



I. The Offering

UrbanHarvest proposes to grow the healthiest, tastiest, most environmentally sustainable fruits and vegetables available anywhere and sell them to local institutions (hospitals, corporate cafeterias, schools...), local food distributors, grocery stores, and restaurants. UrbanHarvest will lease flat, obstruction-free spaces on the rooftops of large, urban and suburban commercial and industrial buildings. UrbanHarvest will then construct commercial hydroponic greenhouses on those leased rooftop spaces and grow fruits and vegetables. UrbanHarvest will then sell its products hyper-locally to customers within a 15-mile radius of the greenhouse that produces them. UrbanHarvest will initially concentrate on the Seattle area local fruit and vegetable market; the company's long term goal is expansion throughout the west coast of the United States.

II. Customer Problems and UrbanHarvest Solutions

a. Current Problems of Fruit and Vegetable Consumers:

- **The freshness of fruits and vegetables.** Most fruits and vegetables offered through current mainstream channels are mass produced on industrial scale farms, usually hundreds or thousands of miles from the end consumer. Leafy greens and tomatoes are highly perishable, but the mainstream industrial food system requires that many of these items travel for a week or more before reaching supermarket shelves. Many hothouse (greenhouse) tomatoes are grown for transport, not taste. They have tough skins, low sugar content and are picked while still green (which helps them endure the journey from Mexico, California, or Canada). Unfortunately, this causes the tomatoes to have a bland, watery taste and a tough consistency.
- **The price point of locally grown fruits and vegetables.** Locally grown fruits and vegetables are often priced at the average end consumer's budget limit or beyond. The premium price of local fruits and vegetables at specialty grocers and farmers' markets reflects the high unit costs (and low profit margins) of producing and distributing local fruits and vegetables.
- **A reliable, year-round supply of locally grown fruits and vegetables.** Both business customers and end consumers do not have access to locally grown, nutritious, flavorful fruits and vegetables on a year-round basis. Local farms' offerings to urban consumers are seasonal, unpredictable, and limited in scale. Supply volatility directly creates market price volatility, hampering business customers' ability to effectively budget for locally produced fruits and vegetables.
- **Food safety and pesticides.** Vegetable recalls due to food-borne bacteria contamination are a major problem for the grocery industry. Tainted food results in lost sales, possible harm to consumers, and poor publicity. End consumers are increasingly concerned with the possible negative health effects from chemical pesticides, herbicides and fungicides.
- **Environmental, social and economic impact.** Consumers are becoming increasingly concerned about the impact the food they eat has on the environment, society and their local economies. In the United States, conventional agriculture is the largest user of land and water; the greatest source of water pollution; and the second largest single source of carbon emissions. Americans are becoming increasingly overweight and obese through the consumption of greater and greater per capita amounts of processed foods. Consumers are also becoming increasingly aware of how their food consumption choices affect the sustainability and employment opportunities within their local economies.

b. The UrbanHarvest Solution:

UrbanHarvest will grow fruits and vegetables as close as possible to the locus of demand – urban and suburban communities – by utilizing both cutting edge hydroponic and greenhouse technology and underused real estate resources.

- **Cutting the Supply Chain.** Food travels thousands of miles to reach urban consumers, adding to traffic congestion, air pollution, and carbon emissions. The average item of produce in the United States travels at least 1,500 miles. The fuel, labor and equipment costs of the mainstream fruit and vegetable supply chain can account for up to half of the end consumer price for those products. Food travels thousands of miles to reach urban consumers, adding to traffic congestion, air pollution, and carbon emissions. UrbanHarvest's hyper-local urban farming – serving customers only within 15 miles of an UrbanHarvest greenhouse – will nearly eliminate the supply chain costs of transporting fruits and vegetables from the grower to the consumer's plate. A significant portion of the reduction in supply chain costs can be added to UrbanHarvest's bottom line.
- **Input costs and production efficiency.** UrbanHarvest hydroponic greenhouses will grow fruits and vegetables utilizing 1/20th of the space per crop unit, 1/10th of the water per crop unit, and 1/4th of the nutrients and fertilizer per crop unit required with conventional or organic field agriculture.¹ Furthermore, there are potentially hundreds of acres of prime rooftop real estate available in each metropolitan area. Presently, this rooftop real estate is largely unused and can be leased for reasonable prices.
- **Product Quality.** Eliminating the lengthy supply chain allows UrbanHarvest to deliver its fruits and vegetables to customers within one day of harvest. This allows UrbanHarvest to grow products for maximum taste and ripeness, not shipping durability. Furthermore, UrbanHarvest hydroponic greenhouses completely control the environmental and material inputs into producing its fruits and vegetables, thus standardizing the high quality and uniformity of its fruits and vegetables.
- **Product Availability, Consistency and Safety.** A controlled greenhouse growing environment will create an optimum, year-round growing climate for fruits and vegetables, allowing for high crop yields and predictable production and harvest. It also eliminates the crop risk from weather, pests, parasites, and plant diseases. UrbanHarvest's hydroponic growing methods (soilless farming and not using pesticides, herbicides or fungicides) greatly reduce the health risks associated with soil borne bacteria and potentially toxic chemicals.

¹ Sara Eckel, *Farms transform city roofs; Urban growers cater to stores, restaurants interested in buying hyperlocal produce*, Crain's New York Business, Pg. 7 Vol. 27, August 29, 2011.

- **Environmental, Economic and Social Benefits.** Growing and selling fruits and vegetables hyper-locally reduces the greenhouse gas emissions associated with long distance shipping from farms to end markets. UrbanHarvest greenhouses are designed to capture waste heat from their host buildings, requiring little or no additional energy for heating. Solar panels can offset some of the greenhouse’s electrical energy consumption. UrbanHarvest greenhouses can also act as thermal insulators on the roofs of their host buildings, potentially reducing the host building’s heating expenses. UrbanHarvest greenhouses will also harvest rainwater and significantly supplement their water consumption. UrbanHarvest’s hyper-local farming will create local jobs and keep money within the local economy. UrbanHarvest’s products – healthy and nutritious fruits and vegetables – can also help communities combat America’s obesity epidemic and increase access to nourishing food for their urban residents.
- **Hedging Price Volatility.** Business to Business (B to B) customers will be able to secure long-term fixed-price contracts with UrbanHarvest. This can protect our customers against food price volatility that can arise from fluctuating oil prices, weather and pest related production and supply disruptions, and speculative commodity traders.

III. Market

a. PEST (Political, Social, Economic and Technological) Analysis²

<p>Political/Legal Factors:</p> <ul style="list-style-type: none"> • Federal and State Government Policies Promote Local Food: The federal and Washington State governments have made promoting local food a major policy priority, encouraging both its supply and demand through multiple programs and agencies. • County and Municipal Laws, Programs, and Initiatives that Promote Local Food: County and municipal governments actively create and enforce policies that promote local food production and consumption. <ul style="list-style-type: none"> ○ Puget Sound Fresh: A regional marketing program that promotes food grown in twelve counties around Puget Sound and educates consumers about the advantages and reasons to buy locally produced food.³ ○ Seattle City Council Resolution 31019: Adopted in 2008, this resolution creates a policy framework, and identifies planning, analysis and actions for the purpose of strengthening Seattle's food system sustainability and security (Figure F5-k).⁴ 	<p>Economic Factors:</p> <ul style="list-style-type: none"> • Economic Effects of Locally Produced Food: A local economy (defined as encompassing a metropolitan area or region of a state) benefits more from the production and sale of locally-produced agriculture products than through the sales of large-scale mainstream agriculture products. The monies generated from the production and sales of locally-produced agriculture products are much more likely to stay within that local economy (thus creating higher levels of economic activity).⁵ • Greater Local Employment: The purchase of local foods by local consumers has a positive effect on the employment rate within that local economy.⁶
<p>Social Factors:</p> <ul style="list-style-type: none"> • America’s Obesity Epidemic: Obesity is a rapidly growing problem in the United States. A tripling in the number of obese Americans over the last 30 years is leading to a surge of type 2 diabetes.⁷ • Institutional Customers’ Focus on Environmental and Social Responsibility: Local and state governments (along with the federal government), schools, universities, hospitals and large corporations (such as Microsoft) are working to decrease their environmental footprint and sponsor healthy diets by sourcing more local produce.⁸ • The Local Food Movement: Books such as Michael Pollan’s “The Omnivore’s Dilemma” have brought great attention to the virtues of eating locally produced food. Food purists and health aficionados have made efforts to avoid mainstream, industrially-farmed fruits and vegetables in favor of local food because it is perceived as healthier and more environmentally sustainable. “‘local’ is the new ‘organic’”.⁹ 	<p>Technological Factors:</p> <ul style="list-style-type: none"> • Some hydroponic technology has become roughly twice as productive far more productive over the last 10 years. A prime example is American Hydroponic’s 2012 3-stage Nutrient Film Technique (NFT) system that is capable of producing 26 crop turns per year (verses 14 crop turns per year from 2-stage NFT systems).¹⁰ • Improvements in computer technology have automated most greenhouse environmental and hydroponic operations.¹¹ • Low profile water and growing solution tanks have been developed by American Hydroponics to operate on building roofs.¹² • Large-scale mainstream, organic and hydroponic greenhouse agriculture has developed increasingly more efficient supply chains, but the rising cost of fuel is raising the absolute per unit cost of those long distance supply chains.

² Note: This market analysis is limited in scope to King, Pierce and Snohomish counties in Washington State. A larger analysis of the west coast of the United States has been omitted from this executive summary for brevity.

³ FARMS Report: *Future of Agriculture, Realize Meaningful Solution*, Department of Natural Resources and Parks Water and Land Resources Division, Pg. 28-29, December 2009, <http://www.kingcounty.gov/environment/wlr/agriculture-program.aspx>.

⁴ <http://clerk.seattle.gov/~scripts/nph-brs.exe?s1=&s2=&s3=31019&s4=&Sect4=AND&I=20&Sect2=THESON&Sect3=PLURON&Sect5=RESN1&Sect6=HITOFF&d=RES3&p=1&u=%2F~public%2Fresn1.htm&r=1&f=G>.

⁵ Steve Martinez, Michael Hand, Michelle Da Pra, Susan Pollack, Katherine Ralston, Travis Smith, Stephen Vogel, Shellye Clark, Luanne Lohr, Sarah Low, and Constance Newman, *Local Food Systems: Concepts, Impacts, and Issues*, United States Department of Agriculture, Economic Research Service, Economic Research Report Number 97, pg. 42, May 2010.

⁶ Id at 42.

⁷ U.S. Department of Health and Human Services. *The Surgeon General’s Vision for a Healthy and Fit Nation*. Rockville, MD: U.S. Department of Health and Human Services, Office of the Surgeon General, pg. 4, January 2010.

⁸ <http://www.microsoft.com/about/corporatecitizenship/en-us/working-responsibly/responsible-sourcing/>.

⁹ *Fresh and Local Food in the U.S.*, www.packagedfacts.com, Pgs. 30-31, May 2007

¹⁰ <http://www.amhydro.com/>; <http://www.cropking.com/>.

¹¹ <http://www.amhydro.com/index.php/Commercial/Automation.html>.

¹² American Hydroponics - via email correspondence concerning American Hydroponic’s sourcing of Gotham Green’s hydroponic equipment.

b. Industry & Competition

For the purposes of this industry analysis, production within the U.S. fresh fruit and vegetable industry can be segmented into six distinct industry segments: 1) large-scale mainstream field growers, 2) large-scale organic field growers, 3) large-scale hydroponic greenhouse growers, 4) local mainstream and organic field growers, 5) local hydroponic greenhouse growers, and 6) hyper-local urban rooftop hydroponic greenhouse growers.

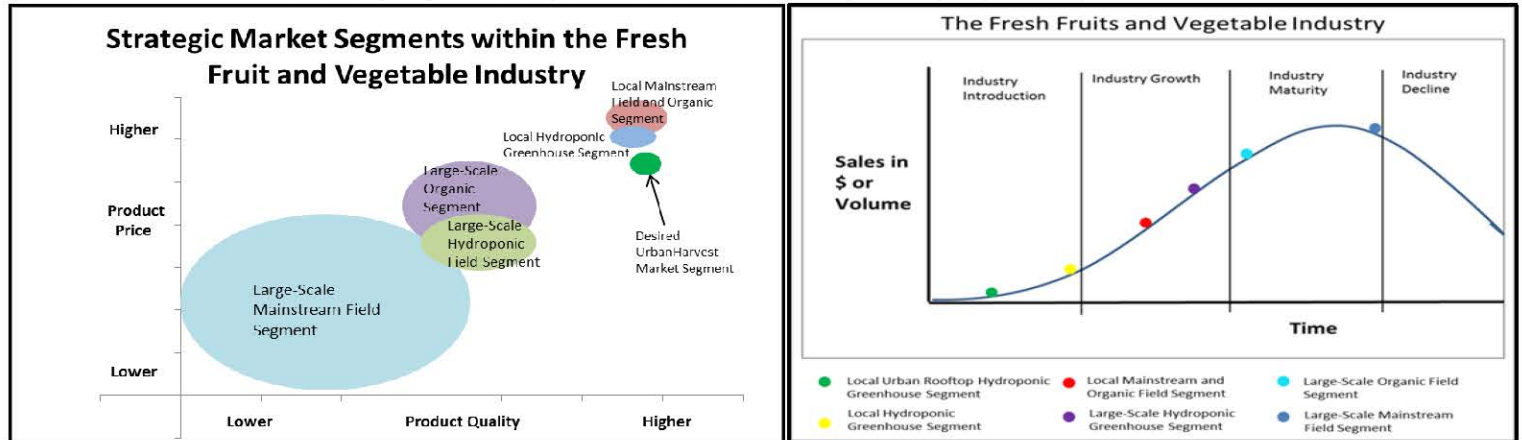
UrbanHarvest will compete within the hyper-local urban rooftop hydroponic greenhouse segment of growers within the fresh fruit and vegetable industry. This market segment is in its embryonic stage of development. Currently, there are no urban rooftop hydroponic greenhouses operating on the west coast of the United States. Only two companies in North America are currently using this particular business model and production method.

Gotham Greens is an urban hydroponic greenhouse farm located on the roof of an industrial building in Brooklyn, New York.¹³ Gotham Greens is a 15,000 square foot greenhouse and cost roughly \$1.4 million to construct. Its principle customers are local specialty grocers and gourmet restaurants. Gotham Greens grows nine varieties of lettuce and its 4.5 ounce heads of lettuce and 1.5 ounce bunches of basil retail for \$3.99 each.

Lufa Farms is a 31,000 square foot urban rooftop hydroponic greenhouse located on an office building in Montreal, Quebec.¹⁴ It grows and sells fresh vegetables directly to over 1,000 Montreal customers per week. Lufa Farm's rooftop greenhouse saves its host building 25% on its yearly heating costs and its direct to consumer sales model has the potential for producing a 25% profit rate.

a. Competitor Segments

There are five other distinct competitor segments within the fresh fruit and vegetable industry that UrbanHarvest will compete within to varying degrees. They can be classified as primary competitors, secondary competitors and tertiary competitors. The following are charts that demonstrate the *Price/Quality Segment Comparison* and the *Market Segment Life-Cycle Comparison*.



Primary Competitors - Local Hydroponic Greenhouse Growers and Large-Scale Hydroponic Greenhouse Growers.

- Greenhouse crops comprised 8.8% of the total U.S. vegetable industry in 2011 and accounted for \$2.19 billion in sales.¹⁵
- There is one large-scale hydroponic greenhouse grower in the Pacific Northwest region, B.C. Hothouse located in Surrey, British Columbia. B.C. Hothouse has over 160 acres under hydroponic greenhouse cultivation and exports its products across North America.¹⁶ There are two local hydroponic greenhouse growers in the Puget Sound region, Utsalady Farms on Camano Island (immediately adjacent to Snohomish County, Washington) and HerbCo International in Duvall (north King County, Washington).¹⁷ These growers produce living basil as their only hydroponic crop. Both growers have a combined hydroponic greenhouse growing area of roughly 1/2 of an acre.

Secondary Competitors – Large-Scale Organic Field Growers and Local Mainstream & Organic Field Growers.

- A few organic growers have created large-scale organic farms that distribute organic fruit and produce across North America. A prominent example is Earth Bound Farms in San Juan Bautista, California.¹⁸
- There are over 20 sizable (defined as over 40 acres) local farms that grow and market their products in King, Snohomish or Pierce Counties. One of the most prominent is Full Circle Farms, an all-organic grower in King County that delivers weekly produce baskets to their retail customers and also sells produce to local specialty supermarkets such as Whole Foods and Metropolitan Markets.¹⁹
- UrbanHarvest will not substantially compete with local organic and mainstream field growers for 8-9 months of the year because these growers' harvest period is limited to the summer and early fall.

Tertiary Competitors – Large-Scale Mainstream Field Growers.

¹³ Michael Garry, *Rooftop Farm to Grow for Grocers*, Supermarket News, Pg. 21, September 21, 2009.

¹⁴ *Buying Local Takes on New Meaning*, Business and the Environment, Aspen Publishers, Volume XXII, No. 9, Pgs. 1-3, September 2011.

¹⁵ Nikoleta Pantiva, *Vegetable Farming in the U.S.*, IBISWorld Industry Report 11120, pg. 3, May 2011.

¹⁶ Judith Blake, *Dirtless Farms -- Hydroponics Use Fewer Pesticides to Produce Vegetables And Herbs*, The Seattle Times, October 11, 1995.

¹⁷ Kelly Ruhoff, *Farming Lives on at Utsalady with Indoor Basil Crop*, Stanwood/Camano News, November 16, 2004; <http://www.herbco.net/>.

¹⁸ <http://www.ebfarm.com/>.

¹⁹ Puget Sound Farm Guide, www.pugetsoundfresh.org, Cascade Harvest Coalition, Pg. 8, 2011.

- Large-scale mainstream field growers include all industrial large-scale mainstream field farms in North America that grow fresh fruits and vegetables and export those crops regionally, nationally or internationally. The average sized mainstream field farm is 229 acres and the majority of these farms are located in California and Florida.²⁰
- UrbanHarvest will not directly compete with large-scale mainstream field growers because they produce commodity product whose sole basis of competition is price. UrbanHarvest will have a substantially different customer base than these growers.

c. Market Segment Sizes and Characteristics

1. End Consumer Market Segment

i. Primary Market Segment

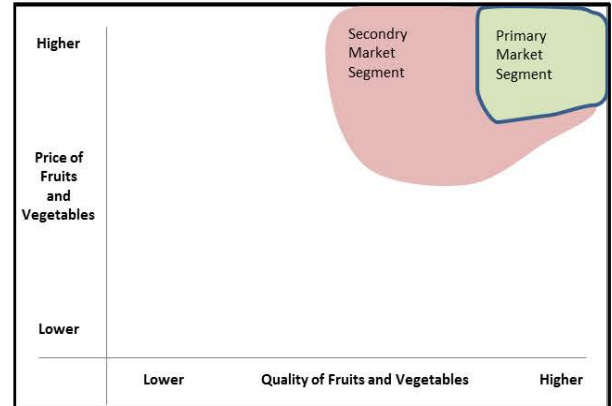
UrbanHarvest’s primary market segment consists of consumers in the greater Seattle area (King, Snohomish and Pierce counties), who regularly purchase local, organic and hydroponically grown fruits and vegetables on a regular basis and consume fruits and vegetables in higher per capita quantities than the median U.S. population. The characteristics of this market segment can be derived from both market surveys and zip code analysis.

- **Geographic Characteristics** - Largely urban and suburban.
- **Demographic Characteristics:** Asian, graduate degree, Hispanic, homemaker, college grad, self-employed, higher income, female, and members of environmental groups and CSAs.²¹
- **Psychographic Characteristics** - Consumer interests include preferences for high quality fresh produce, concerns about the local economy, food safety, chemical use and genetic engineering²²; willing to pay a 27% to 50% price premium over non-locally farmed produce.²³
- **Behavioristic Characteristics** - Primary market segment consumers are slightly more likely to eat a well-balanced diet, eat healthy, and exercise regularly than the general market population.²⁴

ii. Secondary Market Segment

UrbanHarvest’s secondary market segment consists of consumers in the greater Seattle area (King, Snohomish and Pierce counties) who purchase fresh fruits and vegetables at rates within the top 30% of the sample population median. The characteristics of this market segment can be derived from both market surveys and zip code analysis. This market can, and often does, overlap with UrbanHarvest’s primary market segment. The zip code analysis is an especially useful tool to reveal the characteristics of this segment.

- **Geographic Characteristics** – The secondary market is highly suburban.²⁵
- **Demographic Characteristics** – white collar, highly educated, upper-middle class or wealthy, Asian, slightly older.²⁶
- **Psychographic Characteristics** – Slightly more likely than national average to pay for environmentally friendly products; slightly more politically liberal than the national average.²⁷
- **Behavioristic Characteristics** – Eats healthy, well balanced diet; more likely to shop via Internet; watches less TV than American average; more likely to buy environmentally friendly products.²⁸



d. SWOT Analysis

Strengths (Internal to Company)	Weaknesses (Internal to Company)
<ul style="list-style-type: none"> - Superior product quality. Differentiated products. - First mover advantage in Pacific Northwest; second mover advantage in North America. - Traction with institutional customers, specifically Microsoft and Charlie’s Produce. - Founders have VA preferences in securing federal government contracts and accessing VA guaranteed loans. - Founders have several angel investors who are interested in potentially investing in UrbanHarvest. - Honorable mention at the University of Washington’s Environmental Innovation Challenge in March 2012. - Largely predictable cash flows from growing operations and long term contracts. - Low supply chain costs, low variable costs. - Products are sold and delivered to customer the same or next day after harvest. - Products produced year-round in uniform, predictable quantities. 	<ul style="list-style-type: none"> - Limited current experience growing hydroponic crops. - Limited current capital reserves, need to source debt or equity funding. - UrbanHarvest’s product price point is higher than most competitors. - Large up-front fixed costs. - UrbanHarvest is a startup concept that is not traditionally attractive to venture capital investors.

²⁰ Nikoleta Pantiva, Vegetable Farming in the U.S., IBISWorld Industry Report 11120, pg. 20, May 2011.

²¹ Steve Martinez, Michael Hand, Michelle Da Pra, Susan Pollack, Katherine Ralston, Travis Smith, Stephen Vogel, Shellye Clark, Luanne Lohr, Sarah Low, and Constance Newman, *Local Food Systems: Concepts, Impacts, and Issues*, United States Department of Agriculture, Economic Research Service, Economic Research Report Number 97, pg. 29, May 2010.

²² Id at 33-34.

²³ Id at 31.

²⁴ Id at 29.

²⁵ SimplyMap.com – Commercial Marketing Database, <http://sm2.simplymap.com.offcampus.lib.washington.edu/>.

²⁶ SimplyMap.com – Commercial Marketing Database, <http://sm2.simplymap.com.offcampus.lib.washington.edu/>.

²⁷ SimplyMap.com – Commercial Marketing Database, <http://sm2.simplymap.com.offcampus.lib.washington.edu/>.

²⁸ SimplyMap.com – Commercial Marketing Database, <http://sm2.simplymap.com.offcampus.lib.washington.edu/>.

<ul style="list-style-type: none"> - No pesticides, herbicides, fungicides or preservatives used on products. - UrbanHarvest's production model eliminates crop risk and price volatility. - Have www.urbanharvest.com web domain; in the process of trademarking company name and logo. 	
Opportunities (External to Company)	Threats (External to Company)
<ul style="list-style-type: none"> - Municipal governments are becoming increasingly friendly to urban agriculture. - Local agriculture is an emerging social trend that is seen by consumers as supporting environmental sustainability. - A better, healthier diet of fresh fruits and vegetables will be a key factor in alleviating America's obesity epidemic. - Consumers associate buying locally produced food as supporting the local economy and community. - Institutions and large corporations are increasingly trying to source more local, environmentally sustainable food for their food service needs. - Local field agriculture competitors do not produce competing products 8-9 months per year. - Large-Scale growers products are usually of inferior quality because they are produced for transportation and shelf life, not taste and nutrition. 	<ul style="list-style-type: none"> - UrbanHarvest currently has limited barriers of entry to prohibit competitors from encroaching on its market space. - Potential real estate partners may perceive rooftop greenhouses as a threat to their building's structural integrity. - Potential real estate partners may perceive liability issues in partnering with UrbanHarvest.

e. Mitigation of Weaknesses and Threats

Weaknesses (Internal to Company)	Threats (External to Company)
<ul style="list-style-type: none"> - Limited current experience growing hydroponic crops: UrbanHarvest founders are going to be trained by American Hydroponics in growing techniques; Clara Sheppard (Chris Sheppard's wife) is a trained agricultural engineer who will supervise growing operations. - Lack of startup capital: UrbanHarvest founders have several angel investors interested in investing; UrbanHarvest's business model has reasonably predictable cash flows that are attractive to banks in securing debt financing. - Large up front fixed costs: UrbanHarvest has large up front fixed costs but variable costs that are considerably lower than the industry norm. - Not attractive to venture capital: UrbanHarvest probably will not need VC funding. Angel investors and debt financing should be able to get the company off the ground and running. At that point, UrbanHarvest will expand using debt financing (due to the lower risk of its reasonably predictable cash flows). 	<ul style="list-style-type: none"> - Limited barriers of entry: UrbanHarvest will option the exclusive right to conduct commercial farming on the prime rooftop real estate within King, Snohomish and Pierce counties. Rooftop real estate is currently underused and buying these options should be fairly inexpensive. This will preclude many potential competitors from entering the Seattle area urban rooftop hydroponic greenhouse market segment. - Real estate partners and liability issues: UrbanHarvest will have a structural engineer examine each potential rooftop greenhouse site for its structural integrity and ability to bear the weight load of a hydroponic greenhouse. Flat roofs are designed to bear a wet snow load of several feet and the weight will be greenhouse and hydroponic equipment will be less. UrbanHarvest will also carry liability insurance in case it damages the building's roof.

IV. Marketing Plan – Go To Market Strategy

a. Size of King, Pierce and Snohomish Counties' Fresh Fruit and Vegetable Market

<p>Available Market (\$499,815,100) – The market potential is dependent on a given external market environment. The total fresh fruit and vegetable market in King, Snohomish and Pierce Counties, Washington.²⁹</p>
<p>Target Market Size (\$90,066,039) – Part of the available market that the company decides to pursue with marketing budget. The target market is the <i>local</i> vegetable, fruit and nut market in King, Snohomish and Pierce Counties, Washington. This is derived from the value of local vegetable, fruit and nut sales in Washington, Oregon and California³⁰ times the percentage of the three state population total living in King, Snohomish and Pierce counties).³¹ By 2016, this target market will be \$135,428,402.</p>
<p>Target Market Growth – The target market growth for local food in the greater Seattle area grew at roughly 13% per year from 2002 to 2007 (the latest figures available).³² In 2007, the estimated national growth rate for the local food market between 2007 and 2011 was roughly 10% per year.³³ For purposes of this marketing plan, the estimated growth rate of the local food market in King, Snohomish and Pierce counties will be an average of 8.5 percent per year from 2011 to 2016.</p>

2. Business Market Segment

UrbanHarvest will sell its products to consumers through intermediated marketing channels: institutions (K-12 schools, hospitals, government facilities, colleges & universities, corporate cafeterias), local food distributors, grocers and restaurants. Sales through local food distributors and grocers will primarily be driven by demand generated from the primary and secondary market segments (discussed above). Sales to institutional customers and restaurants are largely dependent upon the market characteristics of the particular institution or restaurant.

²⁹ SimplyMap.com – Commercial Marketing Database, <http://sm2.simplymap.com.offcampus.lib.washington.edu/>.

³⁰ Sarah A. Low and Stephen Vogel, *Direct and Intermediated Marketing of Local Foods in the United States*, United States Department of Agriculture, Economic Research Service, Economic Research Report Number 128, pg. 10-11, November 2011.

³¹ SimplyMap.com – Commercial Marketing Database, <http://sm2.simplymap.com.offcampus.lib.washington.edu/>.

³² FARMS Report: *Future of Agriculture, Realize Meaningful Solution*, Department of Natural Resources and Parks Water and Land Resources Division, Pg. 6, December 2009, <http://www.kingcounty.gov/environment/wlr/agriculture-program.aspx>.

³³ *Fresh and Local Food in the U.S.*, www.packagedfacts.com, Pg. 5, May 2007

- **Institution Characteristics:**³⁴ large volume orders; want to source year-round from suppliers; long term customers; moderate – good margins; institutions often want to support and be connected to the community; producers can specialize in just a few crops (as long as they are in sufficient volume); usually very strong barriers to entry.
- **Restaurant Characteristics:**³⁵ typically small to moderate order sizes; want to source year-round from suppliers; independent and gourmet restaurants highly prefer fresh, high quality fruits and produce; not very price sensitive; chain restaurants may be more price-sensitive; providing samples can lead to easy sales; may require a diverse crop mix; moderate barriers to entry.

f. Targeting and Positioning

Positioning Statement: *UrbanHarvest – Local, Sustainable, Delicious.*

1. Phase 1 Marketing Mix (first 12-18 months): Institutions, Local Food Distributors

- Product – fresh, delicious, hyper-local, consistently available year-round, pesticide free, environmentally and socially sustainable.
- Price – moderately high, but discounts based on volume, contract length, order mix, and pre-payment.
- Place (distribution) – greenhouse co-located if possible; if not then UrbanHarvest delivers produce daily.
- Promotion – Developing personal relationships with key buyers, website, media-based public relations.

2. Phase 2 Marketing Mix (next 6-12 months): Independent and Specialty Grocers, Upscale Restaurants

- Product – fresh, delicious, hyper-local, consistently available year-round, pesticide free, environmentally and socially sustainable.
- Price – premium, slightly under that of local produce. Some discounts based on volume, contract length, order mix, and pre-payment.
- Place (distribution) – UrbanHarvest delivers to customers within 15 miles. Explore co-locating greenhouses with select grocers.
- Promotion – social media, website, blog, media-based public relations, select advertising on foodie websites and blogs.

3. Phase 3 Marketing Mix (next 6-12 months): Mainstream Grocers, Chain Family Restaurants, Fast Food Restaurants.

- Product – fresh, delicious, hyper-local, consistently available year-round, pesticide free, economically sustainable, patriotic.
- Price – high, on par with organic fruits and produce. Some discounts based on volume, contract length, order mix, and pre-payment.
- Place (distribution) – UrbanHarvest delivers to customers within 15 miles. Explore co-locating greenhouses with select grocers.
- Promotion - social media, website, blog, media-based public relations, select advertising on mainstream websites and blogs.

V. The Management Team

- Chris Bajuk** grew up in Silverdale, WA and attended Central Kitsap High School. He earned a B.S. in mechanical engineering from the United States Naval Academy in 2004 and served in the U.S. Navy's Maritime Expeditionary Security Forces, achieving the rank of Lieutenant. He has worked as a project engineer for Cadman, Inc. a mining and concrete company based in Redmond, WA and currently works part time for McKinstry's Smart Building Solutions team and as a real estate development consultant for Wright Hotels. Chris attends the University of Washington for graduate school. He earned an MBA from the Foster School of Business in June 2011 and will complete a M.S. in Real Estate from the Runstad Center for Real Estate Studies in the College of Built Environments in June of 2012.
- Chris Sheppard** grew up in Marysville, WA and attended Marysville-Pilchuck High School. He earned a B.A. in economics and a B.A. in political science from the University of Washington in 1997. Chris was an NROTC Midshipman at UW and was commissioned as an officer in the U.S. Marine Corps post-graduation. He served two combat tours of duty in Iraq as a combat engineer and logistician and achieved the rank of Captain. Chris earned a Masters in Mass Communications from Arizona State University in 2007. He currently is a graduate student at the University of Washington and will complete both an MBA and a Juris Doctorate in 2012.

c. Advisors:

1. Jennifer Fan – Managing Director, UW Entrepreneurial Law Clinic	6. Scott Kornberg – American Hydroponics
2. Branden Born – UW Assistant Professor of Urban Design & Planning/Food Systems	7. Greg Ellis – Nexus Greenhouses
3. George Rolfe – Director, UW Runstad Center for Real Estate Studies	8. Adam Pound – Agra-Tech Greenhouses
4. Craig Sherman – Partner, Wilson Sonsini Goodrich & Rosati	9. Darren Barkman – Neva Farms
5. Jim Karambelas – President & CEO GLY Construction	10. Michelle Goldman – Better Grow Hydro
	11. Mary Heidi – Sky Nursery

VI. Traction

- **Microsoft** – The founders of UrbanHarvest have met with Chris Owens and Jay Pittenger of Microsoft RE&F and Paul Egger of Microsoft Food Services. UrbanHarvest submitted a formal proposal to build and operate one or more greenhouses on select Microsoft Redmond campus buildings and to supply Microsoft Food Services with fresh produce. Microsoft reacted enthusiastically to the proposal has verbally committed to this project. UrbanHarvest and Microsoft are currently investigating building rooftop options and navigating the City of Redmond permit process.

³⁴ *Emerging Market Opportunities for Small-Scale Producers*, United States Department of Agriculture, Economic Research Service, pg. 23, April 2009.

³⁵ *Emerging Market Opportunities for Small-Scale Producers*, United States Department of Agriculture, Economic Research Service, pg. 23, April 2009.

- **Charlie's Produce** – The founders of UrbanHarvest have met with the owner of Charlie's Produce, Charlie Billow. He loved the concept and has reviewed UrbanHarvest's proposal to build and operate a greenhouse on the rooftop of the Charlie's Produce distribution center on First Avenue South in Seattle. Charlie Billow has verbally committed to this project and is gathering building schematics for engineering and greenhouse design review.
- **Other Potential Host Sites/Customers**
 - **University of Washington** – The founders of UrbanHarvest have met with Steve Kennard at the UW Real Estate Office and Rob Lubin, the Director of Housing and Food Services. UW is interested in exploring the concept in more depth, but the timeframe is at least nine months to a year down the road.
 - **State of Washington** – The founders of UrbanHarvest are in communication with Daniel Malarkey, Deputy Director of the Washington State Department of Commerce. He expressed interest in the concept and is working to introduce us to the right people at the Department of Enterprise Services who have decision making authority for projects like ours.
 - **Military Commissary facilities** – UrbanHarvest will qualify as a service-disabled-veteran-owned business. As such, UrbanHarvest can receive preference for supply contracts with the military grocery stores and cafeterias.

VII. Financials

- Broad Perspective** – UrbanHarvest will incur high upfront costs for capital equipment (greenhouses, hydroponic systems, rooftop infrastructure) and labor to construct these systems. The specific costs depend on the size of the greenhouses constructed. Our fixed and variable costs will be very low relative to traditional farming operations. Therefore, we will focus on growing only a few crop varieties which have very fast growth rates and large customer demand.
- Assumptions** – We will be able to use debt financing for the majority (~80%) of our capital requirements because we will have LOI's or signed long term purchase agreements from Microsoft and Charlie's Produce. Because there will be virtually no customer risk and no technology risk, banks should be more willing to lend on this project.
- Contingencies & Exit Strategy** – Capital costs have been inflated by a 15% cost contingency and production figures include a 5% crop spoilage. UrbanHarvest will conduct leveraged recapitalizations of each subsidiary LLC to provide an exit for equity investors. We anticipate these recapitalizations will occur in year five of operations.
- Summary Figures**

Two scenarios for single crop greenhouses sized 60'x130':

Performance Analysis	Lettuce (heads)	Tomatoes (lbs)	At a location such as Microsoft, UrbanHarvest may have to build more than one greenhouse. Therefore, each greenhouse will grow one crop type (greens or tomatoes for instance). Greens are much more profitable because they grow much more quickly and hence create more saleable product. Locally-grown heirloom tomatoes can possibly command a significant price premium not reflected in these figures (these are conservative price assumptions).
Variable costs	\$138,230	\$70,638	
Units produced	203,991	47,155	
Variable costs per unit	\$0.68	\$1.50	
Price per unit	\$1.65	\$2.50	
Profit per unit	\$0.97	\$1.00	
Fixed Costs	\$23,195	\$23,195	
Units to breakeven	23,854	23,149	
Total costs	\$161,424	\$93,833	
Total revenues	\$336,585	\$117,886	
Profit	\$175,161	\$24,053	
Profit Margin	46.54%	20.40%	

Financing Required for Greenhouse Projects*

Financing	Microsoft	Charlie's Produce	* Includes capital expenses and first year operating expenses. UrbanHarvest will start operations at both Microsoft and Charlie's Produce in late 2012. Debt financing accounts for approximately 80% of the funds required. The balance will come from equity from founders and investors.
Debt	\$1,127,338	\$2,387,446	
Equity	\$281,834	\$596,867	
Total	\$1,409,172	\$2,984,313	
Total Funds Required		\$4,393,485	

Forecast Financial Performance

Financial Forecast	2013	2014	2015	2016	2017
Growth %		30%	40%	50%	50%
Revenues	\$1,730,820	\$2,250,066	\$3,150,092	\$4,725,139	\$7,087,708
Expenses	\$967,610	\$1,257,893	\$1,761,050	\$2,641,575	\$3,962,363
Net	\$763,210	\$992,173	\$1,389,042	\$2,083,563	\$3,125,345

Revenue and expense figures reflect a continued strategy of focusing on single point customers and locating our operations immediately proximate to those customers. In the future, UrbanHarvest will target other vertical markets such as restaurants and farmer markets, where we will command significant price premiums.