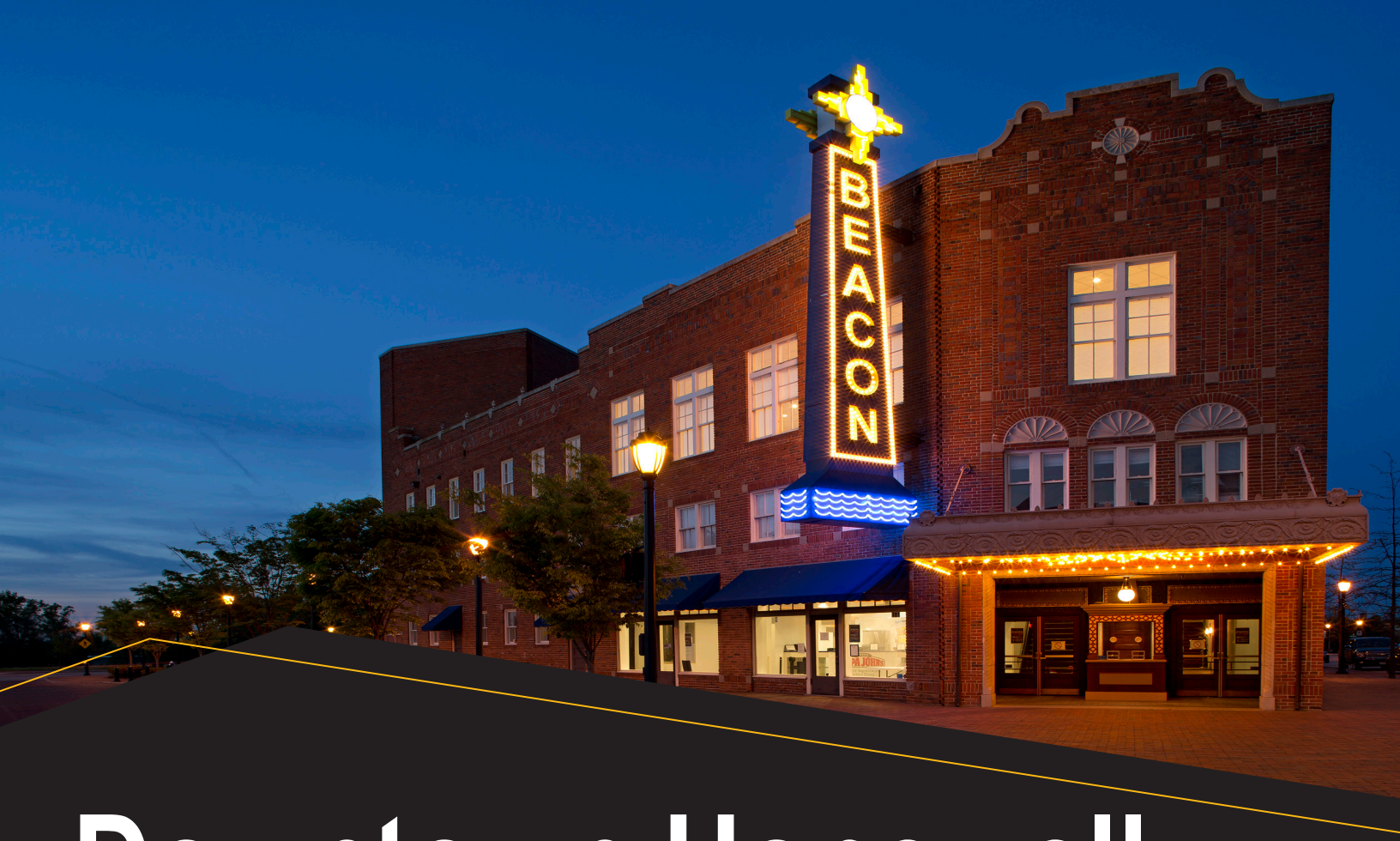

Downtown Hopewell Space Feasibility Study

Exploring Local Entrepreneur Demand for a Co-Working Space - Commerical Kitchen - Makerspace

Prepared for:
Hopewell Downtown Partnership

August 2017

VCU L. Douglas Wilder School of Government and Public Affairs
Center for Urban and Regional Analysis

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Prepared for:

Hopewell Downtown Partnership

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INTRODUCTION

In 2017, the Hopewell Downtown Partnership commissioned the Center for Urban and Regional Analysis (CURA) at Virginia Commonwealth University's L. Douglas Wilder School of Government and Public Affairs to conduct research and analysis on the potential uses of a 14,000 square-foot building owned by the City of Hopewell, Virginia.

In assessing the potential uses of the city owned building, CURA conducted a feasibility study to evaluate the community demand for a kitchen incubator, makerspace, and co-working space in Hopewell, Virginia. A kitchen incubator provides a rentable commercial kitchen for food related entrepreneurs. The makerspace allows for makers to utilize equipment and space to create their products in a shared community. Lastly, the co-working space provides rentable office space, conference rooms, and other business services. All three uses enhance networking and collaboration in a shared facility.

CURA administered the feasibility study through a three-staged approach. The first phase involved an assessment of current kitchen incubator case studies established in rural areas as well as makerspace facilities. During the second stage, the CURA team administered an online survey to local entrepreneurs to assess community demand for potential uses of the city-owned building. By using a Cash Flow Analysis, the third stage incorporates survey information and cost assumptions from the case studies to create possible breakeven scenarios for a variety of potential uses. This report is structured based on the three-staged approach and provides a recommended scenario for the potential space as well as best practices derived from previous case studies.

About CURA

The Center for Urban and Regional Analysis (CURA) is the economic and policy research center of L. Douglas Wilder School of Government & Public Affairs at Virginia Commonwealth University. The Center serves multiple stakeholders at all geographic levels, providing information systems support, program impact analysis, public policy evaluation, targeted investment models, and strategic plans to state agencies, regional and metropolitan organizations, planning districts, cities, counties and towns, as well as businesses and non-profit organizations.

BACKGROUND & HISTORICAL INFORMATION

Since the mid-1800s, the City of Hopewell, Virginia thrived in cyclical periods of economic growth and prosperity to deindustrialization and disinvestment of the downtown area. Known as "The Wonder City", Hopewell was originally established as a port and attracted large-scale manufacturing industries including gunpowder during the Civil War era to silk and furniture industries in the mid 1900s. Similar to other American cities after the 1950s, businesses and industry left downtown Hopewell and buildings were left empty and vacant. Along with disinvestment of industries in Hopewell, the city experienced a rise in unemployment and decrease in population since 2000.[1]

In recent years, projects initiated by the City of Hopewell and community members are beginning to revitalize downtown Hopewell. These endeavors include renovation of the Historic Beacon Theatre in 2012, construction of the new library, Marina redevelopment, and renovation of the Butterworth Warehouse into mixed-use commercial and apartment space. Additionally, the City of Hopewell contributed to improving sidewalks, greenspace, and lighting in downtown. These projects are in conjunction with the City of Hopewell's Downtown Revitalization Plan and establishment of the Hopewell Downtown Partnership.[2]

In 2011, downtown Hopewell was officially named a Virginia Main Streets Program with the Hopewell Downtown Partnership playing a key role in future strategic revitalization efforts. The organization echoes core principles of the Main Streets Program which include economic development, design, promotion, and organization. The Hopewell Downtown Partnership utilizes this framework to improve the downtown area's economic vitality and enhance the intrinsic value of Hopewell's history. This feasibility study aligns with the Hopewell Downtown Partnership's goals in bringing economic revitalization to the downtown area. The potential space presents an opportunity to draw small businesses and entrepreneurs to downtown Hopewell with the hope for future business expansion in the downtown area.[2]

1 Vogelsong, Sarah. 2016. City on economic roll after a history of boom and bust. May 29. Accessed May 29, 2017. http://www.progress-index.com/news/20160529/city-on-economic-roll-after-history-of-boom-and-bust.

2 Partnership, Hopewell Downtown. 2017. Hopewell Downtown Partnership website. Accessed June 1, 2017. http://www.hopewelldowntown.com.

SECTION 1

LITERATURE REVIEW & CASE STUDIES

KITCHEN INCUBATOR & MAKERSPACE

The initial stage of the feasibility study analyzed case studies of successful kitchen incubators and makerspace facilities. The literature review highlighted two case studies which demonstrated successful implementation of kitchen incubators in Hart, Michigan and Grand Junction, Colorado. Current literature on makerspaces shows a variety of potential uses and facilities for makers as either an independent facility or a community center. The following case studies provided information on cost assumptions and best practices which were utilized in developing the community business survey and cash flow analysis.

Kitchen Incubator: The Starting Block, Hart, Michigan

The Starting Block, established in 2006, is a culinary incubator located in Hart, Michigan. The kitchen incubator offers a rentable commercial kitchen to food related small businesses and provides additional business services. These services include training, business expansion assistance, production and distribution services, and the opportunity to network within their industry. The Starting Block initially received start-up funding through a number of grants including the USDA Rural Development's Rural Business Enterprise Grant as well as funding from nearby localities. Thirty local businesses utilize the kitchen incubator and produce a variety of goods including jams, salsas, cookies, snack foods, and granola.[3]

The kitchen incubator space is approximately 2,500 square-feet with additional rental storage and warehouse space. Rental rates for the commercial kitchen range from $10 to $15 per hour. The facility also offers office rentals for 90 square-feet for $110 per month and 225 square-feet for $275 per month. Additional warehouse and storage is available to businesses with rates ranging from $10 to $15 per month.

The Starting Block experienced unforeseen issues in maintaining future operations. These include how to assist entrepreneurs with business growth and expansion opportunities, with the project's limited funding stream. Since the facility only provides limited revenue, other income generating funding avenues were needed. One solution the site explored included training programs for entrepreneurs as a potential source of revenue. Lastly, another long-term issue is maintaining the equipment needed for food production and purchasing other tools based on business needs.[3]

The Starting Block serves as a valuable example for the potential space as it demonstrates best practices in operating a kitchen incubator and other additional resources which could benefit local food related entrepreneurs. Last year the Starting Block celebrated its ten year anniversary.

3 Buckley, Jenifer, Christopher H. Peterson, and Jim Bingen. 2014. "The Starting Block: A Case Study of an Incubator Kitchen." International Food and Agribusiness Management Review 17 (1): 163-186.

Makerspace Literature Review: Definitions and Models

The "Maker Movement" highlights another growing industry for entrepreneurs and small businesses across the United States.[4] A makerspace provides rentable space and equipment to makers, artisans, and crafters to create in a shared community. Many makerspaces are established in libraries, YMCAs, or community colleges as an educational opportunity for students and community members. The target audience of a makerspace ranges from computer science uses and STEM education to makers who create art, woodworking goods, and other crafts.[5]

Makerspace model facilities vary depending on the target audience and community demand for these amenities, and can range in size from 3,000 square-feet to 40,000 square-feet.[6] Larger facilities provide rentable space, equipment, and storage as well as training programs to other makers and the community.[6] Makerspaces typically conform to a membership framework to rent space and equipment versus renting at an hourly rate.[6] These membership fees range from $40 to $175 per month depending on usage.[6] For example, TechShop implements a franchise strategy with multiple locations across the U.S. that offers rentable space and equipment through a membership fee which ranges from $150 to $200 per month.[5] Similar to kitchen incubators, makerspaces also offer classes and training to the community as another source of revenue.[6]

4 Morin, Brit. 2013. "What is the Maker Movement and Why Should You Care?" The Huffington Post 1-4.

5 Holman, Will. 2015. "Makerspace: Towards a New Civic Infrastructure." Places 1 -26.

6 Cavalcanti, Gui. 2013. "Making Makerspaces: Creating a Business Model." Makezine 1 - 114.

Kitchen Incubator & Makerspace: The Business Incubator Center, Grand Junction, Colorado

Established in 1987, the Business Incubator Center provides assistance to entrepreneurs and small businesses in the Grand Junction, Colorado area. The organization receives grant funding and developed sustainable revenue methods by offering rentable space and memberships as well as training programs. The Business Incubator Center also offers a business development program to assist entrepreneurs in growing their business. Additionally, small businesses are provided assistance and services in financing, advertising, business growth strategies, and other training.[7]

In 2002, the facility incorporated a 2,500 square-feet commercial kitchen facility into its framework.[8] This space includes a rentable commercial kitchen available to local food- related entrepreneurs including farmers' market vendors, caterers, and food trucks. The monthly rental rate for the kitchen space is $150 per month.[8] The organization also established a makerspace which provides rentable space and equipment to local makers and artisans in the Grand Junction region.[9] The facility offers monthly membership rates ranging from $25 to $75 per month.[9]

The Business Incubator Center offers many business services and financial tools to local entrepreneurs including a kitchen incubator and makerspace. The variety of funding streams and sources of revenue allows this facility to maintain its operations and impact economic growth in the community.[7]

7 Center, Business Incubator. 2017. The Business Incubator Center. June 1. Accessed June 1, 2017. http://gjincubator.org.

8 Owens, Trent. 2015. "Summit County Kitchen Incubator: Market & Feasibility Analysis and Business & Operating Plan." Colorado Small Business Development Center 1 -79.

9 GJmakerspace. 2017. GJmakerspace website. June 1. Accessed June 1, 2017. http://www.gjmakerspace.org/join-us.

SECTION 2

COMMUNITY BUSINESS SURVEY

SUMMARY OF RESULTS

The second section of the feasibility study involved conducting a survey with community businesses in Hopewell and the Richmond region. The Hopewell Downtown Partnership distributed the online survey through multiple communication avenues including the organization's electronic newsletter, website, and to farmers' market vendors in Hopewell. Survey respondents were asked to provide information regarding their products and services as well as the likelihood of their business renting space at a co-working, makerspace, and/or commercial kitchen facility. This section of the report analyzes the community business survey results by assessing the target audience, their business products and operations, and potential utilization of the proposed space.

Local Entrepreneurs – Target Audience for the Proposed Space

Thirty-three local entrepreneurs completed the online survey. The respondents provided information regarding products and/or services their business produces, the highest education attainment level received, and other trade-related training completed.

Figure 1 demonstrates how respondents identified their business products and services. Forty-eight percent of local entrepreneurs surveyed identified their business as "Food Related" which encompasses bakeries, food trucks, butcheries, and restaurants. Respondents also identified as "Artisan Crafts" representing 18 percent of total responses. Artisan crafts involve jewelry, clothing, painting, prints, and signage. Additionally, some respondents identified as "Other" and indicated they produce soaps and personal care products.

Etrepreneurs surveyed were asked to list the highest level of education obtained or other trade-related training received. Of the total surveyed, 42 percent received a Bachelor's degree and 16 percent received a High School Diploma or G.E.D. equivalent. Figure 2 shows the percentage of survey responses for education attainment levels. Twenty-nine percent of entrepreneurs responded that they received other trade related training. Some of the other trade-related training responses mentioned include culinary school, cake decorating classes, and studio training.

FIGURE 1: LOCAL ENTREPRENEUR – BUSINESS DESCRIPTION

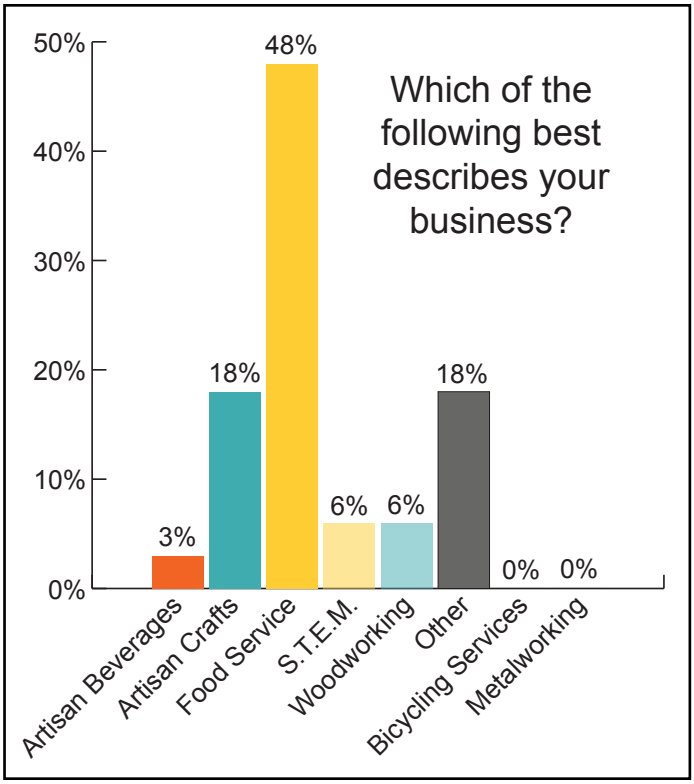
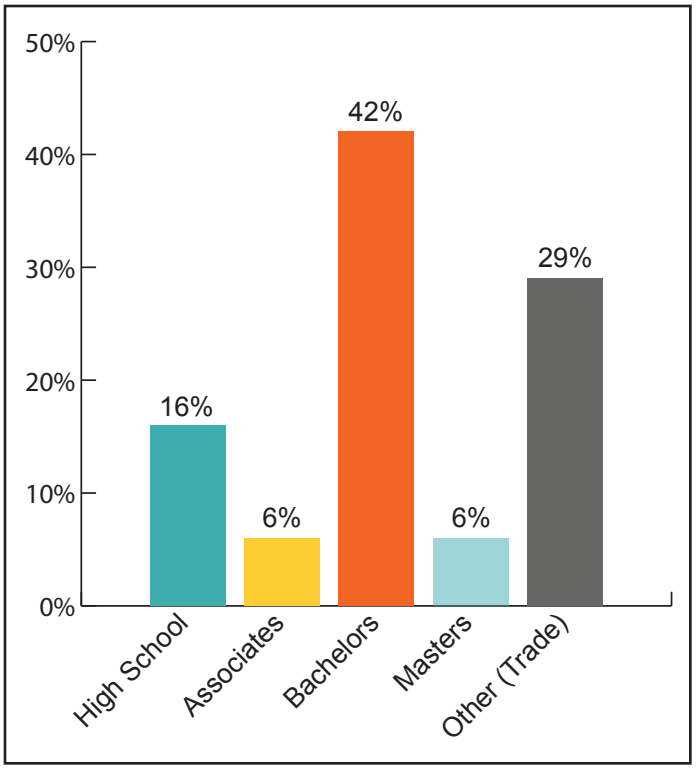


FIGURE 2: LOCAL ENTREPRENEURS: EDUCATION ATTAINMENT LEVELS



The local entrepreneurs surveyed demonstrate a range of products and services as well as education attainment levels and other trade-related training. When asked if artisans, makers, and food related businesses in Hopewell, Virginia would benefit from having a local co-working space, 93 percent of respondents selected the highest ratings of 4 or 5 on a scale of 1 to 5. Survey respondents also provided information regarding their business products, services, and operations.

Business Products and Services Information

The survey asked local entrepreneurs to provide more information on their production, equipment used, marketing scheme, and major challenges experienced in operating their business. When asked to describe their products and services, responses reflected both the food-related industry and maker industry. Food- related responses include food truck, coffee, goat cheese, baked goods, canned goods, gourmet pies, cakes, and other desserts. Maker and artisan product descriptions include candles, signs, digital prints, glass jewelry, handmade clothing, soaps, bird feeders, and woodworking goods. The survey results indicated 81 percent of entrepreneurs make their products at home. Other results showed 13 percent of those surveyed create their products in a commercial warehouse/facility. The majority of entrepreneurs stated they employ 1 to 2 people, representing 55 percent of the total surveyed.

Survey respondents also indicated where they receive their equipment and inputs used in production of their goods. A plurality of entrepreneurs surveyed indicated they receive their inputs from the local region. Figure 3 demonstrates that 47 percent of businesses receive their inputs from the Tri-Cities area, including Hopewell, Petersburg, and Colonial Heights, while 22 percent indicated they receive their inputs from the Richmond region. Additionally, 45 percent of respondents mentioned their ingredients are locally sourced, whereas 55 percent indicated their ingredients are not local.

FIGURE 3: REGIONAL PRODUCTION INPUT CATEGORIES

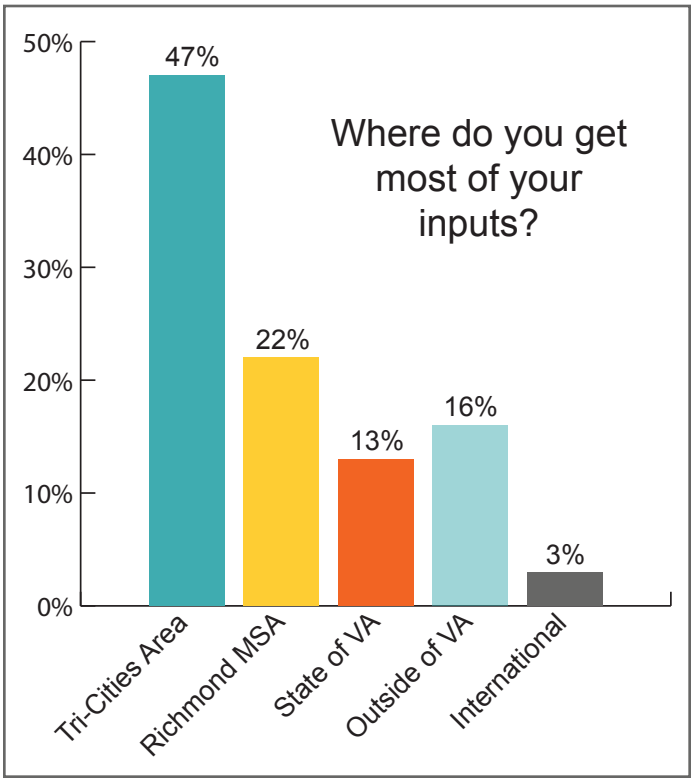
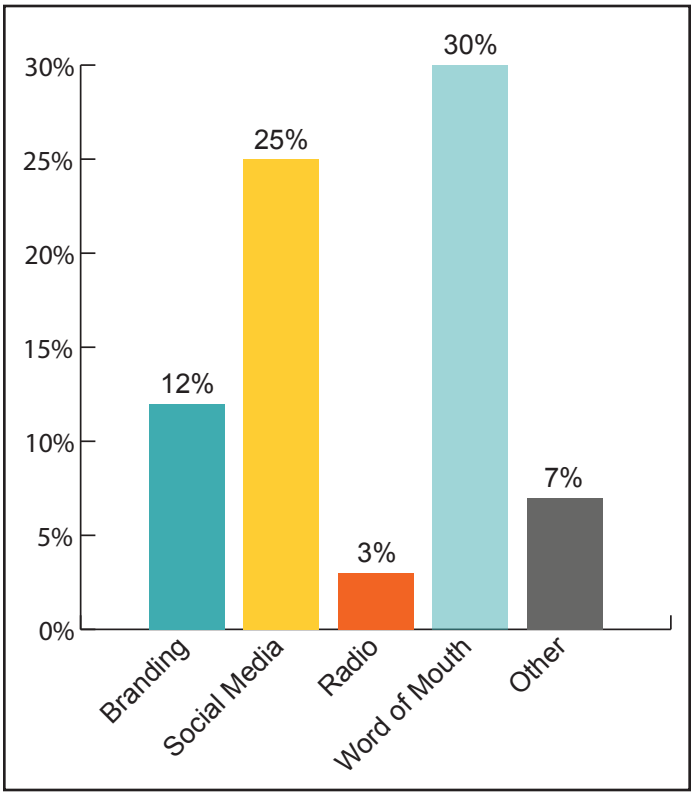


FIGURE 4: ADVERTISING MEDIUMS FOR PRODUCTS AND SERVICES



Entrepreneurs surveyed also provided information regarding equipment used during production. Appendix 1 displays responses provided by business owners when asked what equipment they use to produce their goods. The survey responses indicate equipment used for food-related products and maker, artisan products. Survey results also demonstrated how local entrepreneurs advertise their products and where they currently sell their goods.

Figure 4 displays the marketing schemes utilized by local entrepreneurs for advertising their products and services. A plurality of responses showed many business owners advertise through word of mouth and social media outlets including Facebook, Instagram, and Twitter. Those who responded "Other" mentioned they advertise their products with fliers, at events, and in stores.

Local entrepreneurs provided information on where they currently sell their products and services. Figure 5 demonstrates many respondents sell their goods at the Farmers' Market, Online, and at Craft Festivals. Business owners who responded "Other" also indicated they sell their products in a warehouse space, flea markets, in stores, and to friends and family. Survey responses show that local entrepreneurs are advertising and selling their products online through social media communication avenues and in their local community by word of mouth.

The survey results identified challenges which many business owners currently experience. Figure 6 demonstrates "Financial assistance and funding avenues" as a popular answer with a total of 13 responses. A plurality of business owners also selected "Business Development, advertising, and future business expansion" as a key challenge to the viability of their business. The most popular response, "Available work space and equipment for current operations and future expansion", represented 20 responses and is seen as a major challenge for local entrepreneurs.

FIGURE 5: VENUES FOR SELLING PRODUCTS AND SERVICES

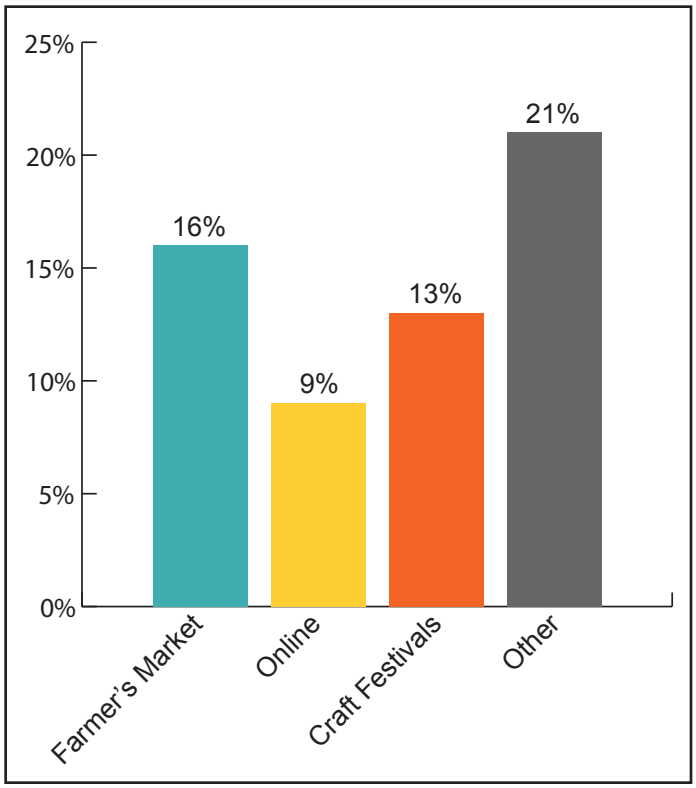
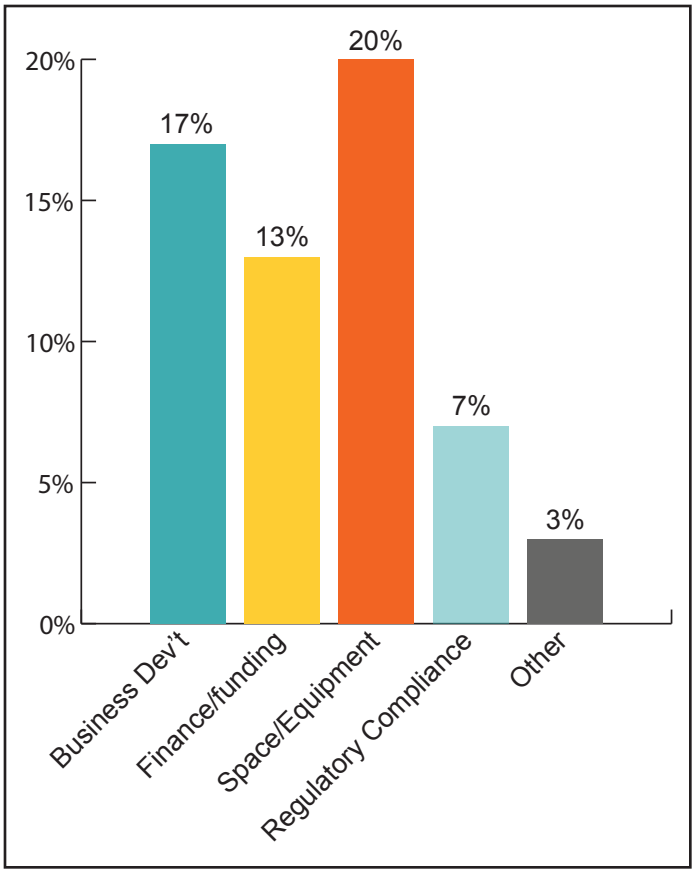


FIGURE 6: MAJOR CHALLENGES TO BUSINESS VIABILITY



The community business survey results revealed that local business owners operate food-related businesses and produce craft, artisan goods. Additionally, a popular response of those surveyed indicated they use social media and word of mouth to advertise their goods and services. While many responses listed Financial assistance and Business Development as challenges for their business operations, the most popular response is the availability of work space and equipment. The niche goods and services produced by local entrepreneurs and the demand for available work space and equipment further demonstrates the community demand for a co-working, commercial kitchen, and/or makerspace facility in Hopewell, Virginia. Survey results also asked business owners their perspective on the potential usage, expected rates, and equipment needs of the potential space.

Local Entrepreneur Needs Assessment and Usage of Proposed Space

The final section of the community business survey assessed the possible usage, equipment needs, and demand for other services in the proposed co-working, makerspace, and/or commercial kitchen. When asked the likelihood of renting space in the proposed facility, 69 percent of local entrepreneurs provided the highest ratings of 4 or 5. Additionally, 65 percent of survey respondents stated they would consider having their business in downtown Hopewell if space were available.

The survey also asked business owners for their perspective on expected hours per month of space usage, hourly rate for using a commercial kitchen, rental rate for office space, and additional yearly membership fees. Regarding the expected hours per month of space usage, the majority of local entrepreneurs stated they would use the potential space between 5 to 19 hours (52 percent) and 20 to 39 hours (26 percent). Figure

FIGURE 7: HOURLY RATE PER MONTH FOR COMMERCIAL KITCHEN USAGE

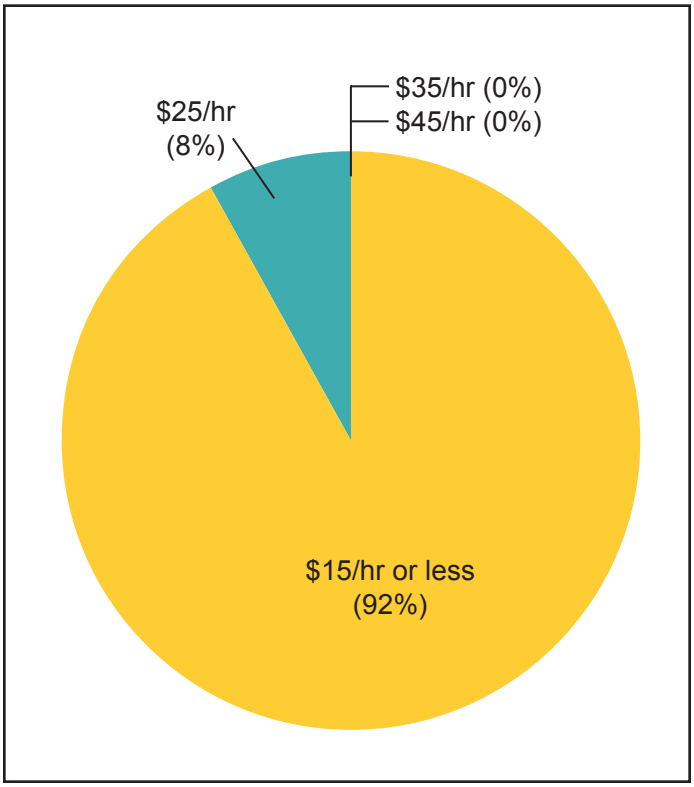
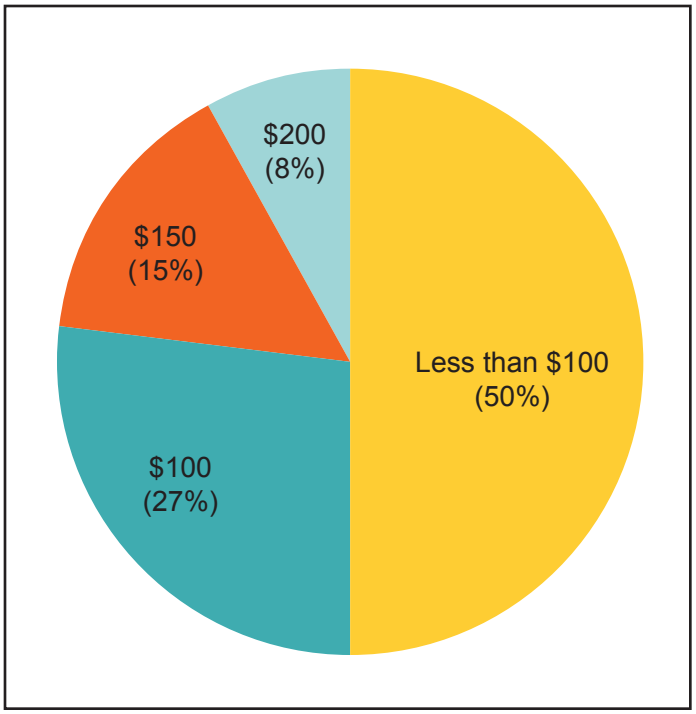


FIGURE 8: MONTHLY RENTAL RATE FOR OFFICE SPACE USAGE



7 displays the survey results for the hourly rate local entrepreneurs would pay for monthly usage of a 2,000 square-foot commercial kitchen. Ninety-two percent of survey respondents indicated they would pay $15.00 or less per hour for using a commercial kitchen. While it is likely respondents opted for the lowest hourly rate, given the feedback from our Literature Review, it can be expected that the project would be able to market a higher hourly rate than $15 and still retain interest.

When asked about using office space in a co-working facility, the majority of responses showed that 77 percent of local entrepreneurs would pay a monthly rental rate of $100.00 or less (as seen in Figure 8). Lastly, Figure 9 displays the additional yearly membership fees which survey respondents would pay to use a co-working space, makerspace, and/or commercial kitchen facility. The majority of business owners, 81 percent, indicated they would pay an additional $100.00 per year in membership fees.

Overall, survey respondents chose the lower end of costs for expected rates and fees in utilizing the potential space. The survey results for potential costs are comparable to The Starting Block Case Study described earlier in this report. The Starting Block facility operates on an hourly rate of $10.00 to $15.00 for commercial kitchen usage and offers office space at 90 square-feet for $110 per month and 225 square-feet for $275 per month. The final section of the community business survey also asked local entrepreneurs their equipment needs for the potential space and other services which could benefit their business.

Local entrepreneurs provided a list of equipment needs (as seen in the Appendices) which reflect both the makerspace and kitchen incubator facility models. The case study analysis revealed that other kitchen incubators and makerspace also offer additional business services to their members. When asked what other services would assist entrepreneurs in meeting their business goals, the most popular responses, seen in Figure 10, included “Partnering with potential distributors and suppliers” at 40 percent of the total and “Marketing Strategies” representing 27 percent.

FIGURE 9: ADDITIONAL YEARLY MEMBERSHIP FEE FOR SPACE USAGE

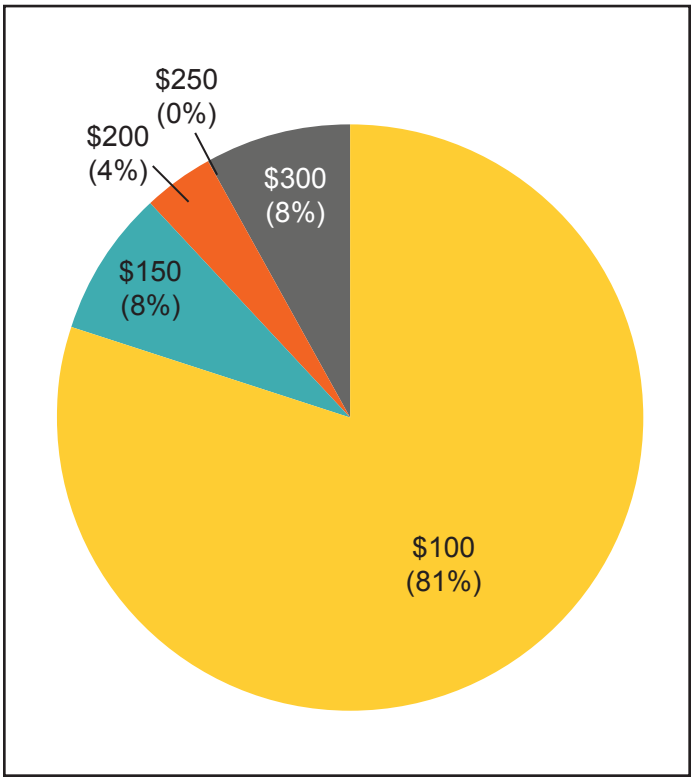
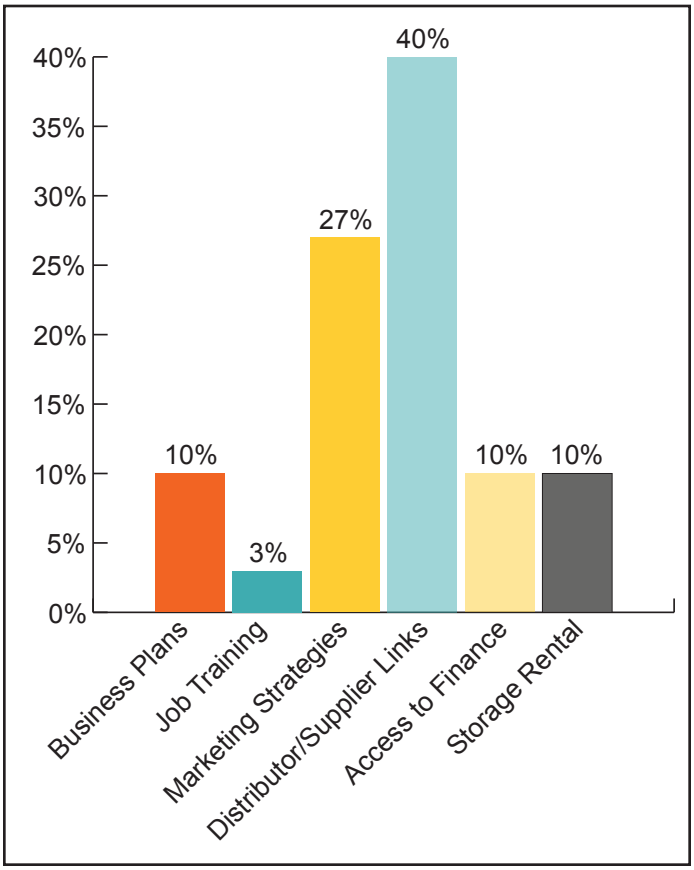


FIGURE 10: COMMUNITY BUSINESS DEMAND FOR OTHER BUSINESS SERVICES



Similar to the major challenges identified in the survey results, these responses again suggest there is a community business demand for assistance with advertising and marketing strategies for future product development and business expansion. The third section of the study evaluates the financial feasibility of a commercial kitchen, co-working space, and/or makerspace and builds five scenarios for the potential space.

SECTION 3

CASH FLOW ANALYSIS

CASH FLOW ANALYSIS

To explore the financial viability of a membership-based kitchen incubator ("commercial kitchen") and/or makerspace for the site, cost and income assumptions were pulled from case studies and a literature review. Using these assumptions five (5) scenarios were built that illustrate the financial tradeoffs and returns for different ways the building can be used. Detailed pro formas, including explanations for the cost and income assumptions, for each scenario are in the appendix. These scenarios look at the upfront and operating costs over ten years to determine how much fundraising or "subsidy" the project Owner would need to contribute to make the project successful. The five scenarios are as followings:

Scenario 1 - Single Tenant Triple Net Lease

In this scenario, it is assumed the building owner ("Owner") makes basic improvements to the building to be able to lease it at a market-rate rent to a single tenant. It is assumed this tenant will build out the space at its own expense and enter into a triple- net, 10 year lease with the Owner. In a triple net lease the tenant pays all real estate taxes, building insurance, and maintenance expenses (the three "nets") in addition to the rent, utilities, and other operating expenses. In a triple-net lease scenario the Owner incurs no ongoing building expenses; they are all passed on as obligations of the tenant in the lease. The Owner's operating costs for the building will be minimal due to the triple-net structure.

The pro forma for this scenario models the costs and income over a 10-year lease period. This scenario also illustrates assumptions a private developer interested in purchasing the building may use to determine the offer price for the property.

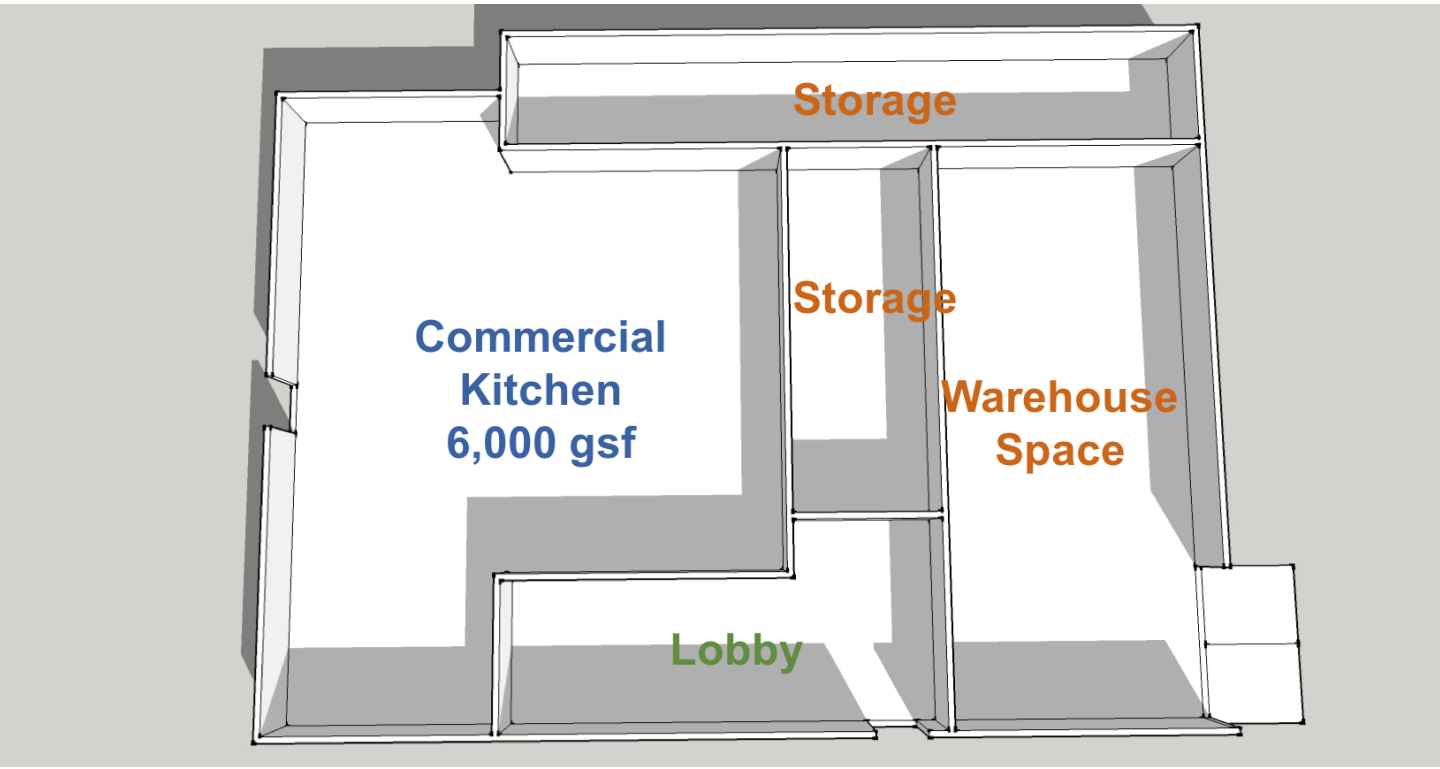
Scenario 1 Pro Forma Assumptions/Inputs

- Operating Cost Assumptions: Owner is responsible for:
    - Repairs & Supplies. Owner is responsible for any building repairs that arise so the budget includes Owner Costs for repairs, supplies and personnel to make repairs.
    - Owner will pay a broker who finds the tenant a fee of 5% of net income in Year 1, 4% in year 2 and so on through Year 5.
    - Owner will fund a replacement reserve of 4% of net income annually
- Income Assumptions: Tenant pays an annual market rent of $10 per square foot.
- Capital Cost Assumptions: $60 per square foot building renovation expense required to bring the building to a state where a tenant can build out and occupy the space.

Scenario 2 - Commercial Kitchen Membership Model

This scenario assumes the entire building is used as a commercial kitchen with ancillary storage/ warehouse space and income is generated through memberships paid by small users such

FIGURE 11: COMMERCIAL KITCHEN MEMBERSHIP MODEL



as the individuals who responded to the project's survey. The commercial kitchen is sized at 6,000 gross square feet ("gsf") and the remaining 8,000 gsf is considered storage/warehouse space. It is assumed the building Owner spends significant funds to build and outfit the commercial kitchen. Ongoing operating expenses for the commercial kitchen are based on case studies and outlined in more detail below. The analysis in this model shows the payback period for the investment the Owner makes initially to build the space. Income is based on the survey results which support an annual gross income of $163,080. Details of how this income is derived are outlined in the income assumptions below.

Scenario 2 Pro Forma Assumptions/Inputs

- Operating Cost Assumptions: Owner is responsible for operations of the kitchen and does not pass on any costs directly to the users/members. This is a very expensive operating cost model that includes:
  - Staff person to maintain and oversee use of the kitchen equipment and to make repairs/upkeep building.
  - Utilities – the commercial kitchen is a heavy user of utilities
  - Insurance
  - Repairs and Supplies
  - Property Taxes
- Income Assumptions: The income for Scenarios 2 through 5 are placeholders for membership fees. Membership fees have three variables – hourly rate, number of hours per user and number of users. Changes in these variables will vary income greatly – 5 members using the space for 40 hours per week each and paying $25 per hour will generate very different income than 20 members using the space 8 hours per week paying $15 per hour.

  The survey results indicated 91.7% of respondents (22 respondents) were willing to pay $15/hour or less to rent space. Based on respondents' interest in number of hours and the number of respondents, it can be assumed there is interest in renting the space for 10,872 hours per year by respondents. This equates to $163,080 in gross annual income per year. This income is discounted by a 10% annual

vacancy rate and is assumed to increase (either through increased hourly rates or an increase in number of users) by 2% annually. It is likely that there is also a willingness to pay a higher rate than $15 per hour, given the data collected on comparable spaces and their rates.

It should also be noted the Owner may be able to generate additional income from charging for classes or training programs for members and the community at large. As was discussed in Section I: Literature Review and Case Studies, many existing spaces supplement their income in this way. While not explicitly factored into the income calculations for any of the scenarios, it should be noted this is a viable income stream for the scenarios modeled here.

- Capital Cost Assumptions: The commercial kitchen including equipment costs $130 per square foot to build, but only 6,000 square feet of the building is built as a commercial kitchen. The remaining 8,000 square feet is storage/ warehouse space for the kitchen users and costs only $40 per square foot to renovate to this use.

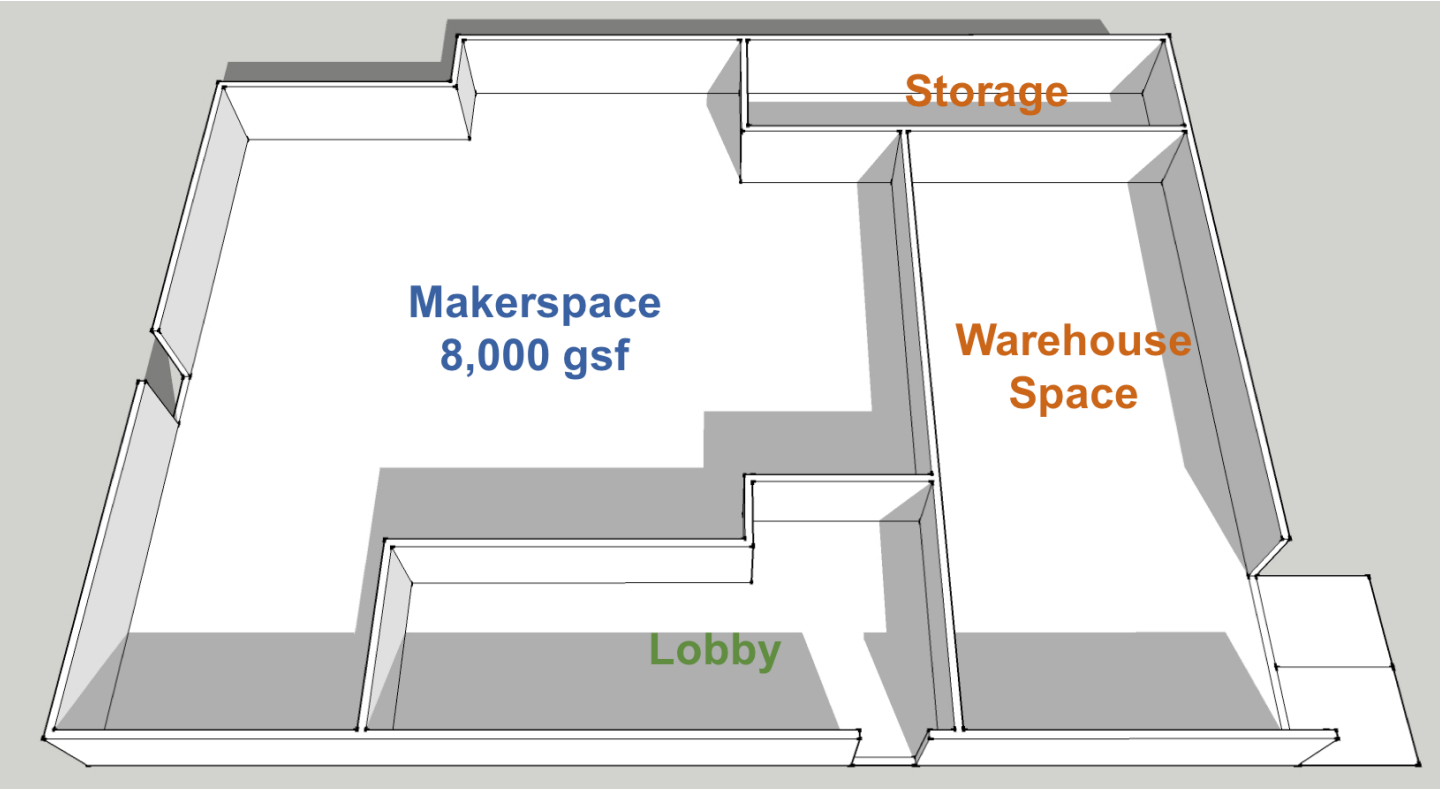
Scenario 3 - Makerspace Membership Model

Here the Owner's costs for building the space are different because instead of a commercial kitchen, less costly maker- studio space is built, with 8,000 gsf as makerspace and 6,000 gsf of the space as ancillary storage/warehouse space for the maker's use. Additionally, the operating expenses for the Owner are different in this model as outlined in greater detail below. Income is identical to Scenario 2.

Scenario 3 Pro Forma Assumptions/Inputs

- Operating Cost Assumptions: Owner is responsible for all operations and does not pass on direct costs to members similar to Scenario 2. However costs are significantly lower than the commercial kitchen model because of the utility-intensive nature of the commercial kitchen.
- Income Assumptions: Same as Scenario 2.
- Capital Cost Assumptions: 8,000 square feet

FIGURE 12: MAKERSPACE MEMBERSHIP MODEL



of the space is renovated at a cost of $80 per square foot into makerspace. The remaining 6,000 square feet is used as storage/ warehouse space for makerspace users and costs $40 per square foot to renovate.

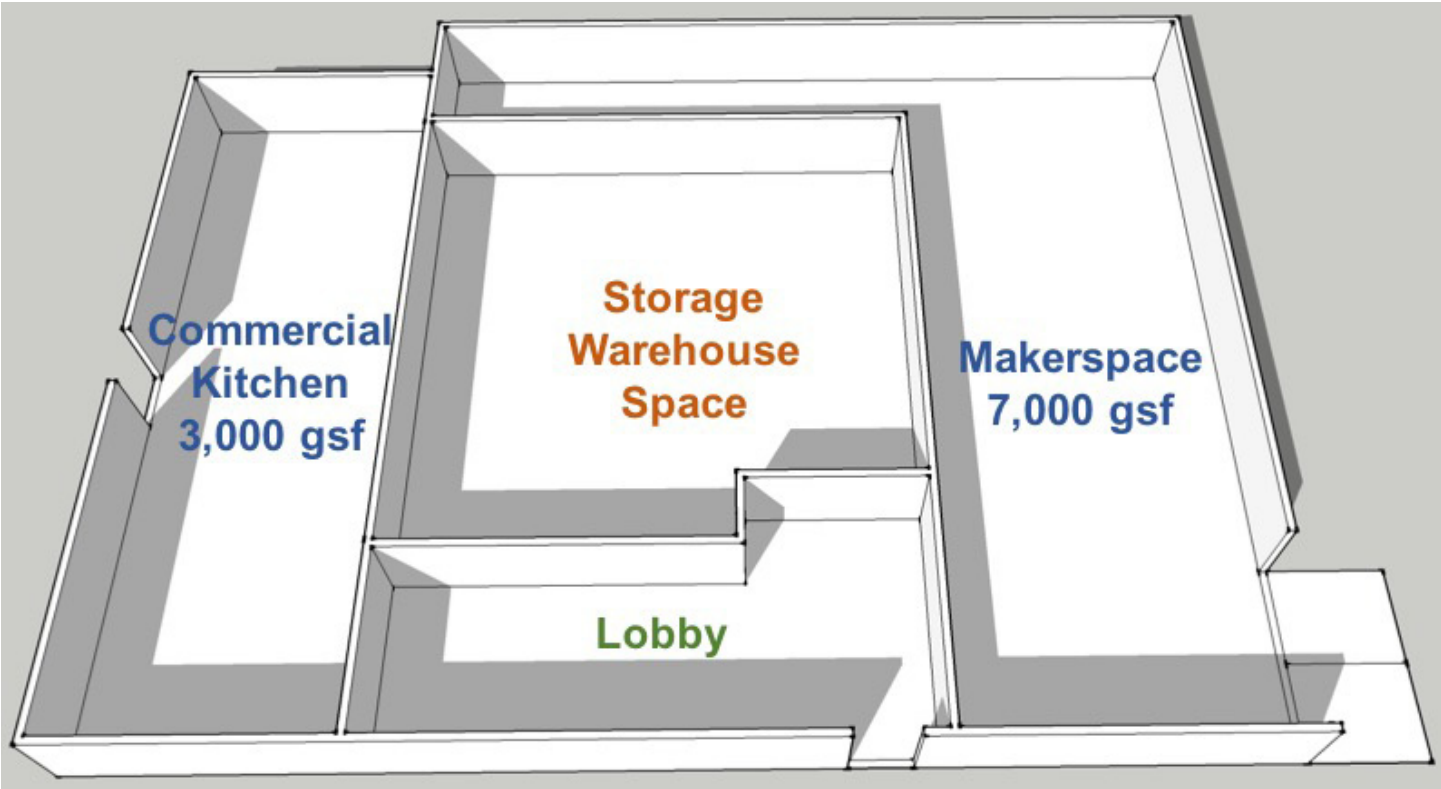
Scenario 4 - Combination Commercial Kitchen and Makerspace

Because the building is large enough to accommodate a commercial kitchen and makerspace, this model is a hybrid of Scenarios 2 and 3. In this model 3,000 gsf is underwritten for the commercial kitchen, 4,000 gsf is storage/ warehouse space related to the commercial kitchen and/or makerspace and the remaining 7,000 gsf is makerspace. Because the commercial kitchen has high fixed costs related to equipment, no matter the amount of space used, the capital costs for this model are not significantly lower than Scenario 2 – Commercial Kitchen.

Scenario 4 Pro Forma Assumptions/Inputs

- Operating Cost Assumptions: Assumes a hybrid of expenses between Scenario 2 and 3. This is because the kitchen space in these scenarios is smaller than Scenario 2 but greater than Scenario 3. Therefore, utility expenses should be lower than Scenario 2 but greater than Scenario 3.
- Income Assumptions: Income is 25% higher than Scenarios 2 and 3. The assumption here is that by creating a combination makerspace and commercial kitchen the Owner can attract a larger number of interested users by more "intensively" using the space.
- Capital Cost Assumptions: The kitchen renovation cost per square foot is $130; the makerspace cost per square foot is $80 and the storage/warehouse space is $40 per square foot.

FIGURE 13: COMBINATION COMMERCIAL KITCHEN AND MAKERSPACE MODEL



Scenario 5 - Combination Commercial Kitchen and Makerspace with Break-Even Income

This is scenario 4 (combination commercial kitchen and makerspace) with income increased so the project cash flows positively through the 10-year pro forma period. This scenario is useful to review to see how much income would need to be generated from this project in order to "break even". In this scenario, the project can support all the commercial debt available and is able to recoup the soft funds spent by Year 10.

Scenario 5 Pro Forma Assumptions/Inputs

- Operating Cost Assumptions: Same as Scenario 4
- Income Assumptions: Income is this scenario is derived by first determining what is needed to make the project "work". A successful project is defined as one that maximizes its commercial loan at the 60% loan to value, repays this loan over 10 years and generates sufficient additional cash to repay the soft/grant funds used to cover the remaining 40% of the capital costs. Gross Annual Income in Scenario 5 is therefore $265,000. This is a 62% increase in income over the $163,080 used in Scenario 2 and 3. At a $15/hour user rate this would be approximately 10 users using the space "full-time" (35 hours per week for 52 weeks per year) or 20 users "part-time", etc.
- Capital Cost Assumptions: Same as Scenario 4.

Financing Assumptions - All Scenarios

All scenarios assume the Owner must improve the building to use it according to the various scenarios. To finance these improvements, the Owner will be able to borrow funds from a conventional commercial lender, but will not be able to borrow all funds needed to complete the renovations. Any funds not borrowed will have to be fundraised. The scenarios vary by total costs and portion to be borrowed; therefore leaving varied amounts to be fundraised. The total to be raised is labeled as "Capital Fundraising Needs" under the "Cost-Benefit Analysis" section of each scenario and is also listed in Table 1 below.

The amount to be borrowed is determined by using two calculation methods (a 60% "Loan to Value" method and a 1.15 "debt service coverage ratio" method) and adopting that which allows for the lowest amount to be borrowed. Lenders will use these two methods to determine the amount they will lend and will only lend up to the lower of these two methods. Each of the five scenarios calculates both methods and inputs the lower as the amount to be borrowed. All five scenarios assume a loan with a 10-year fully, amortizing payback period at an interest rate of 5.75%.

Loan to Value Method: The loan to value method calculates the maximum loan amount at 60% of capital improvement costs. This means that no matter the level of improvement, the remaining 40% would need to be financed using alternative sources such as grants.

Debt Service Coverage Ratio Method: As previously stated, the loan is assumed to be a 10-year loan at an interest rate of 5.75%. After the project's other expenses (property taxes, utilities, insurance, etc.) the project must have sufficient cash flow to repay this loan. The amount available to be lent by a conventional loan using this method is limited by the ability to pay. This method requires that Net Operating Income (income minus operating expenses) must be equal or greater than 1.15 times the annual debt service in Year 1 of the commercial loan (a 1.15 "debt service coverage ratio"). Using this ratio determines the maximum loan amount. This further constrains the loan amount in certain scenarios and increases the "Capital Fundraising Need".

TABLE 1: SCENARIO COST COMPARISON

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
	$10/SF Lease	Commercial Kitchen	Maker Space	Kitchen & Maker	Kitchen & Maker with Max Income
Capital Costs	$ 890,000	$ 1,150,000	$ 930,000	$ 1,160,000	$ 1,160,000
Capital Fundraising	$ 356,000	$ 887,447	$ 372,000	$ 612,894	$ 464,000
Year 1 Gross Income	$ 140,000	$ 163,080	$ 163,080	$ 195,696	$ 265,000
Year 1 Operating Expenses	$ 17,800	$ 107,000	$ 59,800	$ 93,250	$ 93,250
Cumulative Owner Cash Year 10	$ 397,608	$ -	$ 73,895	$ 15,432	$ 472,870
Market Value Y11	$ 1,143,123	$ 172,078	$ 770,624	$ 700,382	$ 1,255,861

Summary of Outcomes

Table 1 comapres the 5 scenarios based on the costs to the Owner and the eventual market value at the end of Year 10.

Scenario 1

This has the lowest capital costs and operating costs and therefore highest return to the Owner (and the highest Market Value). While there may be some work to be done to the building to prepare the building for lease-up, the amount borrowed can be repaid in 10 years through building income. The amount fundraised (the 40% of the capital costs that cannot be borrowed) is sufficiently low so that by Year 10 the project has generated cash in excess of the original amount fundraised. In this scenario, $356,000 will need to be fundraised to outfit the building but the Owner will generate $397,608 in profit/ revenue from the building over 10 years (in the form of management fees and excess cash flow). After Year 10, if the Owner is able to continue with a Tenant at a comparable lease, all capital costs will be paid off and the Owner will realize signfiicant annual income from the building.

Scenario 2

The commercial kitchen scenario has some of the highest capital and operating costs due to the kitchen and equipment. This scenario also cannot borrow much to fund the capital costs and so must fundraise the majority of the capital costs. The amount borrowed in this scenario is restricted not by the 60% LTV rule but by the 1.15 debt service coverage ratio.

Operating costs in this scneario are very high because of the utilities and manpower required to operate a commercial kitchen.

Keep in mind the income assumption here, and in all scenarios, is highly fungible. If the Owner believes additonal income is possible, small shifts in additional income can translate into signficant increases in available debt. This scenario is useful since it provides the Owner with an order of magnitude for the funds to be raised to construct and operate a commercial kitchen. If, for example, the Owner felt the entire capital costs for the commercial kithcen could be fundraised, then the project becomes much more financially feasible.

Scenario 3

Makerspace capital and operating expenses are lower than Scenario 2 and yet income is kept the same. Here the owner is able to borrow the full 60% LTV amount of $558,000. This puts the capital fundraising need at $372,000. However, the project does not cash flow so well that by Year 10 the Owner has cash in excess of this intial fundraised amount. This means whatever soft sources are used to fund the 40% of the capital costs will not be fully recouped by Year 10. But,

there will be cash available by year 10 and the project will have paid off its private loan.

Scenario 4

This scenario has lower commercial kitchen capital and operating costs because it is smaller, sharing the property with a makerspace but the total capital costs are the highest because both kitchen and makerspace is constructed. Operating costs are in between scenarios 2 and 3 in this scenario. The project is not able to borrow the full 60% LTV amount and instead is constrained by the 1.15 debt service coverage ratio. Capital fundraising needs are higher than Scenario 3 but substantially lower than Scenario 2. Owner cash at the end of Year 10 is small and so the Owner would be unable to repay the capital fundraising used to construct the facility.

Scenario 5

Scenario 5 is a version of Scenario 4 that "works". By increasing income, the project is able to maximize its 60% LTV and also able to repay the 40% fundraised by Year 10. If the Owner believes the income in Scenario 5 is feasible, this option is viable.

Recommendations

Given the costs and income generated, Scenario 4, which contemplates a space divided into a commercial kitchen, makerspace and supplemental storage space for both, is recommended.

Scenario 1 is a backup or baseline scenario that can be used to view the property through the eyes of an outside investor interested in purchase or to develop a baseline from which to compare the other scenarios, which are the true goal of the project's developer. For purposes of our final recommendation, we will exclude Scenario 1 as a viable option.

Additionally, Scenario 5 is aspirational and should be pursued only if there is a reasonable expectation the income assumption is viable. Therefore, we will exclude it from the final recommendation.

Capital costs for Scenarios 2 through 4 are not substantively different. There is a $220,000 difference between the highest cost (commercial kitchen) and lowest cost (makerspace). But there is a significant difference between the fundraising needs of the highest and lowest cost options (a $515,000 difference). Scenario 4 falls in between these two in terms of fundraising obligation and project cost (operating and capital). Furthermore, Scenario 4 includes the construction of both a small commercial kitchen and makerspace. Providing both uses on site will be a useful diversification of the space.

As discussed in Section I: Literature Review and Case Studies, many makerspaces and commercial kitchens generate other sources of income as well. Owners offer classes and provide training to their membership base as well as the community at large. Such alternative sources of income have not been explicitly factored into the models but should be considered a potential income-generating opportunity for the space.

Diversifying who can use the space is a financial hedge against changes in the market and interest level by individual users. Because makerspace and commercial kitchen users are small, and often new, businesses, the Owner is likely to see high turnover. To hedge against this, having both spaces operating simultaneously should allow the Owner to maintain consistent cash flow even if users of either space go out of business or cancel memberships. The Owner will have a broader pool of users to market for membership.

All scenarios assume fixed costs of different levels required to renovate the building for use. This fixed cost is paid back (to varying degrees of success) by income, which is a variable input. The goal of the Owner in any scenario is to maximize

the income (its variable input) in order to lessen the financial burden of the fixed/ capital cost. The Owner's efforts will be put into marketing the space, attracting new users, enticing new users through special promotions, offers and features. Scenario 4 provides the Owner with the greatest opportunity to maximize income by allowing both commercial kitchen and makerspace users to be accommodated in the same facility.

CONCLUSION

The Hopewell Feasibility Study explored the community demand for potential uses of a city-owned building in downtown Hopewell. To assess demand, this study analyzed kitchen incubator and makerspace case studies, administered a community business survey, and presents the Cash Flow Analysis of five scenarios for potential uses of the space.

The community business survey results demonstrated a strong demand for this potential space with 69 percent of respondents providing high ratings on the likelihood of renting space at the facility. The majority of survey respondents indicated they produce a variety of food-related products or artisan craft goods. A major challenge identified in the survey results includes the availability of work space and equipment for current operations and future expansion. Local entrepreneurs surveyed also stated other business services such as advertising and marketing strategies and partnering with potential distributors and suppliers would assist them in meeting future business goals. The survey results clearly demonstrate a community demand for a commercial kitchen and makerspace that provides other business services to local entrepreneurs in the Hopewell community.

Through evaluating five scenarios in a Cash Flow Analysis, Scenario 4 is the recommended model as it allows for user accessibility to a makerspace, commercial kitchen, and additional storage. It falls between the highest and lowest costs for both capital and operating expenses in maintaining the facility. Designing the potential space to offer both makerspace and a commercial kitchen also provides diversified uses and will attract a variety of small businesses to use the facility. As mentioned in the Cash Flow Analysis, this scenario provides the greatest opportunity for generating income because of the diversity of uses as well as the option to offer training and other business services to local entrepreneurs. Similarly, in the case-studies analysis section of this report, both kitchen incubators and makerspaces examples also provided training and other business services to members in their model as a means to generate income for the space.

The potential space in downtown Hopewell offers an opportunity to engage local entrepreneurs in the shared community of a makerspace and/or commercial kitchen. Efficient marketing of the facility to a variety of entrepreneurs will allow for sustained utilization of the potential space and serve as a valuable asset to businesses in downtown Hopewell, Virginia.

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APPENDICIES

Table 1: Community Business Survey Results - Equipment Used in Production

Types of Equipment Currently Used in Production	
COMMERCIAL KITCHEN	**MAKERSPACE**
Stove top	Glass saw, grinder, and kiln
Mixer, stove, and oven	Sewing Machines
Blenders, Crockpots, Kitchen equipment	Screen print, DTG Machine, Vinyl Plotter, Heat Press, Computer
Espresso Machine and Coffee Maker	Basic Woodworking equipment and Saws
Stove, Large Counter Space, Sink, and Large Open Area	Molds, Ceramic, and Nonporous bowls
Stove	Saw
Refrigerators, Freezers, Mixers, Ovens	
Measuring Cup, Cooking pot	
Pasteurizer, Milking Machines, Ice Cream Maker	
Oven, Food Processor, Knives, Mixer, Baking pans	
Stove top, Pots and Pans, Table. Heat Sealer	
Oven, Mixer, Measuring devices, Refrigerator	
Snow Cone Machine	
Kitchen Supplies	
Ovens, heating elements, Blenders, Microwaves, Mixers	
Oven, Stove	
Mixers	

Table 2: Community Business Survey Results – Equipment Needed in Potential Space

Types of Equipment Needed in Potential Space Co-working space, Makerspace, and/or Commercial Kitchen	
COMMERCIAL KITCHEN	**MAKERSPACE**
Kitchen equipment, stovetop, microwave, deep sink	Shelves for display of items.
Access to water and power	Sewing machines, iron, ironing board, sissors and cutting table
Stove, refrigerator , large counter space	Machines. Table saw, band saw, planer, miter saw.
Table and space	
Refrigerator, freezer, convection & conventional ovens, 20 - 30 qt mixer	
One stove	
oven, mixer	
Large surface table for apreading brittle. Packaging equipment. Stoves.	
Ovens, mixer, refrigerator, microwave, stove top, chiller	
Snow cone machine, ice grinder, and syrup	
Microwave or oven	
Ovens, mixers, refrigerators,	
Double oven; mixers; tables	
oven, table/countertop, sink to wash dishes. Bowls, utensils, etc would be nice but not neccessary	
Pots and pans. Kitchen equipment	
Mixer, oven, sink	
Fridge, ovens, mixers	
steam jacketed kettle, retort, commercial gas stove, food processors, pots, cutting boards, knives, a steamer for peeling tomatoes would be good, a seeder, corn sheller-the Hanover Cannery has all these	

Community Business Survey Results – Aggregated Data:

Question 1: Artisans, makers, and food related businesses in Hopewell, Virginia would benefit from having a local co-working space. (Scale of 1 to 5. The highest rating being 5 stars)					
RATING	★	★★	★★★	★★★★	★★★★★
TOTAL	1	0	1	9	18

Question 2: Which of the following best describes your business?	
RESPONSES	**TOTALS**
Artisan crafts (i.e. jewelry, clothing, painting, prints, signage)	6
Bicycling services	0
Metalworking, welding crafts	0
Woodworking crafts	2
Artisan Beverages (i.e. coffee, beer, wine)	1
Food related businesses (i.e. bakeries, food trucks, butcheries, restaurant)	16
Science, Technology, Engineering, Math (S.T.E.M.) related businesses	2
Other (please specify)	6

Question 3: Did you receive any formal training/education for this? (Please select the highest form of education you have received.)	
RESPONSES	**TOTALS**
High School Diploma or G.E.D equivalent	5
Associate Degree	2
Bachelor's Degree	13
Master's Degree	2
Other trade related training	9

Question 5:
Where do you currently make your products?

RESPONSE	TOTALS
At Home	26
In a rented office space	0
In a commercial warehouse/facility	4
Other (please specify)	2

OTHER RESPONSES:
Hanover Cannery and at home
On premise

Question 6:
What types of equipment do you currently use to make your product?

RESPONSES
Oven, food processor, knives, mixer, baking pans
Stovetop, pots and pans, table. Heat sealer.
Oven, mixer, measuring devices, refrigerator.
Mixers
Stove top
Refrigerators, freezers, mixers, ovens
Basic woodworking equipment and saws.
Glass saw, grinder, and kiln
Mixer, stove and oven.
Snow cone machine
kitchen supplies
We grow vegetables
kitchen stuff but would love use of a steam jacketed kettle and large canning pots
Blenders, crockpots, kitchen equipment
Espresso machine and coffee maker
Molds, Ceramic and nonporous bowls
Ovens, heating elements, blenders, microwaves, mixers.
saw
Kitchen aides
Stove ,large counter space , sink, large open area
Sewing machines
Measuring cup/cooking pot
Screen print, DTG machine, Vinyl plotter, Heat Press, Computer
Pasteurizer, milking machines, ice cream maker
basic household things
Stove
Oven. Stove.
Food prep

Question 8: Where do you get most of your inputs?	
RESPONSES	**TOTALS**
Tri-Cities area (Hopewell, Petersburg, Colonial Heights)	15
Richmond Metropolitan Statistical Area	7
State of Virginia	4
Outside of Virginia	5
International	1

Question 9: Are your ingredients or supplies locally sourced?	
RESPONSE	**TOTALS**
Yes	14
No	17

Question 10: How do you advertise your products/services? (Please check all that apply)	
RESPONSE	**TOTALS**
Branding	11
Social Media (i.e. Facebook, Instagram, Twitter)	24
Radio	2
Word of Mouth	29
Other (please specify)	6

Question 11: Where do you sell your products or services? (Please check all that apply.)	
RESPONSES	**TOTALS**
Farmer's Market	16
Online	9
Craft Festivals	13
Other (please specify)	21

Question 12: How long have you been in business?	
RESPONSES	**TOTALS**
Less than 2 years	13
2 - 5 years	11
6 - 10 years	4
Over 10 years	5

Question 13: How many do you employ?	
RESPONSES	**TOTALS**
1 -2	17
3 - 5	1
6 - 10	3
10 or more	1
Other (please specify)	9

Question 14: What are the major challenges to the viability of your business? (Please select all that apply.)	
RESPONSES	**TOTALS**
Business Development – Product and service development, advertising, future business expansion	17
Financial assistance and funding avenues	13
Available work space and equipment for current operations and future expansion	20
Understanding compliance measures needed for government regulations and policies	7
Other (please specify)	3

Question 15: How likely would you rent a co-working space, makerspace, and/or commercial kitchen? (Scale of 1 to 5. The highest rating being 5 stars.)

RATING	★	★★	★★★	★★★★	★★★★★
TOTAL	4	1	5	8	14

Question 16: How many hours per month would you use a co-working space, makerspace, and/or commercial kitchen?

RESPONSE	TOTALS
5 - 19	16
20 - 39	8
40 - 59	2
60 - 79	2
80 and over	3

Question 17: How much would you pay hourly to use a commercial kitchen (Based on usage per month of a 2,000 sq. ft. kitchen)?

RESPONSES	TOTALS
$15.00 per hour or less	22
$25.00 per hour	2
$35.00 per hour	0
$45.00 per hour	0

Question 18: How much would you pay monthly to use office space in a co-working facility (Based on usage of a 200 sq. ft. office space)?

RESPONSES	TOTALS
Less than $100.00	13
$100.00	7
$150.00	4
$200.00	2
$250.00	0

Question 19: How much in additional yearly membership fees would you pay to use a co-working space, makerspace, and/or commercial kitchen facility (i.e. equipment, storage, utilities, other services)?

RESPONSES	TOTALS
$100.00	21
$150.00	2
$200.00	1
$250.00	0
$300.00	2

Question 21: What other services would assist you in meeting your business goals? (Please select all that apply)

RESPONSES	TOTALS
Assistance with Business Plan development	3
Job related Training	1
Marketing Strategies	8
Partnering with potential distributors and suppliers	12
Access to financing	3
Rentable storage space	3

Assumptions

Hard Costs PPSF	$ 60	A
Total Hard Costs	$ 840,000	
Legal Costs	$ 25,000	
6/23/17	$ 25,000	
Property Size (GSF)	14000	
PSF Rent	$ 10.00	B
Annual rent increase	2%	
Vacancy Rate	10%	
Year 1 Full Property Taxes	$ -	C
Property Tax increase	10%	
Operating Expenses		
Maintenance Personnel	$ 7,800	D
Utilities	$ -	
Insurance	$ -	
Supplies	$ 5,000	E
Repairs	$ 5,000	F
Expense Increase	3%	
Management Fee	6%	
Advertising/Broker Fees	5%	
Reserve	4%	
Financial Assumptions		
Capitalization Rate	10%	
Max Loan Amount	$ 534,000	
Loan Interest Rate	5.75%	G
Loan Term	10 years	
Annual Debt Service	$70,340	
Fundraising Obligation	$ 356,000	

Property Tax Assumptions	
2016 Building Value	$ 386,400
2016 Land Value	$ 65,000
Post Rehab Building Value	$ 886,400
Post Rehab Land Value	$ 65,000
Full Taxes	$ 10,751
Year 1 Abatement	100%
Year 2-5 Additional Rate	10%

Scenario 1: Straight $10/PSF Triple Net Lease Single User

Year	1	2	3	4	5	6	7	8	9	10	11
ANNUAL OPERATING INCOME											
Gross Income	$140,000	$142,800	$145,656	$148,569	$151,541	$154,571	$157,663	$160,816	$164,032	$167,313	$170,659
Less Vacancy/Collection losses	$14,000	$14,280	$14,566	$14,857	$15,154	$15,457	$15,766	$16,082	$16,403	$16,731	$17,066
EFFECTIVE GROSS INCOME	$126,000	$128,520	$131,090	$133,712	$136,386	$139,114	$141,896	$144,734	$147,629	$150,582	$153,593
ANNUAL OPERATING EXPENSES											
Property Taxes	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Operating Expenses	$17,800	$18,334	$18,884	$19,451	$20,034	$20,635	$21,254	$21,892	$22,549	$23,225	$23,922
Management Fee	$7,560	$7,711	$7,865	$8,023	$8,183	$8,347	$8,514	$8,684	$8,858	$9,035	$9,216
Advertising/Broker Fee	$6,300	$5,141	$3,933	$2,674	$1,364	$0	$0	$0	$0	$0	$0
TOTAL OPERATING EXPENSES	$31,660	$31,186	$30,682	$30,148	$29,581	$28,982	$29,768	$30,576	$31,406	$32,260	$33,137
NET OPERATING INCOME	**$94,340**	**$97,334**	**$100,408**	**$103,565**	**$106,805**	**$110,132**	**$112,129**	**$114,159**	**$116,223**	**$118,322**	**$120,456**
CASH FLOW AFTER DEBT SERVICE											
Net Operating Income	$94,340	$97,334	$100,408	$103,565	$106,805	$110,132	$112,129	$114,159	$116,223	$118,322	$120,456
Debt Service	$70,340	$70,340	$70,340	$70,340	$70,340	$70,340	$70,340	$70,340	$70,340	$70,340	$0
CASH FLOW AFTER DEBT SERVICE	**$24,000**	**$26,994**	**$30,068**	**$33,225**	**$36,465**	**$39,792**	**$41,788**	**$43,818**	**$45,883**	**$47,982**	**$120,456**
REPAIR AND REPLACEMENT RESERVE											
Cash Flow After Debt Service	$24,000	$26,994	$30,068	$33,225	$36,465	$39,792	$41,788	$43,818	$45,883	$47,982	$120,456
Repair and Replacement Reserve	$5,040	$5,141	$5,244	$5,348	$5,455	$5,565	$5,676	$5,789	$5,905	$6,023	$6,144
ANNUAL CASH FLOW	$18,960	$21,853	$24,825	$27,876	$31,010	$34,228	$36,113	$38,029	$39,978	$41,958	$114,312
CUMMULATIVE REPLACEMENT RESERVE	$5,040	$10,181	$15,424	$20,773	$26,228	$31,793	$37,469	$43,258	$49,163	$55,187	$61,330
Cost-Benefit Analysis											
Capital Fundraising Need	$ 356,000										
Owner Cash	$ 26,520	$ 29,564	$ 32,690	$ 35,899	$ 39,193	$ 42,574	$ 44,626	$ 46,713	$ 48,835	$ 50,993	$ 123,528
10 Year Cumulative Owner Cash	$ 397,608										
Year 10 Building Reserve	$ 55,187										
Market Value Year 1	$ 189,599										
Market Value Year 5	$ 310,098										
Market Value Year 11	$ 1,143,123										
Debt Coverage Ratio	1.34	1.38	1.43	1.47	1.52	1.57	1.59	1.62	1.65	1.68	
Loan to Value Ratio	2.82										
Operating Subsidy	-										

Assumptions

A - minimal improvements - tenant completes build out of space

B - market rate, 10-year lease price

C - Property tax assumptions per E. Kaufman. Tenant assumes tax payments.

D - minimal maintenance personnel ($15/hour for 10 hours/week) for building maintenance.

E - See Literature Review assumptions

F - See Literature Review assumptions

G - market rate, 10-year fully amortizing commercial loan

Assumptions

Kitchen Size	6,000	
Kitchen Hard Costs PPSF	$ 130	A
Ancillary Space Size	$ 8,000	
Ancillary Space PPSF	40	B
Total Hard Costs	$ 1,100,000	
Legal Costs	$ 25,000	
Misc Transaction Costs	$ 25,000	
Property Size (GSF)	14000	
Annual Rent	$ 163,080	C
Annual rent increase	2%	
Vacancy Rate	10%	
Year 1 Full Property Taxes	$ 10,751	
Property Tax increase	10%	
Operating Expenses		
Maintenance Personnel	$ 35,000	D
Utilities	$ 55,000	E
Insurance	$ 7,000	F
Supplies	$ 5,000	G
Repairs	$ 5,000	H
Expense Increase	3%	
Management Fee	0%	I
Advertising/Broker Fees	0%	J
Reserve	4%	
Financial Assumptions		
Capitalization Rate	10%	
NOI at 1.15 DSCR	$34,584.35	
Max Loan Amount	$ 262,553	
Loan Interest Rate	5.75%	
Loan Term	10 years	
Annual Debt Service	$34,584	
Fundraising Obligation	$ 887,447	

Scenario 2: Commercial Kitchen Membership Model

Year		1	2	3	4	5	6	7	8	9	10	11
ANNUAL OPERATING INCOME												
Gross Income		$163,080	$166,342	$169,668	$173,062	$176,523	$180,053	$183,655	$187,328	$191,074	$194,896	$198,794
Less Vacancy/Collection losses		$16,308	$16,634	$16,967	$17,306	$17,652	$18,005	$18,365	$18,733	$19,107	$19,490	$19,879
EFFECTIVE GROSS INCOME		$146,772	$149,707	$152,702	$155,756	$158,871	$162,048	$165,289	$168,595	$171,967	$175,406	$178,914
ANNUAL OPERATING EXPENSES												
Year 1 Full Property Taxes		$0	$1,075	$2,150	$3,225	$4,300	$5,375	$6,450	$7,526	$8,601	$9,676	$ 10,751
Operating Expenses		$107,000	$110,210	$113,516	$116,922	$120,429	$124,042	$127,764	$131,597	$135,544	$139,611	$143,799
Management Fee	0%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Advertising/Broker Fee												
TOTAL OPERATING EXPENSES		$107,000	$111,285	$115,666	$120,147	$124,730	$129,418	$134,214	$139,122	$144,145	$149,286	$154,550
NET OPERATING INCOME		**$39,772**	**$38,422**	**$37,035**	**$35,609**	**$34,141**	**$32,630**	**$31,075**	**$29,473**	**$27,822**	**$26,120**	**$24,364**
CASH FLOW AFTER DEBT SERVICE												
Net Operating Income		$39,772	$38,422	$37,035	$35,609	$34,141	$32,630	$31,075	$29,473	$27,822	$26,120	$24,364
Debt Service		$34,584	$34,584	$34,584	$34,584	$34,584	$34,584	$34,584	$34,584	$34,584	$34,584	$0
CASH FLOW AFTER DEBT SERVICE		**$5,188**	**$3,838**	**$2,451**	**$1,024**	**($443)**	**($1,954)**	**($3,509)**	**($5,112)**	**($6,763)**	**($8,465)**	**$24,364**
REPAIR AND REPLACEMENT RESERVE												
Cash Flow After Debt Service		$5,188	$3,838	$2,451	$1,024	($443)	($1,954)	($3,509)	($5,112)	($6,763)	($8,465)	$24,364
Replacement Reserve		$5,188	$3,838	$2,451	$1,024	$0	$0	$0	$0	$0	$0	$7,157
Cash Flow Shortfall						$443	$1,954	$3,509	$5,112	$6,763	$8,465	
ANNUAL CASH FLOW		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$17,208
CUMMULATIVE RESERVE		$5,188	$9,026	$11,476	$12,501	$12,057	$10,103	$6,594	$1,482	($5,280)	($13,745)	($6,588)
Cost-Benefit Analysis												
Capital Fundraising Need		$ 901,191										
Owner Cash/ Operating Subsidy		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 17,208
10 Year Cumulative Owner Cash		$ -										
Year 10 Building Reserve		$ (13,745)										
Market Value Year 1		$ -										
Market Value Year 5		$ -										
Market Value Year 11		$ 172,078										
Debt Coverage Ratio		1.15	1.11	1.07	1.03	0.99	0.94	0.90	0.85	0.80	0.76	
Loan to Value Ratio		-										

Assumptions

A - includes cost for kitchen equipment and kitchen space build out

B - basic build out cost for warehouse space/ common space

C - $15/hour membership fee using hours per survey. See Literature Review Assumptions for more detail

D - full-time maintenance personnel for building and commercial kitchen

E to H - See Literature Review Assumptions for detail

I - No management fee can be supported by the project in this scenario

J - Only scenario 1 has a broker fee because the remainder are membership programs

Assumptions

Maker Space Size	8,000	
Maker Space Hard Costs PSF	$ 80	A
Ancillary Space Size	$ 6,000	
Ancillary Space PPSF	$ 40	B
Total Hard Costs	$ 880,000	
Legal Costs	$ 25,000	
Misc Transaction Costs	$ 25,000	
Property Size (GSF)	14000	
Annual Rent	$ 163,080	
Annual rent increase	2%	
Vacancy Rate	10%	
Year 1 Full Property Taxes	$ 10,751	
Property Tax increase	10%	
Operating Expenses		
Maintenance Personnel	$ 7,800	C
Utilities	$ 35,000	D
Insurance	$ 7,000	E
Supplies	$ 5,000	F
Repairs	$ 5,000	G
Expense Increase	3%	
Management Fee	2%	
Advertising/Broker Fees	0%	
Reserve	4%	
Financial Assumptions		
Capitalization Rate	10%	
Max Loan Amount	$ 558,000	
Loan Interest Rate	5.75%	
Loan Term	10 years	
Annual Debt Service	$73,501	
Fundraising Obligation	$ 372,000	

Scenario 3: Maker Space

Year	1	2	3	4	5	6	7	8	9	10	11
ANNUAL OPERATING INCOME											
Gross Income	$ 163,080	$166,342	$169,668	$173,062	$176,523	$180,053	$183,655	$187,328	$191,074	$194,896	$198,794
Less Vacancy/Collection losses	$16,308	$16,634	$16,967	$17,306	$17,652	$18,005	$18,365	$18,733	$19,107	$19,490	$19,879
EFFECTIVE GROSS INCOME	$146,772	$149,707	$152,702	$155,756	$158,871	$162,048	$165,289	$168,595	$171,967	$175,406	$178,914
ANNUAL OPERATING EXPENSES											
Year 1 Full Property Taxes	$ -	$1,075	$2,150	$3,225	$4,300	$5,375	$6,450	$7,526	$8,601	$9,676	$ 10,751
Operating Expenses	$ 59,800	$61,594	$63,442	$65,345	$67,305	$69,325	$71,404	$73,546	$75,753	$78,025	$80,366
Management Fee	$2,935	$2,994	$3,054	$3,115	$3,177	$3,241	$3,306	$3,372	$3,439	$3,508	$3,578
Advertising/Broker Fee											
TOTAL OPERATING EXPENSES	$62,735	$65,663	$68,646	$71,685	$74,783	$77,941	$81,161	$84,444	$87,793	$91,209	$94,695
NET OPERATING INCOME	**$84,037**	**$84,044**	**$84,056**	**$84,070**	**$84,088**	**$84,107**	**$84,129**	**$84,151**	**$84,174**	**$84,197**	**$84,219**
CASH FLOW AFTER DEBT SERVICE											
Net Operating Income	$84,037	$84,044	$84,056	$84,070	$84,088	$84,107	$84,129	$84,151	$84,174	$84,197	$84,219
Debt Service	$73,501	$73,501	$73,501	$73,501	$73,501	$73,501	$73,501	$73,501	$73,501	$73,501	$0
CASH FLOW AFTER DEBT SERVICE	**$10,535**	**$10,543**	**$10,554**	**$10,569**	**$10,586**	**$10,606**	**$10,627**	**$10,649**	**$10,672**	**$10,695**	**$84,219**
REPAIR AND REPLACEMENT RESERVE											
Cash Flow After Debt Service	$10,535	$10,543	$10,554	$10,569	$10,586	$10,606	$10,627	$10,649	$10,672	$10,695	$84,219
Replacement Reserve	$5,871	$5,988	$6,108	$6,230	$6,355	$6,482	$6,612	$6,744	$6,879	$7,016	$7,157
ANNUAL CASH FLOW	$4,664	$4,554	$4,446	$4,338	$4,231	$4,124	$4,015	$3,906	$3,794	$3,679	$77,062
CUMMULATIVE RESERVE	$5,871	$11,859	$17,967	$24,197	$30,552	$37,034	$43,646	$50,390	$57,268	$64,284	$71,441
Cost-Benefit Analysis											
Capital Fundraising Need	$ 372,000										
Owner Cash/ Owner Subsidy	$ 7,600	$ 7,549	$ 7,500	$ 7,454	$ 7,409	$ 7,365	$ 7,321	$ 7,278	$ 7,233	$ 7,187	$ 80,641
10 Year Cumulative Owner Cash	$ 73,895										
Year 10 Building Reserve	$ 64,284										
Market Value Year 1	$ 46,642										
Market Value Year 5	$ 42,313										
Market Value Year 11	$ 770,624										
Debt Coverage Ratio	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.15	1.15	
Loan to Value Ratio	11.96										

Assumptions

A - Build out of maker space

B - basic build out cost for warehouse space/ common space

C - $15/hour membership fee using hours per survey. See Literature Review Assumptions for more detail

D - Lower utility costs than commercial kitchen

E to G - See Literature Review for more detail

Assumptions

Kitchen Size	3,000	
Kitchen Hard Costs PPSF	$ 130	A
Maker Space Size	7000	
Make Space Hard Costs PPSF	80	B
Ancillary Space Size	4,000	
Ancillary Space PPSF	40	C
Total Hard Costs	$ 1,110,000	
Legal Costs	$ 25,000	
Misc Transaction Costs	$ 25,000	
Property Size (GSF)	14000	
Annual Rent	$ 195,696	
Annual rent increase	2%	
Vacancy Rate	10%	
Year 1 Full Property Taxes	$ 10,751	
Property Tax increase	10%	
Operating Expenses		
Maintenance Personnel	$ 35,000	D
Utilities	$ 41,250	E
Insurance	$ 7,000	F
Supplies	$ 5,000	G
Repairs	$ 5,000	H
Expense Increase	3%	
Management Fee	0%	
Advertising/Broker Fees	0%	
Reserve	4%	
Financial Assumptions		
Capitalization Rate	10%	
NOI at 1.15 DSCR	$72,066.43	
Loan Amount	$ 547,106	
Max Loan Amount	$ 666,000	
Loan Interest Rate	5.75%	
Loan Term	10 years	
Annual Debt Service	$72,066	
Fundraising Obligation	$ 612,894	

Scenario 4: Commercial Kitchen and Maker Space Split

Year	1	2	3	4	5	6	7	8	9	10	11
ANNUAL OPERATING INCOME											
Gross Income	$ 195,696	$199,610	$203,602	$207,674	$211,828	$216,064	$220,385	$224,793	$229,289	$233,875	$238,552
Less Vacancy/Collection losses	$19,570	$19,961	$20,360	$20,767	$21,183	$21,606	$22,039	$22,479	$22,929	$23,387	$23,855
EFFECTIVE GROSS INCOME	$176,126	$179,649	$183,242	$186,907	$190,645	$194,458	$198,347	$202,314	$206,360	$210,487	$214,697
ANNUAL OPERATING EXPENSES											
Year 1 Full Property Taxes	$0	$1,075	$2,150	$3,225	$4,300	$5,375	$6,450	$7,526	$8,601	$9,676	$ 10,751
Operating Expenses	$ 93,250	$96,048	$98,929	$101,897	$104,954	$108,102	$111,345	$114,686	$118,126	$121,670	$125,320
Management Fee											
Advertising/Broker Fee											
TOTAL OPERATING EXPENSES	$93,250	$97,123	$101,079	$105,122	$109,254	$113,478	$117,796	$122,211	$126,727	$131,346	$136,071
NET OPERATING INCOME	**$82,876**	**$82,526**	**$82,163**	**$81,785**	**$81,391**	**$80,980**	**$80,551**	**$80,103**	**$79,633**	**$79,142**	**$78,626**
CASH FLOW AFTER DEBT SERVICE											
Net Operating Income	$82,876	$82,526	$82,163	$81,785	$81,391	$80,980	$80,551	$80,103	$79,633	$79,142	$78,626
Debt Service	$72,066	$72,066	$72,066	$72,066	$72,066	$72,066	$72,066	$72,066	$72,066	$72,066	$0
CASH FLOW AFTER DEBT SERVICE	**$10,810**	**$10,460**	**$10,096**	**$9,718**	**$9,324**	**$8,914**	**$8,485**	**$8,036**	**$7,567**	**$7,075**	**$78,626**
REPAIR AND REPLACEMENT RESERVE											
Cash Flow After Debt Service	$10,810	$10,460	$10,096	$9,718	$9,324	$8,914	$8,485	$8,036	$7,567	$7,075	$78,626
Replacement Reserve	$7,045	$7,186	$7,330	$7,476	$7,626	$7,778	$7,934	$8,093	$8,254	$8,419	$8,588
Cash Flow Shortfall								$56	$688	$1,344	$0
ANNUAL CASH FLOW	$3,765	$3,274	$2,767	$2,242	$1,699	$1,135	$551	$0	$0	$0	$70,038
CUMMULATIVE RESERVE	$7,045	$14,231	$21,561	$29,037	$36,663	$44,441	$52,375	$60,411	$67,978	$75,053	$83,641
Cost-Benefit Analysis											
Capital Fundraising Need	$ 612,894										
Owner Cash/ Owner Subsidy	$ 3,765	$ 3,274	$ 2,767	$ 2,242	$ 1,699	$ 1,135	$ 551	$ -	$ -	$ -	$ 70,038
10 Year Cumulative Owner Cash	$ 15,432										
Year 10 Building Reserve	$ 75,053										
Market Value Year 1	$ 37,649										
Market Value Year 5	$ 16,986										
Market Value Year 11	$ 700,382										
Debt Coverage Ratio	1.15	1.15	1.14	1.13	1.13	1.12	1.12	1.11	1.10	1.10	
Loan to Value Ratio	14.53										

Assumptions

A - includes cost for kitchen equipment and kitchen space build out

B - build out of maker space

C - basic build out cost for warehouse space/ common space

D - full-time maintenance personnel for building and commercial kitchen

E to H - See Literature Review Assumptions for detail

Assumptions

Kitchen Size	3,000	
Kitchen Hard Costs PPSF	$ 130	A
Maker Space Size	7000	
Make Space Hard Costs PPSF	80	B
Ancillary Space Size	4,000	
Ancillary Space PPSF	40	C
Total Hard Costs	$ 1,110,000	
Legal Costs	$ 25,000	
Misc Transaction Costs	$ 25,000	
Property Size (GSF)	14000	
Annual Rent	$ 265,000	
Annual rent increase	2%	
Vacancy Rate	10%	
Year 1 Full Property Taxes	$ 10,751	
Property Tax increase	10%	
Operating Expenses		
Maintenance Personnel	$ 35,000	E
Utilities	$ 41,250	E
Insurance	$ 7,000	F
Supplies	$ 5,000	G
Repairs	$ 5,000	H
Expense Increase	3%	
Management Fee	6%	
Advertising/Broker Fees	0%	
Reserve	4%	
Financial Assumptions		
Capitalization Rate	10%	
Max Loan Amount	$ 696,000	
Loan Interest Rate	5.75%	
Loan Term	10 years	
Annual Debt Service	$91,679.25	
Fundraising Obligation	$ 464,000	

Scenario 5: Kitchen/Maker Space Combo Maximizing Income

Year	1	2	3	4	5	6	7	8	9	10	11
ANNUAL OPERATING INCOME											
Gross Income	$ 265,000	$270,300	$275,706	$281,220	$286,845	$292,581	$298,433	$304,402	$310,490	$316,700	$323,034
Less Vacancy/Collection losses	$26,500	$27,030	$27,571	$28,122	$28,684	$29,258	$29,843	$30,440	$31,049	$31,670	$32,303
EFFECTIVE GROSS INCOME	$238,500	$243,270	$248,135	$253,098	$258,160	$263,323	$268,590	$273,962	$279,441	$285,030	$290,730
ANNUAL OPERATING EXPENSES											
Year 1 Full Property Taxes	$0	$1,075	$2,150	$3,225	$4,300	$5,375	$6,450	$7,526	$8,601	$9,676	$ 10,751
Operating Expenses	$ 93,250	$96,048	$98,929	$101,897	$104,954	$108,102	$111,345	$114,686	$118,126	$121,670	$125,320
Management Fee	$14,310	$14,596	$14,888	$15,186	$15,490	$15,799	$16,115	$16,438	$16,766	$17,102	$17,444
Advertising/Broker Fee											
TOTAL OPERATING EXPENSES	$107,560	$111,719	$115,967	$120,308	$124,744	$129,277	$133,911	$138,649	$143,493	$148,448	$153,515
NET OPERATING INCOME	**$130,940**	**$131,551**	**$132,168**	**$132,790**	**$133,416**	**$134,046**	**$134,678**	**$135,313**	**$135,947**	**$136,582**	**$137,215**
CASH FLOW AFTER DEBT SERVICE											
Net Operating Income	$130,940	$131,551	$132,168	$132,790	$133,416	$134,046	$134,678	$135,313	$135,947	$136,582	$137,215
Debt Service	$91,679	$91,679	$91,679	$91,679	$91,679	$91,679	$91,679	$91,679	$91,679	$91,679	$0
CASH FLOW AFTER DEBT SERVICE	**$39,261**	**$39,872**	**$40,489**	**$41,111**	**$41,737**	**$42,367**	**$42,999**	**$43,633**	**$44,268**	**$44,903**	**$137,215**
REPAIR AND REPLACEMENT RESERVE											
Cash Flow After Debt Service	$39,261	$39,872	$40,489	$41,111	$41,737	$42,367	$42,999	$43,633	$44,268	$44,903	$137,215
Replacement Reserve	$9,540	$9,731	$9,925	$10,124	$10,326	$10,533	$10,744	$10,958	$11,178	$11,401	$11,629
ANNUAL CASH FLOW	$29,721	$30,141	$30,564	$30,987	$31,411	$31,834	$32,256	$32,675	$33,090	$33,502	$125,586
CUMMULATIVE RESERVE	$9,540	$19,271	$29,196	$39,320	$49,647	$60,179	$70,923	$81,882	$93,059	$104,460	$116,090
Cost-Benefit Analysis											
Capital Fundraising Need	$ 464,000										
Owner Cash	$ 44,031	$ 44,737	$ 45,452	$ 46,173	$ 46,900	$ 47,633	$ 48,371	$ 49,113	$ 49,857	$ 50,603	$ 143,030
10 Year Cumulative Owner Cash	$ 472,870										
Year 10 Building Reserve	$ 104,460										
Market Value Year 1	$ 297,207										
Market Value Year 5	$ 314,108										
Market Value Year 11	$ 1,255,861										
Debt Coverage Ratio	1.43	1.43	1.44	1.45	1.46	1.46	1.47	1.48	1.48	1.49	
Loan to Value Ratio	2.34										

Assumptions

A - includes cost for kitchen equipment and kitchen space build out

B - build out of maker space

C - basic build out cost for warehouse space/ common space

D - full-time maintenance personnel for building and commercial kitchen

E to H - See Literature Review Assumptions for detail

Assumptions for Pro Forma

Making Makerspaces			
electricity	$ 0.20	per SF	per month
natural gas	$ 0.10	per SF	per month
trash	$ 300		per month
internet	$ 150		per month
insurance	$ 0.40	per SF	per year
umbrella policy	25%	PPL	
Hart Michigan Model (10,900 SF - only 2,500 of it is commercial kitchen)			
Insurance	$ 5,698.75	$ 0.04	per SF per month
Utilities	$ 13,555.97	$ 0.10	per SF per month
Repairs	$ 1,300.00	$ 0.01	per SF per month
Supplies	$ 5,266.49	$ 0.04	per SF per month
bldg Maintenance	$ 20,000.00	$ 0.15	per SF per month
Payroll	$ 34,386.00	$ 0.26	per SF per month
West Memphis Arkansas (6,000 SF - 3k of which is commercial kitchen)			
utilities/supplies	20000	0.28	per SF per month
maintenance	20000	0.28	per SF per month
staff/facility director	45000	0.63	per SF per month