**Problem Statement:** Vacant and abandoned properties have long beleaguered the industrial cities of America, particularly in the Rust Belt, resulting in blighted blocks, increased crime, and uncollected taxes. Cities such as Detroit and Cleveland have vacancy rates of over 11%, with localized rates much higher. Large warehouses and factories that were once the source of thousands of living-wage jobs are now a threat to the health and welfare of the community. Concurrently, demand for local, environmentally sustainable food sources has skyrocketed. As the world population grows, food sustainability will become increasingly important. Direct-to-consumer farm sales have increased 300% in the past 15 years as consumers care more about what they eat and from where their food comes. Recently, cities are embracing urban agriculture as a way to not only combat urban decay, but also as a strategy to make cities healthier and more environmentally sustainable.

**Investment Thesis:** Floating Green Capital (FGC) will establish a vertically-integrated fund that will acquire urban industrial real estate and leverage that capital to obtain debt/equity stakes in controlled environment agriculture (CEA) operations. This will primarily be done through acquisition of abandoned industrial property that will be converted into hydroponic farming facilities. The facilities will be “leased” to partner entities with proven CEA experience in exchange for equity. These facilities will provide a source of local, “organically grown” produce in U.S. urban centers and spur economic redevelopment in struggling industrial communities.

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**Environmental and Social Impact:**

90% less water – Hydroponic crops use 90% less water than the same crops in traditional soil farming, increasing water sustainability.

¼ of the space – Farmers can plant 4 times the amount of crops in the same space as traditional soil farming, significantly increasing volume of crops produced.

½ growth time – Lettuce matures in less than 4 weeks. Given the ability for hydroponic crops to have a year-round growing season, this greatly increases the yield of local crops sold in the community.

0.0 chemicals – Hydroponic produce is extremely healthy, as hydroponically grown crops use no herbicide or pesticide chemicals. This prevents harmful effects to the environment and the human body found in other types of farming.

↓ emissions – Locating these facilities close to urban centers drastically reduces emissions related to food transportation.

**Auxiliary Benefits:**

- Revitalization of neighborhoods suffering from the loss of industry and creation of jobs.
- Locating the facilities in struggling neighborhoods can provide an affordable, local food source to urban food deserts.

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**Overview of Investment Opportunity**

**Asset Class and Capital Structure:** Open-Ended Corporate Fund (“Evergreen Fund”) with renewable commitment at year 7 and every 2 years thereafter.

**Fees and Incentives:** 1% management fee; 20% performance fee over 8% preferred return

**Target Investor Pool(s):** Family Offices, Foundations

**Fund Size:** Initial fund of ~ $30 million, which will provide financing for an initial asset portfolio of 3-5 hydroponic facilities and businesses.

**Returns and Cash Flows:** FGC will receive 15% preferred dividend paid through to FGC investors when cash flows permit. In Y7, FGC will retain a put option to sell its equity to the operator at a value that ensures a cumulative IRR of 15%. Upon investor exit from FGC fund, investor will be paid the fair market value of its proportional equity stake in FGC fund.

**Time Horizon:** Exit will vary with investments. Preferred returns of 15% annually with put option in Y7 to sell the equity to the operator.

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**Controlled Environment Agriculture (CEA)**

**What is CEA? What is hydroponics?**

CEA is any agricultural technology that allows the grower to control the environment in which the crop grows. This is generally done by creating indoor agricultural systems. Hydroponics is one form of CEA in which produce is grown in a nutrient rich soil alternative that is placed on floating beds on top of a water reservoir.

**Is this technology proven?**

Yes. CEA is a prominent source of produce in countries like Canada, Japan, and the Netherlands. It is a $17 billion market worldwide and projected to grow rapidly. In China, 25% of produce is grown via CEA. However, in the U.S., CEA is comprised mostly of hobbyists, non-profits, and a growing number of boutique commercial operations.

**CEA offers a way to produce a large amount of year-round produce in a relatively small amount of space and in an environmentally friendly manner.**

**Why isn't CEA prevalent yet in the U.S.?**

Growers agree that large upfront investments is the biggest hurdle. On top of this, the U.S. produce market is structured such that 1-2 hub states produce a vast majority of the food that is distributed nationwide. Locally grown produce is inherently more likely to be from smaller operations that cannot compete nationally on price in major grocery chains. By tying locally scaled operations into a national network, however, we can facilitate this process by providing local growers with access to national food buyers.
Target Geography: The initial fund will focus on large urban centers within the United States. The fund will favor areas that have large inventories of unused industrial space and/or are in drought-prone areas. These geographic specifications maximize social impact and increase the likelihood of government incentives.

Size of Addressable Market: The market for hydroponics is not fully developed within the United States; however, the total U.S. agricultural market exceeded $775 billion. Hydroponics represents a growing portion of the overall agricultural market. In 2012, the hydroponics market was $543 million and growing at a rate of 7.7% annually. Our initial investments will likely focus on operators that grow lettuce and other “leafy greens.” In 2010, the U.S. demand for lettuce exceeded $90 billion.

Estimates of Scalability: Our model proposes to create a national network of locally scaled operations. Previously, hydroponics has not obtained national scale, because there is a limited number of geographically immobile master growers. Our investment model will capitalize on these grower’s ability to scale locally by tying their operations into a larger network of growers that can more easily contract with national grocery chains and other large scale food buyers who desire locally grown produce, e.g. Whole Foods, Chipotle, etc. We will also look for growers with a focus on human capital development needed to expand operations.

Assumptions: FGC base model is a lettuce-only facility located in a low-income area of a large Midwestern city. Build-out would cost ~$50 per square foot, which is above estimates we were given. Lettuce would market for $1.50 and would be sold to chain grocers that have contracted to buy 100% of the produce that is grown. To maximize social impact and facilitate human capital growth for scaling, FGC has opted for a labor intensive operation which requires about 13 people per acre. Operators will be salaried to manage the facility and will not share in equity unless preferred return is met. Model does not include government incentives; however, FGC believe incentives are probable depending on geographic location.

Investment Size and Investment Criteria: For land acquisitions, any structure must have at least 90,000 square feet of space available for hydroponic equipment. The building must be structurally sound and require minimal insulation work. Vacant lots must have at least two acres on which a greenhouse can be built. Partner organizations must be able to operate at scale within its region. Plus factors will include grower’s ability to operate multiple facilities nationwide and commitment towards developing human capital. In exchange for operator’s use of the space, FGC will require a preferred annual return and an equity position in the business (50%) with a put option and will retain ownership of any real assets.