtaining employment opportunities in the food industry.

3.5 Resource Network and Clustering Strategy

An incubator can become the catalyst for the creation of a *business cluster and hub* in a community, county, state or region by creating concentrations of interconnected companies, suppliers, service providers, and associated institutions. The Paterson Food Hub food incubator program can facilitate a regional food industry cluster, where the entire *regional food industry value chain is aggregated*, and where it also aggregates a *network of resources* to meet the diverse needs of its clientele.

The main benefit of a cluster-based strategy is that it allows small and medium-sized enterprises (SMEs) to achieve new competitive advantages by networking, and by providing a group of skilled professionals at the incubator which can assist multiple businesses. It has been demonstrated that small businesses are often better able to reach their potential if business support and capacity building services can be focused on a group of small companies belonging to the same industry cluster. Such a network of small clustered companies also can better attract attention from more established companies in their sector, as well as professionals from the financing, legal and accounting community. Sector-focused incubators can also offer informational and marketing services that can educate larger more established companies in the sector about the existence and competence of the new smaller companies. In the creation of a regional food industry cluster, the Paterson Food Hub will need to aggregate the food industry value chain and the six types of clients described in the prior section, by also aggregating a network of resources to meet the diverse needs of its clientele. These linkages will result in enhanced impacts and a needed multi-disciplinary approach to clients. In this cluster model, the Paterson Food Hub provides resources that “surround” its clients, and include: universities and community colleges; food industry trade associations; industry service providers; venture capital firms and investor groups; economic development agencies and partners; and business mentors and network of consultants that will need to be developed. This cluster can be illustrated as follows:



This cluster can and should include a great number of resources that service the food entrepreneurship community within Patterson, Passaic County and the region. Some examples of these resources, which is not inclusive of the many resources that exist within the region, include the following:

City, County, Regional and State Associations and Economic Development Agencies

- Small Business Development Center (SBDC) at William Paterson University
- Passaic County Division of Economic Development
- Greater Paterson Chamber of Commerce
- Paterson Farmers' Market Association
- Downtown Paterson – Merchants and Businesses
- Impact Paterson
- Paterson Housing Authority Entrepreneurship & Small Business Incubator Program
- Paterson Housing Authority Success Incubator
- Paterson Urban Enterprise Zone
- United Way of Passaic County - Passaic County Food Policy Program
- Oasis – Culinary Kitchen Program
- Eva's Village – Eva's Kitchen Culinary Program
- Greater Newark Enterprises Corporation
- New Jersey Business Innovation Network
- New Jersey Department of Health – Paterson Department of Health office
- Statewide Hispanic Chamber of Commerce of New Jersey

Educational Institutions – High Schools, Vocational Schools, and Colleges/Universities

- Paterson Public Schools – School of Culinary Arts, Hospitality and Tourism
- Passaic County Community College – Center for Continuing Education and Workforce Development; Culinary Arts Program; etc.
- HoHoKus School of Trade and Technical Services
- Montclair State University – Department of Nutrition and Food Science; Feliciano Center for Entrepreneurship
- New Jersey Institute of Technology
- Rutgers University – Rutgers Food Innovation Center, Rutgers Business School (Newark), Rutgers Center for Urban Entrepreneurship & Economic Development

In addition to the above listing, many other service providers will need to be identified including banks, accounting firms, food industry suppliers, microbiological testing providers, industry consultants, etc.

3.6 Incubation Service Offerings

It is proposed that the Paterson Food Hub provide 3 primary offerings, that will be served via its own staff and the resource network it will provide, and which will enable it to meet the needs of its clients. Through a partnership that can be established with the Rutgers Food Innovation Center and other resources that will be developed, these service offerings include:

A. Business and Technical Mentoring

I. Business Development

- Subject Matter Expertise in Food Industry Trends and Differentiated Business Models
- Market Research and Trends Assessment
- Competitive Intelligence
- Innovation and Ideation
- Qualitative and Quantitative Consumer Research, e.g. focus groups
- Marketing, Sales and Distribution Channel Strategy
- Human Resources and Organizational Hiring
- Product Costing and Pricing Analysis and Benchmarking
- Feasibility Studies and Business Plan Development Guidance
 - Customer Segmentation
 - Value Proposition, and Unique Selling Proposition
 - Channels of Distribution
 - Market Analysis and Marketing Plan
 - Management Team, Resource Partners, and Strategic Alliances
 - Cost Structure and Financial Projections
- Grant Writing Guidance
- Access to Resources and Guidance with Sources of Capital
- Access to Resources and Guidance with Legal Matters such as Legal Structure Considerations, Corporate Governance, Intellectual Property, Employment Law, Brokerage Agreements, Strategic Partner and Cooperative Agreements, etc.

II. New Product Development

- Concept Generation and Prototype Development
- Ingredient Sourcing and Evaluation
- Formula Optimization and Least Cost Product Development
- Packaging Selection for Cups, Trays, Pouches, Jars, etc.
- FDA and USDA Regulations Counseling
- Nutritional Analysis and Labeling Determination
- Product Commercialization Testing
- Sensory Analysis
- Recipe/secondary Usage Development
- Product Preparation Directions
- Manufacturing Strategy

III. Technology Commercialization

- Process Assessment
- Equipment Assessment
- Packaging Technology Assessment
- Product and Package Sustainability
- Intellectual Property Assessment
- Patents and Trademarks Advice
- Technology Transfer

IV. Quality Assurance and Food Safety

- Shelf Life Testing
- Analytical Standards Development
- Food Safety and Food Security Strategy
- Crisis Management Support
- Quality Assurance Documentation, including Raw Material and Finished Product Specifications, GAP's, GMP's, SOP's, SSOP's and HACCP
- Supplier Auditing
- Preparation for Third Party Audit
- GFSI Standards, including SQF and BRC

B. Workforce Development and Training

Staff of the Rutgers Food Innovation Center can provide for, or facilitate, the following three types of workforce development and training programs for the clients of the Paterson Food Hub:

- In-Class Seminars and Certification Programs at the Paterson Food Hub or elsewhere in Passaic County.
- On-site Training Classes in food safety or other relevant topics, at the location of the food processor.

Potential training classes include the following subject areas, which can be taught in both English and Spanish:

- Food Business Basics
- Developing a Business Plan
- Good Manufacturing Practices for Food Producers
- Legal Considerations for Food Business Ventures
- Sales and Distribution Strategy

C. Shared-Use Food Processing Space

The Paterson Food Hub facility will enable a broad range of value-added agricultural and food products that can be produced on a shared-use basis, with rental/usage fees based on a minimum of a single day of space usage or for a longer-term rental period. The processing space and equipment selected will be designed to meet the sanitary requirements of the US Food and Drug Administration (US FDA) and US Department of Agriculture (USDA) Food Safety and Inspection Service (FSIS) and is further described in the section that follows.

4.0 FACILITY LAYOUT

4.1 Incubator Facility Location and Space Requirements

The Paterson Restoration Corporation purchased a facility located at 163-177 Pennsylvania Avenue in Paterson to serve as its location for the food business incubator. A photograph of this location is as follows.

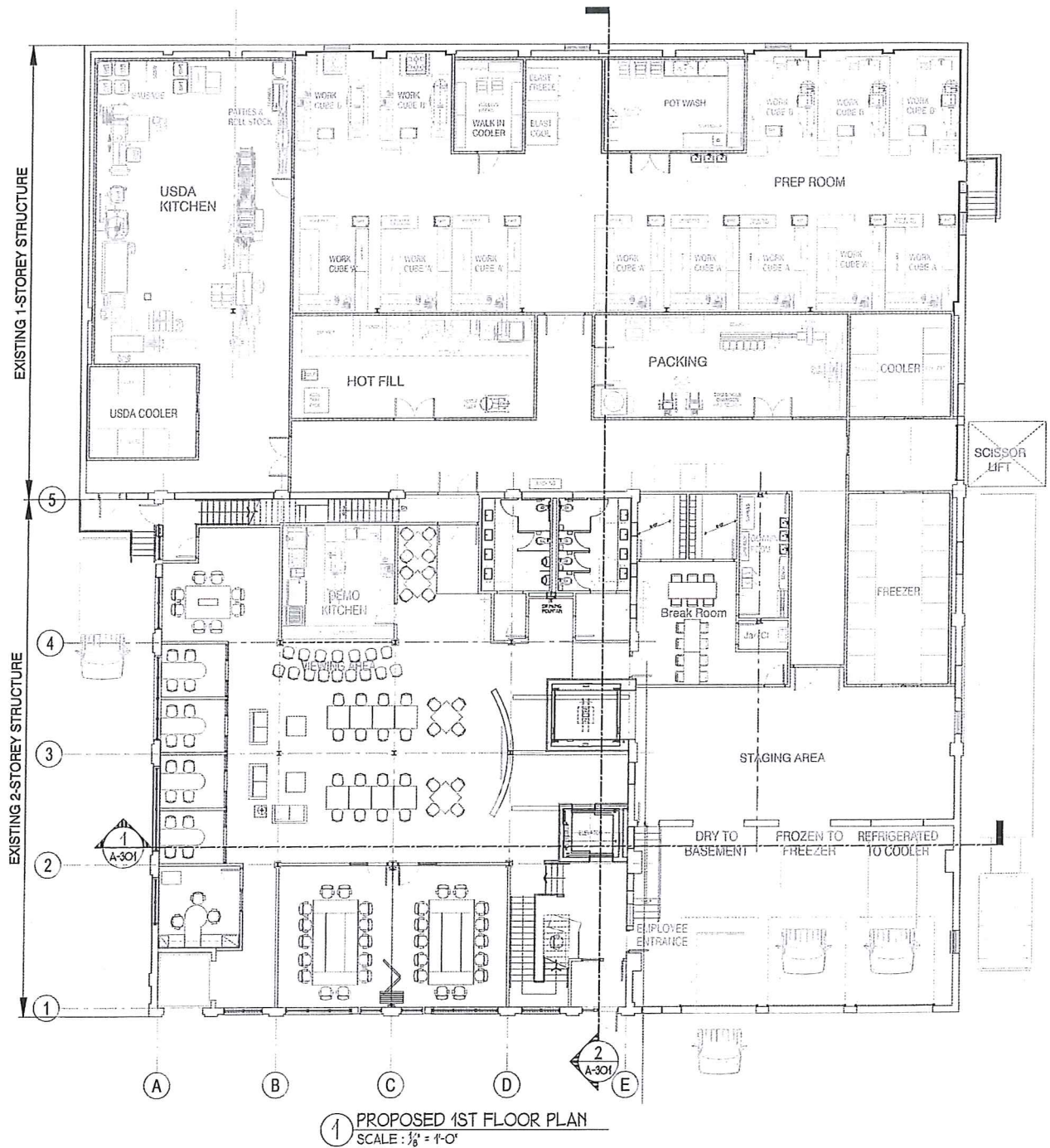


The Paterson Food Hub will need to provide great flexibility given the varying needs of clients, while being “best in class” in terms of sanitary design, fit and finish, and operating protocol. This facility will need to be multi-dimensional and address the following:

- *Equipment:* Versatile equipment will be needed to help a client from bench-top to scale production, with some degree of automation to enable least-cost manufacture.
- *Products:* A diverse array of value-added processes will be required by clients that choose to produce ready-to-eat, ready-to-heat, and ready-to-cook products.
- *Packaging:* A diverse array of packaging will also be needed including semi-automatic filling of bottles, cups, bags, etc., for retail and foodservice applications.
- *Regulatory:* The sanitary facility design and personnel Standard Operating Procedures (SOP's) will need to minimize potential for microbial cross-contamination, and meet/exceed the needs of FDA and USDA for commercial sale
- *Storage:* Capabilities to store both raw materials and finished products in the ambient, refrigerated and frozen states will exist.
- *Special Certifications:* Products may need to be packaged with specialized quality standards, such as Organic, Kosher, non-GMO and/or Gluten-Free.

4.2 Incubator Facility Design

The facility design was determined based upon the expertise of the Rutgers Food Innovation Center staff, and the primary and secondary research that was conducted by the Rutgers team. The entire layout of the current facility at 163-177 Pennsylvania Avenue in Paterson has also been redesigned by the Rutgers team, as shown on the CAD illustration that follows:



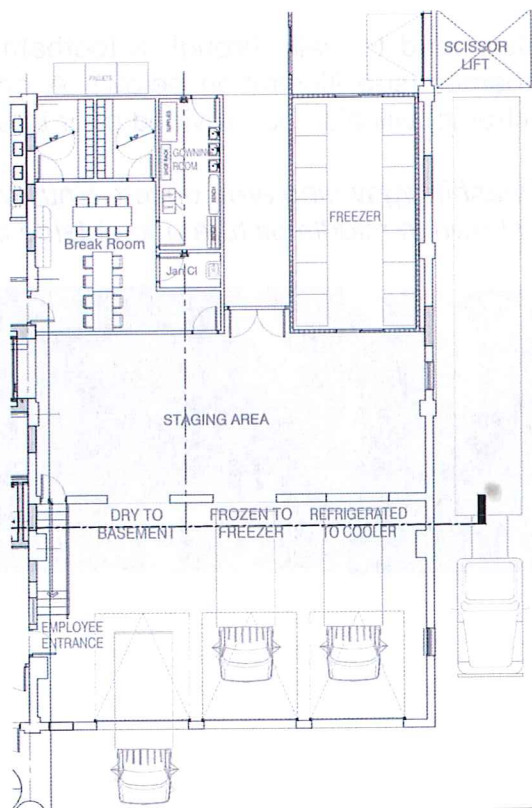
This design incorporates the following processing rooms and supporting areas, which will be described in further detail:

- 1) Shipping and Receiving Docks
- 2) Employee Gowning Area and Locker Room
- 3) Work Cubes for Small-Scale Processors
- 4) Hot Kitchen
- 5) Packaging Room
- 6) USDA-Inspected Meat and Poultry Processing
- 7) Demo Kitchen
- 8) Coworking and Meeting Space
- 9) Raw Material and Finished Good Storage
- 10) Administrative Needs

The activities that will occur within each of these ten functions are as follows:

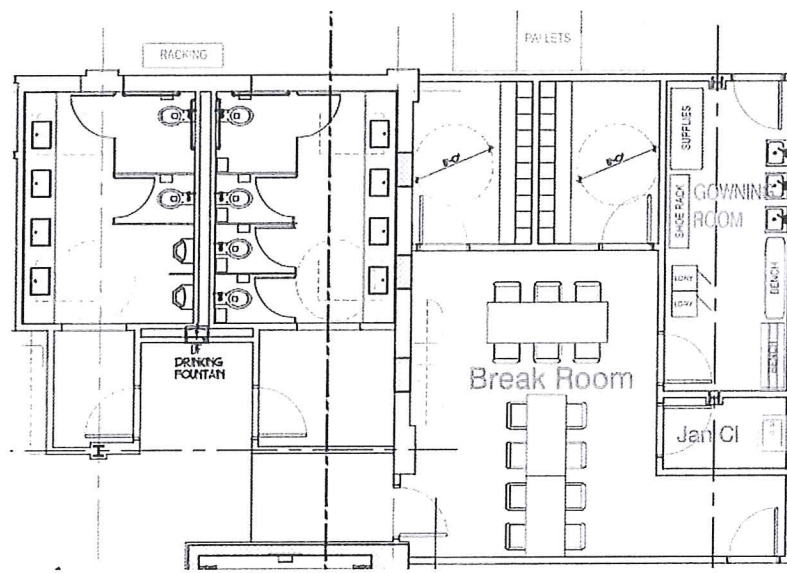
1. Shipping and Receiving Docks

The existing first floor receiving and shipping area will enable the receipt of goods in a sanitary fashion. Three bays will be located within the enclosed receiving and shipping area, and there will be space for a fourth bay on the side of the building, as shown below:



2. Employee Gowning Area and Locker Room

Adjacent to the shipping and receiving areas will be a dedicated locker room and employee gowning area for men and women, as well as bathroom facilities. It is imperative that there be a controlled access point into the processing areas to minimize potential contamination by employees.



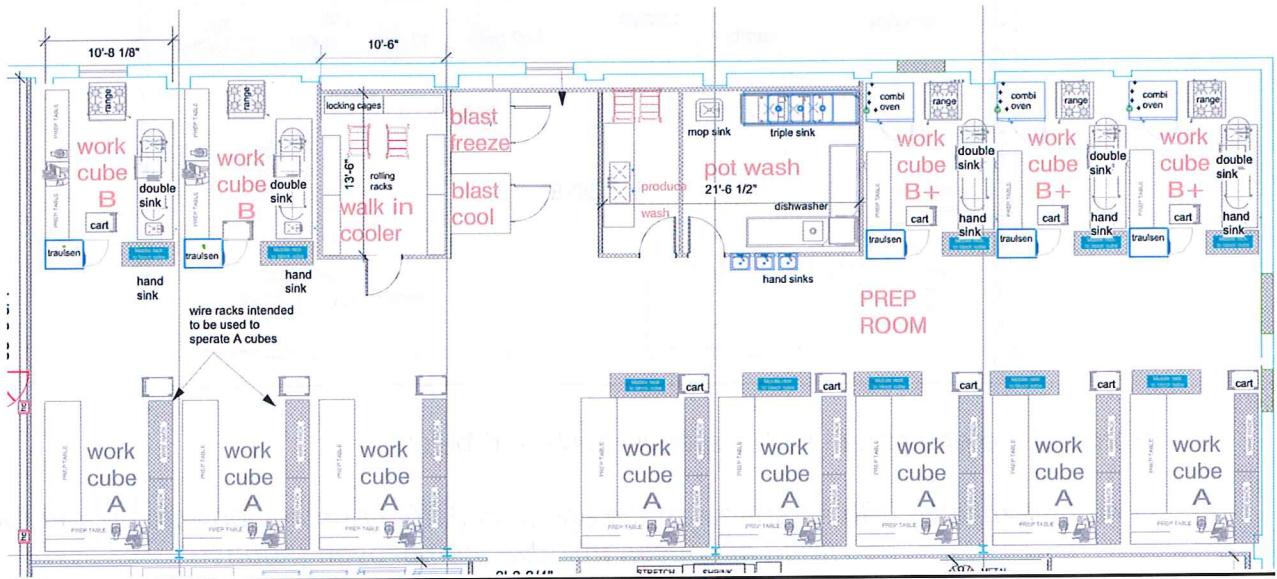
Employees will also need to walk through a footbath and/or an area that is sanitized with a doorway foamer (see illustration below). A handwash station (hands-free with knee valve or electronic) will also be provided prior to entering the processing areas.

Example of washing/gowning area on left, Entryway foamer installed in a hallway shown in middle picture and outside door on right picture



3. Work Cubes for Small-Scale Processors

The Rutgers Food Innovation Center has designed 13 modules that will enable small-scale processors to manufacture products at the Paterson Food Hub. Eight of these modules are defined as “work cube A”, and five of these modules are defined as “work cube B”. The A work cubes are divided by shelving units and stainless steel tables to create a segregated space and electric utilities will be provided for access to needed power. These spaces will be entirely modular so that a client that would like to double his/her space can simply be provided two modules instead of one. This is shown below:



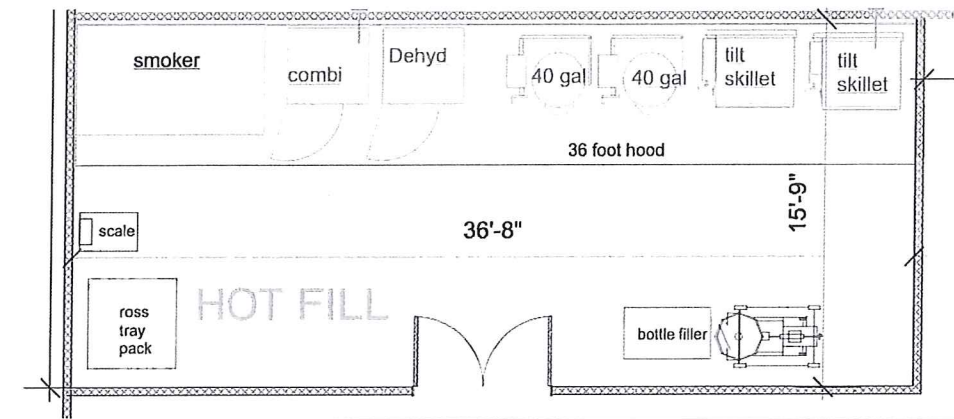
The “B” work cubes will each have a double sink, a hand sink, a designated refrigerator, and some units (noted as work cube “B” below) will also have a four-burner stove and hood, and some units (noted as work cubes “B+” below) will instead have a four-burner stove as well as a combi oven.

All clients in both the A and B work cubes would also be able to share the following:

- The three hand sinks located outside the pot wash area
- Produce washing area
- Pot wash area (with 3 compartment sink and tray washer)
- Blast cooler
- Blast freezer
- Walk-in storage cooler
- Finished goods cooler (described in item 9)
- Finished goods freezer (described in item 9)

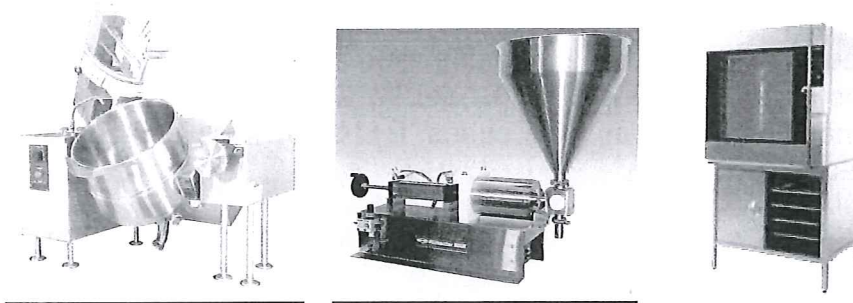
4. Hot Kitchen

The "hot kitchen" area will present entrepreneurs with an extensive range of process capabilities including steaming, cooking, sautéing, roasting, smoking, baking, dehydrating, and liquid filling and labeling. This enables a wide array of products packaged for retail and foodservice sale, such as: beverages, soups, sauces, stews, salsas, jam and jelly, grilled and roasted vegetables, and dehydrated snacks. A small bottling line and cup/tray filling line will also allow for semi-automated production. A layout of this area is as follows:

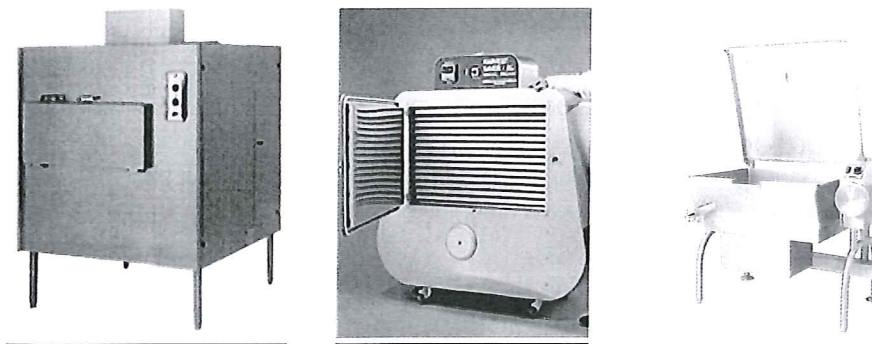


Some of the equipment in this area is illustrated below:

40-gallon kettle with scraped-surface agitation (left), filling station with hopper for hot filling of sauces (middle), combi oven (right)

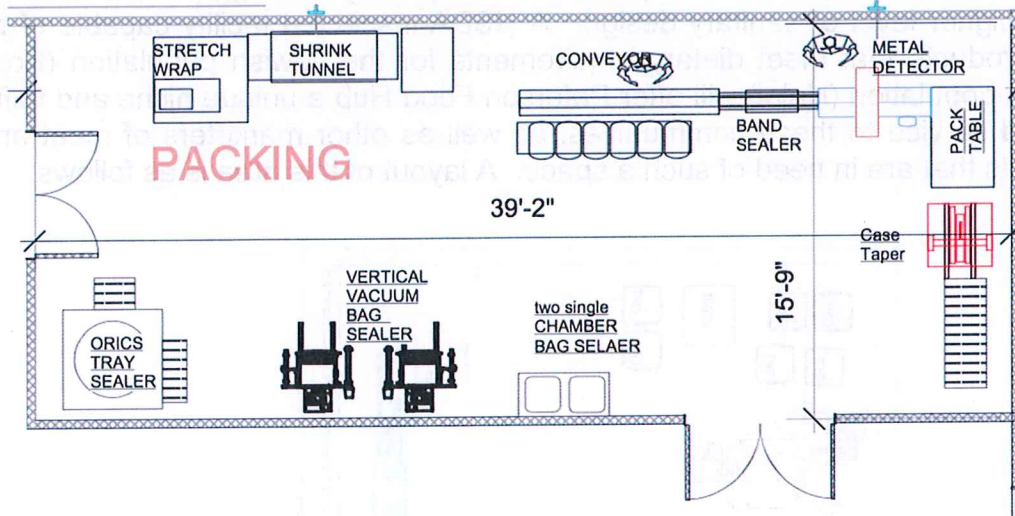


Smoker (left), dehydrator (middle) tilt skillet (right)



5. Packaging Area

The packaging area will present entrepreneurs with an extensive range of packaging capabilities for stretch wrap and shrink packaging; vacuum sealing of bags; sealing of preformed trays, metal detection and case taping. A layout of this area is as follows:



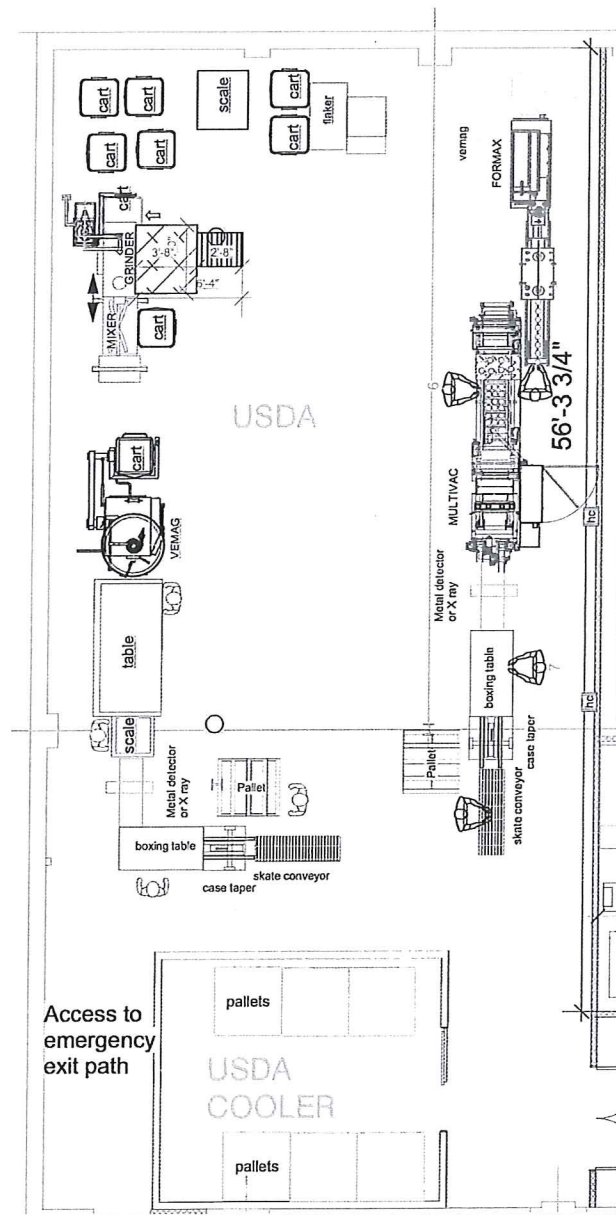
Some of the equipment in this area is illustrated below:

Orics tray sealer capable of sealing entrees, dips, soups, etc. (left), single chamber bag sealer for vacuum packaging (middle), metal detector (right)



6. USDA-Inspected Meat and Poultry Processing

As stated earlier in this report, it has been determined that a unique asset of the Paterson Food Hub facility should include a USDA-inspected operation. Very few food incubation facilities in the nation are under USDA inspection, and there are no known USDA-inspected incubators in the New York MSA region that currently exist. Such facilities are needed in order to process meat, poultry and egg products, and require a much higher level of sanitary design. A USDA-inspected facility capable of producing food products that meet dietary requirements for the Jewish population (Kosher) and Muslim population (Halal) will offer Paterson Food Hub a unique niche and fulfill a much needed service to these communities, as well as other marketers of meat and poultry products that are in need of such a space. A layout of this area is as follows:



Some of the equipment in this area is illustrated below:

Hobart meat grinder (left); Vemag filler for portioning a broad array of meat, poultry, and dough products (middle); Formax forming machine for making patties, nuggets and other shapes from raw meat (right)

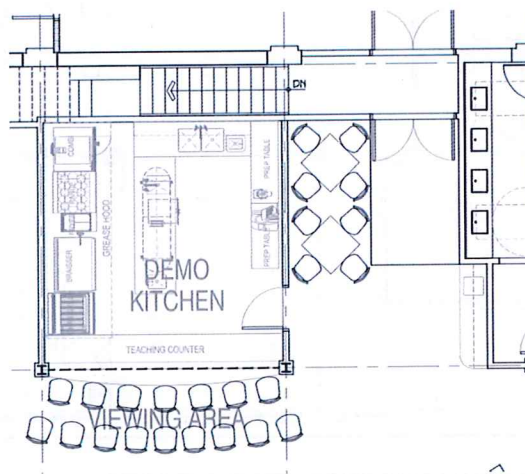


Multivac form-fill-seal machine (left) that enables vacuum packaging or gas flushing of a wide array of products, such as sausages (as shown on right)



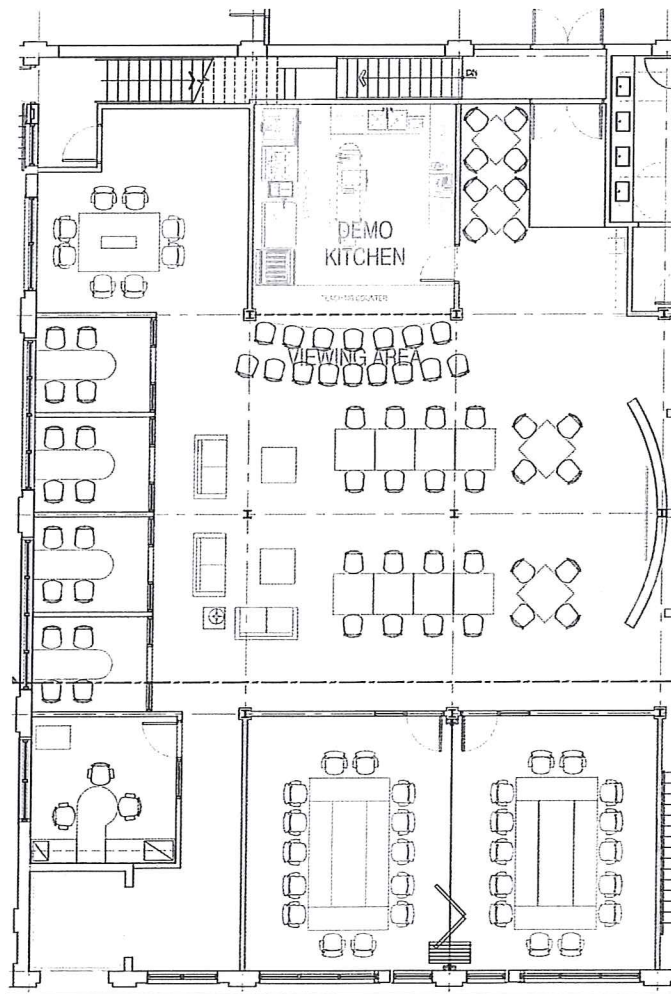
7. Demo Kitchen

A demonstration (demo) kitchen will be provided in the Paterson Food Hub that will allow for both product and process development to occur by visiting staff of the Rutgers Food Innovation Center and/or other service providers, as well as demonstration projects that can be utilized by food companies, and culinary and food science teaching and training projects that can be utilized by community partners. Basic foodservice kitchen equipment will be provided, and a layout of this area is as follows



8. Coworking and Meeting Space

The Paterson Food Hub has been created with flexible space that will enable a coworking environment, as well as some separate office areas for small teams, and some separate conference rooms for private meetings. A coworking environment will be critical to the creation of the “hub” that will be part of the core mission of the Paterson Food Hub. Coworking is a style of work that involves a shared working environment, with independent activity. Unlike a typical office environment, those coworking are usually not employed by the same organization. Typically this environment is attractive to sole proprietors working on a new business concept, work-at-home professionals, independent contractors, or people who travel frequently who otherwise end up working in relative isolation. Coworking is also the social gathering of a group of people who are still working independently, but who share values, and who are interested in the synergy that can happen from working with people who value working in the same place alongside each other. These spaces represent a critical foundation of infrastructure for a new and growing workforce of people who work where, when, how, and why they want. A layout of this area is as follows:

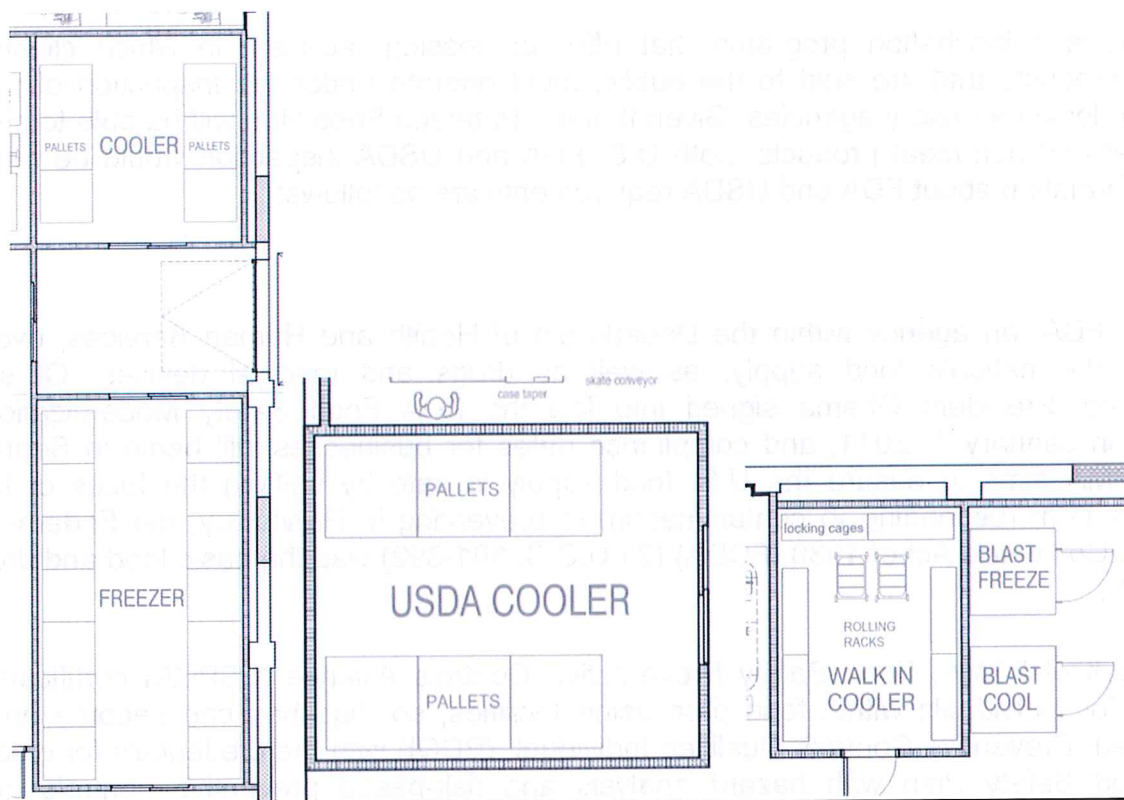


9. Raw Material and Finished Goods Storage

Raw material and finished product storage has been designed for all three product states that will be required of users of the Paterson Food Hub, that include:

- Ambient Storage, for
 - Ambient-stored Ingredients
 - Packaging Storage
 - Ambient-stored finished products
- Refrigerated Storage, for
 - Raw materials
 - Finished products
 - Blast chilling capabilities
- Frozen Storage, for
 - Raw materials
 - Finished products
 - Blast freezing capabilities

This includes the entire basement, which is being designed for ambient storage of packaging materials and dry ingredients with separate cages that will be provided to clients, as well as a number of portions of the first floor operation. A layout of these cold storage areas on the first floor, that will be available for storage in addition to the ambient storage that will be available in the basement, is as follows:



10. Administrative Needs

Lastly, the Paterson Food Hub will provide space for the administrative staff of the program, guests and interns that may utilize the facility on an occasional or regular basis, as well as a dedicated office for the USDA inspector. In addition, space will need to be available for maintaining quality assurance and other administrative paperwork of clients. In addition a break room will be provided for clients, for their lunches and other needs, and men's and women's restrooms will also be provided.

4.3 Equipment Selection

As part of this feasibility study, Rutgers Food Innovation Center designed the entire facility layout for PRC, and identified and specified each piece of equipment for each of the processing areas that were described in the previous section. This list of equipment was provided to F. J. Rawding, AIA, Architect, and A&A Construction Management & Consultants, Inc., who were contracted independently by the Paterson Restoration Corporation. This equipment list was sent out to bid, in two separate packages, so that the equipment needed to outfit this building could be purchased as quickly as possible and could be installed shortly after building renovations were concluded.

4.4 Facility Regulatory Requirements

Food business incubation programs that offer processing facilities, in which clients can produce products that are sold to the public, must operate under the inspection of federal, state, and local regulatory agencies. Given that the Paterson Food Hub will be able to produce both meat and non-meat products, both U.S. FDA and USDA inspection would be required. Some information about FDA and USDA requirements are as follows:

FDA

The U.S. FDA, an agency within the Department of Health and Human Services, oversees much of the nation's food supply, as well as drugs and medical devices. Of special significance, President Obama signed into law the FDA Food Safety Modernization Act (FSMA) on January 4, 2011, and compliance dates for businesses will begin in September 2016. FSMA aims to ensure the U.S. food supply is safe by shifting the focus of federal regulators from responding to contamination, to preventing it. Previously, the Federal Food, Drug and Cosmetics Act of 1938 (FCDA) (21 U.S.C. 301-392) was the basic food and drug law of the U.S.

As a result of FSMA, Food Safety Preventative Controls Alliance (FSPCA) certificates are required for individuals within food processing facilities, so that they can become an FDA-recognized "Preventive Controls Qualified Individual" (PCQI) with the credentials for creating a FDA Food Safety Plan with hazard analysis and risk-based preventive controls at their operation.

Each FDA-regulated food processing facility that is not under regulatory-required HACCP, must now have a PCQI to develop, implement and validate their food safety plan as required under the 2011 FSMA Act, and the Preventive Controls for Human Food regulations that will go into effect in September of 2016 for many food processing companies. PCHF training is appropriate for food marketers and food processing managers in the functions of quality assurance, plant operations, sanitation, and other functions; service providers and consultants; public health inspectors; and also brokers and distributors.

Rules and regulations established by the FDA are published in Title 21 of the Code of Federal Regulations (CFR). Title 21, CFR, Part 1-99, covers the general regulations for the enforcement of the Federal Food, Drug, and Cosmetic Act and the Fair Packaging and Labeling Act. Part 100 to 169, addresses the food labeling, food standards, good manufacturing practices for foods, low acid canned foods, and acidified foods. Part 170 to 199 is concerned with food additives. Part 800 to 1299 include regulations under the Federal Import Milk Act, and regulations for control of communicable diseases and interstate conveyance sanitation. These laws are intended to assure that foods are safe to eat, pure and wholesome, and produced under sanitary conditions.

FDA inspectors are given authority to inspect any establishment where food is processed, packaged, or held for shipment in interstate commerce. Inspection can also be done on products after shipment, on vehicles used to transport food in interstate commerce, equipment, finished products, containers, and labeling. The FDA provides specific definitions for adulterated and misbranded foods.

FDA is also specifically charged with inspection and registration of shelf-stable or canned foods. By definition, canned foods include those preserved in glass jars and not requiring refrigeration prior to opening. In many areas, inspection of canning establishments is contracted to state agencies to administer.

With new FSMA regulations, food-processing facilities must establish and implement a food safety system that includes an analysis of hazards and risk-based preventive controls. The FDA requires a Hazard Analysis and Critical Control Points (HACCP) program for covered facilities, which must establish and implement a food safety system that includes an analysis of hazards and risk-based preventive controls.

Low acid or acidified food processing must be done under the supervision of an individual who has attended and passed one of the Better Process Control Schools (BPCS). FDA requires that a "processing authority" review recipes and procedures for all low acid or acidified foods. The Northeast Center for Food Entrepreneurship (NECFE) at Cornell currently provides this service within New Jersey. The process authority has scientific training and facilities that allow him or her to submit a "process schedule" that the FDA deems valid and safe. All food-processing facilities must be designed to comply with 21CFR, Part 110, Good Manufacturing Practices.

USDA

The United States Department of Agriculture (USDA), Food and Safety Inspection Service (FSIS) enforces laws pertaining to meat and poultry. Meat or meat products derived from cattle, sheep, swine, goats and horses are subject to the provisions of the Wholesome Meat Act, and poultry is subject to the Wholesome Poultry Act. Food products having more than three percent (3%) meat are subject to USDA regulations, and must be produced in an USDA certified facility. All other meat and poultry products not subject to USDA regulations are under the Federal Food, Drug, and Cosmetic Act and thereby subject to FDA jurisdiction.

The USDA, through its agency the Food Safety Inspection Service (FSIS), maintains regulatory authority of most meat and poultry products consumed in the US. Exceptions include products originating from facilities (plants) that do strictly intrastate shipment located in states that have their own meat inspection programs. Other exempt processes include slaughter and processing of animals for personal consumption, further processing of meats for retail sale and certain species such as rabbit.

While some larger processing plants may have a multitude of FSIS inspectors on full-time duty, most medium and small plants are covered on a circuit basis with one inspector covering several plants in an area. The inspector visits each plant on days they do inspected product to verify that Sanitation Standard Operating Procedures (SSOP's) and proper food handling processes are being followed.


Inspectors report to a Circuit Supervisor (CS) whose jurisdiction covers many individual plants. The CS will be the primary individual in approving the Grant of Inspection for any new plant and represents the first avenue of appeal when plants and inspectors have regulatory disagreements. Plants can expect a visit from the CS on a regular basis.

A Grant of Inspection will need to be issued to the Paterson Food Hub. Each plant receives its own, individual and unique plant number. All USDA inspected products that are produced at the Paterson Food Hub must be labeled to include (among other things) that unique plant number, which may be specific to meat and also to poultry. Individual producers use that plant number when seeking USDA label approval by filling as a "doing business as" (d/b/a) entity under the operating facility.

4.5 Food Safety and Quality Systems

The Paterson Food Hub will need to develop standardized operating forms for usage, which will require continual updating, and include items such as the following:

Client Standard Operating Procedures

- Client Protocol and Guidebook (How to Work With Us)
 - Client Intake Form
 - Client Agreement Template – Business Mentoring
 - Client Agreement Template – Facility Usage
 - Client Agreement Template – Confidentiality
- 

Quality Assurance Documents

- Paterson Food Hub Commitment to Food Safety
- GMP Policy for Plant Personnel
- GMP Policy for Visitors
- GMP Policy for Sanitation Personnel
- Adverse Health Policy Statement
- HACCP Plan Templates
- Allergen Program
- Emergency Preparedness and Recall Procedure
- Food Defense, Bioterrorism and Facility Safety Plan
- Foreign Materials Policy (Metal Detection, Glass, and Brittle Plastic)
- Self-Inspection Policy and Procedures for Food Safety
- Receiving and Storage Policy
- Listeria Prevention Policy
- Coding and Traceability Policy
- Blood-borne Pathogen and Bodily Fluids Policy
- Chemical Policy
- Facility Maintenance and Construction Policy
- Policy and Procedure Change Process
- Record Retention Schedule
- Regulatory Information and Updates
- Lock-out Tag-out Policy
- Sanitation Program, and Sanitation Standard Operating Procedures
- Pest Control Program
- Storage & Handling of Inedible Meat Materials
- Thawing Frozen Ingredients
- MSDS Policy and Log

Quality Assurance Forms

- GMP Training Signature Document
- Adverse Health Policy Signature Document
- MSDS Training Signature Document
- Batch Sheet Form
- Change / Revision to a Policy or Document
- Quality Hold Log
- Metal Detector Log
- Certificate of Analysis
- Pre-Op Inspection Form for Processing Rooms
- CCP Meat & Poultry Cooked Temperature Template
- CCP Meat & Poultry Temperature Stabilization Record Template
- CCP Presence of Allergen Statement on Box/Package
- Filling & Sauce Cooked Temperature Record Template
- Finished Product Weight Checks Template
- Formula and Label Verification Form
- Shipping and Receiving / Inventory Tracking
- Inverted Jar Time Record

5.0 ORGANIZATION

5.1 Operating and Organizational Strategy and Structure

Based on best practices at similar facilities in the US, it is recommended that the Paterson Food Hub be structured as a stand-alone, 501(c) (3) – Non-Profit Corporation. This non-profit may be affiliated with the Paterson Restoration Corporation and/or other agencies that may be identified.

This will provide the following benefits to the incubator program:

- Allows operation as a business, and speed, decision-making and efficiency with clients, which are critical for creating impacts and providing excellent customer service
- Allows for greater independence and flexibility in hiring, scheduling, salaries, staffing, logistics and administration
- Allows for maximum goodwill in community with a stand-alone, separate identity with focus on greater needs of the community
- Allows for tax benefits for donors
- Appealing structure for fundraising efforts, and may facilitate options and eligibility for certain grants
- “Open Records Act” or “Freedom of Info Act” type provisions are not applicable
- Allows a strategy of confidentiality from third parties to be implemented, maintained and preserved, which is of extreme importance to for-profit client companies
- Enables greater efficiency and cost management, with potentially reduced headcount needs for finance and administration
- Can potentially have flexible operating hours and be open on weekends, holidays, second shift or as needed, which may be quite important to client needs
- Can be more resistant to changes in administration of parent organization
- Allows for independent Advisory Board and independent credibility in the local business community
- Procurement of goods and services likely subject to discounts, due to non-profit nature of entity and possible tax benefit from in-kind donations

5.2 Staffing Strategy, Structure and Position Descriptions

The effectiveness of any organization is directly related to its leadership, and this will also be quite relevant when it comes to determining the long-term leadership for the Paterson Food Hub. This is a key strategy, and it is recommended that the resources that will need to be developed by the Paterson Food Hub will consist of three components:

- **The Paterson Food Hub Team**, which will include a dedicated but lean organization that has broad food industry and entrepreneurial experiences, and will manage all day-to-day operations. It is recommended that this team be contracted to a third-party, unless the PRC has a desire to hire and manage these individuals initially. A list of possible third-party organizations that can provide this management will be provided in section 5.4.

- **A Resource team from the Rutgers Food Innovation Center (RFIC) that will provide subject matter expertise.** The RFIC can also be contracted by the PRC to provide ongoing one-on-one business and technical mentoring to Paterson Food Hub clients, and manage a number of other functions of the Paterson Food Hub going forward.
- **An External Resource Network** composed of federal, state, and community agencies, venture capital associations and investor groups, commodity and trade associations, service providers, industry consultants, etc. from Passaic County and the surrounding region. The Food Innovation Center, together with PRC, can manage the coordination of this external resource network. Examples of organizations on this list were identified in Section 3.5 above.

At this time, it is believed that the Paterson Food Hub team, which will be a contracted organization, should include the following individuals:

- Director, Paterson Food Hub
- Manager, Facilities and Operations
- Manager, Quality Assurance and Food Safety

The resources of the Rutgers Food Innovation Center can provide other specialized staffing needs, but these three resources listed above will need to be provided on-site. A description of some of the roles and tasks for each of these positions is as follows:

Director, Paterson Food Hub

The Director will provide overall management and strategy development for the Paterson Food Hub, and will oversee full-time and part-time staff associated with facility operations, engineering and maintenance, and financial and administrative management.

The individual that will serve as Director will ideally have the following qualities: extensive food industry expertise; a track record of leadership, innovation, and entrepreneurship; strong interpersonal and communication skills and the ability to effectively form collaborations; the ability to manage multiple projects simultaneously and efficiently; and exceptional character, integrity and respect for others.

The Director will be the primary decision maker charged with overall management and strategy development for the Paterson Food Hub, and will be empowered to make decisions subject to oversight by an Advisory Board and/or state leadership or other reporting structure that will be created. The Director will be responsible for day-to-day operations of the incubator as well as assisting business start-ups in the incubator. Roles of the director will include:

- Strategic planning and milestone tracking
- Developing a local resource network of service providers, including potential strategic alliances with government agencies, university partners, service providers, consultants, mentor programs, etc.

- Develop a contact and customer management software program which can be used for tracking activities for all clients and results in a robust database that can be used for marketing and client administration
- Market the Center and its programs, and develop a robust website that includes local, state, national and international resources that can assist client companies
- Develop and implement formalized client recruitment and screening process in order to determine optimal client candidates and to maximize the aggregate economic impact of the Center
- Actively and selectively identify and engage clients, focused on providing excellent customer service, outcomes and company impacts
- Identifying and diversifying income-generating activities, and development and implementation of a fee system for incubator services.
- Budgeting for the incubator and its programs
- Evaluate and report operational and financial performance and impacts of the Center and all of its operations and services, and prepare needed financial reports, budget forecasts and proforma statements

Manager, Facilities and Operations

This position will be needed and will be the key contact on operational and infrastructure aspects of the Incubator facility and will provide equipment scheduling, allocation of running time to clients, identification and recommendation of necessary technical skills, etc. Some of the roles of this individual are as follows:

- Manage day-to-day activities and requirements, including the scheduling and management of processing rooms and equipment, and the oversight of production operations, engineering, maintenance and sanitation staff to ensure that the clients' needs are appropriately and responsibly managed
- Interface with clients on daily basis, and personally manage operations and engineering projects as needed
- Ensure compliance with SOP's and continually revise and update SOP's and develop new procedures as needed
- Establish and/or maintain the center's operating structure and protocol, and the incubator's building regulations, tenant agreements, schedule of rents and other needed policies
- Oversee and manage the training of all employees who will work in the incubator facility (including full-time, part-time, or seasonal employees that may be employed), contracted employees, and/or employees of client companies
- Manage and interact with all incubator-related equipment suppliers, service providers, contractors, and employment agencies utilized, and other relevant vendors
- Develop Maintenance program for the Center, and compliance with MSDS
- Oversee Sanitation program for the Center, and quantitative and verifiable method to ensure efficacy via environmental microbiology program

Manager, Quality Assurance and Food Safety

This position will be the key contact on quality assurance aspects of the Incubator facility and will provide a variety of services to clients of the Center. Roles of this individual include the following:

- Develop, implement and maintain sanitation, QA and training programs
- Provide personalized & customized technical support to clients in the areas of product & process development, ingredient and finished product specifications support, QA, food safety, regulations & compliance
- Develop protocol & manage day-to-day operations related to QA, sanitation activities, and microbiological and analytical testing
- Maintain all required records of the Paterson Food Hub, and the food safety and quality systems identified in section 4.5 above.
- Serve as liaison with the US FDA, USDA and other regulatory agencies

Resource team at Rutgers Food Innovation Center

The Rutgers Food Innovation Center team can provide a pre-determined, or a variable rate, of man-hours per month of Business and Technical Mentoring to food entrepreneurs who are clients of the Paterson Food Hub on a contracted basis. Business and technical mentoring services will be offered through confidential, customized consulting sessions in wide range of business development and technical services targeted at starting and growing small scale food business. The Rutgers FIC team can manage all of the subject matter expertise needed by clients of the Paterson Food Hub that are described in Sections 3.6 above, in parts A and B. This can occur either at the sites of the Paterson Food Hub and/or the Rutgers Food Innovation Center and/or another location determined by the Rutgers FIC. Specifically this could include all elements of the following,

- **Business Development**
 - Market Research and Trends Assessment
 - Competitive Intelligence
 - Innovation and Ideation
 - Qualitative and Quantitative Consumer Research, e.g. focus groups
 - Marketing, Sales and Distribution Channel Strategy
 - Human Resources and Organizational Hiring
 - Business Plan Development Guidance
 - Access to Resources and Guidance with Sources of Capital
- **New Product Development**
 - Concept Generation and Prototype Development
 - Ingredient Sourcing and Evaluation
 - Formula Optimization and Least Cost Product Development
 - Packaging Selection for Cups, Trays, Pouches, Jars, etc.
 - FDA and USDA Regulations Counseling
 - Nutritional Analysis and Labeling Determination
 - Product Commercialization Testing
 - Sensory Analysis

- **Technology Commercialization**
 - Process Assessment
 - Equipment Assessment
 - Packaging Technology Assessment
 - Technology Transfer and Scale-Up Assistance
- **Quality Assurance and Food Safety**
 - Shelf Life Testing
 - Analytical Standards Development
 - Food Safety Strategy
 - Quality Assurance Documentation and Specifications
- **Workforce Development and Training**
 - Seminars and Certification Programs, which can be taught in both English and Spanish if needed, in areas such as: Food Business Basics, Developing a Business Plan, Good Manufacturing Practices for Food Producers, Pitching your Business to Funders, etc.

5.3 Advisory Board

In accordance with best practices identified by the International Business Innovation Association (InBIA), it is strongly recommended that an Advisory Board be created for the Paterson Food Hub. This will be strictly advisory in nature. The Advisory Board should comprise members from the parent institution(s), allied agencies and institutions, and from relevant members of the community and private sector. The major purpose of the Advisory Board will be to provide guidance to the Paterson Food Hub program, and the Director, in assessing the strategic direction and impacts. It is proposed that the Advisory Board meet quarterly, unless more frequent meetings are requested. The Advisory Board may also take on other roles, which may include:

- Support and/or leadership in fundraising activities
- Strategic partner development and impact enhancement
- Interview of applicants to key management positions
- Review and recommend policy and guidelines for Center operations
- Review annual operations plans and budgets and advise Director
- Conduct annual assessment of incubator programs and its impacts, and opportunities for greater emphasis and improvement.

The Rutgers Food Innovation Center can work in collaboration with the PRC to identify organizations that may be represented on this Board over the coming months.

5.4 Potential Contracted Management Organizations

As mentioned in the prior sections, it is suggested that the Paterson Food Hub be managed by a third party organization, which will include a dedicated but lean team that brings broad food industry and entrepreneurial experiences, and will manage all day-to-day operations. The Rutgers Food Innovation Center can work in collaboration with the PRC to create an RFP (Request for Proposal) that will identify the responsibilities for such organizations, interview the candidates that apply for this role, and complement them going forward. A partial list of such third-party organizations that can provide this management are as follows:

Northern Jersey:

1. Le Gourmet Factory - Nicholas Prastos, 201-408-5471
 - Services: Space, professional consulting, cooking school
2. IAM International, Inc. - Neera Tulshian, 908-713-9651
 - Services: product development, labeling, and packaging
3. Makerhoods - Avi Telyas, 646-256-7995
 - Services: Community Development and Business Incubation

Pennsylvania:

4. Artisan Exchange - Frank Baldassarre, 610-719-0282
 - Services: Indoor market, commercial kitchen, business planning, distribution
5. YorKitchen -717-814-8879
 - Services: commercial kitchen, cooking classes, copacking

New York:

6. Mi Kitchen es su Kitchen - Katherine Gregory, 718-392-0025
 - Services: kitchen space, faculty and staff
7. Organic Food Incubator Michael Schwartz, 718-291-0009
 - Services: Coaching & consulting, kitchen space
8. Hot Bread Kitchen - Kobla Asamoah, 347-281-6912
 - Services: product development and production, photography
9. Flourish Baking Company - Diane Forley, 914-725-1026
 - Services: consulting, kitchen space, production
10. Brooklyn FoodWorks - Drew Barrett, 512-743-9218
 - Services: mentorship, production facility, classes & events
11. The Farm Bridge - Jim Hyland, 845-383-1761
 - Services: complete copacking for diverse array of products

Washington, DC

12. Union Kitchen - Jonas Singer
 - Services: production facility, mentorship, etc.

6.0 OPERATIONS

It is important that the Paterson Food Hub adopt best practices regarding measuring its impacts. Some of these processes are described below:

6.1 Client Impacts, Screening and Selection Process

Impacts for the Paterson Food Hub operation can be substantial, and it is important to measure these impacts from the outset of the program. These impacts can include:

- Number of active clients
- Number of graduate clients
- Number of employees currently employed by clients and graduates
- Aggregate revenues of client companies
- New businesses created
- Businesses sustained
- Direct and indirect jobs created
- Direct and indirect jobs retained
- Increased client revenue/profits
- Equity capital (including angels and venture capital financing), secured by clients
- Debt capital secured by clients
- Grant funds secured by clients (including USDA RD, SBIR, foundations, etc.)
- Public-Private partnerships and industry joint ventures
- Student experiential learning and internship/employment
- Number of formal training events/seminars and persons trained
- New locally produced foods introduced by clients and reduced dependence on imports
- More affordable foods observed in marketplace
- Companies that move to Paterson or Passaic County as a result of program efforts
- Commercial space taken in community from graduates

It is important for the Paterson Food Hub program to utilize a contact and customer management software program, such as IncuTrack, ACT or Salesforce, which can be used for tracking activities for all of its clients. Data can be collected for company name, type, address, contact person, minority and women ownership, primary product, years in business, number of employees, and annual revenue. This database will enable ongoing program evaluation, while also enabling continual targeted mailings and customer service to clients. In addition, it will assist greatly in determining the impacts of the program.

InBIA suggests that all incubators collect these basic data points on an annual basis for all clients, and annually for graduates for at least five years after they leave the program. It is also suggested that an annual report be provided each year, as a means to demonstrate impacts. If desired, the Rutgers Food Innovation Center can possibly manage this process for the PRC and the Paterson Food Hub.

The Paterson Food Hub is also strongly encouraged to implement a formalized client screening process in order to determine optimal client candidates and to maximize its aggregate economic impacts. This methodology identifies high growth, high quality clients (“gazelles”) that are driven to succeed and have an increased potential to generate profit for themselves, as well as economic growth for the region and the state.

Suggestions for criteria for ranking clients include:

- Idea/Project potential: Market demand for business/concept and its feasibility
- High Impact Initiative: Number of participants/beneficiaries; revenue and job creation potential
- Ability to Finance: Cash availability of client, and access to funds
- Commitment: Client authority, availability, ability to deliver; passion for business
- Management Team and Capability: Client command of necessary skill sets, experiences, resourcefulness

Clients can then be prioritized and “admitted” to utilize the resources of the Paterson Food Hub. Those not admitted could be suggested to enroll in food industry training and entrepreneurship classes on “Food Business Basics” or “Food Industry Fundamentals” that can be offered. They may also be referred to other resources, such as the Small Business Development Center (SBDC) and other agencies, based upon their needs.

In addition, it is recommended that all applicants complete a short survey/questionnaire that asks questions, such as:

- Presence of a business plan or business model canvas
- Unique Selling Proposition (USP), mission and vision, and goals and tactics
- Anticipated growth of business and financial projections/objectives
- Project idea (e.g. product/service offered, brand, package design, and the need being fulfilled)
- Description of target customer
- Description of competition and what will differentiate client’s product or make it superior to the products or services that competition may offer
- Obstacles that would impact or prevent others from entry
- State and/or federal regulations that apply to business concept
- Proposed distribution channels
- Sources and uses of funds required, if needed
- Current and projected number of employees, annual revenue and annual expenses

6.2 Client Scheduling and Fees Strategy

It is recommended that the facility operate and be scheduled like a “hotel,” with scheduling to be done on a “first come, first serve basis” and clients utilizing rooms or modules for a minimum period of at least one day. During busy periods it is critical that clients plan ahead to prevent larger users from monopolizing certain hours. This policy will force clients who use the kitchen on a seasonal basis not to wait until the last minute to schedule anticipated usage.

It is proposed that the Paterson Food Hub program initially operate during the morning and evening shifts, from 6 a.m. – 9 p.m. This would allow sanitation to occur from 9 p.m. until midnight or thereabouts.

Longer-term, it may be desirable to operate the facility 24 hours per day, 7 days per week. If this were the case, one way to encourage off-peak usage is by setting a reduced rate during low-usage hours. This will need to be determined as actual and potential facility users provide feedback, and the staffing is available to provide the appropriate levels of service.

Scheduling of clients will be determined by a variety of factors, such as products and processes being used, need for organic, kosher, halal, non-GMO or other requirements, etc. If an operation is under USDA inspection, then it should be produced during the time period that has been established for USDA oversight (or an overtime fee will be charged, assuming the USDA inspector is available during this extended period).

A common approach when scheduling rates is to develop a sliding scale based on usage. In true business fashion, it would benefit the incubator to reward substantial users of kitchen hours by adjusting the rate downward as more hours are rented. Other “out of pocket” costs incurred by the facility should be charged to the client, such as direct labor personnel (unless included in basic rate), sanitation personnel (unless included in basic rate), USDA inspection overtime (if applicable), etc.

Also, a start-up fee may be charged to address the one-time expenses of setting up a new client. This might be for a security deposit, initial consultation requirements, mandatory training requirements, registration fees that may be imposed, etc.

“Anchor” clients are highly desirable and should be aggressively sought, and these clients may be given a discounted rate for a commitment to long-term usage of the facility. A separate financial plan for the facility is strongly recommended, to determine base rates and fee structures that will provide affordable rates to the community but also provide the necessary income required for Center sustainability.

As determined in the Primary Research that was conducted, building safety and security were paramount issues, especially during evening hours, so this will need to be effectively implemented once the facility is in operation.

6.3 Financial Strategy

The funding strategy for the Paterson Food Hub should be multi-faceted and rely on a holistic approach. A great deal of potential funding and revenue-generating opportunities exists, and these opportunities are directly related to the types of services that will be provided to the community.

Funding and revenue potential for the Paterson Food Hub is directly related to the types of impacts that can be developed, tracked, and sustained. Clearly, funding will occur when impacts are demonstrable, proven and sustainable. Impacts to the Paterson community and greater region can be substantial, and it is important to measure these impacts from the outset of the program, in order to validate and document the success of the program to the potential funding audience. As stated earlier, it is critical that the Paterson Food Hub utilize a contact and customer management software program, which can be used for tracking activities for all of its clients. This database will enable ongoing program evaluation, while also enabling continual targeted mailings and customer service to clients.

In developing a holistic funding strategy, it is strongly suggested that a very broad and comprehensive assessment of funding opportunities be assessed, developed and implemented. These funding sources and revenue streams can originate from the following categories:

- Fee-based Services from Client Activities, such as:
 - a. Facility Usage
 - b. Business and Technical Mentoring
 - c. Training Activities
 - d. Membership Fees
 - e. Storage Fees
 - f. Distribution Fees
- Grant Sources
 - a. Federal – US EDA, USDA, HUD, etc.
 - b. State
 - c. County
 - d. City
- Foundations
- Private Sector Corporations – including banks, accounting firms, law firms, advertising and marketing firms, utilities, healthcare organizations, foodservice companies, food processing companies, food retail organizations, etc.
- Philanthropists
- Parent and/or Partner Institution(s)

This holistic orientation will enable financial sustainability for the Center.

A complete financial proforma can only be determined after: the third-party organization that will be contracted to manage the Paterson Food Hub has been identified; the fees that may be utilized to contract the Rutgers Food Innovation Center for their subject matter expertise in the food industry have been determined; and the appropriate fee structures have been determined for utilizing the various services of the program

APPENDICES

APPENDIX 1 – PRIMARY RESEARCH SURVEY RESULTS

Food Business Incubator Study - Survey and Questionnaire

Section A: Background Information

We would like to learn a little bit about you. Please check the statement that best describes your background: I am:

(Total percentage may be greater than 100% due to multiple category selection by respondent)

A business owner of an established food company	21%
An employee of an established food company	09%
A member of the community who is thinking of starting a food business or has recently launched a food company	24%
A service provider to the food industry	24%
An interested member of the community	15%
Other	27%

N=33

Section B: Specific Information on Food Industry Topics of Interest

For each of the following questions, please rank from 1-5, with

5 = Extremely Valuable or Helpful

4 = Very Valuable or Helpful

3 = Modestly Valuable or Helpful

2 = Slightly Valuable or Helpful

1 = Not at All Valuable or Helpful (No Interest)

****Note: Total percentage may not equal 100% due to rounding****

1. What workshops topics would be helpful to you when you started with your business, or would be of interest to you now?

	5	4	3	2	1
Food Business Basics - trends, technologies, regulations, markets, etc.	41%	34%	14%	10%	00%
Food Marketing, Sales and Distribution	72%	07%	17%	00%	00%
Food Technology and Product Development	45%	21%	10%	17%	00%
Food Safety and/or HACCP	52%	24%	21%	00%	00%
Financial Management	62%	14%	10%	07%	00%
Legal Considerations – e.g., company formation, governance, and supplier agreements	41%	28%	17%	03%	00%
Other	00%	03%	00%	00%	00%

N=29

2. What type of specialized, industry programs might have been helpful to you then, or would be of interest to you even now?

	5	4	3	2	1
A single point of contact that can point you in the right direction with your business	54%	27%	19%	00%	00%
A great website that can provide all the information and resources that you might need	50%	23%	15%	00%	04%
Networking events, in which you can meet with other entrepreneurs in your industry	58%	08%	19%	08%	04%
A local trade show event, in which you can meet with potential customers	50%	19%	19%	04%	00%
Other	00%	00%	04%	00%	00%

N=26

3. What type of personalized assistance would you find of value?

	5	4	3	2	1
Business strategy (i.e. someone with experience to give you constructive feedback)	54%	23%	23%	00%	00%
Financial assumptions and projections, and/or your overall business financing strategy	50%	23%	23%	04%	00%
Competitive intelligence, marketing, and consumer research to differentiate your product	38%	42%	15%	00%	00%
Legal considerations for your business	38%	27%	15%	08%	00%
Product, process and/or packaging development	35%	35%	23%	00%	04%
Ingredient and packaging sourcing	31%	27%	31%	04%	04%
Government regulations, nutrition analysis and/or labeling	54%	08%	31%	04%	00%
Development of a food safety or HACCP plan	50%	19%	23%	04%	00%
Sensory analysis that would enable you to gauge the quality of your product vs. competitors	31%	27%	15%	12%	04%
Shelf life testing, or product analytical testing	31%	27%	27%	00%	04%
Sales and distribution strategy, and introductions to distributors and potential customers	50%	19%	19%	04%	04%
Facility design or equipment selection	31%	27%	23%	00%	08%
Access to a mentor or mentoring team to provide advice during every step in your business	46%	19%	27%	08%	00%
Commercialization or co-packing facility	19%	19%	35%	08%	08%
Other	00%	00%	00%	00%	00%

N=26

ATTACHMENT LIST

- THE FOLLOWING ITEMS MUST BE INCLUDED WITH APPLICATION FOR FUNDING:
1. FEDERAL TAX EXEMPTION (PITR 501(C)(3))
 2. COPY OF MOST RECENTLY COMPLETED FINANCIAL STATEMENT
 3. LIST OF NAMES AND ADDRESSES OF ALL VOLUNTEERS AND THE ORGANIZATION
 4. A LETTER TO ALL SERVANTS WITH A COPY OF THE APPLICATION FOR FUNDING
 5. SAMPLES OF BROCHURES, FLYERS OR OTHER MARKETING MATERIAL
 6. A LETTER FROM THE ORGANIZATION TO THE FUNDING AGENCY
 7. A LETTER FROM THE FUNDING AGENCY TO THE ORGANIZATION

ATTACHMENTS ARE DUE
10-15-2024

All required documentation and signed applications
must be received by the due date.

Parasaf Funding Agency
10101 1st Street
San Diego, CA 92108

Phone: 619-594-1111
Email: info@parasaf.org
Website: www.parasaf.org
Facebook: <https://www.facebook.com/parasaf>
Twitter: <https://twitter.com/parasaf>

Section C: Specific Information for food processing industry participants

Please rank from 1-5 your assessment of the following answers as:

5 = Extremely Valuable or Helpful to Region

4 = Very Valuable or Helpful to Region

3 = Modestly Valuable or Helpful to Region

2 = Slightly Valuable or Helpful to Region

1 = Not at All Valuable or Helpful to Region

4. **Potential Industry Sector Focus** - As a member of our food processing community in this region, we are trying to identify one or several specific industry sectors in which our incubator program may focus. What is your perception for the need in our region for a facility that focuses upon:

	5	4	3	2	1
Value-added produce processing	17%	28%	22%	11%	11%
Value-added meat, poultry, seafood processing	17%	28%	06%	06%	28%
Shared-use automated hot-fill bottling and/or juicing facility	28%	11%	33%	00%	22%
Shared-use bakery	44%	17%	28%	00%	06%
Shared-use canning facility	28%	17%	33%	06%	11%
Shared-use dehydration and/or freeze-drying facility	22%	17%	28%	06%	17%
Shared-use Individually quick frozen (IQF) vegetable and fruits processing facility	22%	22%	28%	11%	17%
Facility that uses cook-chill technology for foodservice operations	22%	33%	22%	00%	17%
Aseptic Packaging Equipment	17%	22%	44%	00%	11%
Shared-use High Pressure Processing Equipment	11%	22%	28%	11%	17%
A dedicated kosher or halal facility	28%	22%	11%	11%	17%
A dedicated gluten free facility	17%	39%	17%	17%	00%
Other	06%	00%	00%	00%	00%

N=18

5. Potential Scale of Operations and Usage of Space

We are trying to identify the scale of operation in which our incubator program may focus. For example, perhaps there are adequate options for very small scale processing today, but there may not be adequate options for larger scale shared-use production in which economies of scale can result, in which a company can reside indefinitely in their own dedicated leased space.

What is your perception for the need in our region for a facility that focuses upon...

	5	4	3	2	1
R&D (Provides product development kitchens that can assist from bench top to commercial)	43%	33%	19%	00%	05%
Marketing (Provides sensory analysis capabilities, focus groups, market research, etc.)	43%	33%	10%	10%	05%
Dedicated Equipped Kitchen Suites for Small Scale-Production, rented by the day	52%	43%	05%	00%	00%
Dedicated Equipped Kitchen Suites, for Small Scale-Production, rented by the year	43%	38%	05%	00%	05%
Shared-Use Equipment that provides small-scale equipment for processing larger volumes	43%	29%	10%	10%	00%
Co-packing (For clients seeking third-party management of their production)	29%	19%	24%	05%	14%

N=21

What do you feel are the most important opportunities and challenges for the local/regional food processing industry today, and in the near future?

- Distribution
- Sourcing
- Bank financing
- Capital
- Facilities
- Staffing
- Cost
- Kitchen access (cost, availability)
- Corporate competition
- Getting the right product that is needed
- Understanding the financial of food processing
- Insuring the safety of food items being processed
- Jobs
- Will probably find many individuals creating specialty food products
- Understanding manufacturing / distribution
- Business basics
- R&D and business strategy
- Understanding regulations
- Access to capital
- Availability of nutritious foods
- Avail of good restaurant with reasonably price items
- Regulations
- High density of cultures
- Excellent distributor network
- Cost of production
- Cost of labor
- Government regulations
- Location near customer and supply base
- Freezer and refrigeration storage
- Green technology
- Nearby workforce
- Implementing affordable computerization and technology
- Opportunity for ethnic specialty food item that are ethnically focus
- Healthy food items
- Dependable staffing
- High cost of doing business
- Government regulations
- Cost of insurance
- Cultural diversity
- Transportation
- Traffic flow
- Manufacturing – we would like to bring it to Paterson
- We purchase 95% of our product out of state
- Most products can be made in Paterson with local residents
- Commercial kitchen rental
- Access to capital
- Access to information about how to get started
- Organic resources
- Urban growing space
- Education
- Small scale innovation
- Cost of doing business in NJ vs. surrounding states
- Job creation
- Small business growth
- Pre-launch development
- Preparation & storage space
- Shipping
- Bringing product to fruition
- Cottage Law!
- More shared facilities for small businesses with lower costs
- Marketing
- Assistance with permits is very difficult
- Assistance in finding out what you need is difficult
- Try to keep food in its purest form
- Stop adding chemicals and/or additives that do not work well with our bodies
- Extend shelf life
- Richness & variety of culture in Paterson
- Consumer interest in specialized, artisanal foods/goods that are produced locally.
- National Park will bring more interest in Paterson – creating more business opportunities.
- \$\$\$
- Location
- Diversity
- Availability of commercial kitchens to rent