Lively'Hood Farm

Strategy Plan

In Partnership with SF Environment

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SUS6050 Spring 2011
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Executive Summary

Urban farmers in San Francisco face unique operating challenges, resulting in limited commercial success to date. These challenges include significant operating costs, space limitations, highly varied microclimates, and stiff competition from other Bay Area farms and large industrial producers. Because of this, it isn’t possible to simply apply successful models of urban agriculture from other regions and expect comparable results.

However, the most successful urban agriculture ventures tend to share some common characteristics that can be instructive for entrepreneurs in the San Francisco market\(^1\), despite variations in physical constraints and cost structures. These characteristics include partnerships with community members, investors and buyers; varied agricultural products and revenue streams; a focus on higher-margin products and distribution methods, including specialty produce, value-added goods and services and direct sales channels; and supplementary income through the offering of educational services, production supplies, or technologies to other interested urban farmers. The most successful urban agriculture ventures have a clearly delineated business strategy, including a well-defined target market and differentiated value proposition that enable them to compete as a premium priced product\(^2\).

Based on this analysis, key strategies for urban farmers in San Francisco include:

- Maximizing space and optimizing crop mix based on margins and highest yield options.
- Careful business and agricultural planning, while allowing for flexibility to meet market demands and trends.
- Identifying diverse funding sources for startup capital, including crowdfunding and slow money.
- Engaging in marketing and branding to build the reputation of the farm.
- Efficient use of all resources, including financial and human capital.

\(^1\) Based on Team Lively‘Hood research and analysis. See Appendix K: Case Studies.
\(^2\) Based on Team Lively‘Hood case study research and informational interviews.
To assist potential urban agricultural entrepreneurs within San Francisco to develop a viable business strategy, this report describes a potential strategic plan for a fictional urban agriculture startup, Lively’Hood Farm. It outlines the external and internal factors, recommends strategic objectives, and lays out an implementation plan that urban farmers in San Francisco can use as a template for creating their own actual businesses. The history of urban agriculture in San Francisco, key constraints and opportunities that urban farmers face in growing and selling food within the city limits, a segmentation of the market for local agricultural products, and an overview of the competitive landscape are also included. Finally, Team Lively’Hood has created several analytical tools and compiled a collection of available resources to further support the development of a successful business venture in this field.

Introduction

The San Francisco Department of the Environment (SF Environment) is committed to preserving and maintaining the City’s unique open spaces, vegetation, and wildlife that contribute to an improved quality of life for citizens through its Urban Forestry initiatives (SFEnvironment.org, n.d.). A major component of this effort involves raising awareness of the importance of urban nature and ecological sustainability. To this end, SF Environment has created numerous programs to help connect community members more closely to their natural environment, including supporting community gardens and farmers’ markets in low-income communities that suffer from food insecurity and inequity (for terms, see Appendix A: Glossary).
In recent years, SF Environment has received a number of requests regarding launching commercial urban agriculture (CUA) ventures in the City. In response to these inquiries, SF Environment has added this type of organization to its vision for the future of the City’s open space landscape and has made a commitment to support CUA entrepreneurs by identifying relevant resources, providing useful tools and information, helping to educate the public about the benefits of a local food economy, and facilitating favorable legislative changes.

Team Lively’Hood is working with SF Environment to assess the viable commercial models for CUA ventures. Through research and analysis of urban agriculture trends, constraints and opportunities, Team Lively’Hood will make strategic recommendations for the establishment of Lively’Hood Farm, a fictionalized startup urban agriculture business in San Francisco. These recommendations focus on products and services that the farm offers, customer segments, branding and marketing, and key financial and operational decisions that will inform the success of the venture. These findings were developed by research and analysis of external factors affecting urban agriculture businesses. The research, analysis and recommendations in this report are intended to serve as a guide to urban farming[^3] in San Francisco for individuals who want to start local urban agriculture businesses.

**Background**

**Emergence of Urban Agriculture in the U.S.**

According to the United Nations, the world’s population is expected to increase to 9.1 billion by 2050, requiring a seventy percent increase in food production (The Economist, 2010). This necessitates higher crop yields and an expansion of the area under cultivation, which in turn relies on innovative food production methods and maximization of the amount of space used for agriculture. The urban agriculture movement has grown

[^3]: Urban farming refers to individuals who are growing and selling food produced in urban environments. Urban gardeners are generally defined as those who are growing food in cities for personal use.
out of this concern, as well as the increasing interest in eating (and sharing) local, sustainably produced food. Government agencies, businesses, nonprofits, and schools are joining the ranks of city dwellers starved for experiences of natural beauty in a growing obsession with urban agriculture. These constituents are learning the value of growing food in cities: improved health and quality of life, increased food security, and decreased environmental impact.

Urban agriculture has a long history. The recent incarnation began about a decade ago, primarily with hobbyists, restaurateurs, nonprofits, and school gardens in institutional settings or on abandoned city land (Alsever, 2010). More recently, large-scale urban rooftop farms and industrial scale vertical farms (i.e. foodscrapers) have emerged, relying on non-soil water-based growing techniques like hydroponics, aquaponics and aeroponics and other technological advances to grow food in formerly inhospitable conditions. For example, companies like Brightfarms and Sky Vegetable are utilizing TerraSphere systems to grow vegetables hydroponically on rooftops and distribute them to local grocery stores and restaurants. But these solutions use a great deal of energy (unless they are able to find ways to capitalize on natural light), and critics say they are too expensive to work in the long term (Ibid).
In San Francisco, Alemany Farms and Hayes Valley Farms provide San Franciscans with first-hand experience and knowledge of where food comes from. Growing Power is another example of an urban farm that is addressing job creation and food security in Milwaukee and Chicago (see Appendix K: Case Studies for more information). Similar projects in New York and Philadelphia are sprouting up quickly and growing in size and scale (Alsever, 2010).

Personal-scale urban agriculture solutions are also developing quickly. Windowfarms, a New York based startup company, is manufacturing vertical, hydroponic systems for growing vegetables indoors, taking advantage of the climate control found in private homes and using low impact materials. But its reach is small as of yet and the long-term interest in and viability of its product line remain to be seen.

The federal Food Safety Modernization Act, passed in late 2010, promotes traceability of all products and prevention of food-borne illnesses (Hamburg, 2011). Early versions of the bill would have made it prohibitive for small producers under $1 million in annual revenues to continue to operate within the new regulations, which require extensive testing and oversight. After much debate, an amendment to the Act was added to exempt small producers and farmers (Cooking Up a Story, 2011). This recognition of the importance of small farms at the federal level is positive news for urban agriculture enthusiasts in the U.S. In addition, technological advances will likely drive down the costs of urban agriculture, allowing producers to increase profit margins in what has traditionally been a thin margin business. The increased interest, legislative changes, and technological advances are also driving policy change in San Francisco, as described in more detail below.
Urban Agriculture in San Francisco

In July 2009, Mayor Gavin Newsom issued *Executive Directive 09-03: Healthy and Sustainable Food in San Francisco*, the first comprehensive food policy for the City. Food production on city-owned land was included as part of the commitment to increasing the amount of healthy and sustainable food available to San Francisco residents.

In December 2010 Mayor Newsom, in collaboration with the San Francisco Planning Department, announced a proposal to change the zoning code to allow commercial urban agriculture to operate in all parts of the City, as well as to permit the sale of produce from these operations (Newsom & Chui, 2010).

![Figure 5: A history of urban agriculture in San Francisco.](image-url)
On April 12, 2011, the San Francisco Board of Supervisors approved the ordinance. On April 20, 2011, San Francisco Mayor Ed Lee signed legislation allowing for greater food production within San Francisco by updating zoning regulations to explicitly permit gardens in all areas of the city and allowing for the sale of produce from these gardens (Chiu, 2011). The new legislation recognizes and approves two sub-uses of urban agriculture: Neighborhood Agriculture (gardens less than one acre in size) and Urban Agriculture (one acre or larger) (Cohen, 2011). Gardens over one acre are required to obtain a “conditional use” permit to operate.

In addition to local government, backyard farmers, social justice organizations, nonprofits, churches, for-profit ventures, educational institutions, and community groups and other coalitions also strongly support for urban agriculture in San Francisco, evidenced by groups like the San Francisco Urban Agriculture Alliance (SFUAA), a membership organization that advocates for city policies to facilitate opportunities for urban food cultivation, represents many of these individuals and organizations. SFUAA also provides communication networks, resources and support to strengthen the urban agriculture movement within the City.
Commercial urban agriculture operations are bound to mushroom in the City as the new legislation creates more consistent expectations for the profitability of such ventures. A number of (currently) non-commercial urban agriculture projects can be found in an interactive map denoting public space within the City (see Figure 6: Light blue pins denote parks both with and without community gardens. Green pins are public parks without community gardens, and pink indicates community garden landowner unknown). Approximately fifty community garden sites are listed, along with contact information, access details and waiting list times. Similar maps of for-profit local gardens and farm stands are being developed.

Additional marketing is sure to follow, such as the expansion of the FarmsReach website, which provides an in-progress database of local food producers selling wholesale (FarmsReach, 2011). Urban gardeners can connect to resources through organizations such as Yards to Gardens, which provides a website where users can post listings and connect with others in their community to share backyard space, garden labor, organic
matter and tools (Yards to Gardens, 2011). For more local resources, see Appendix B: Catalog of Helpful Resources.

![Figure 7: Little City Gardens (see Appendix K: Case Studies).](image)

**External Analysis**

**Constraints**

Constraints are factors that prohibit commercial urban agriculture from propagating in San Francisco. Some of these are real, physical barriers making local farming more challenging than that of its industrial competitors, while others are a question of customers’ perception. The following list of constraints is categorized into physical barriers, resources, regulations, and economic hurdles facing a commercial urban farm venture in San Francisco. See Appendix C: Extended External Analysis for a more in-depth look at these constraints.
**Physical Barriers**

- Lack of available open space.
- Expensive real estate.
- Housing shortage.
- Structural engineering needed to prepare buildings for rooftop farming.
- Proximity to cheaper land outside of San Francisco.
- Microclimates unique to San Francisco (see Figure 20: San Francisco Climate Zones.) (San Francisco Recreation and Parks Department, 2009).
- Urban air quality concerns.
- Urban soil quality concerns.

**Resources**

- Water shortages and history of droughts in the Bay Area.
- Higher energy costs than national average.
- Higher labor costs than national average.
- Higher costs of living in San Francisco than in adjacent Bay Area cities.

**Regulatory**

- A changing political landscape in terms of land use regulations.
- Landowner rights that may conflict with urban farm operations.

**Economic**

- Significant upfront costs.
- Lack of government funding.

**Opportunities**

Urban agriculture opportunities within San Francisco stem from a variety of factors, including policy, consumer trends environmental benefits, economics, and the limitations of traditional agriculture. Some of these key factors are highlighted below. See Appendix C: Extended External Analysis for a more in-depth look at CUA opportunities.
**Policy**

- San Francisco Ordinance 101537: recent legislation allows small farms to sell directly to consumers.

**Consumer Trends**

- Interest in localism.
- Interest in healthy and sustainably grown produce.

**Health and Environmental Benefits**

- Organic urban agriculture is not dependent on toxic pesticides.
- Decreased transportation reduces overall fuel usage.
- Increased food security.
- Increased visibility of agricultural practices.
- Reduced heat island effect in urban areas.

**Economic**

- Potential revenue streams.
- Using farm location for other commercial ventures like workshops and events.
- Fewer transportation expenses.
- Tourists are drawn to hyper-local products.
- Improved local economy (Been & Voicu, 2007).
- Increased neighboring property values (Ibid.)

**Limitations of Traditional Agriculture**

- Offering heirloom varietals and freshly picked produce.
- Ability to provide delicate produce that cannot withstand long shipping distances.
- Small-scale farms are more customizable.
- “Small farms produce far more per acre or hectare than large farms” (Rosset, 2000).
**Competitive Landscape**

The competitive landscape for urban agriculture in San Francisco is diverse. In the broadest sense, urban agriculture competes with conventional agriculture, since produce and other agricultural products continue to be viewed as commodities by many consumers. However, given its higher cost structure and smaller production model, urban agriculture (at least in the near term) will have to be positioned as a premium product that can command a premium price. Therefore, the most direct competitors for urban agricultural products are other premium product lines, such as organic, sustainable and regional local products. The main categories of competitors and select companies in each are summarized in Figure 8.

**Figure 8: Types of competitors for CUA in San Francisco.**

Consumers choose produce based on a wide range of considerations. Survey respondents report that taste is the most important factor in purchasing decisions, followed closely by nutrition, appearance and price (Team Lively’Hood, 2011). Figure 9 compares the wide range of factors that local, organic and industrial farmers compete on, as well as the relative importance of each factor to consumers. A successful San Francisco urban food
venture will need to further differentiate its hyper-local value proposition from these competitors, including introducing new factors that might appeal to customers such as the ability to interact with food producers through farm events and educational workshops.

Figure 9: Agricultural products strategy canvas and reported consumer value.

The market for organic foods is growing at a much faster rate than conventional food (Greene, Dimitri, Lin, McBride, Oberholtzer, & Smith, 2009), but in many cases, organic foods are being produced by larger entities around the globe. The rise in large-scale organic farming has raised additional concerns about how sustainable these product offerings really are when the full life cycle impact of the products (including transportation) is considered. There are also concerns about how strictly organic

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4 Consumer value represents the percentage of survey respondents reporting that a characteristic is “very” or “somewhat” important in choosing fresh produce (Team Lively Hood, 2011).
guidelines are being followed, particularly since standards can vary heavily across geographies.

Local agricultural products are similarly positioned in the marketplace as a sustainable choice, although local food also competes on the concept that “buying local” supports the social and economic well being of the local community. Many consumers appreciate the greater sense of connection to the individuals who grow their foods, as well as the added freshness and quality that comes with buying something that was just harvested. In the Bay Area, there are a number of local food providers who have gained a loyal following of both at-home consumers and restaurant buyers (Community Alliance with Family Farmers, n.d.).

Within the City of San Francisco, the competition marketing “hyper-local” food is much less developed. There are a couple of small commercial growers like Little City Gardens, producing lettuces and herbs on small plots of land within the city limits for sale to premium markets, including high-end restaurants and caterers (Little City Gardens, n.d.). Some backyard farmers sell agricultural products or value-add goods at monthly fairs or meet ups, including San Francisco’s Underground Food Market, but these enterprises are primarily hobby-scale, generating from a few hundred to a few thousand dollars per year (Rabins, n.d.). There is also at least one start-up in planning phase focusing on rooftop farming (Hui, personal communication, April 20, 2011).

The number of not-for-profit projects growing food within the City is larger, but these initiatives do not really compete with commercial agriculture ventures for customers, nor do they represent self-sustaining business models that are able to thrive without grants or volunteer help (Hui, personal communication, December 14, 2010). Of course, commercial urban agriculture also competes with backyard gardeners growing their own food for personal consumption, but few San Franciscans have the time or the space to grow significant quantities of food.

Survey results suggest that consumers are willing to pay a premium for both organic and local produce, but will pay the greatest premium for produce that is both local and
organic (Team Lively’Hood, 2011). Furthermore, consumers report that they are willing to pay an additional premium of approximately four percent for salad greens grown in the City of San Francisco, versus the surrounding 100-mile radius (see Figure 10). These results suggest the market for commercial urban agriculture is poised for expansion.

![What Consumers Report they Would Pay for a Salad Made with Different Types of Produce](image)

Figure 10: Team Lively’Hood survey: Salad price preferences in San Francisco.

### Sales Channels and Market Segmentation for Urban Agricultural Products

The market for urban agricultural products in San Francisco mirrors the market for a broader class of agricultural products. Following more traditional sales channels, farmers sell to a broker or wholesaler, who then distributes produce to retail markets (supermarkets, natural food markets, neighborhood grocers, etc.), food manufacturers or restaurants, who in turn sell produce and/or value-added food products to consumers. Under this model, revenues paid to the farmer represent less than half of the mark-up ultimately paid by the consumer (Burritt, personal communication, April 7, 2011).
Due to the current constraints of the urban environment, the costs for agricultural goods produced in San Francisco will be significantly higher than for industrial agriculture, and also measurably higher than regional local and certified organic products. Thus, it is essential to pursue markets further down in the sales channel.

As illustrated in Figure 11, it is possible to bypass wholesale distributors to secure higher margins. Some small-scale CUA ventures have developed relationships directly with retail vendors (1), manufacturers (2), or restaurants (3). Others have pursued opportunities to sell directly to consumers (4) via farmers’ markets or through Community Supported Agriculture (CSA) models (for definition, see Appendix A: Glossary).

Figure 11: Sales channels and proposed market segmentation.

The direct-to-consumers category is attractive because it enables the farmer to maintain higher margins by entirely cutting out the middlemen. Nearly half of survey respondents report that they “always” or “frequently” shop for produce at a farmers’ market or through participation in community supported agriculture (CSA), indicating that these
channels may present robust opportunities for an urban farmer to sell both produce and
value-added products directly to customers\(^5\) (Team Lively’Hood, 2011).

It is possible to identify some attractive market opportunities across the other alternative
sales channels identified as well, particularly when focusing more closely on the
premium market. For example, within the direct retail category, Rainbow Grocery
Cooperative or Bi-Rite Market may be viable customers as their procurement guidelines
promote supporting local food sources and they differentiate local offerings on store
shelves through proactive labeling practices.

Selling directly to restaurants represents another attractive high-end opportunity. In fact,
sixty-nine percent of survey respondents indicate that they would go to a restaurant
because it featured San Francisco grown or produced ingredients (Team Lively’Hood,
2011). Interviews with restaurant proprietors suggest that securing restaurant partnerships
will require the development of a strong brand around the product, including reliable
quality and service, as well as a selection of the most desirable crops (Pastore, personal
communication, March 23, 2011).

Finally, high-end, value-add food and beverage manufacturers may represent a potential
market for San Francisco-grown food. For example, local chocolatiers, bakeries, and/or
distilleries might look to incorporate locally grown herbs or berries into their products.
This market is particularly attractive for produce that can command a premium price, but
for which only a small amount might be used, so as to not make the switching costs
prohibitive.

\(^5\) Assuming permit costs and regulatory constraints can be overcome. On-site sales must be from the same
farm and cannot be aggregated. Permits and insurance are required to sell at farmers markets. Producing
value-added goods requires working in a commercially licensed kitchen and meeting strict safety and
health standards.
Internal Assessment

Figure 12: Lively'Hood Farm logo.

Ownership Structure

Lively’Hood Farm is a partnership between two fictional\(^6\) individuals: Sandy Cash and Jeff Grow. They discovered their mutual passion for promoting urban agriculture in San Francisco while studying permaculture with Kevin Bayuk in 2008 at the U.C. Berkeley Extension.

\textit{Sandy Cash}

Sandy Cash is a forty year-old native San Franciscan. Her parents are renowned San Francisco restaurateurs. Their legacy influenced Sandy’s interest in sustainable food systems. Sandy obtained her Masters in Business Administration in Sustainable Management from the Presidio Graduate School after years as a Chief Financial Officer in the food industry and in technology startup companies. Sandy has been an active member of the San Francisco Urban Agriculture Alliance since 2009.

\(^{6}\) Jeff and Sandy’s biographies have been fictionalized for the purposes of this report.
Jeff Grow

Jeff Grow is an avid urban farmer, who spends considerable time educating himself around principles of sustainable farming. Jeff is thirty-five years old and very personable. Jeff moved to San Francisco in 2005 from Cleveland, Ohio, where he had participated in a pilot project where twenty residents received training and a quarter acre of land to grow crops they could sell for a profit to local schools, restaurants and farmers’ markets. Jeff has been growing food on his roof in the Mission District for the past three years.

Vision

Lively’Hood Farm will provide a local food experience for every San Francisco resident and visitor.

Mission

The mission of Lively’Hood Farm is to provide restaurants and individuals with safe and delicious produce that is grown within San Francisco city limits and that benefits the local community.

Values

- Promoting environmental sustainability (reducing San Francisco’s ‘foodprint’)
- Embracing community (social and economic sustainability)
- Providing fun and hands-on education and beautiful aesthetic experiences
- Operating with integrity and transparency
- Contributing to our collective food security
Basic Job Descriptions

Though Jeff and Sandy are partners and support each other in their tasks, they will divide responsibilities as follows.

Jeff Grow
- Farm operations (planting, harvesting, etc.).
- Purchasing equipment and supplies.
- Developing custom offerings.

Sandy Cash
- Financial management.
- Administration.
- Logistics.
- Sales.
- Marketing.
- Value-add products and coordination with commercial kitchen for production.
- Teaching workshops and other educational programs.

Business Model

Lively’Hood Farm’s stakeholders include all groups within San Francisco that are interested in and have an influence on the success of the endeavor. Important groups to develop relationships with include customers (restaurants, grocery stores, neighbors, and other individuals), government agencies that regulate and support urban farms, related community organizations, and other urban agriculture businesses. The influence and interest of these key stakeholder groups is illustrated in Figure 15.
Operational Strengths and Weaknesses

Lively’Hood Farm anticipates operational advantages as well as vulnerabilities from their business model (see Table 1 and Table 2).
## Operational Strengths

| Intrinsic advantages of hydroponics | • Easily adaptable to pesticide-free production.  
• Makes use of non-arable land and conserves space.  
• Provides vine-ripened products throughout the year.  
• Cost- and energy-efficient alternative to imported products.  
• Higher yields.  
• Lack of soil improves consumer perception of appearance and safety.  
• Less water intensive. |
| Advantages of Lively’Hood Farm owner experience and reputation | • Combination of farming and business expertise.  
• Good standing relationship with urban agriculture community in San Francisco.  
• Some personal savings and good credit for borrowing capital. |
| Benefits of location | • Continuous growing season.  
• Economic bicycle delivery facilitated by average temperature less than 70° as well as relative proximity to customers.  
• Potential to use grey water and rainwater catchment. |
| Benefits of business structure and orientation | • Able to nimbly respond to customer needs and customize produce mix.  
• Greenhouse production provides a measure of increased quality control and security, as well as improved consumer perception of produce (in terms of the air and soil contamination issues associated with traditional farming). |

Table 1: Operational strengths of Lively’Hood Farm.

## Operational Weaknesses

| Uncertainties associated with a new industry | • Lively’Hood Farm understands their venture is a high-risk model.  
• Having no established brand and limited information about CUA in San Francisco will undoubtedly present the opportunity to learn from numerous unanticipated obstacles. |
| High cost of operating a business in San Francisco | • Doing business in San Francisco is expensive, compared to other urban areas.  
• High cost of labor.  
• Limited real estate options.  
• Elevated advertising costs. |

Table 2: Operational weaknesses of Lively’Hood Farm.
Synthesis of Strategic Analysis

Key Takeaways from Internal and External SWOT Analysis

We have summarized the key takeaways and implications from our external analysis in Table 3, and compared these implications to the strengths and weaknesses identified in our internal analysis of Lively’Hood Farm.

<table>
<thead>
<tr>
<th>Key Takeaway of External Analysis</th>
<th>Implications for CUA in San Francisco</th>
<th>Implications for Lively’Hood Farm</th>
</tr>
</thead>
<tbody>
<tr>
<td>SF has significant space limitations on land / infrastructure</td>
<td>• Ag model &amp; products should maximize output for available space.</td>
<td>• Leverage hydroponics knowledge to achieve higher yields. • Identifying suitable land or rooftop space could be a big hurdle; should be a prerequisite to launch.</td>
</tr>
<tr>
<td>Regulatory environment is a key consideration</td>
<td>• Farms one acre or less will likely face fewer regulatory hurdles. • Aggregation models are subject to “farmers market” oversight/laws, hindering co-op models.</td>
<td>• Plan farm around a single property to take advantage of the current environment. • Continue to monitor regulatory developments in rooftop farming and animal husbandry.</td>
</tr>
<tr>
<td>CUA operating costs are significantly higher than more traditional competitors</td>
<td>• Energy, water and labor costs need to be taken into consideration in developing strategy and operating plan. • Focus on high-margin, premium products. • Supplemental income may be required (workshops, education, etc.).</td>
<td>• Hydroponics model aligns well with water constraint; consider recapture/reuse strategies. • Minimize labor costs through owner-operated business model. • Leverage Sandy Cash’s financial model to analyze product combinations that maximize yields. • Advertise Jeff Grow’s technical skills to position Lively’Hood Farm as an expert in the marketplace.</td>
</tr>
<tr>
<td>Currently limited demand for “hyper-local” food</td>
<td>• Brand positioning and marketing will be critical. • Strategy needs to be clearly differentiated from other “local” products (for example, crops specific to the area help people to connect with natural earth cycles and seasons, which may be beneficial for their health).</td>
<td>• Lack of brand recognition is an obstacle; brand development and marketing must be a priority in the first year. • Connections with UA community may help Lively’ Hood Farm build a reputation in the space more quickly</td>
</tr>
<tr>
<td>Limited financing available for commercial urban agriculture</td>
<td>• Explore alternative financing models (co-ops, partnerships, grants, etc.). • Ag models with low start-up costs may be more viable over near-term. • Develop contracts in advance.</td>
<td>• Strong credit will be helpful over the long-term, but launch will depend on ability to “bootstrap” start-up costs.</td>
</tr>
</tbody>
</table>
| Farming in SF microclimates | • Controlled environment agriculture models may enable greater consistency | • Lack of start-up capital could make procurement of a greenhouse an | 7 See Appendix E: Summary of SWOT Analysis for a high-level summary of our findings.
These findings suggest that while launching an urban agriculture business in San Francisco is a risky prospect, there are some potential opportunities that may be exploited by Lively’Hood Farm, based on the Farm’s unique capabilities. Furthermore, the authors’ analysis of potential future scenarios (see Multi-future Scenarios) suggests that the trend toward increased interest in local and seasonal food should continue to accelerate, and so we are hopeful that the external environment for CUA will become more and more favorable over time. Early entrants like Lively’Hood Farm could realize an advantage over future competitors.

Implications for Buyer Value Proposition and Strategic Priorities

One of the most critical determinants of Lively’Hood Farm’s success will be its ability to position itself as a superior choice over other local and organic options by emphasizing freshness, community pride, and more direct connection to food sources. Figure 16 describes our recommended differentiated value proposition using W.C. Kim and R. Marlborough’s Four Action Framework (2009).
Building on this differentiated value proposition, we have further identified a number of strategic priorities for Lively’Hood Farm to consider, as outlined in Table 4: Recommended Strategic Priorities for Lively’Hood Farm.

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Products: Focus on high-yield greens and fast-growing herbs</strong></td>
<td>• High turnover.</td>
</tr>
<tr>
<td></td>
<td>• High margin.</td>
</tr>
<tr>
<td></td>
<td>• Broad market appeal.</td>
</tr>
<tr>
<td><strong>Operations: Utilize hydroponic growing method in greenhouse conditions with natural light to supplement soil-based farming methods</strong></td>
<td>• Greenhouse increases yield and predictability of output.</td>
</tr>
<tr>
<td></td>
<td>• Hydroponic method minimizes water requirements / costs.</td>
</tr>
<tr>
<td></td>
<td>• Possibly improves consumer perceptions of urban-grown produce.</td>
</tr>
<tr>
<td></td>
<td>• Increases speed of growth, enabling quicker fulfillment of custom orders.</td>
</tr>
<tr>
<td></td>
<td>• Use of natural light keeps energy bills to a minimum.</td>
</tr>
<tr>
<td><strong>Channels: Develop supplier relationships with local restaurants as primary sales channel</strong></td>
<td>• Higher margins than wholesale.</td>
</tr>
<tr>
<td></td>
<td>• Ability to charge more for custom orders.</td>
</tr>
<tr>
<td></td>
<td>• More predictable revenue stream.</td>
</tr>
<tr>
<td></td>
<td>• Opportunities for co-branding.</td>
</tr>
<tr>
<td><strong>Products/Channels: Pursue supplemental income opportunities, such as training courses</strong></td>
<td>• Profits may not be sufficient to cover cost of capital.</td>
</tr>
<tr>
<td></td>
<td>• Educational offerings increase awareness of urban agriculture and brand.</td>
</tr>
<tr>
<td></td>
<td>• Common model used by CUA ventures in other cities.</td>
</tr>
<tr>
<td><strong>Products/Channels: Develop line of value-add product offerings to sell to local retailers</strong></td>
<td>• Higher margins than produce.</td>
</tr>
<tr>
<td></td>
<td>• Addresses market potential oversaturation issue.</td>
</tr>
</tbody>
</table>

Table 4: Recommended strategic priorities for Lively’Hood Farm.
These recommendations assume that Lively’Hood Farm will be operating in a future where interest in local, sustainable foods continues to grow, but that technological advancements do not significantly alter the economics of the business. Should key indicators suggest that interest in local, sustainable foods begins to wane, or that technologies rapidly change, we have identified a number of adjustments to the above recommendations under various potential futures as outlined in the section on Multi-future Scenarios.

**Strategy Formulation**

**Objectives and Priorities**

*Financial*

In order to have a viable business, Lively’Hood Farm must be financially sustainable. Therefore the financial plan must ensure the ability to cover costs and pay the partners within a set timeframe.

*Operational*

The operational objectives focus broadly on staffing, developing product mix, production methods, and logistics surrounding distribution. The success of these objectives depends on developing a measurable cost structure and forecasting a predictable supply and demand.

*Marketing and Sales*

To grow a market for Lively’Hood Farm products, the partners must establish the brand and reputation. Perception of the brand will be colored by the physical and online presence as well as community engagement. Lively’Hood Farm’s reputation will develop through creative branding and through demonstration of commitment to its values.

---

8 See Strategy Implementation section for details on how these objectives will be achieved.
Sustainability

Lively’Hood Farm believes that positively influencing social change on a small scale will have a ripple effect across the globe. Therefore it will practice business in a way that positively effects current and future generations of the San Francisco community.

Business Model Canvas

The nine building blocks of the *Business Model Generator* framework below make up the Lively’Hood Farm business model canvas (Osteralder & Pigneur, 2010). The initial business plan focuses on select restaurants, grocery outlets, and individuals valuing fresh, local, sustainably grown produce. Refer to Appendix M: Lively’Hood Farm Business Model for a detailed description of each building block, as well as future growth opportunities.

![Lively’Hood Farm Business Model Canvas](image)

*Figure 17: Lively’Hood Farm business model strategy canvas.*
**Strategy Implementation**

**Multi-year Action Plans**

Lively’Hood Farm’s success depends on careful planning implementation to reach its desired goals. The implementation plan below focuses primarily on the first three years of the venture, though key milestones beyond that date are included for reference. Please note that all amounts are approximate, and are based on the Lively’Hood Farm financial model as illustrated in Appendix G: Excerpts from Financial Modeling Tool.

<table>
<thead>
<tr>
<th>Goal</th>
<th>Actions and Notes</th>
<th>Year (end)</th>
<th>Human Resources</th>
<th>Financial Resources</th>
<th>Metric/ Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Financial</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raise sufficient capital to launch start-up</td>
<td>1. Create basic business plan. 2. Identify possible investors. 3. Identify other sources of capital (credit cards, grants, etc.).</td>
<td>0</td>
<td>Sandy</td>
<td>$0</td>
<td>$65,000 raised.</td>
</tr>
<tr>
<td>Pay Jeff and Sandy enough to cover basic living expenses</td>
<td>Get to $22k in revenue/month.</td>
<td>2</td>
<td>Both Jeff and Sandy</td>
<td>Revenue</td>
<td>$25,000/ year/person.</td>
</tr>
<tr>
<td>Cash flow positive</td>
<td>Get to ~$25k in revenue/month.</td>
<td>3</td>
<td>Both</td>
<td>Revenue</td>
<td>Revenue covers monthly burn for 3 consecutive months.</td>
</tr>
<tr>
<td>Break even (after investment)</td>
<td>Get to ~$30k in revenue/month.</td>
<td>5</td>
<td>Both</td>
<td>Revenue</td>
<td>Earned enough profit to pay back investors.</td>
</tr>
<tr>
<td>Jeff and Sandy’s profit</td>
<td>Reinvest in the business and pay out the rest to Jeff and Sandy.</td>
<td>6+</td>
<td>Both</td>
<td>Revenue</td>
<td>Profits allowing.</td>
</tr>
<tr>
<td>Goal</td>
<td>Actions and Notes</td>
<td>Year (end)</td>
<td>Human Resources</td>
<td>Financial Resources</td>
<td>Metric/ Evaluation</td>
</tr>
<tr>
<td>------</td>
<td>------------------</td>
<td>------------</td>
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<td>--------------------</td>
</tr>
<tr>
<td>Determine basic product offerings.</td>
<td>Possibilities: lettuce, Italian spinach, radishes, leeks, chives, parsley, tarragon, rosemary, oregano, mustard greens and lots of sweet basil, edible flowers, honey (K. Bayuk, personal communication, March 13, 2011).</td>
<td>0</td>
<td>Jeff, with input from Sandy</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Develop 2 signature value-add products.</td>
<td>Possibilities: jam, pickles, chutney, pesto, veggie chips, dried herbs, etc.</td>
<td>1</td>
<td>Sandy</td>
<td>Funds to pay for commercial kitchen ($4k in first year) and R&amp;D ($300)</td>
<td>2 product launched.</td>
</tr>
<tr>
<td>Create “special” offerings for partner restaurants.</td>
<td>Work with chefs at 2 high end restaurants in San Francisco to create exclusive custom produce from heirloom and rare varietals.</td>
<td>1</td>
<td>Jeff</td>
<td>Small budget for R&amp;D ($600 in first year)</td>
<td>2 custom produce offerings.</td>
</tr>
<tr>
<td>Develop additional value-add products.</td>
<td>Using chutney as an example, develop additional chutney offerings.</td>
<td>2</td>
<td>Sandy</td>
<td>Additional R&amp;D ($300) and commercial kitchen rental ($4,000)</td>
<td>2 more products added.</td>
</tr>
<tr>
<td>Expand special offerings program.</td>
<td>Add 3 more restaurants, for a total of 5.</td>
<td>3</td>
<td>Jeff</td>
<td>Additional R&amp;D ($900)</td>
<td>2 more custom produce offerings.</td>
</tr>
</tbody>
</table>

**Production**

<table>
<thead>
<tr>
<th>Action</th>
<th>Year (end)</th>
<th>Human Resources</th>
<th>Financial Resources</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan site layout.</td>
<td>0</td>
<td>Jeff</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Purchase tools and equipment.</td>
<td>0</td>
<td>Jeff</td>
<td>$3k</td>
<td></td>
</tr>
<tr>
<td>Purchase seeds, fertilizer, etc.</td>
<td>0</td>
<td>Jeff</td>
<td>$40k</td>
<td></td>
</tr>
<tr>
<td>Build hydroponic system.</td>
<td>0</td>
<td>Jeff</td>
<td>$22k</td>
<td>System operational.</td>
</tr>
<tr>
<td>Build greenhouse.</td>
<td>0</td>
<td>Jeff + construction team</td>
<td>$10k</td>
<td>Greenhouse built.</td>
</tr>
<tr>
<td>Construct raised beds.</td>
<td>0</td>
<td>Jeff + construction team</td>
<td>$4.3k</td>
<td>Beds built.</td>
</tr>
<tr>
<td>Goal</td>
<td>Actions and Notes</td>
<td>Year (end)</td>
<td>Human Resources</td>
<td>Financial Resources</td>
</tr>
<tr>
<td>------</td>
<td>-------------------</td>
<td>------------</td>
<td>-----------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Build fence.</td>
<td>Required by SF Urban Ag Ordinance.</td>
<td>0</td>
<td>Jeff + construction team</td>
<td>$1.9k</td>
</tr>
<tr>
<td>Plant first crops.</td>
<td></td>
<td>1</td>
<td>Jeff</td>
<td>$0</td>
</tr>
<tr>
<td>Harvest first crops.</td>
<td></td>
<td>1</td>
<td>Jeff</td>
<td>$0</td>
</tr>
<tr>
<td>Optimize production for site specific variables.</td>
<td>Beginning in year 2 after Jeff understands the site and microclimate. Ongoing.</td>
<td>2</td>
<td>Jeff</td>
<td>R&amp;D ($900)</td>
</tr>
<tr>
<td><strong>Staffing</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hire 1 part-time helper @ 10 hours/week for harvesting and planting.</td>
<td>15 hours/week, if necessary. May also assist with farmers market and onsite sales.</td>
<td>2</td>
<td>Jeff</td>
<td>$5k/year</td>
</tr>
<tr>
<td>Add hours for part-time staff member for a total of 20 hours/week.</td>
<td>If necessary. To help with logistics, value-add products, on-site sales, etc.</td>
<td>5</td>
<td>Both</td>
<td>$10k/year</td>
</tr>
<tr>
<td>Establish profit sharing mechanism for staff.</td>
<td></td>
<td>5+</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Logistics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buy a bike.</td>
<td>With a trailer for deliveries.</td>
<td>1</td>
<td>Sandy</td>
<td>$300</td>
</tr>
<tr>
<td>Establish bike delivery route and schedule.</td>
<td>Dependent on sales.</td>
<td>1</td>
<td>Sandy</td>
<td>$0</td>
</tr>
<tr>
<td>Establish hours for onsite sales.</td>
<td></td>
<td>1</td>
<td>Sandy</td>
<td>$0</td>
</tr>
<tr>
<td>Establish farmers market stand.</td>
<td></td>
<td>1</td>
<td>Sandy</td>
<td>$60/week</td>
</tr>
<tr>
<td>Purchase a bio-diesel truck.</td>
<td>Dependent on sales, volume, and distance.</td>
<td>3</td>
<td>Sandy</td>
<td>$4,500</td>
</tr>
<tr>
<td>Establish truck delivery route and schedule.</td>
<td>Dependent on sales, volume, and distance</td>
<td>3</td>
<td>Sandy</td>
<td>$20/week</td>
</tr>
<tr>
<td>Additional onsite sales hours.</td>
<td>Dependent on sales.</td>
<td>3</td>
<td>Sandy</td>
<td>$0</td>
</tr>
<tr>
<td><strong>Administration</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Register and get permits.</td>
<td>Zoning, business registration, seller’s permit.</td>
<td>0</td>
<td>Sandy</td>
<td>$900</td>
</tr>
<tr>
<td>Goal</td>
<td>Actions and Notes</td>
<td>Year (end)</td>
<td>Human Resources</td>
<td>Financial Resources</td>
</tr>
<tr>
<td>------</td>
<td>------------------</td>
<td>------------</td>
<td>-----------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Establish and maintain accounting and filing systems.</td>
<td>Probably use Quickbooks.</td>
<td>1</td>
<td>Sandy</td>
<td>$30/month</td>
</tr>
<tr>
<td>Establish benefits plans.</td>
<td>For Jeff and Sandy.</td>
<td>1</td>
<td>Sandy</td>
<td>$300/month</td>
</tr>
<tr>
<td>Purchase general liability insurance</td>
<td>Risk management.</td>
<td>1</td>
<td>Sandy</td>
<td>$100/month</td>
</tr>
</tbody>
</table>

**Sales & Marketing**

**Channel Development**

<table>
<thead>
<tr>
<th>Action</th>
<th>Year (end)</th>
<th>Human Resources</th>
<th>Financial Resources</th>
<th>Metric/Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish on-site farm stand.</td>
<td>1</td>
<td>Sandy</td>
<td>$200</td>
<td>&gt;30 direct sales customers per week.</td>
</tr>
<tr>
<td>Establish ordering procedures for restaurants and grocery customers.</td>
<td>1</td>
<td>Sandy</td>
<td>$0</td>
<td></td>
</tr>
</tbody>
</table>

**Branding**

<table>
<thead>
<tr>
<th>Action</th>
<th>Year (end)</th>
<th>Human Resources</th>
<th>Financial Resources</th>
<th>Metric/Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Articulate brand positioning.</td>
<td>1</td>
<td>Both</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>Develop logo.</td>
<td>1</td>
<td>Both</td>
<td>$500</td>
<td></td>
</tr>
<tr>
<td>Use logo to increase consumer awareness.</td>
<td>1</td>
<td>Sandy</td>
<td>$200</td>
<td>30% of San Franciscans have heard of Farm.</td>
</tr>
<tr>
<td>Pursue co-branding opportunities.</td>
<td>2</td>
<td>Sandy</td>
<td>$0</td>
<td>3 websites listing Farm as partner.</td>
</tr>
</tbody>
</table>

**Marketing**

<table>
<thead>
<tr>
<th>Action</th>
<th>Year (end)</th>
<th>Human Resources</th>
<th>Financial Resources</th>
<th>Metric/Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop website.</td>
<td>1</td>
<td>Sandy</td>
<td>$300</td>
<td>400 hits / mo.</td>
</tr>
<tr>
<td>Launch social media campaign.</td>
<td>1</td>
<td>Sandy</td>
<td>$0</td>
<td>500 'likes’ on Facebook; 500 Twitter followers.</td>
</tr>
<tr>
<td>Participate in “green” events.</td>
<td>1</td>
<td>Both</td>
<td>$100</td>
<td>50 participants signed up per event.</td>
</tr>
<tr>
<td>Goal</td>
<td>Actions and Notes</td>
<td>Year (end)</td>
<td>Human Resources</td>
<td>Financial Resources</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------</td>
<td>------------</td>
<td>-----------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Strengthen ties to broader local urban agriculture community.</td>
<td>Identify at least 2 local community networks to engage with on a regular basis.</td>
<td>1</td>
<td>Sandy</td>
<td>$0</td>
</tr>
<tr>
<td>Articles.</td>
<td>Place at least 2 articles in local newspapers and at least 2 more in online blogs.</td>
<td>1</td>
<td>Sandy</td>
<td>$0</td>
</tr>
<tr>
<td>Speaking engagements.</td>
<td>Lead at least one speaking engagement.</td>
<td>1</td>
<td>Sandy</td>
<td>$0</td>
</tr>
<tr>
<td><strong>Sales</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improve consistency of customer demand.</td>
<td>Work to develop long-term purchase contracts.</td>
<td>2</td>
<td>Sandy</td>
<td>$0</td>
</tr>
<tr>
<td>Maximize pricing.</td>
<td>1. Secure more favorable contract terms once product quality and reliability has been proven.</td>
<td>2</td>
<td>Both</td>
<td>$0</td>
</tr>
<tr>
<td><strong>Sustainability</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop channel to donate all unsalable produce.</td>
<td>Partner with distributor such as SF Food Bank, to reach food pantries, soup kitchens, childcare centers, and homeless shelters.</td>
<td>1</td>
<td>Sandy</td>
<td></td>
</tr>
<tr>
<td>Provide educational opportunities to the community.</td>
<td>1. Create educational curriculum.</td>
<td>3</td>
<td>Sandy</td>
<td>$800 per class.</td>
</tr>
<tr>
<td></td>
<td>2. Community outreach and beta testing.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Identify optimal class size, scheduling, and growth capacity.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partner with an organization to provide vocational training to the developmentally disabled.</td>
<td>Partner with SF Vocational Services, Transitional Partnership Program.</td>
<td>5</td>
<td>Sandy</td>
<td>$0</td>
</tr>
<tr>
<td>Donate 1% of the profits to food education programs.</td>
<td>Partner with NextCourse, focused on knowledge, food, and change.</td>
<td>5</td>
<td>Sandy</td>
<td>1% of profits.</td>
</tr>
<tr>
<td>Track and publish sources of equipment/seeds/water/ fertilizer.</td>
<td>1. Measure all quantities of inputs.</td>
<td>1</td>
<td>Jeff</td>
<td>$0 (if using Excel)</td>
</tr>
<tr>
<td>Goal</td>
<td>Actions and Notes</td>
<td>Year (end)</td>
<td>Human Resources</td>
<td>Financial Resources</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------</td>
<td>------------</td>
<td>-----------------</td>
<td>--------------------</td>
</tr>
</tbody>
</table>
| Establish the “foodprint” of products.                              | 1. Using the data collected above, track environmental footprint of each input, relative to yields.  
|                                                                      | 2. May want to hire an intern to help calculate this and relieve Jeff of some of his time commitments.  
|                                                                      | 3. Compare eco-footprint of SF-based yields with standard industry farming and publish! | 5          | Jeff            | $0                 | Published footprint for all products.                    |
| Constantly improve operational efficiency.                          | 1. Monitor resources used and keep track of utility bills.  
|                                                                      | 2. Maintain farm operations and maintenance.                                    | 1+         | Both            | $0 (cost savings to offset investment)                  | Utility costs lowered by 20% over 1 year.                |
| Create a closed loop system                                        | 1. Compare inputs measured above with yields.  
|                                                                      | 2. Establish organic waste collection/re-use.  
|                                                                      | 3. Establish partnership with recycling center, such as SF Recology, for all non-organic waste. | 3          | Both            | $0                 | No waste!                                                |
| Have fun!                                                            | 1. Be grateful.  
|                                                                      | 2. Enjoy farming.                                                                | 1+         | Both ☺          | Priceless!                                                | Happiness.                                              |

Table 5: Multi-year action plans for Lively’Hood Farm.
**Evaluation and Control**

To evaluate and control the activities described in the Implementation Plan, Jeff and Sandy should create a framework for communication and management amongst themselves, the staff, board of directors, and investors. Jeff and Sandy will hold weekly meetings at the Farm to discuss weekly orders, production, and status of the farm. Jeff and Sandy may also consider using Sureharvest (www.sureharvest.com), a Life Cycle Assessment (LCA) software package that provides a Farming Management Information System (MIS), so they can capture data, establish benchmarks, and generate action plans. This will also help them measure the environmental footprint as part of the Sustainability Plan.

Jeff and Sandy will form a Board of Directors in the first year of operations. The Board will meet monthly to monitor the evaluation metrics and financial resources shown in the right columns of the Implementation Plan above. Board members should be trusted experts involved in farming and food preparation, as well as financial investors in the Farm. Biannually, Jeff and Sandy will meet with investors to track flow of capital and progress as they role out crop production.

As the farm develops in the coming years, Jeff and Sandy will want to delegate some of the work, such as bicycle delivery, tracking and inputting data for sustainability metrics, and some administrative work. As noted in the Plan above, an additional employee will be hired part-time by the second year, and will eventually become full-time. This staff member, along with any interns hired, will work closely with Jeff and Sandy and may be included in the weekly progress meetings, as an additional feedback loop. Jeff and Sandy may also hold an annual retreat with their board members to review and revise long-term goals, as outlined in Table 5: Multi-year action plans for Lively'Hood Farm.
Conclusion

In partnership with SF Environment, Team Lively’Hood undertook this project to increase the success of an aspiring San Franciscan gardener to start a viable commercial urban agriculture business. In the process, we have concluded that while the upswell of energy for the local food movement will certainly support such a venture, the challenges an urban gardener faces in this City are numerous and complex. We have determined seven best practices to increase the likelihood of beneficial outcomes for CUA ventures within San Francisco.

Determine the correct crop mix

Community pride is high in San Francisco. There are a large number of customers already committed to buying locally. If a local gardener can deliver desirable produce that is tastefully marketed, San Francisco restaurants, grocers and individuals will literally eat it up. Understand what grows well in the area and temper that information with what customers want to buy. Customize operations to provide produce that is easy to sell. Create relationships with local restaurants to grow the produce they want to feature on their menus. Develop a community of supporters who provide feedback on crops and have an investment in the success of an urban farm operation.

Organize for high yields

In our research we have found that it is crucial, especially in the first few years, to structure a CUA operation that will provide the highest yields possible. Obviously it will take several seasons of trial and error to obtain the optimum combination of produce. Any additional research available on the growing conditions of a specific location will be
useful. Look to backyard gardeners in the area to find out what grows best in the area. Be creative with the timing of your planting and harvesting so that you can achieve multiple and staggered harvests within the year. Consider supplementing outdoor soil-based agriculture with higher yield greenhouse and hydroponic growing models.

**Secure diversified funding sources**

An urban agriculture operation within San Francisco is a labor of love that will benefit from a diverse spectrum of community support. As the wave of support for urban agriculture continues to grow, additional resources will become available. Keep an eye out for and request support from local government, and keep abreast of state and national subsidies as they develop for urban farms. Look for grant opportunities provided by private and non-profit foundations that apply to the venture. Position the farm to connect with the angel investment community. Don’t be shy about telling friends, family and neighbors about why urban agriculture is important and let them know how they can provide support.

**Maximize use of space**

San Francisco is one of the most densely populated cities in the U.S. Urban gardens can mimic this phenomenon by being creative as well as efficient with operating space available. Experiment with the physical structure of the site to maximize space available to grow produce. Consider multiple scenarios of how space can be allocated to provide the maximum space available for growing produce. Given the high cost of land, look for alternatives to traditional land-based operations. For example, rooftop space may become available as new construction is developed or existing buildings are upgraded.

**Emphasize efficiency**

The high operating costs of doing business in San Francisco require that business owners keep a keen eye out for ways to continually improve efficiency. Recycling, repurposing, and remembering are key concepts, as every input will need to be utilized to the maximum extent possible. Consider collaborating with other urban garden ventures to share resources. Picture the urban garden as a metabolic system and understand how waste can be utilized as resource inputs.
**Pursue alternative revenue sources**

Agriculture is inherently a low margin business, and there is even more pressure on margins when operating in high cost locations like San Francisco. However, San Franciscans are more conscious about both food and health than the average American, which presents numerous opportunities for tapping into this energy. Educational workshops, farm tours, and artisan value-added goods can help generate additional revenue, enhance profitability and reduce enterprise risk.

**Invest in marketing and community outreach**

Urban agriculture has a compelling value proposition that can appeal to a wide range of audiences, but consumers may also hold misconceptions that need to be addressed. Developing a strong brand and marketing the social, environmental and health benefits of urban agriculture through traditional marketing tactics and the development of robust community partnerships will be crucial for differentiating San Francisco urban farms forum the competition.

While commercial urban agriculture in San Francisco is a risky venture full of unknowns, it is also ripe with potential and promise. Savvy and innovative gardeners committed to the venture will surely be able to leverage the support of the San Francisco community to make their dreams of urban gardens within the City by the Bay a success.
Multi-future Scenarios

There are a variety of critical uncertainties surrounding the future of urban agriculture in San Francisco. Factors to consider that may impact the success of Lively’Hood Farm are technological innovation; government policy; the degree to which consumers value healthy, sustainable food options; and food security. Two factors that may impact the future of Lively’Hood Farm that we have chosen to examine more closely are technological innovation and consumer values.

Technological innovations in food production are occurring frequently and increasingly rapidly. Companies like Monsanto have made genetically modified organisms (GMOs) common throughout the world, particularly for cereal crops like corn, soy, and wheat. Other organizations like Sky Vegetables and Brightfarms are building rooftop farms in urban centers using hydroponic technology. Vertical farms maintained with industrialized methods may soon be cropping up in major urban areas throughout the United States (The Economist, 2010). In addition, innovations around fortification and an increased understanding of individual nutritional needs are leading to highly personalized food combinations. Finally, vat growing technologies, replicators, and other technology that seemed like science fiction just a short time ago are now being researched and tested in our quest to feed the growing population. The success of each of these techniques, or of others that have yet to be developed, will heavily impact the future of urban agriculture in San Francisco.

The value that consumers place on eating healthy, sustainable, locally produced food is the second critical uncertainty we have chosen to focus on. Though interest in sustainable and local food is currently on the rise, a variety of external factors and difficult to predict events could greatly change this trend. For example, a continued economic slump and rising food prices may make locally produced food inaccessible for all but the wealthiest consumers, forcing everyone else to settle for industrial products. Or the trend may simply fall away as other environmental and social movements have over the years, leaving sustainable food as a quaint idea from the past. Figure 19 below further elucidates the four quadrants of high/low consumer value and high/low innovation.
Figure 19: Scenario matrix for urban agriculture in San Francisco.

We believe that Scenario One ("Urban Agriculture for the Privileged Few") is the most likely environment in which Lively’Hood Farm will operate during the next several years. However, many factors such as a changing political climate, natural disasters or economic crisis could lead to an alternative future that will affect the success of the strategy we have prescribed in this document. The following are methods to gauge which future is currently on the horizon and how this new future may affect Lively’Hood Farm operations.

**Scenario One: Low Innovation/High Consumer Value**

*Implications*

- Smaller scale: urban agriculture is produced in limited quantities using traditional farming practices.
- Prices soar.
- Focus on heirloom varietals, specialty crops.
- Low commercial market; limited buyers.
Increased interest in education around urban farming and locally grown food.
Commercial urban agriculture is exclusive to the wealthy, at high prices.
Decreased interest amongst low-income residents, due to high price.
DIY urban farming grows in popularity amongst mid-range income residents.

**Key Indicators**

- A greater number of urban farming products found in high-end local eateries and retail/grocery shops.
- CSA membership increases, particularly for CSAs providing limited, specialty foods.
- Locally farmed sustainable foods increase in price at Bi-Rite and Rainbow Grocery.
- Urban agriculture workshops are prevalent in public schools and community centers.
- Demand for boxed, packaged foods at discount outlets grows amongst low-income residents.
- Participation in SF Forage and underground local food networks grows.
- Locally made value added foods become cult classic amongst SF residents in mid-range income level.
- Innovative, locally focused restaurants like Locavore and Radius, fail.

**Scenario Two: Low Innovation/Low Consumer Value**

**Implications**

- Yields are generally low.
- Urban aesthetics suffer.
- High operating costs.
- High start up costs.
- Limited opportunity for supplemental revenue through educational offerings.
- Urban agriculture in SF becomes more of a hobby among fewer people.
- Lack of volunteer opportunities in urban farming.
- Less community awareness surrounding food production.
- Loss of collective and concentrated knowledge.
- Fewer seed banks.

**Key Indicators**

- Garden shops shutting down.
- Current policy supporting urban farming does not get passed.
- Decreased traffic on San Francisco Urban Agriculture Alliance website.
- Urban open space remains dormant.
- Urban open space is developed.
- Little City Farms (one of the city’s only commercial urban ag. ventures) fails.
- Businesses like Sky Vegetables give up on San Francisco.

**Scenario Three: High Innovation/Low Consumer Value**

**Implications**

- Less emphasis placed on producing fresh fruit and vegetables within city limits.
- Urban agriculture in San Francisco not practiced using traditional methods (soil farming).
- Increased use of high technology, innovative agricultural models (hydroponics, aquaponics, vat-grown).
- Higher start-up costs needed to obtain these high-technology inputs for urban agriculture.
- Higher cost of labor to obtain specialized knowledge of high technology agricultural systems.
- Genetic modification technology increases the yield of crops (at least short-term).

**Key Indicators**

- Profitability of San Francisco farmers markets decline as more produce is produced on a larger commercial scale.
- Less demand for local produce in supermarket produce sections.
- High percentages of community garden plots lie fallow.
- Consumers expect improved nutritional value in their produce (obtained through genetic modification technology).
- Most crops, even within the city, are monoculture (ex. kale in the Richmond).
- Patentable agriculture technology attracts more capital to industry.

**Scenario Four: High Innovation/High Consumer Value**

**Implications**
- Increased access to capital.
- Government support and cooperation.
- Higher yield alternative agricultural methods begin to dominate.
- Emergence of food scrapers.
- Smaller players edged out.
- Potential shortage of skilled labor.
- Greater reliance on alternative energy sources.
- Potential to saturate existing market for hyper-local food.

**Key Indicators**
- Increases in oil and gas prices.
- Number of reported cases of E. coli and other food-borne illnesses.
- Traffic on websites dedicated to urban agriculture and alternative growing methods.
- Number of grocery stores adopting “local” labeling on their produce shelves.
- Number of homes in San Francisco with solar rooftop installations.
- Increase in number of hydroponic growing kits sold at Home Depot, Lowes, and Costco.
- Increased number of strikes and increase in prominence of water policy on California’s the political agenda.
Multi-future Options

Lively’Hood Farm has a variety of strategic options to choose from. The strategy described in this document derives from our assessment of the “official future”, scenario one. However, Lively’Hood Farm may proactively adjust their strategy should the indicators above suggest a new reality. Strategic options for each of the four scenarios are described in Table 6 below.

<table>
<thead>
<tr>
<th>Alternative Future Scenarios</th>
<th>Strategic Options</th>
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</table>
| Low Innovation / High Consumer Value          | • Grow specialty products (unique varietals, herbs, etc.).  
• Premium brand positioning, aesthetics and packaging important.  
• Target customers are high-end restaurants, affluent buyers.  
• Value-add products focused on premium culinary goods, such as pestos, dried herb mixes, teas.  
• Educational revenue streams include farm dinners, tasting tours, etc.  
• Sustainability strategy includes supporting broader community via redistributing income from target market. |
| Wealthy San Franciscans Increase the Market for Local Foods (Official Future) |                                                                                                                                                                                                                  |
| Low Innovation / Low Consumer Value           | • Grow specialty products (unique varietals, herbs, etc.).  
• Target customers are niche customers and hobbyists.  
• Branding and value-add products focus on niche market needs.  
• Educational revenue streams include training and education for hobbyists.  
• Sustainability strategy centers on preserving agricultural knowledge / varietals. |
| Not Worth the Effort                          |                                                                                                                                                                                                                  |
| High Innovation / Low Consumer Value          | • Grow high nutrition products (wheat grass, medicinal herbs, etc.).  
• Branding around health, nutritional value of “same-day” picked goods.  
• Target customers are health-oriented restaurants (juice bars), institutions (hospitals) and individuals.  
• Value-add products focus on supplements, nutritional bars.  
• Educational revenue streams and sustainability strategy focus on health education, balanced nutrition. |
| Produce in a Pill                             |                                                                                                                                                                                                                  |
| High Innovation / High Consumer Value | - Grow products with mass appeal.  
| Rise of Urban Agriculture | - Target broader market; expand distributional channels.  
| | - Compete on price, in addition to local branding and sustainability image.  
| | - Value-add products include convenient, pre-packaged produce for families.  
| | - Educational revenue streams focus on new “high-tech” growing methods. |

**Table 6: Strategic options for Lively’Hood Farm in multiple scenarios.**

Managers may use this tool to calibrate their strategy to the environment in which they currently operate. Re-assessment of the current “official” future on an annual basis is a recommended best practice.
Appendix A: Glossary

Aeroponics: Aeroponics is the process of growing plants in an air or mist environment without the use of soil or an aggregate medium (known as geoponics).

Agrifood: Food produced by agriculture.

Aquaponics: The symbiotic cultivation of plants and aquatic animals in a recirculating environment.

Beyond organic: While no one term seems to sum up “Beyond Organic”, many agree that it means combining organic, local and sustainable. Not USDA certified.

Biodynamic: A method of organic farming that treats farms as unified and individual organisms, emphasizing balancing the holistic development and interrelationship of the soil, plants and animals as a self-nourishing system without external inputs as much as possible.

Community-supported agriculture (CSA): A socio-economic model of agriculture and food distribution where individuals pledge support to a farming operation and in turn receive a share of the farm’s harvest.

Foodprint: The environmental impact, or footprint, of food, including the amount of land required to sustain a diet, the amount of CO2 produced, if the food is organic, and if it is local.

Food equity: Concern around how food is distributed based on class, race, and geography. For example, inner cities and lower income areas with large minority populations often suffer from high food prices and lack of access to fresh vegetables, in contrast to the abundance of cheap, unhealthy options.

Food safety: Food safety is a scientific discipline describing handling, preparation, and storage of food in ways that prevent food borne illness.

Food security: Food security refers to the availability of food and one’s access to it. A household is considered food secure when its occupants do not live in hunger or fear of starvation.

Foodshed: Refers to the food grown and produced within 100 miles of consumption.

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9 This information was compiled while researching this report. Sources include Wikipedia.org, localsustainability.net, The American Public Health Association, and the personal experience of Team Lively’Hood.
**Foodscrapers**: Vertical high technology structures designed for efficient food production.

**Genetically Modified Organism (GMO)**: an organism whose genetic material has been altered using genetic engineering techniques.

**Hydroponics**: Hydroponics (from the Greek words hydro water and ponos labor) is a method of growing plants using mineral nutrient solutions, in water, without soil.

**Hyper-local**: Can be used as a noun in isolation or as a modifier of some other term (e.g. news). It connotes having the character of being oriented around a well defined, community scale area with primary focus being directed towards the concerns of its residents.

**Local**: Of or belonging to or characteristic of a particular locality or neighborhood; "local customs"; "local schools"; "the local citizens"; "a local point of view"; "local outbreaks of flu"; "a local bus line." Local food usually refers to food grown within 100 miles of where it is consumed, though sometimes the definition stretches to 250 miles.

**Localism**: Localism describes a range of political philosophies that prioritize the local.

**Locavore**: One who tries to eat only foods grown within 100 miles.

**Organic (food)**: Produced using environmentally sound methods that do not involve modern synthetic inputs such as pesticides and chemical fertilizers, do not contain genetically modified organisms, and are not processed using irradiation, industrial solvents, or chemical food additives. The U.S. Department of Agriculture (USDA) offers an organic certification which producers must pay a fee for if they wish to use the term organic to describe their product. This can be a barrier for smaller producers.

**Permaculture**: Permaculture is an approach to designing human settlements and agricultural systems that mimic the relationships found in natural ecologies.

**Raised beds**: A form of gardening in which the soil is formed in 3–4 foot (1.0–1.2 m) wide beds, which can be of any length or shape. The soil is raised above the surrounding soil (6 inches to waist high), sometimes enclosed by a frame generally made of wood, rock, or concrete blocks, and enriched with compost. The vegetable plants are spaced in geometric patterns, much closer together than conventional row gardening. The spacing is such that when the vegetables are fully grown, their leaves just barely touch each other, creating a microclimate in which moisture is conserved and weed growth suppressed.

**Sustainable food**: One that provides healthy food to meet current food needs while maintaining healthy ecosystems that can also provide food for generations to come with minimal negative impact to the environment. A sustainable food system also encourages local production and distribution infrastructures and makes nutritious food available,
accessible, and affordable to all. Further, it is humane and just, protecting farmers and other workers, consumers, and communities.

**Transitional organic:** Transforming conventionally tilled land to organic methods. Not USDA certified.

**Urban agriculture:** The practice of cultivating, processing and distributing food in, or around (peri-urban), a village, town or city

**Urban farming:** Cultivating food in an urban environment. Intrinsically on a smaller scale than traditional agriculture. Food may be for sale or personal use.

**Urban gardening:** Growing food in an urban environment primarily for personal use.

**Urban heat island:** a metropolitan area that is significantly warmer than its surrounding rural areas.

**Vertical farming:** Vertical farming is a proposed agricultural technique involving large-scale agriculture in urban high-rises or "farmscrapers".
Appendix B: Catalog of Helpful Resources

Beekeeping:

**Urban Bee Gardens**: A practical guide to introducing the world’s most prolific pollinators into your garden. A project of the University of California.

**Urban Beekeeping Information**: All kinds of facts and resources about beekeeping.

Community:

**Southeast Food Access Group (SFAG)**: The goal of SFAG is to ensure that healthy, fresh, local, sustainable, and affordable produce is accessible to all residents of the Bay View Hunter’s Point.

Financing Small Farms:

**Acción USA**: Brings affordable small business loans to microentrepreneurs.

**California Farmers Market Association**: Information for farmers and vendors to sell at CA farmers’ markets

**Kickstarter**: The largest funding platform for creative projects in the world. A project must reach its funding goal before time runs out or no money changes hands. This unique platform protects everyone involved, so that no one is expected to develop a project with an insufficient budget. Individuals or organizations set their own funding goal, aimed to raise the minimum amount needed to create the project. Projects can always raise more than their goal, and often do.

**Kiva**: Non-profit organization that distributes loans through traditional microfinance institutions.

**Lending Club**: peer-to-peer site that connects individual borrowers with lenders and takes a two to five percent cut for the service. Free application process.
**Rainbow Grocery Cooperative:** Grants are awarded to local non-profit organizations, groups and projects. Prioritization is provided to sustaining organizations that benefit the local San Francisco community and whose goals are consistent with the mission of Rainbow Grocery Cooperative.

**San Francisco Chamber of Commerce:** Resource for business information in the Bay Area, including how to start a business, statistics, etc.

**San Francisco Seed Library:** Borrow and donate seeds. Includes a seed catalog and a planting calendar. Branches at Hayes Valley Farm and at the public library in Potrero.

**San Francisco Small Business Development Center:** Free, professional business consulting.

**The Slow Money Alliance:** The Slow Money Alliance is a national nonprofit organization that promotes new ways of thinking about the relationship between food, money and soil. It hosts regional and national gatherings that connect slow money investors with farmers and entrepreneurs.

**Startup America Partnership:** Brings together a coalition of mentors, funders, major corporations and service providers to deliver strategic and substantive resources to help entrepreneurs start and scale companies.

**U.S. Small Business Administration:** Government agency dedicated to providing support to small businesses across the nation.

**Hydroponics**

**Hydroponics in Urban Farming:** Includes information about the basics, supplies, resources, and more.

**Local Food**

**FarmsReach:** An (in-progress) database of local food producers selling wholesale.
**Neighborhood Fruit**: An (in-progress) website that helps people to find and share fruits, nuts and vegetables growing within their communities. The site features interactive maps.

**Om Organics**: A searchable database of local, sustainable food vendors and events.

**San Francisco Food**: Provides a ton of resources, including how to provide healthy/sustainable (read: local) foods for family or work meetings.

**Wise Food Ways**: List of Bay Area farms, community supported agriculture (CSA), and other local food resources.

**Rooftop Gardening**

**Greenroofs.com**: Information about growing gardens on a roof.

**Urban Agriculture Resources in the Bay Area**

**Bay View Greenwaste Management**: Collects resident yard waste for a collection fee, grinds it into high-quality mulching material, and gives it away for free from their site. Also produces compost, soil amendment (shredded bark) and woodchips for biofuels.

**San Francisco Garden Resource Organization (SFGRO)**: Resources for school gardens, community gardens, urban agriculture, and more.

**San Francisco Public Utilities Commission Rainwater Harvesting**: While supplies last, San Francisco residents can purchase 60-gallon rain barrels and larger volume cisterns at steep discounts. Includes many additional resources.

**San Francisco Recreation and Parks Community Gardens Program**: Website includes policies and forms, how to find a community garden, garden support and resources, etc.

**San Francisco Urban Agriculture Alliance (SFUAA)**: Promotes the growing of food within San Francisco and the associated goals of SFUAA member organizations.

**Yards to Gardens (y2g)**: Website allows you to list gardening resources to share, such as extra space in a yard, extra tools in the garage, extra seeds or seedlings, or labor.
Appendix C: Extended External Analysis

Constraints

Physical Barriers

There are many constraints on San Francisco’s growing capacity because of its unique physical landscape. San Francisco is relatively small, compared to other major centers of commerce in the U.S., at roughly seven by seven miles. The urban landscape has limited available open space for commercial urban agriculture, despite numerous existing community gardens and potentially available flat roofs (San Francisco Public Space, 2011). Since 2002, the Surplus Property Ordinance has established that any publicly owned, ‘underutilized’ land in San Francisco be designated for low-income housing (Mills, 2005). This means that a farm could only be established temporarily on available open ground space, and the farm investment assumes the risk of future development of the land. Hayes Valley Farm in San Francisco is a current example of a farm operating on an interim basis.

Despite a lack of available ground space for growing produce, the City has numerous flat roofs. Unlike the roofs of buildings in the northeastern U.S. cities that are designed to withstand significant snow loads, however, San Francisco’s roofs are not designed for the significant vertical loads needed for rooftop gardening. In some cases, where seismic retrofits are needed in existing buildings, it may be feasible to re-engineer a roof structure to withstand the vertical loads of a roof garden without significant additional costs. Yet this opportunity is dependent on several other factors, including willingness of the building owner to absorb the additional costs accrued in structural upgrade as well as willingness of the building tenant to share occupancy with a farm or garden business. Depending on the type of construction, seismic reinforcing can add $15-20 per square foot in construction costs (Stevensen, personal communication, 2011). In most cases, re-engineering existing roof structures to withstand garden roof loads is cost prohibitive and
without a strategic financing plan, there is little incentive for the building owner to upgrade a roof to improve vertical load capacity (Moehring, 2009).

Figure 20: San Francisco climate zones (San Francisco Recreation and Parks Department, 2009).

The proximity of San Francisco to cheaper, available open space outside of city limits (to the South, beyond Hunter’s Point; in the East Bay, such as in West Oakland; and in the North, beyond the Marin Headlands) makes prioritizing open space for food production within City limits financially challenging. Food tends to grow better in the adjacent regions as well, and San Francisco’s many microclimates limit the kinds of produce that will grow in particular regions of the City (see Figure 20). While the map above identifies three major climate zones, the peninsula has also been split into seven separate microclimates (Pierce, 2002).

Finally, San Francisco residents have both real and perceived concern in regards to quality of air and planting soil within the City. According to San Francisco’s “Spare the
Air” program, the highest risk days for particulate matter in the air run from June through mid-October, which is also the primary growing season (Bay Area Air Quality Management District, 2011). There is no scientific data indicating that urban air quality and potential air pollutants are a hazard to food grown within the City, but concern over the health effects of eating food grown within the City may be an initial barrier to concerned citizens. The same can be said for soil toxicity in the urban context. Though soil tests may address citizens’ concerns about pollution in urban agriculture crops, further education around soil testing and remediation is needed (Hui, personal communication, February 9, 2011).

**Resources**

Water availability is a concern for most cities, but it is of particular concern in California where water is piped substantial distances to reach urban centers (Aldax, 2008). In areas where substantial rainwater collection is not possible, irrigation needs for urban growing could further stress municipal water supplies, already at risk of shortage. In 2007, California experienced one of the worst droughts in history, and San Francisco residents were asked to cut water use by ten percent (Ritter, 2007). This restriction could weigh heavily on an urban farmer, whose water use for growing plants would already be closely rationed. Grey water or rain catchment systems may help to meet water needs, if constructed inexpensively and sustainably.

Energy is also at a premium in San Francisco, compared to other regions. According to the Bureau of Labor Statistics, San Franciscans pay nearly 90% more than the U.S. city average for electricity (2010). While electricity costs may not be an obstacle for small-scale urban farms using traditional growing techniques, it could be a major barrier for alternative agricultural methods that rely on artificial light or mechanized irrigation. At nearly fourteen percent above the national average, fuel prices are also significantly higher in San Francisco (Ibid), which impacts local transportation and shipping costs. Higher fuel costs could also be advantageous to local farming, where the cost of transportation is minimized and in some cases eliminated completely through alternative delivery to customers by bike and through pedestrian access to the farm.
Regarding labor, San Francisco’s minimum wage was recently increased to $9.92/hour in 2011 (Sheppard Mullin, 2010), well above the national average of $7.25/hour (Labor Law Center, 2009). In addition, businesses in San Francisco with more than twenty employees are also required to provide health care security, and paid sick leave (San Francisco, CA Administrative Code, 2007), though it is unlikely that urban agriculture businesses will reach this threshold. Coupled with the high costs of living in San Francisco, labor costs for both hired workers and farm managers will continue to present a challenge for any urban farming startup business.

**Regulatory**

Appeasing neighbors in densely populated San Francisco is a hurdle for most land uses (see Appendix D: New Business Process Diagram). As previously noted, there are currently few examples of long-standing, profitable San Francisco-based commercial urban agriculture ventures. This is partly because City residents, particularly those who own property, have significant influence over land use activities on their own or adjacent properties (Jackson, 2007). Less traditional methods of urban farming such as beekeeping and small animal husbandry are subject to neighbor approval and run the risk of being shut down if neighbors lodge formal complaints. Even traditional urban agriculture attempted on vacant, privately owned lots is precarious, despite many of these lots remaining vacant for decades due to the high costs of development (Hatch, 2008).

**Economic**

While there are many economic benefits to growing food locally, such as reducing transportation costs and emissions and providing local jobs for residents, the upfront costs of substantial commercial urban agriculture within San Francisco remain a barrier. Estimates of additional roofing needed to weatherproof a rooftop garden site are in the range of $14 to $40 per square foot (in addition to the engineered roof structure), requiring significant outlays of upfront capital (Greenroofs, 2011). This barrier to entry might be overcome if external sources of funding could be funneled towards urban agriculture infrastructures. Financial support could come from government funding or
through resources like Kickstarter or other community funding opportunities (additional resources to finance small farms are available in Appendix B: Catalog of Helpful Resources). In the existing framework however, very little funding is being directed towards urban farming in San Francisco.

Opportunities

Policy

The recent legislation (Ordinance 101537) removing prior restrictions on CUA is an indicator of the direction of policy in San Francisco.

Consumer Trends

“Localism” is on the rise in San Francisco and opportunities exist to feed the growing demand for locally sourced produce and food products. Trend indicators include various types of businesses that are developing, as well as the growth of social movements. Examples of the increased demand for local food include restaurants like Locavore, Local Mission Eatery and Mission Pie that advertise the use of local ingredients. In addition, movements like Slow Food San Francisco have gone from only a handful of members a decade ago to over six hundred in 2010 (Slow Food

Figure 2: Mayor Ed Lee signs the new zoning legislation.

Figure 22: A sign in San Francisco advertising locally made products.
San Francisco, 2011). Slow Food is a movement that “links the pleasure of food with a commitment to community and the environment” (2011).

The demand for locally grown urban agriculture continues to grow (American Farmland Trust, 2008). Temra Costa, author of Farmer Jane and Bay Area farming expert, noted that the San Francisco market for urban produce is unique because “If you can grow it, the people, restaurants and grocers of SF will buy it” (Costa, personal communication, March 27, 2011).

*Health and Environmental Benefits*

Increased human and environmental benefits of CUA can be leveraged as marketing and consumer education opportunities. Some benefits include:

- Urban producers are not integrated with an infrastructure that relies on such factors like chemical fertilizers and long haul shipping. Chemical fertilizers have known negative side effects to environmental and human health (US EPA, 2011).
- Green vegetation can reflect as much as twenty to twenty-five percent of radiation from the sun, thus reducing the heat island effect in cities and cooling the climate in urban areas (Local Government Commission, 2011). Eating locally reduces fuel consumption, carbon dioxide emission, and a variety of other negative environmental effects associated with long-distance transportation of foods.
- In the U.S., a meal travels about 13,000 miles before reaching your plate (Local Government Commission). Eating locally produced foods reduces fuel consumption, carbon dioxide emissions, and a variety of other negative environmental consequences associated with the transportation of foods.
Increased consumer visibility of agricultural practices results in increased transparency of farm operations.

**Economic**

Economic opportunities run the gamut from personal gain to improving the economic well-being of the city. CUA can provide individuals and families with a supplemental income stream. The farm location can be used for other commercial ventures to increase awareness and customer base for the business, such as for-profit classes, workshops, and events can all be held in conjunction with agriculture activities. As noted, growing food locally also provides reduced transportation costs. Tourists will be drawn to the hyper-local edibles, in search of the most authentic San Francisco products. The farmers themselves can capitalize on this attraction and charge a premium for their product. This is an opportunity to improve both the livelihood of urban farmers as well as the stability of city and county government.

**Limitations of Traditional Agriculture**

Offering heirloom varietals and daily picked produce are distinct competitive advantages for urban farms. In a city that is renowned for restaurant culture and quality, urban production of food has the market advantage when it comes to the freshest and most unique food offerings. Conventional agriculture has limits to food quality and variety as it is produced to withstand intensive shipping and extended storage. Small scale farming ventures are also more adaptable and can change crop rotations more frequently, allowing urban farmers to customize orders per local restaurant, grocery and other consumer demands.
Appendix D: New Business Process Diagram

Figure 25: Lively'Hood Farm startup flowchart.

For specific information regarding urban agriculture in San Francisco, including the full language of the planning code amendment (Ordinance 101537), see the Food Policy Council Summary Report. Excerpts from the report also follow in this document in Appendix H: Criteria of Suitable Public Land for Urban Agriculture, City and County of San Francisco and Appendix I: Potential Uses of Public Land for Urban Ag.
Appendix E: Summary of SWOT Analysis

![SWOT Analysis Diagram]

Figure 26: Lively’Hood Farm SWOT analysis.
Appendix F: Assessment of Various Agricultural Models (Strengths and Weaknesses)

<table>
<thead>
<tr>
<th>Constraint</th>
<th>Maximizes Output for Space</th>
<th>Minimizes Use of Water</th>
<th>Minimizes Use of Energy</th>
<th>Not Labor Intensive</th>
<th>Requires Minimal Start-Up Capital$^1$</th>
<th>Minimal Regulatory Hurdles Exist</th>
<th>Delivers Varied Product Mix</th>
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<tbody>
<tr>
<td>Soil-based Farming</td>
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Legend: 
- Fully addresses constraint / goal
- Partially addresses constraint / goal
- Does not meet constraint / goal

$^1$ Reflects equipment costs, not cost of acquiring land.

Figure 27: Strengths and weaknesses of various agriculture models.
Appendix G: Excerpts from Financial Modeling Tool

Assumptions & Notes

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<thead>
<tr>
<th>Assumptions</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Payroll Load - Taxes</td>
<td>11%</td>
</tr>
<tr>
<td>Payroll Load - Benefits</td>
<td>9%</td>
</tr>
<tr>
<td>Corporate Tax Rate</td>
<td>35%</td>
</tr>
<tr>
<td>Risk Free Rate</td>
<td>3.5%</td>
</tr>
<tr>
<td>Market Rate</td>
<td>10.2%</td>
</tr>
<tr>
<td>Costs Growth Factor</td>
<td>5%</td>
</tr>
<tr>
<td>Revenue Growth Factor</td>
<td>5%</td>
</tr>
<tr>
<td>Working Capital Requirements (months revenue)</td>
<td>1.5</td>
</tr>
<tr>
<td>Average Gross Margin on Raised Beds (excluding labor)</td>
<td>65%</td>
</tr>
<tr>
<td>Produce Sales Ratio - % Direct to Consumers</td>
<td>25%</td>
</tr>
<tr>
<td>Produce Sales Ratio - % Direct to Restaurants</td>
<td>75%</td>
</tr>
<tr>
<td>Value-Add Products - % Direct to Consumers</td>
<td>100%</td>
</tr>
<tr>
<td>Debt Payback Period (years)</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Site Dimensions</th>
<th>Square Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Site Dimensions</td>
<td>21,780</td>
</tr>
<tr>
<td>Greenhouse</td>
<td>2,000</td>
</tr>
<tr>
<td>Hydroponics In Greenhouse (sq ft floor space, assumes 75% of greenhouse)</td>
<td>1,500</td>
</tr>
<tr>
<td>Hydroponics Stacks</td>
<td>2</td>
</tr>
<tr>
<td>Hydroponics In Greenhouse (Sq ft planting)</td>
<td>3,000</td>
</tr>
<tr>
<td>Seed Starters &amp; Greenhouse Circulation (sq foot, 25% of greenhouse)</td>
<td>500</td>
</tr>
<tr>
<td>Hydroponics Outdoor (sq ft floor space)</td>
<td>1,243</td>
</tr>
<tr>
<td>Hydroponics Outdoor (sq ft planting)</td>
<td>2,485</td>
</tr>
<tr>
<td>Raised Beds (sq ft planting)</td>
<td>10,045</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unsalable Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
</tr>
<tr>
<td>Year 2</td>
</tr>
<tr>
<td>Year 3</td>
</tr>
<tr>
<td>Year 4</td>
</tr>
<tr>
<td>Year 5</td>
</tr>
</tbody>
</table>

--

# Revenue & COGS

## Revenue

<table>
<thead>
<tr>
<th>Year</th>
<th>Soil Farmed</th>
<th>Hydroponically Farmed</th>
<th>Honey</th>
<th>Value-added Goods</th>
<th>Classes &amp; Workshops</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>$45,268</td>
<td>$145,001</td>
<td>$1,280</td>
<td>$10,400</td>
<td>$201,949</td>
</tr>
<tr>
<td>Year 2</td>
<td>$50,927</td>
<td>$163,126</td>
<td>$2,688</td>
<td>$24,024</td>
<td>$263,444</td>
</tr>
<tr>
<td>Year 3</td>
<td>$57,038</td>
<td>$182,701</td>
<td>$2,822</td>
<td>$25,225</td>
<td>$291,600</td>
</tr>
<tr>
<td>Year 4</td>
<td>$63,633</td>
<td>$203,825</td>
<td>$2,964</td>
<td>$26,486</td>
<td>$321,913</td>
</tr>
<tr>
<td>Year 5</td>
<td>$70,745</td>
<td>$226,606</td>
<td>$3,112</td>
<td>$27,811</td>
<td>$354,528</td>
</tr>
</tbody>
</table>

## COGS

<table>
<thead>
<tr>
<th>Year</th>
<th>Soil Farmed</th>
<th>Hydroponically Farmed</th>
<th>Honey</th>
<th>Value-added Goods</th>
<th>Classes &amp; Workshops</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>$22,634</td>
<td>$46,082</td>
<td>$80</td>
<td>$1,560</td>
<td>$-</td>
</tr>
<tr>
<td>Year 2</td>
<td>$23,766</td>
<td>$48,387</td>
<td>$206</td>
<td>$3,604</td>
<td>$3,402</td>
</tr>
<tr>
<td>Year 3</td>
<td>$24,954</td>
<td>$50,806</td>
<td>$217</td>
<td>$3,784</td>
<td>$3,572</td>
</tr>
<tr>
<td>Year 4</td>
<td>$26,202</td>
<td>$53,346</td>
<td>$227</td>
<td>$3,973</td>
<td>$3,751</td>
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<tr>
<td>Year 5</td>
<td>$27,512</td>
<td>$56,013</td>
<td>$238</td>
<td>$4,172</td>
<td>$3,938</td>
</tr>
</tbody>
</table>

## Gross Profit (excl. labor, rent, kitchen)

<table>
<thead>
<tr>
<th>Year</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 0</td>
<td>$131,592</td>
<td>$184,080</td>
<td>$201,949</td>
<td>$228,634</td>
<td>$263,444</td>
</tr>
<tr>
<td>Year 1</td>
<td>$131,592</td>
<td>$184,080</td>
<td>$201,949</td>
<td>$228,634</td>
<td>$263,444</td>
</tr>
<tr>
<td>Year 2</td>
<td>$131,592</td>
<td>$184,080</td>
<td>$201,949</td>
<td>$228,634</td>
<td>$263,444</td>
</tr>
<tr>
<td>Year 3</td>
<td>$131,592</td>
<td>$184,080</td>
<td>$201,949</td>
<td>$228,634</td>
<td>$263,444</td>
</tr>
<tr>
<td>Year 4</td>
<td>$131,592</td>
<td>$184,080</td>
<td>$201,949</td>
<td>$228,634</td>
<td>$263,444</td>
</tr>
<tr>
<td>Year 5</td>
<td>$131,592</td>
<td>$184,080</td>
<td>$201,949</td>
<td>$228,634</td>
<td>$263,444</td>
</tr>
</tbody>
</table>

## Headcount

<table>
<thead>
<tr>
<th>Name</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Time Laborer</td>
<td>$-</td>
<td>$5,158</td>
<td>$7,738</td>
<td>$7,738</td>
<td>$10,317</td>
</tr>
<tr>
<td>Jeff Grow</td>
<td>$20,000</td>
<td>$25,000</td>
<td>$25,000</td>
<td>$30,000</td>
<td>$30,000</td>
</tr>
<tr>
<td>Sandy Cash</td>
<td>$20,000</td>
<td>$25,000</td>
<td>$25,000</td>
<td>$30,000</td>
<td>$30,000</td>
</tr>
<tr>
<td>Salaries Subtotal</td>
<td>$40,000</td>
<td>$55,158</td>
<td>$57,738</td>
<td>$67,738</td>
<td>$70,317</td>
</tr>
<tr>
<td>Add Payroll Load</td>
<td>$4,400</td>
<td>$6,067</td>
<td>$6,351</td>
<td>$7,451</td>
<td>$7,735</td>
</tr>
<tr>
<td>Add Benefits Load</td>
<td>$3,600</td>
<td>$4,964</td>
<td>$5,196</td>
<td>$6,096</td>
<td>$6,329</td>
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<tr>
<td>Total Headcount Related Expenses</td>
<td>$48,000</td>
<td>$66,190</td>
<td>$69,285</td>
<td>$81,285</td>
<td>$84,380</td>
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</table>

## Operating Expenses

<table>
<thead>
<tr>
<th>Department</th>
<th>Expense</th>
<th>Year 0</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>G&amp;A Web Hosting</td>
<td>$12</td>
<td>$144</td>
<td>$151</td>
<td>$159</td>
<td>$167</td>
<td>$175</td>
<td></td>
</tr>
<tr>
<td>G&amp;A Internet</td>
<td>$20</td>
<td>$240</td>
<td>$252</td>
<td>$265</td>
<td>$278</td>
<td>$292</td>
<td></td>
</tr>
<tr>
<td>G&amp;A Office Supplies</td>
<td>$25</td>
<td>$300</td>
<td>$315</td>
<td>$331</td>
<td>$347</td>
<td>$365</td>
<td></td>
</tr>
<tr>
<td>G&amp;A Software</td>
<td>$30</td>
<td>$360</td>
<td>$378</td>
<td>$397</td>
<td>$417</td>
<td>$438</td>
<td></td>
</tr>
<tr>
<td>G&amp;A Rent - Land</td>
<td>$6,534</td>
<td>$78,408</td>
<td>$82,328</td>
<td>$86,445</td>
<td>$90,767</td>
<td>$95,305</td>
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</tr>
<tr>
<td>G&amp;A Rent - Commercial Kitchen</td>
<td>$650</td>
<td>$3,900</td>
<td>$7,995</td>
<td>$8,395</td>
<td>$8,814</td>
<td>$9,255</td>
<td></td>
</tr>
<tr>
<td>G&amp;A Muni Pass/Bike</td>
<td>$60</td>
<td>$720</td>
<td>$756</td>
<td>$794</td>
<td>$833</td>
<td>$875</td>
<td></td>
</tr>
<tr>
<td>G&amp;A Auto Expenses</td>
<td>$100</td>
<td>$1,200</td>
<td>$1,260</td>
<td>$1,323</td>
<td>$1,389</td>
<td>$1,459</td>
<td></td>
</tr>
<tr>
<td>G&amp;A Utilities (excl. H20)</td>
<td>$100</td>
<td>$1,200</td>
<td>$1,260</td>
<td>$1,323</td>
<td>$1,389</td>
<td>$1,459</td>
<td></td>
</tr>
<tr>
<td>G&amp;A Property Insurance</td>
<td>$100</td>
<td>$1,200</td>
<td>$1,260</td>
<td>$1,323</td>
<td>$1,389</td>
<td>$1,459</td>
<td></td>
</tr>
<tr>
<td>G&amp;A Permits and registration fees</td>
<td>$150</td>
<td>$1,800</td>
<td>$1,890</td>
<td>$1,985</td>
<td>$2,084</td>
<td>$2,188</td>
<td></td>
</tr>
<tr>
<td>G&amp;A Charitable contributions (net tax benefit)</td>
<td>$50</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td>$430</td>
<td></td>
</tr>
<tr>
<td>G&amp;A Subtotal</td>
<td>$7,831</td>
<td>$88,272</td>
<td>$96,598</td>
<td>$103,005</td>
<td>$108,155</td>
<td>$113,563</td>
<td></td>
</tr>
<tr>
<td>M&amp;S Supplies</td>
<td>$50</td>
<td>$600</td>
<td>$630</td>
<td>$662</td>
<td>$695</td>
<td>$729</td>
<td></td>
</tr>
<tr>
<td>M&amp;S Logo Development</td>
<td>$100</td>
<td>$100</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td></td>
</tr>
<tr>
<td>M&amp;S Subtotal</td>
<td>$150</td>
<td>$600</td>
<td>$630</td>
<td>$662</td>
<td>$695</td>
<td>$729</td>
<td></td>
</tr>
<tr>
<td>R&amp;D Parts &amp; Materials</td>
<td>$75</td>
<td>$900</td>
<td>$945</td>
<td>$992</td>
<td>$1,042</td>
<td>$1,094</td>
<td></td>
</tr>
<tr>
<td>R&amp;D Subtotal</td>
<td>$75</td>
<td>$900</td>
<td>$945</td>
<td>$992</td>
<td>$1,042</td>
<td>$1,094</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$8,056</td>
<td>$89,772</td>
<td>$98,161</td>
<td>$104,659</td>
<td>$109,892</td>
<td>$115,386</td>
<td></td>
</tr>
</tbody>
</table>
### Fixed Assets & Depreciation Schedule

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Information Technology</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beginning Balance</td>
<td>$690</td>
<td>$744</td>
<td>$558</td>
<td>$492</td>
<td>$276</td>
</tr>
<tr>
<td>Additional Investment</td>
<td>$-</td>
<td>$-</td>
<td>$150</td>
<td>$-</td>
<td>$-</td>
</tr>
<tr>
<td>Depreciation</td>
<td>$186</td>
<td>$186</td>
<td>$216</td>
<td>$216</td>
<td>$216</td>
</tr>
<tr>
<td><strong>Ending Balance</strong></td>
<td>$744</td>
<td>$558</td>
<td>$492</td>
<td>$276</td>
<td>$60</td>
</tr>
<tr>
<td><strong>Tools &amp; Equipment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beginning Balance</td>
<td>$25,435</td>
<td>$20,354</td>
<td>$15,692</td>
<td>$14,820</td>
<td>$8,682</td>
</tr>
<tr>
<td>Additional Investment</td>
<td>$-</td>
<td>$525</td>
<td>$5,385</td>
<td>$150</td>
<td>$1,210</td>
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<tr>
<td>Depreciation</td>
<td>$5,081</td>
<td>$5,186</td>
<td>$6,258</td>
<td>$6,288</td>
<td>$6,428</td>
</tr>
<tr>
<td><strong>Ending Balance</strong></td>
<td>$20,354</td>
<td>$15,692</td>
<td>$14,820</td>
<td>$8,682</td>
<td>$3,465</td>
</tr>
<tr>
<td><strong>Leasehold Improvements</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beginning Balance</td>
<td>$16,748</td>
<td>$14,707</td>
<td>$13,289</td>
<td>$11,794</td>
<td>$10,223</td>
</tr>
<tr>
<td>Additional Investment</td>
<td>$-</td>
<td>$700</td>
<td>$700</td>
<td>$700</td>
<td>$1,250</td>
</tr>
<tr>
<td>Depreciation</td>
<td>$2,041</td>
<td>$2,118</td>
<td>$2,195</td>
<td>$2,271</td>
<td>$2,403</td>
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<tr>
<td><strong>Ending Balance</strong></td>
<td>$14,707</td>
<td>$13,289</td>
<td>$11,794</td>
<td>$10,223</td>
<td>$9,070</td>
</tr>
<tr>
<td><strong>Annual Depreciation Expense</strong></td>
<td>$7,309</td>
<td>$7,490</td>
<td>$8,668</td>
<td>$8,775</td>
<td>$9,047</td>
</tr>
<tr>
<td><strong>Annual Investment</strong></td>
<td>$-</td>
<td>$1,225</td>
<td>$6,235</td>
<td>$850</td>
<td>$2,460</td>
</tr>
<tr>
<td><strong>Ending PP&amp;E</strong></td>
<td>$35,804</td>
<td>$29,539</td>
<td>$27,106</td>
<td>$19,181</td>
<td>$12,595</td>
</tr>
</tbody>
</table>

### Income Statement

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td>$201,949</td>
<td>$263,444</td>
<td>$291,600</td>
<td>$321,913</td>
<td>$354,528</td>
</tr>
<tr>
<td><strong>Cost of Good Sold</strong></td>
<td>$70,356</td>
<td>$79,364</td>
<td>$83,332</td>
<td>$87,499</td>
<td>$91,874</td>
</tr>
<tr>
<td><strong>Gross Profit</strong></td>
<td>$131,592</td>
<td>$184,080</td>
<td>$208,266</td>
<td>$234,414</td>
<td>$262,654</td>
</tr>
</tbody>
</table>

**Operating Expenses**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>General &amp; Administrative (incl. rent)</td>
<td>$88,272</td>
<td>$96,586</td>
<td>$103,005</td>
<td>$108,155</td>
<td>$113,563</td>
</tr>
<tr>
<td>Marketing &amp; Sales</td>
<td>$600</td>
<td>$630</td>
<td>$662</td>
<td>$695</td>
<td>$729</td>
</tr>
<tr>
<td>Research &amp; Development</td>
<td>$900</td>
<td>$945</td>
<td>$992</td>
<td>$1,042</td>
<td>$1,094</td>
</tr>
<tr>
<td>Salaries &amp; Related Expenses</td>
<td>$48,000</td>
<td>$66,190</td>
<td>$69,285</td>
<td>$81,285</td>
<td>$84,380</td>
</tr>
<tr>
<td><strong>Total Operating Expenses</strong></td>
<td>$137,772</td>
<td>$164,351</td>
<td>$173,944</td>
<td>$191,177</td>
<td>$199,766</td>
</tr>
<tr>
<td><strong>Non-Operating Revenue (Kickstarter)</strong></td>
<td>$24,000</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
</tr>
<tr>
<td><strong>Non-Operating Expenses</strong></td>
<td>$3,750</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
</tr>
<tr>
<td><strong>Non-Operating Revenue NET (Kickstarter)</strong></td>
<td>$20,250</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
</tr>
<tr>
<td><strong>EBITDA</strong></td>
<td>$14,070</td>
<td>$19,729</td>
<td>$34,324</td>
<td>$43,237</td>
<td>$62,888</td>
</tr>
<tr>
<td><strong>Interest Expense</strong></td>
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<td>$3,981</td>
<td>$3,412</td>
<td>$2,642</td>
<td>$1,761</td>
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<tr>
<td><strong>Depreciation Expense</strong></td>
<td>$7,309</td>
<td>$7,490</td>
<td>$8,668</td>
<td>$8,775</td>
<td>$9,047</td>
</tr>
<tr>
<td><strong>Pre-Tax Profit</strong></td>
<td>$5,319</td>
<td>$8,236</td>
<td>$15,244</td>
<td>$31,824</td>
<td>$52,061</td>
</tr>
<tr>
<td><strong>Tax</strong></td>
<td>$1,862</td>
<td>$2,890</td>
<td>$7,785</td>
<td>$11,137</td>
<td>$18,228</td>
</tr>
<tr>
<td><strong>Net Income</strong></td>
<td>$3,457</td>
<td>$5,368</td>
<td>$14,459</td>
<td>$20,683</td>
<td>$33,852</td>
</tr>
<tr>
<td>Dividends to Shareholders</td>
<td>$-</td>
<td>$-</td>
<td>$8,036</td>
<td>$18,713</td>
<td>$29,375</td>
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<tr>
<td>Retained Earnings</td>
<td>$3,457</td>
<td>$5,368</td>
<td>$6,422</td>
<td>$1,970</td>
<td>$4,478</td>
</tr>
</tbody>
</table>

### Balance Sheet (condensed)

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net working capital (min. 1 1/2 mo. revenue)</td>
<td>$20,887</td>
<td>$25,244</td>
<td>$32,931</td>
<td>$36,450</td>
<td>$40,239</td>
<td>$44,316</td>
</tr>
<tr>
<td>Fixed assets (less accumulated depreciation)</td>
<td>$43,113</td>
<td>$35,804</td>
<td>$29,539</td>
<td>$27,106</td>
<td>$19,181</td>
<td>$12,595</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td>$64,000</td>
<td>$61,048</td>
<td>$62,470</td>
<td>$63,556</td>
<td>$59,420</td>
<td>$56,911</td>
</tr>
</tbody>
</table>

**Liabilities and Equity**

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unearned revenue (Kickstarter, net fees)</td>
<td>$24,000</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
<td>$-</td>
</tr>
<tr>
<td>Debt</td>
<td>$10,000</td>
<td>$29,091</td>
<td>$29,725</td>
<td>$29,725</td>
<td>$29,725</td>
<td>$29,725</td>
</tr>
<tr>
<td>Amortized Debt (accumulated)</td>
<td>$1,500</td>
<td>$6,080</td>
<td>$11,416</td>
<td>$17,522</td>
<td>$24,510</td>
<td></td>
</tr>
<tr>
<td>Shareholders' equity (incl. retained earnings)</td>
<td>$30,000</td>
<td>$33,457</td>
<td>$38,825</td>
<td>$45,247</td>
<td>$47,218</td>
<td>$51,695</td>
</tr>
<tr>
<td><strong>Total liabilities &amp; shareholders' equity</strong></td>
<td>$64,000</td>
<td>$61,048</td>
<td>$62,470</td>
<td>$63,556</td>
<td>$59,420</td>
<td>$56,911</td>
</tr>
</tbody>
</table>
# Discounted Cash Flow

<table>
<thead>
<tr>
<th>Year</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Fixed assets</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investments in fixed assets</td>
<td>$43,113</td>
<td>$ -</td>
<td>$1,225</td>
<td>$6,235</td>
<td>$850</td>
<td>$2,460</td>
</tr>
<tr>
<td>Sales of fixed assets</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
</tr>
<tr>
<td>CF, invest. in fixed assets</td>
<td>$(43,113)</td>
<td>$ -</td>
<td>$(1,225)</td>
<td>$(6,235)</td>
<td>$(850)</td>
<td>$(2,460)</td>
</tr>
<tr>
<td><strong>B. Working capital and plant investments</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Investments (Δ) in plant working capital</td>
<td>$20,887</td>
<td>$4,357</td>
<td>$7,687</td>
<td>$3,519</td>
<td>$3,789</td>
<td>$4,077</td>
</tr>
<tr>
<td>CF, invest. In working capital</td>
<td>$(20,887)</td>
<td>$(4,357)</td>
<td>$(7,687)</td>
<td>$(3,519)</td>
<td>$(3,789)</td>
<td>$(4,077)</td>
</tr>
<tr>
<td><strong>C. Operations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depreciation</td>
<td>$7,309</td>
<td>$7,490</td>
<td>$8,668</td>
<td>$8,775</td>
<td>$8,775</td>
<td>$9,047</td>
</tr>
<tr>
<td>Profit after tax</td>
<td>$3,457</td>
<td>$5,368</td>
<td>$14,459</td>
<td>$20,683</td>
<td>$33,852</td>
<td>$33,852</td>
</tr>
<tr>
<td>Cash flow from operations</td>
<td>$10,766</td>
<td>$12,858</td>
<td>$23,127</td>
<td>$29,458</td>
<td>$42,999</td>
<td>$42,999</td>
</tr>
<tr>
<td><strong>D. Free cash flow</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PV of cash flow using excel formula</td>
<td>$(64,000)</td>
<td>$6,409</td>
<td>$3,946</td>
<td>$13,372</td>
<td>$24,819</td>
<td>$36,302</td>
</tr>
<tr>
<td>Net present value using sum of PV of cash flows</td>
<td>$(16,085)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>E. Horizon value</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PV of Horizon value</td>
<td>$304,506</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>F. Total value (Horizon plus free cash flows)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$133,436</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Cost of Capital

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
<th>% of Total</th>
<th>Expected Return</th>
<th>Equity or Debt?</th>
<th>Tax Adjusted Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social venture capital</td>
<td>$30,000</td>
<td>75.0%</td>
<td>17.5%</td>
<td>Equity</td>
<td>17.5%</td>
</tr>
<tr>
<td>Credit cards</td>
<td>$10,000</td>
<td>25.0%</td>
<td>14.4%</td>
<td>Debt</td>
<td>9.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$40,000</td>
<td>WACC</td>
<td>15.4%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Not included in WACC - captured as unearned revenue)

## Crop Yields and Margins

<table>
<thead>
<tr>
<th>Crop</th>
<th>Square Feet Allocated</th>
<th>Annual Yield (lbs./per sq ft)</th>
<th>Gross Margin ($/sq ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydro Lettuce</td>
<td>1,125</td>
<td>5.8</td>
<td>$45.05</td>
</tr>
<tr>
<td>Hydro Basil</td>
<td>375</td>
<td>8.0</td>
<td>$98.48</td>
</tr>
<tr>
<td>Hydro Watercress (outdoor)</td>
<td>1,243</td>
<td>4.3</td>
<td>$59.12</td>
</tr>
<tr>
<td>Beets</td>
<td>500</td>
<td>4.0</td>
<td>$9.82</td>
</tr>
<tr>
<td>Broccoli</td>
<td>800</td>
<td>1.5</td>
<td>$2.65</td>
</tr>
<tr>
<td>Cabbage</td>
<td>1,000</td>
<td>3.0</td>
<td>$4.52</td>
</tr>
<tr>
<td>Carrot</td>
<td>750</td>
<td>2.0</td>
<td>$3.53</td>
</tr>
<tr>
<td>Cauliflower</td>
<td>500</td>
<td>1.4</td>
<td>$2.49</td>
</tr>
<tr>
<td>Cucumber</td>
<td>800</td>
<td>0.9</td>
<td>$1.32</td>
</tr>
<tr>
<td>Endive</td>
<td>500</td>
<td>1.0</td>
<td>$4.12</td>
</tr>
<tr>
<td>Greens, Mustard</td>
<td>500</td>
<td>5.0</td>
<td>$11.78</td>
</tr>
<tr>
<td>Kale/Collard</td>
<td>2,000</td>
<td>1.9</td>
<td>$4.42</td>
</tr>
<tr>
<td>Tomato</td>
<td>1,200</td>
<td>1.5</td>
<td>$5.30</td>
</tr>
<tr>
<td>Zucchini</td>
<td>500</td>
<td>1.2</td>
<td>$1.69</td>
</tr>
<tr>
<td>Yellow Summer</td>
<td>500</td>
<td>1.2</td>
<td>$1.69</td>
</tr>
<tr>
<td>Patty Pan</td>
<td>500</td>
<td>1.2</td>
<td>$1.41</td>
</tr>
</tbody>
</table>
Appendix H: Criteria of Suitable Public Land for Urban Agriculture, City and County of San Francisco

Excerpt from Executive Directive on Healthy and Sustainable Food Summary Report

1. **TYPE & SIZE**: Vacant or under-utilized sites no less than 500 square feet, with no portion of the space less than 10 feet wide.

2. **SITES AVAILABILITY**: Include sites that are available at least for the next 3 years for possible temporary use. Proper use agreement will be created.

3. **SLOPES**: At least 30% of the site must have a slope of 10% or less. Remaining portions of the site must have a slope of less than 40%.

4. **SURFACE TREATMENT**: Permeable surface and unused or underused sites with impervious surfaces. Include unused existing lawns.

5. **LIGHT EXPOSURE**: Must have direct, bright indirect, or moderate indirect light available at least 6 hours per day.

6. **WATER ACCESS**: Any sites that currently have water access (regarding of its current condition) or that are feasible for installation of new water access or to benefit from rainwater capture.

7. **PUBLIC TRANSIT**: Within reasonable walking distance from nearby public transit. List nearby alternative access points.

8. **VEHICLE ACCESS**: Parking space is not required. However, sites should be within reasonable distance from vehicle drop-off area and can be reasonably accessed by construction vehicle during installation or operation.

9. **RIPARIAN ZONE**: Exclude sites with existing streams or wetlands, or known planned day-lighting of riparian features.

10. **OTHER**: Identify other sites to be considered including rooftops* and area for green wall**.

   * In addition to traditional rooftop system that covers building roof area with layers of light-weight soil and plants, rooftops may also utilize shallow-depth tray system for roof area that may need to be accessed regularly.

   ** Green Wall allows for plants to grow on vertical planting medium thus saving a ground space. The footprint of Green Wall should be more than 3 feet wide and can be of any length.

**Exemptions:**

- Public Utilities Commission’s land within 25 feet of a pipeline.
- Sites subject to environmental remediation within the next 3 years or sites identified as toxic or hazardous.
- Note: Lands with low to mid level of soil contamination should be included in this report for possible use of raised beds that will bring appropriate and new soil to the site.
Appendix I: Potential Uses of Public Land for Urban Ag

Excerpt from *Executive Directive on Healthy and Sustainable Food Summary Report*

<table>
<thead>
<tr>
<th>Potential Use of Public Land for Urban Ag</th>
<th>Categories (this use meets the need of):</th>
<th>Site requirements for that use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plot Based Community Gardens (managed by either Rec &amp; Park or someone else)</td>
<td>Land Access</td>
<td>water, tools, shed</td>
</tr>
<tr>
<td>Organizationally Managed Gardens</td>
<td>Land Access</td>
<td>water, tools, shed</td>
</tr>
<tr>
<td>Communally Managed Gardens</td>
<td>Land Access</td>
<td>water, tools, shed</td>
</tr>
<tr>
<td>Animal Husbandry</td>
<td>Land Access</td>
<td>water, place to store feed, shelter for animals</td>
</tr>
<tr>
<td>Market Gardens</td>
<td>Land Access</td>
<td>water, tools, shed, selling space, proximity to market and/or transportation access</td>
</tr>
<tr>
<td>Resource &amp; Material Centers</td>
<td>Materials</td>
<td>vehicle access, storage, tools and tool shed</td>
</tr>
<tr>
<td>Nurseries &amp; Greenhouses</td>
<td>Materials</td>
<td>water, structures, access, compost station(s), toilet and sanitation</td>
</tr>
<tr>
<td>Education/Training Center</td>
<td>Education</td>
<td>proximity to potential audience and/or transportation access, growing site, seating areas which are sheltered from noise, work spaces, compost facilities, toilet facilities</td>
</tr>
<tr>
<td>Value-Added Centers/Community Kitchens</td>
<td>Distribution &amp; Processing</td>
<td>sanitary conditions for production, transportation access, water, electricity, sewage hook-ups, waste disposal</td>
</tr>
<tr>
<td>Farm Stands and Farmers Markets</td>
<td>Distribution &amp; Processing</td>
<td>accessible by public transport, market stalls of some sort, water, toilet facilities, sanitary hand washing facilities</td>
</tr>
</tbody>
</table>
Appendix J: Additional City Support for Urban Agriculture

Excerpt from Executive Directive on Healthy and Sustainable Food Summary Report

- Street Parks is a partnership between Department of Public Works (DPW), the San Francisco Parks Trust and the residents of San Francisco to develop and create community managed gardens on public rights of way owned by DPW. Information about the Street Parks program is available at: http://www.sfpt.org

- DPW also operates an Urban Gleaning Program to help collect and distribute food grown from trees and community gardens for distribution to shelters, food banks and other communities of need. More information about this program is available at: www.sfdpw.org.

- The Community Challenge Grants is a community based fund administered by the Office of the City Administrator that provides matching grants to local residents, businesses, non-profits and other community groups to make physical improvements to their neighborhoods. Awards are given two times each year. The January 2010 awards include funding for 10 garden projects, and 1 project installing landscaping around a new farmers market – with total funding amounting to $257,512. The October 2010 Community Challenge Grants awarded a total of $40,000 to two urban garden projects.

- Other city agencies that support urban agriculture either through land, funding, supportive partnerships are:
  - San Francisco City Administrator’s Office (administers Community Challenge Grant Program)
  - San Francisco International Airport (provides land for San Bruno Community Garden (4-H club), New Belle Air Elementary school garden, organic garden operated by staff)
  - San Francisco Real Estate Department (supports gardening projects on public lands – Hayes Valley Farm, Tenderloin People’s Garden, Growing Home Community Garden, and pilot bee hives installation on City owned building)
  - Office of Economic and Workforce Development (supports gardening projects on public lands)
- San Francisco Sheriff's Department (provides land and support for the Garden Project – www.thegardenproject.org)
- Juvenile Probation (provides land and support for garden at Log Cabin Ranch)
- San Francisco Public Library (installed new gardens at neighborhood branches (Mission and Noe Valley), plan to install additional gardens, operates programming to support sustainable gardening)
- Mayor's Office of Neighborhood Services (supports community groups interested in gardening)
- Mayor's Office of Housing (provides land for the Please Touch Community Garden)
- San Francisco Department of Public Health (supports Growing Home Community Garden, Bret Harte school garden)
- San Francisco General Hospital (staff and volunteers operate Community garden)
- Laguna Honda Hospital (staff and volunteers operate a garden and therapeutic animal husbandry program)
- San Francisco Fire Department (providing land)
- Academy of Sciences (installed living roof)
- Treasure Island (planning 20 acre farm)
- San Francisco Unified School District in partnership with the San Francisco Green Schoolyard Alliance promotes and supports a thriving school garden network in San Francisco’s schools - http://sfgreenschools.org/.

The Laguna Honda Hospital Replacement Program includes a healing garden (center) with ground level and raised beds, a greenhouse, and stalls for small animals.
Appendix K: Case Studies

Name: City Slicker Farms (CSF)

Website: http://www.cityslickerfarms.org/

Location: Oakland, CA

Organization Type: CSF is a not-for-profit urban farm model. It organizes low-income communities to achieve equal access to fresh, healthy, organic food through four programs:

- Community Market Farms Program
- Backyard Garden Program
- Urban Farming Education Program
- Policy Advocacy Initiative

Ag model: CSF currently consists of seven Community Market Farms (spaces open to the public), over 100 backyard gardens, a weekly farm stand, a greenhouse, and Urban Farming Education Programs. CSF also has a Policy Advocacy Initiative, which re-imagines green space in the inner city for food production, engages residents in environmental education, and serves as a model for urban green growth.

Organic status: CSF produce is not currently certified organic, but is locally grown and sustainable. CSF staff use the University of Massachusetts Soil and Plant Tissue Testing Laboratory to test soil prior to all garden development to determine if and what soil remediation is needed.

Primary products: Lettuce, salad greens, and culinary herbs, and over 15,000 seedlings grown in the Ralph Bunche School Nursery for use in local community gardens.

Supplemental products: Educational component.

Other features: Compost – CSF collects restaurant food waste and horse manure for vericomposting to support bio-intensive farming.

Revenue streams: As a not-for-profit, CSF can receive government funding and tax-deductible donations.

Strategic emphasis: Community activism, food justice, locally grown food, education.
**Name:** Gotham Greens

**Website:**
http://gothamgreens.com/

**Location:** New York, NY

**Organization Type:** Gotham Greens is a for-profit limited liability corporation. It grew out of New York Sun Works, a non-profit organization that designed and managed the Brooklyn Science Barge project.

**Ag model:** Gotham Greens grows all produce in Brightfarms’ hydroponic systems in a greenhouse in Greenpoint, Brooklyn.

**Organic status:** Gotham Greens’ produce is not USDA certified organic. It does have a strong commitment to sustainability, evidenced by Gotham Greens’ desire to tailor a solution to the unique demands of their geographic location. The website describes practices that reduce water and energy usage while decreasing waste and increasing efficiency.

**Primary products:** Lettuce, salad greens, and culinary herbs.

**Supplemental products:** None described.

**Other features:** Reusable compostable packaging; year-round availability of produce due to greenhouse and hydroponic system.

**Revenue streams:** Selling greens, lettuces and herbs to chefs and retailers.

**Strategic emphasis:** Quality, availability and localism.
Name: Greensgrow Farms

Website: http://www.greensgrow.org/farm/index.php

Location: Philadelphia, PA

Organization Type: Greensgrow Farms is an initiative of Greensgrow Philadelphia Project, a 501(c)(3) nonprofit organization whose mission is to aid the development of green businesses as an alternative to abandoned land and a potential for neighborhood revitalization.

Ag model: Hydroponics and raised beds.

Organic status: Do not use pesticides or herbicides but not certified organic. “Local trumps organic.”

Primary products: Vegetables, fruits, honey, artisanal cheeses, hormone-free meats, eggs, and freshly baked breads. Also have a nursery offering bedding plants, perennials, vegetable starters and hanging baskets.

Supplemental products: Self-guided tours of operations, including lessons in composting, hydroponic growing, and raising bees.

Other features: Making biodiesel with waste oil.

Revenue streams: Nursery, farm market, and CSA program.

Strategic emphasis: Promoting social entrepreneurship through the reuse of land once deemed useless.
**Name:** Growing Power (Similar model: Sweet Water Organics in Bayview, WI)

**Website:** [http://www.growingpower.org](http://www.growingpower.org)

**Location:** Milwaukee, WI & Chicago, IL

**Organization Type:** Not-for-profit, including significant community education and outreach aspect

**Ag model:** Mixed greenhouse, aquaponics, apiary, poultry, small livestock

**Organic status:** Follow organic practices, but not certified

**Primary products:** Herbs, salad mix, micro greens, tilapia, perch

**Supplemental products:** sunflower, other fruits and vegetables, mushrooms, honey, duck and chicken eggs, goat milk, turkey, rabbit, decorative house and bedding plants, pet supplies, etc.

**Other features:** Significant compost and vermicompost operation, anaerobic digester for energy generation

**Revenue streams:** Retail store, market basket subscription (including school fundraiser program), farmers market (including direct-to-restaurant outreach and marketing), workshops and training series, coordination of regional cooperative. Growing Power obtains funding from four major sources: grants, fee-for-service programs, product sales, and contributions, with approximately half of budget coming from fee-for-service programs.

**Strategic emphasis:** Highly quality, local food, community outreach, educational services
Name: Little City Gardens

Website: http://www.littlecitygardens.com/

Location: San Francisco, CA

Organization Type: A small farm that grows, sells and distributes fresh food within the City. Also operates as an educational site.

Ag model: ¾ acre garden site specializing in salad greens, with additional smaller culinary herb and flower garden.

Organic status: Follow organic practices, but not certified.

Primary products: Specialty salad mix, cooking greens, root vegetables, herbs, cut flowers.

Supplemental products: Week-by-week CSA subscription provided on a sliding scale, educational workshops.

Other features: The farm operates as an experiment of the economic viability of small-scale urban gardening in San Francisco.

Revenue streams: In addition to selling direct to local restaurants, Little City Gardens will begin to offer a CSA subscription this year. Workshops are offered through collaborations with San Francisco City College and Garden for the Environment. Online retail store features posters, sticker pack, and the zine Germination created by the two farmers.

Strategic emphasis: Hyper-local produce, community outreach, educational services and aesthetic experiences.
Appendix L: Interviews

Interview: Keith Agoada, Hydroponics Expert

Organizations: Sky Vegetables

“No matter what, you won’t make everyone happy. But you can find a niche that does support this.”

What are best practices for hydroponics?
- Figure it out by testing. Becomes like a manufacturing model.
- Greens and herbs work best for small-scale operations; not enough scale to compete on flowering crops.
- Wheatgrass is highly profitable. Grows in 10-14 days and a flat can sell for $10.
- Special crops that cannot withstand transportation are an attractive option (such as French strawberries).

What is the best way to estimate prices and yields?
- Turnover of inventory and production is key. Lettuce takes 3.5 weeks to grow, but hydroponics can be grown on top of each other, maximizing space.
- Every farmer has different yields; university researchers are good sources for information, but their numbers should not be relied upon (University of Arizona, Rutgers, Cornell, Cal Poly San Luis Obispo, Rodale Institute).
- Direct to consumer pricing is better, but also more spoilage.
- Wholesale pricing is about 1/2 of what you see in retail. Some markets may give you more if they support your mission.
- High-end restaurants will pay close to the farmers’ market price.

What are the key operating costs and requirements to consider?
- 12,000-15,000 sq.ft. farm needs a general manager and likely an assistant manager and two part-time technicians. Labor is a significant cost.
- Investment is high for rooftop farming. Capital outlays include various kinds of engineers, lawyers, permitting and structural changes to meet load bearing requirements and other regulations (ADA, etc.)
- Deep culture or raft system set-ups are pretty low tech and could have substantially lower pricing. Nutrient Film Technique (NFT) is more technologically advanced. Howard Resh is an expert in hydroponics.
- For most of the roofs here you would have to build a sub-roof (roof on top of the roof) – better than trying to re-engineer. Wind load and seismic issues are challenges unique to San Francisco.
Interview: Kevin Bayuk, Permaculture Expert

Organizations:
- UC Berkeley
- LIFT Business Coaching
- Urban Permaculture Institute

“SF is a frustrating exercise in potential quantity.”

CUA market opportunity?
- Extremely modest (basically an afterthought).
- 100 people working in UA now, all of them selling high margin premium, rare boutique product to restaurants that emphasize local.

Potential ways to utilize UA?
- Home scale production with surplus exchange is a viable model but not necessarily for profit.

UA Buyer market:
- We have foodie movement/affluent culture that can afford and appreciate higher value product.
- Restaurant industry loaded with high-end offerings.
- Farmers market connoisseurs.
- Direct to consumer/market stand (possible, but small market).

What would you/do you grow in SF?
- Two kinds of lettuce, Italian spinach, radishes, leeks, chives, parsley, tarragon, rosemary, oregano, lavender, sage, mustard greens, high-end bitter Italian greens and lots of sweet basil.
- Drought tolerant Mediterranean herbs that require no irrigation are low maintenance, easy to harvest, and high margins to labor.
- Mineral rich and vitamin rich foods that spoil quickly, preferred fresh
- Fruit trees, soft fruit.
- Root crops and potatoes in sandy soils in the low lands.

Biggest constraints? Why?
- Primary constraint is space, of course.
- 70% of SF is rooftops.
5,000 acres of SF backyards is cultivatable (including fire escapes...). Backyards are attractive because everything you need is there (water source, food scraps to go back to compost...).
Interview: Meg Burritt, Purchaser

Organization: Veritable Vegetable (VV)

How does VV engage new producers?
- By teaching them how to sell into the market. For example, there’s standard packaging (ex. onions come in forty pound bags) producers need to know about.
- Also, teaching about the presentation of products. Grocery stores want it trimmed so that it looks like what the consumer wants to buy.
- VV will take a grower on if they have a consistent supply and educate them over time.

What makes VV unique?
- VV buys as much as they can from as many producers as they can.
- VV carries everything for restaurants that you would find in the produce section of the grocery store. The product often doesn’t hit the warehouse floor due to sales channels. This is really efficient for everyone; they need fewer warehouses, no spoilage, etc.
- They pick up daily when possible.

Do you have advice or words of wisdom for aspiring urban gardeners in San Francisco?
- Huge variability of pricing depending on supply and season.
- What’s “hot” in the market can change quickly.
- Most costs get passed to customer and end user.
- Product ideas/recommendations: Herbs, mizuna, chicory, and unique offerings.
- Consistent washing and standard product packaging is important.
- Consistent supply as well as quality product is important.
- VV doesn’t currently buy anything hydroponic but they are open to buying new things.
- Restaurants seem like they are interested in hyper local right now.
Interview: Temra Costa, Author

Organization: Farmer Jane

Temra is an expert in urban farming. Her focus is on women’s contributions to farming in recent decades.

“If you can grow it, the people, restaurants and grocers of SF will buy it.”

Thoughts on the biggest challenges facing urban agriculture in San Francisco and how they can be overcome:

- Efficiency of scale. Most successful (large) organic farms are finding their sweet spot at 250 to 500 acres to effectively compete with Del Monte, Dole, etc. Efficiency applies to small urban farms even more.
- Support of community is key. Benefit is that in a crisis, your community will support you.
- People will buy whatever you can grow. Bi-Rite and other local markets and restaurants want to feature local products and produce.
- An educational component can provide an additional fee for service.
- People desire connection with the seasons. Marketing can connect your farm to these buyers.
- Consider making the farm an education hub for other small growers.
- Donate 1% of farm profits to education or create a non-profit arm of the farm.
- Support City measures to allow small animal husbandry.
- San Francisco consumers are very discerning about the design of the products they buy, even how their produce is presented. Consider partnering with a design team to market products thoughtfully.
- Aggregate a website or design service to assist other small local farms to promote themselves.

How did you become involved in urban agriculture and farming in general?

- In 1998, Temra became involved in an ag. program at the University of Wisconsin.
- Heeded a call to action by the Center for Food Safety when GMO issues began to rise.
- Local agriculture and increased fuel costs could provide a solution to U.S. dependence on food imports.
- Wrote Farmer Jane because in response to realization that burgeoning food movement is dominated by women.
- Currently involved in a value-added seasonal produce operation in Sonoma County.
Interview: Dexter Carmichael, Director of Operations

Organization: The Center for Urban Education about Sustainable Agriculture (CUESA)

Dexter is responsible for Ferry Plaza Farmers Market (FPFM) operations.

Thoughts on the traits of the most successful vendors at FPFM:
- Localism is a card that can be played as a strong selling point for vendors’ produce and products.
- Each grower is a salesperson and has to make the case for their product when connecting with consumers.
- The physical presentation of the booth is very important.
- FPFM regulars appreciate and respond to artisan, high quality produce and products.

What are some of the details of the application process to be a produce vendor at FPFM?
- Vendors need to obtain a producer’s certificate from the County Agricultural Commissioner/Department of Public Health (need to state product, expected yields, seasonality, etc.).
- Vendors that make less than $5,000 a year don’t need to certify as organic with the CA Department of Food and Agriculture.
- FPFM is the most expensive San Francisco farmers market for vendors - $45/per event per booth on Tue/Thurs; $50/per event per booth on Sundays. It also has infrastructure most farmers markets don’t have: restrooms, offices, food hall, etc.
- Space isn’t really an issue at FPFM, there’s more room for vendors, just not premium space.
- Vendor booths have to have an awning, per county health regulations.
- Vendors must use a certified kitchen if they are going to process food.
- Insurance is probably the biggest expense farmers market vendors incur. Note that insurance for these operations can generally be added to homeowner or renters insurance.
Interview: Yaron Milgrom, Owner

Organization: Local Mission Eatery

What portion of your current food purchases do you consider local? What sort of local goods do you buy?
- Everything except for coffee, vanilla beans, peppercorn and sugar are sourced locally (within 100 miles or less) from Marquita Farms and from farmers markets.
- Even these exceptions are sourced from locally owned companies, never from purveyors.
- In some ways this approach is more expensive, but in other ways it’s cheaper. Meat is more expensive.
- Local Mission Eatery has a small (few acre) farm in Lodi, but can’t grow enough.

How do customers respond to your efforts to keep it local? How do you publicize it?
- Customers respond well.
- People presume that localism is more widespread than it actually is.
- The difference at Local Mission Eatery is that food isn’t sourced locally when possible – it’s always the case. Feature lots of info on website.
- People ask about meat and poultry more than anything else.

What level of interest do you have in buying San Francisco grown food? What would your buying criteria be? Would you be willing to pay a premium price?
- Overall not more interested in buying things that are grown within SF. Already sourcing locally. Two miles isn’t substantively different than fifty if other factors like sustainability are factored in.
- Other determinations are: quality, consistency, volume and reliability.

What’s your opinion on how to make UA successful in San Francisco?
- Biggest opportunity is for special products and to grow produce by request.
- Local Mission Eatery gives seeds to some farms to grow specific items. Examples include Tokyo turnips, specialty radishes, and edible succulents.
- Might be better to target consumers directly because of the cost.

Sample Order Lists (serving 400 people/week)

<table>
<thead>
<tr>
<th>75 lbs. carrots</th>
<th>100 lbs. potatoes</th>
<th>50 lbs. red onions</th>
</tr>
</thead>
<tbody>
<tr>
<td>80 lbs. navel oranges</td>
<td>80 lbs. lemons</td>
<td>40 lbs. blood oranges</td>
</tr>
<tr>
<td>25 lbs. of arugula</td>
<td>50 bunches of braising greens</td>
<td>6 bunches thyme, chervil, parsley, rosemary, sage, etc.</td>
</tr>
</tbody>
</table>
Interview: Karla Nagy, Program Manager

Organization: Kitchen Garden SF

“What we can’t grow is small compared to what we can grow.”

What’s popular and grows well in San Francisco?
- Squash, tomatoes, peppers, zucchini in the Mission.
- Broccoli, cabbage, chard, leafy greens grow well in cool areas.
- Fruit trees do well here.
- Challenges exist with soil and microclimates.

Thoughts on the biggest challenges facing urban agriculture in San Francisco and how they can be overcome:
- Access is an issue. Kitchen Garden SF does primarily residential backyards, but if you’re doing something on a larger scale, access can be a major issue.
- Materials - Kitchen Garden SF goal is to use recycled reusable materials, but some materials like compost are hard or impossible to get for free. Challenge is to keep cost affordable so that anyone can get a garden. Share plant material, have seedlings for free.
- Wind and water. Water bills can be extremely high. How do we stay mindful of our Mediterranean climate and reduce the use of our demand for water? Take advantage of dry farming, fog, rainwater catchment, grey water, and grow crops that reduce the demand for water.

What would have to happen for you to do this full-time?
- Would need a sustainable income for staff - could be a grant, fee for service, etc.

What perception issues that you face with growing in the city?
- A lot of people have concerns and fears.
- Concerns about lead, soil toxicity. A lot of room for research on what we really need to be concerned about and careful of.
Interview: Mark Pastore, Owner

Organization: Incanto Restaurant

What portion of your current food purchases do you consider local? What sort of local goods do you buy?
  - Almost all. Incanto purchases about 85% of produce from farmers markets, and works with Marquita Farms in Watsonville for the rest; they deliver twice a week.
  - There is more push than pull from the restaurant in terms of varieties. Incanto head chef Chris Consentino has given Marquita some seeds to help them become more differentiated.
  - Buying directly from Marquita and other farmers ensures that there is similar quality as when Incanto buys from a distributor. Decisions on who to buy from are made on a product-by-product basis.
  - Incanto grows high impact herbs on the rooftop garden: thyme, mints, rosemary. No basil or parsley because need too much to grow on limited rooftop space. Also grow neptella, a rare Italian herb.
  - Incanto makes everything in-house and doesn’t buy any value-added items.

What level of interest do you have in buying San Francisco grown food? What would your buying criteria be? Would you be willing to pay a premium price?
  - Depends on what SF farms have to offer. Interested in publicizing use of SF grown produce. Would look for freshness and quality. Drawn to unique options like yuzu or neptella. Most likely to buy if something is really compelling. Might be willing to pay a premium for what’s grown in the City.
  - Also would like to see consistently good products over the course of the seasons through farmers market channels, for example. Reliability is a concern. Chefs and restaurateurs are crisis-driven people, and lack of reliability is death.
  - Skeptical of SF urban ag as Incanto has its own rooftop garden. Any artisanal business faces a scale problem. Just because something is grown in SF doesn’t make it better. Economic viability and competitiveness is challenging.

Do you have advice for urban farmers?
  - Consider direct channels for distribution.
  - 80-90% of sales should go directly to consumers, not to middlemen like restaurants. The margins at wholesale are not as robust as at resale.
  - It’s better to turn the produce into value-added products as much as possible.

What about the purchasing process at Incanto?
  - Restaurants expect 5-30 days credit, but there is cash for retail. Restaurants are notoriously bad buyers.
  - Difference in price for consumers vs. restaurants is about 15%.
Interview: Karen Peteros, Expert Beekeeper

Organization: SFBeecause

“Honey is one of the most local things you can get.”

Thoughts on urban honey:
- Perceived as better honey because city beekeepers are stationary, not migratory like commercial beekeepers (which stresses the bees).
- Urban beekeepers do not use mitocides or antibiotics.
- Conventional honey is clear and liquidy because it has been pasteurized and filtered – reduced health benefits with this method.
- There is enough flora everywhere in SF. Bees- Eucalyptus, acacia, plum, magnolias… SF honey will not just be one type.
- Honey from different neighborhoods taste distinctly different.
- Honey never goes bad.

Thoughts on the beekeeping business:
- Would start with two hives on a one-acre space if growing vegetables.
- A commercial kitchen is not necessary to sell honey (no processing/canning).
- Honey gets extracted from comb by centrifugal force, spun out. Extractors cost about $900, but you can borrow one from beekeeping club.
- Can sell chunks of honey with the wax.
- Wholesale SF honey goes for about 50 cents/oz. ($16/lb.).
- Her Majesty Secret Beekeeper was selling honey for $32/lb.
- Robert MacKimmie Full time beekeeper in SF (CityBees.com).
- Alemany farm has about 15 hives.
- Yields - Best case 150 lbs. in one year. Average about 40 lbs. Results are extremely varied.
- Traditional beekeepers rent for using a backyard/roof is 1 gallon honey/year
- Can make about $1,000 per hive per year.
- Can sell nucleus colonies for about $150 each (queen/few bees/frame). A better way to go in terms of making money off of apiculture.
- Product liability policy for $100k, $470 per year.
- Probably about 200 beekeepers in the city and about 400 managed hives.
- The 1996 SF Sustainability Plan set goal for 5% of honey consumed in SF be produced in the city.
Interview: Antonio Roman-Alcalá, Filmmaker and Urban Farming Activist

Organizations:
- Alemany Farm
- Hayes Valley Farm
- San Francisco Urban Agriculture Alliance (SFUAA)
- SF Permaculture Guild

Thoughts on the biggest challenges facing urban agriculture in San Francisco and how they can be overcome:
- Challenges on a local level: lack of available land and high land prices, soil toxicity, water availability, and (occasionally) an uninformed or unappreciative public.
- Challenges on a macro level: capitalism's drive for growth and profit over all else; a political economy that has emphasized cheap mass produced foods and convenience (e.g. the federal Farm Bill subsidies); a loss of food culture and connection to the processes of growing and eating food.
- Ultimately, in a legal system that dictates the right to property as predominant among all other interests, it will always be hard to make space for a land use function that is not very economically lucrative (especially in comparison to high-valued industries like real estate, bio tech, computers, etc.) and serves mainly to enhance local non-economic health.
- To overcome challenges?
  - Municipal support for soil testing/remediation and water.
  - Education to have a better-informed public about food systems issues.
  - Land? That's a tough one. Land trusts perhaps can help...philanthropy can do something but not much...zoning regulations and taxation, requirements for green/agricultural spaces in developments, something to address liability concerns for property owners who would like to let others farm their property.

Thoughts on the viability of growing food in San Francisco:
- More expensive by far in terms of square footage, mainly due to land prices.
- Economies of scale obviously work against any urban farm effort, which by nature is small.
- Even well run organic farms selling to high end restaurants have a hard time making substantial profits, indicating that NO produce-related product has high enough margins to make urban farming that economically viable. Perhaps value added products like jams could change this? Raising and selling animal products, also, is possibly more lucrative than produce alone. Perhaps as the city gentrifies further, there will be enough fancy restaurants with enough purchasing power to really splurge on hyper-local.
Interview: Marcus Trigueros, Worker-Owner, Store Spokesperson

Organization: Rainbow Grocery Cooperative

Thoughts on the desirability of San Francisco produce:
- SF farmers could absolutely charge a premium for local produce. Of course because SF has a particular climate, farmers would have to be savvy with what can bloom in this kind of weather.
- Local honey is an example of a product that demands a premium price. Rainbow sells honey from the Mint area in the Castro, from the Potrero Hill district as well as South SF.

Would Rainbow be interested in selling local produce that isn’t certified organic?
- Organic standards can be price-prohibitive for a small farmer. In addition, with organic standards being watered down, produce buyers are open to other options/certifications.
- Rainbow would be interested in selling produce that isn’t necessarily certified organic if there was some way to test it and provide reliable standards and quality assurance. People expect Rainbow to provide produce they can feel safe about consuming.
- Another concern is the issue of scale and predictability. If a producer can’t deliver on their promise to provide certain goods at specific times, that means an empty shelf or section in the store, which is not acceptable.

Do you buy from distributors?
- It depends. Some distributors are dependable and source from specific farms. Sometimes Rainbow will buy directly from farmers, for example heirloom produce, or if distributors’ sources are subpar.

Are there particular steps a farmer could take to ensure Rainbow buys their produce?
- Best resource for this is the Rainbow grants program.
- The Rainbow produce department is somewhat autonomous and might not be interested in collaborating with specific farms.
- In order to satisfy requirements for the program, the farm would have to have the implementation and follow-through of providing produce to the store worked out, especially for specialty items.
- If the demands Rainbow has could be satisfied, then a relationship could be promising.
Interview: Eli Zigas, Director, Co-Coordinator

Organizations:
- Cultivate SF
- San Francisco Urban Agriculture Association (SFUAA)

“I would like to see commercial urban agriculture in every city.”

Thoughts on the best produce to grow in the City:
- Typically, greens, heirlooms and garden mixes grow well here.
- Little City Gardens comes the closest on having real data on the margins that can be received for local produce.
- Consider transportation when choosing which products to grow. For example, if bicycles are a primary medium for deliveries, produce should not be too heavy and needs to stack well.
- Choose produce and products that can be sold at a premium.
- The permaculture garden at 18th and Rhode Island has a great variety of the types of produce that can be grown locally.

Thoughts in regards to the quality of produce grown in an urban setting versus produce grown in rural areas?
- Compare actual urban conditions for farming with typical rural conditions. Many prime farmlands in California are located along polluted Highway 101 and Interstate 5.
- With education and awareness, consumers should not have additional concerns about produce grown in urban versus rural settings.
- The key to soil remediation is awareness and testing. The University of Massachusetts Amherst Soil and Plant Tissue Testing Lab is available to test soil samples for lead.

What attracted you to urban farming?
- Originally enticed by the extra income.
- Extra benefits realized are having a connection to the local community, knowing the source of food, familiarity with ecological cycles, and increased nutrition.

What advice do you have for aspiring urban farmers?
- Learn from local commercial urban farm ventures that have failed. For lessons on the challenges facing urban agriculture, read about the demise of MyFarm.
- Obtaining data is key for start-up CUA, and there is considerable interest in doing this work. Political support and/or capital are needed.
- Obtaining space is a key variable.
Appendix M: Lively’Hood Farm Business Model

The following nine building blocks make up the Lively’Hood Farm business model, based on the guidelines of Business Model Generation (Osteralder & Pigneur, 2010). Future growth opportunities are shown in grey.

**Strategy Formulation**

1. **Customer Segments:**

An organization serves one of several customer segments. Types of customer segments include: mass market, niche market, segmented, diversified, or multi-sided platforms (Osteralder & Pigneur, p.21).

*Lively’Hood Farm Customer Segments:*

Lively’Hood Farm provides produce and value-added goods (i.e. jams, pickles, sauces, etc.) to a select niche market of local San Francisco-based restaurants, grocery outlets, and local residents.

**Examples:**

- **Select Grocery Outlets:** Rainbow, Bi-Rite, Real Foods
- **Restaurants:** High end restaurants like Tartine Bar, Range, Gratitude, Locavore, Local Mission Eatery, Slow Club, Incanto
- **Individuals:** onsite purchase: collard greens; local honey; whatever is fresh and available daily

**Future Growth Opportunities:**

- **Institutions:** hospitals; schools; universities; businesses; other organizations with regular food production & catering.
- **Educational Workshop Attendees:** Onsite educational workshops on permaculture as well as workshops held at local schools and other organizations.
- **Individuals:** through CSA membership, such as monthly herb bags.
2. Value Propositions:
The value propositions building block describes the bundle of products and services that create value for a specific customer segment. Types of value offerings include newness, performance, customization, ‘getting the job done’, design, brand/status, price, cost reduction, risk reduction, accessibility, or convenience and usability (Osteralder & Pigneur, p. 25).

*Lively’Hood Farm Value Propositions:*
Lively’Hood’s proximity to its customers gives it an advantage over all produce grown outside the City, due to its freshness, speed of delivery, and small-scale, customizable orders. The Lively’Hood brand will be established on the basis of providing safe, convenient, fresh and healthy produce to San Francisco residents, working with the specific needs of our customer partnerships.

**Examples:**

- **Locally grown:** regional, naturally hardy produce that grows well in San Francisco’s unique climate, as well as honey and other value-add goods made locally
- **Fresh:** healthy, higher nutrient content due to freshness
- **Neighborhood Pride:** local and trusted San Francisco brand and source
- **Customized orders:** meeting increasing demand

3. Channels:
The channels building block describes how a company communicates with and reaches its customer segments to deliver a value proposition. Types of channels include communication, distribution, and sales. There are five phases of channel development: awareness, evaluation, purchase, delivery, and after sales (Osteralder & Pigneur, p. 27).
**Lively'Hood Farm Channels:**

Lively'Hood Farm reaches its customers through a variety of channels specific to the customer segments we are targeting above. Individual sales occur through direct retail channels onsite, and at farmer’s markets. Other channels include partnerships with select restaurants and grocery outlets.

**Examples:**

- **Direct distribution:** to select grocery outlets and some restaurants. This could occur with a bio-diesel vehicle or small fleet of bicycle delivery carts.
- **Third party distribution:** partnership with distributor(s) who transport bulk orders to grocery outlets and restaurants
- **Individual sales:** onsite sale of produce to individuals
- **Farmers market:** for higher yields / sales to individuals

**Future Growth Opportunities:**

- Co-branding with restaurants
- Web-based CSA membership base

**4. Customer Relationships:**

The customer relationships building block describes the types of relationships a company establishes with specific customer segments. Motivations include customer acquisition, customer retention, and sales boosting. Types of relationships include personal assistance, self-service, automated services, communities, and co-creation (Osteralder & Pigneur, p. 29).

**Lively'Hood Farm Customer Relationship:**

Lively'Hood Farm actively builds community around local, sustainable food. We also co-create fresh produce orders, based on customers’ needs.
Examples:

- **Personal**
- **Co-creation:** specialty crop orders, serving boutique restaurant needs and offerings of specific grocery outlets
- **Community:** neighborhood pride and outreach to individuals for produce sale

Future Growth Opportunities:

- Web-based CSA membership
- Community development: online and through educational workshops
- Web-based CUA resource: aggregation of other urban agriculture producers

5. Revenue Streams:

The revenue streams building block represents the cash a company generates from each customer segment (costs must be subtracted from revenues to create earnings). There are two types of revenue streams: transaction revenues (one-time purchases) and recurring revenues (on-going payments for value proposition). The methods include: asset sale, usage fee, subscription fee, lending/renting/leasing, licensing, brokerage fees, advertising, as well as fixed pricing and dynamic pricing (Osteralder & Pigneur, p. 33).

*Lively'Hood Farm Revenue Streams:*

Most of Lively'Hood Farm’s produce would be purchased through recurring revenues from partnerships with local grocery outlets and eateries. Individuals may also purchase produce and value-added goods onsite, and at select farmers markets. Due to the nature of the product, the Farm would utilize ‘dynamic pricing’ for produce, depending on availability and market conditions. Value-added goods and educational workshops would generally use fixed pricing.

Examples:

- **Transaction purchases:** with select grocery outlets, select restaurants, onsite at the farm, and through select farmer’s markets
Future Growth Opportunities:

- **Recurring payments**: CSA membership payments
- **Recurring payments**: from contracts with restaurants
- **Transaction purchases**: through retail outlets (mainly restaurants) selling value-added goods
- **Transaction purchases**: online/in person for educational workshops

6. Key Resources:

The key resources building block describes the most important assets required to make a business model work. Types of key resources include physical, financial, intellectual, and human (Osteralder & Pigneur, p. 35).

*Lively’Hood Farm Key Resources:*

The Lively’Hood Farm requires a one-acre space on open land, in a warehouse, or on a rooftop. Various materials are required, depending on the type of farming practice, i.e. hydroponic farming, raised beds, covered greenhouse, supporting tools, etc. Seeds, soil, fertilizer, light, and water are continuous resources the farm will need. A means of delivery is also needed, unless Lively’Hood partners with a distributor. Knowledge and training are also prerequisites for operating the farm. The initial investment will require the appropriate start-up capital and a line of credit to operate the farm.

**Examples:**

- **Physical**: space, land, seeds, tools, fertilizer, water, light, nutrients
- **Intellectual**: knowledge and training in urban agriculture, as well as branding, marketing, and business operations
- **Human**: skilled labor
- **Financial**: start-up capital and line of credit

7. Key Activities:

The key activities building block describes the most important things a company must do to make its business model work. Types of key activities include: product development /
production, supply-chain management, problem solving, and platform/network (Osteralder & Pigneur, p. 37).

*Lively'Hood Farm Key Activities:*

The obvious key activity of the Lively'Hood Farm is *farming*. The Farm is considered a ‘production’ model and all the key activities surrounding production models would apply.

**Examples:**

- Marketing / Sales
- Logistics
- Administration and financial management
- Optimization (of the farming practices)
- Planning
- Processing (for value-add goods)

**Future Growth Opportunities:**

- Web development
- Educational Curriculum Development

**8. Key Partnerships:**

The key partnerships building block describes the network of suppliers and partners that make the business model work. There are four types of partnerships: the strategic alliances between non-competitors; ‘coopetition’ partnerships between competitors; joint ventures developing new business; and buyer-supplier relationships to assure reliable supplies. Three motivations for partnerships include: optimization of economies of scale, reduction of risk and uncertainty, and acquisition of particular resource and activities (Osteralder & Pigneur, p. 39).

*Lively'Hood Farm Key Partnerships:*

The Lively'Hood Farm would initially utilize primary partnerships to reduce risk and
acquire a strong customer base. As they grow, they may also create *coopetition* partnerships with other commercial agriculture farms.

**Examples:**

- **Buyer-Supplier:** primary partnerships with buyers, such as grocery outlets and select restaurants, as well as some farmer’s markets
- **Strategic alliances:** community outreach and neighborhood price would ensure individual sales relationships

**Future Growth Opportunities:**

- **Coopetition with other CUA:** web-based aggregation of CUA producers, farmer’s market distribution, educational organizations
- **Coopetition with Farmer’s Markets:** partnerships with farmer’s markets.
- **Coopetition with Educational Organizations:** partnerships with other educational organizations that would hold workshops at the farm, or contract with knowledgeable Lively'Hood employees to teach workshops at their school.
- **Strategic Alliances:** partnerships with commercial kitchens to produce some of their value-added goods

**9. Cost Structure:**

The cost structure describes all costs incurred to operate a business model. Cost structure is either cost-driven or value-driven. Characteristics include: fixed costs, variable costs, economies of scale, and economies of scope (Osteralder & Pigneur, p. 41).

**Lively'Hood Farm Cost Structure:**

Though costs of operations will be reduced wherever possible, the main cost structure of the Lively'Hood Farm is value-driven. Customized orders and daily offerings of fresh, local, sustainably grown produce will be sold at a premium for their limited quantity and superb quality.
Examples:

- **Fixed costs:** grower permit, equipment, tools, structure
- **Variable costs:** consumables, seeds, fertilizer, nutrients, water, as well as labor, packaging, insurance, taxes
- **Economies of scale:** bulk orders from grocery outlets could bring down price, while securing the demand for produce and value-added goods. Educational workshops could also be offered at reduced price for larger groups.

Future Growth Opportunities:

- **Economies of scope:** Lively'Hood could offer web hosting to other UA models, aggregating a variety of agrifood offerings. Lively'Hood Farm could also share resources, such as accounting and other expertise used on the farm.
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Trigueros, Marcus. Public Relations Committee, Rainbow Grocery Cooperative.
Companion Documents


About the Authors

Miranda Leonard focuses on providing full circle events that bring training, education and engagement to diverse stakeholders. She has a background in planning events for non-profit organizations working to promote environmental and social justice. Previous productions include countywide coastal cleanup days, gala fundraisers and concerts, and professional conferences. She has organized diverse outreach efforts such as onsite pesticide safety training for indigenous Mexican farm workers, life skills workshops for youth exiting the foster care system, and green building training for school districts and their design teams. Miranda graduated from Cal Poly San Luis Obispo in 2002 with a degree in Modern Languages and Literature (Spanish and French), and spent a year abroad in Granada, Spain. For five years, Miranda volunteered as a DJ for a local public radio station, hosting weekly live music programs. She is a candidate for a MBA in Sustainable Management from Presidio Graduate School. Miranda is fluent in Spanish.

Shivani Ganguly founded Friday Consulting in 2009 to support food and technology businesses by building sustainable business models and infrastructure. Her clients include 18 Rabbits, the Napa County HHSA, SomaFM, and Windowfarms. She also works with AchieveMission to provide management consulting services to nonprofits. Previously, Shivani was Sr. Director of Human Resources and Business Operations at OQO, where she was a member of the executive team that created the world’s smallest personal computer. Shivani held similar positions leading finance, human resources, and operations for start-up technology companies and nonprofits before joining OQO. She has volunteered with several nonprofits, and is on the board of The Mosaic Project. Shivani received a Bachelors degree in Science, Technology, and Society from Stanford University, and is currently pursuing a Masters of Business Administration in Sustainable Management at Presidio Graduate School, with coursework focusing on food production and distribution systems.

Piper is a LEED accredited architectural designer with over a decade of experience in green building. She initiated two classes at UC Berkeley Extension’s Sustainable Design Program and actively volunteers with the US Green Building Council. Piper believes in the power of education and awareness and is inspired by grassroots community projects everywhere. Piper came to Presidio Graduate School seeking business acumen to solve some of society’s greatest problems and believes we should start by improving our existing built environment. In her spare time she enjoys tending her own backyard herb garden with her pet bunny Nigel, and a heavy dose of localism, taking in San Francisco’s many urban treasures by foot. Piper also enjoys exploring the unexplored, is an advanced open water diver, and loves trekking through rain forests across the globe.
Jennifer Wagner is a Principal at Mercer, Inc., a leading global consulting firm. She specializes in helping organizations align people-strategy with business priorities, and has advised a range of for-profit and not-for-profit companies on matters such as workforce planning, business performance measurement and employee engagement. Jennifer is a published author and frequently speaks on human capital topics. She has a strong interest in food and sustainable agriculture, and is a regular volunteer with related organizations and events. She is also a passionate global traveler, and has studied foreign languages in Italy and Mexico.

Jennifer graduated with a BA in Sociology and a certificate in Education from the State University of New York at Geneseo and is a 2012 candidate for an MBA in Sustainable Management at Presidio Graduate School.

Zachary Worthington entered the Presidio MBA program after starting, building, and successfully selling Cava Wine Bar in Capitola, Ca. During four years in the wine bar business Zachary excelled at growing the business while managing both the front and back of house operations. Zachary’s entrepreneurial spirit and passion for food systems motivated him to move his career to Presidio where he became involved with programs surrounding food education and urban agriculture. Zachary has a degree in Theater from Ohio University and enjoys public speaking and playing basketball. Zachary has visions of working with aquaponic systems, or anything else that contributes to the development of more sustainable agricultural models.

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