



GROWING COMMUNITIES ONE GARDEN AT A TIME

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SPRING 2017 • MBA IN DESIGN STRATEGY • CALIFORNIA COLLEGE OF THE ARTS



Table of Contents

Executive Summary	2
Overview	2
Our Mission	2
What CULTIVAR Does:	3
Our Approach	9
The Challenge	11
The Problem	12
Opportunity	12
Does CULTIVAR Move the Needle?	12
Theory of Change	13
Impact Value Chain	15
Quantification of Social Impact	16
Monetization of Social Value	17
The Business Model	18
Competitive Analysis	19
Value Proposition	20
Potential Challenges/Risks	20
Next Steps	21
A Path toward Sustainable Cities	21

Executive Summary

Overview



Our Mission

CULTIVAR builds more healthy, transparent and engaged communities by connecting people with little access to space and as a result little ability to garden, apartment dwellers, to those with access, home and land owners.

Our Vision:

CULTIVAR aims to dissolve the binary world of public and private space in an effort to build more socially, economically, and environmentally sustainable communities for everyone. Ensuring everyone the opportunity of environmental agency and food autonomy.

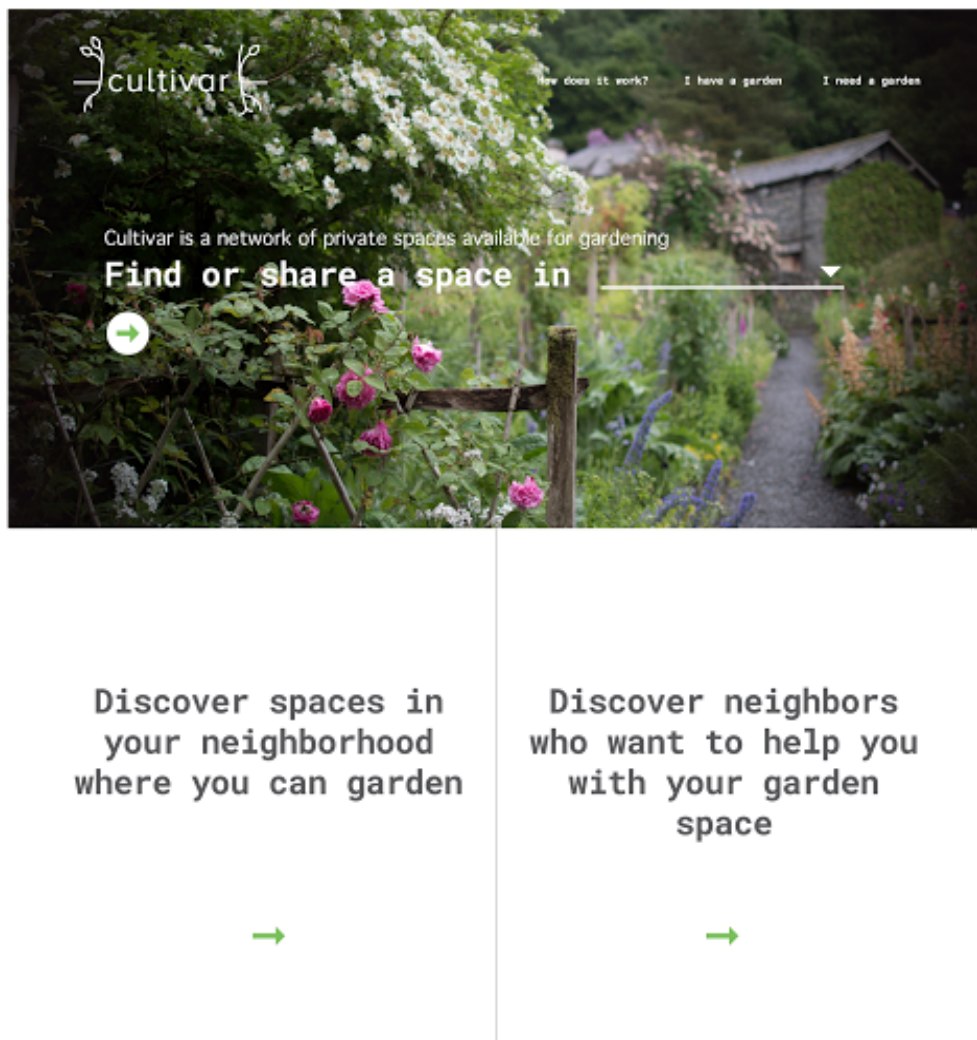


What CULTIVAR Does:

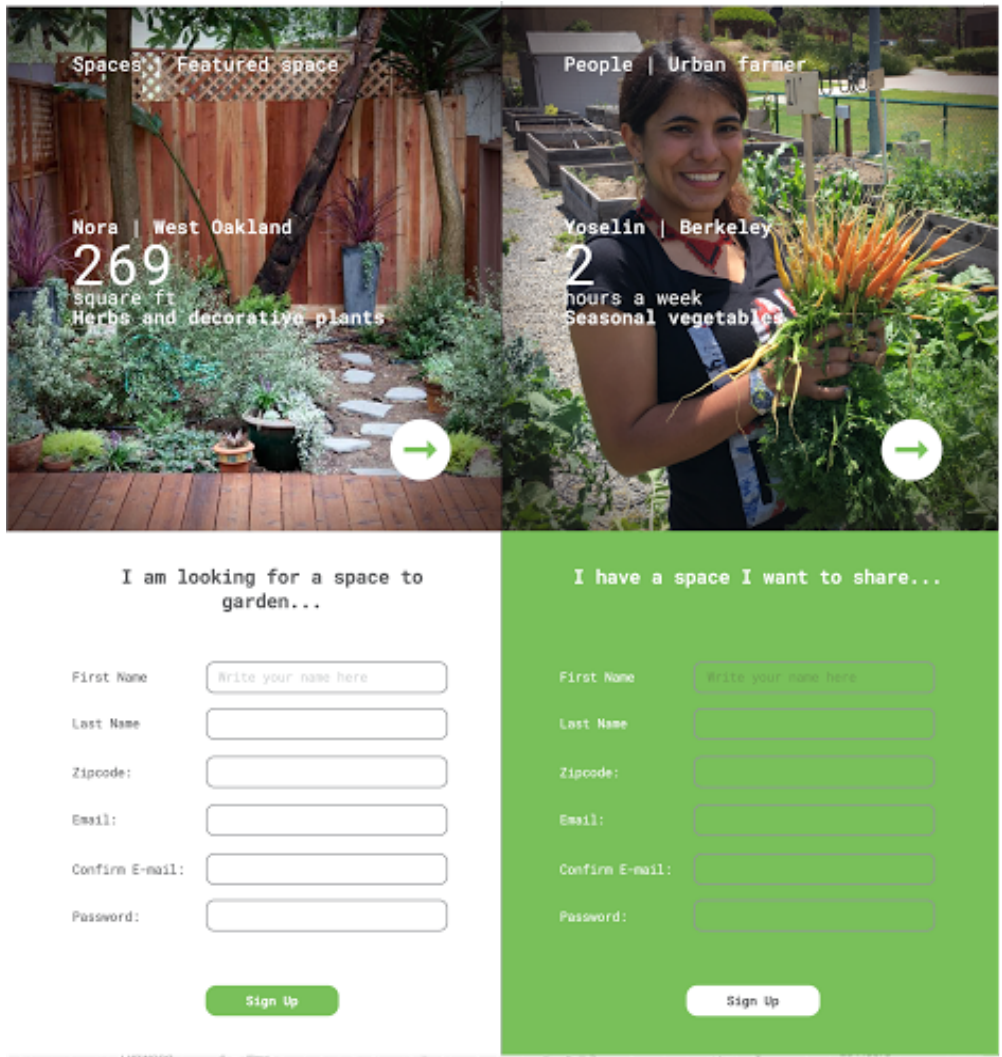
- Connects people who are looking for space to garden with those who have excess and/or underutilized space that they would enjoy seeing being made use of.
 - This encourages community connection through increased opportunities for interaction with neighbors.
 - Reducing isolation and the associated negative health implications
- Increase the amount of land being used to grow food and other plants in urban areas
 - Creates an urban collective of grower / farmers
 - Increases food autonomy while decreasing food miles
 - Creates opportunities for contact with nature and natural cycles in an environment that often pushes people out of the natural rhythms of life.
 - Creates more pockets for pollinators and other crucial life to thrive.
 - Provides access to knowledge and resources through a digital marketplace

How It Works

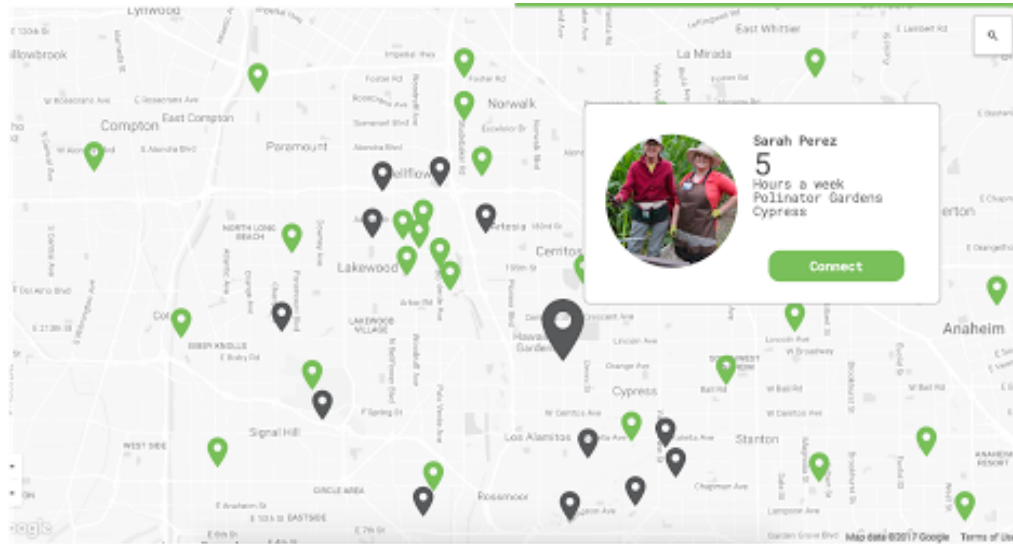
Our website front-page will guide our stakeholders through the process of pairing:



The website will feature photos of the gardens, as well as reviews of gardens, hosts and gardeners:



Users will be able to search for spaces with a map interface, and they will be able to look at several images and read about characteristics of each space.



Spaces



350 square feet | Noe Valley
Vegetables and herbs



400 square feet | Noe Valley
Trees and decorative plants



300 square feet | Bayview
Organic fruits and vegetables



270 square feet | Noe Valley
Flowers



180 square feet | Castro
Trees and decorative plants



100 square feet | Mission
Pollinator friendly plants



500 square feet | St. Francis Wood
Trees and decorative plants



300 square feet | Noe Valley
Trees and decorative plants



NEED HELP?

US | 800-471-8701

CA | 855-543-4562

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LANGUAGE

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PAIRING QUESTIONNAIRE

Our prototype consists of a questionnaire to gather information about interested parties.

Aspirational Gardeners

Questions for ASPIRATIONAL GARDENERS include:

- What is the farthest you would travel from home for garden space?
- What would you like to grow?
- How important to you are organic gardening, drought-tolerant gardening, and other ecologically aware gardening practices?
- Would you be willing to garden in containers, such as pots or raised beds?
- What micro-climates would you be interested in gardening in?
- Please rate your level of gardening know-how.

Garden Hosts

Questions for GARDEN HOSTS include:

- What is the amount of time you would be willing to have someone else in your garden?
- What sort of access entry point is available?
- What would you like the garden to look like / grow?
- How important to you are organic gardening, drought-tolerant gardening, and other ecologically aware gardening practices?
- Would you be willing to let your garden tenant garden in containers, such as pots or raised beds?
- What micro-climate does your garden have?

POST- PAIRING INVOLVEMENT

- Gardener + Host Contract
- Structure to the paired relationships
- What to plant, how to do it, kits & seeds
- Mediate dispute



How We Got Here

The Status Quo

The denser and more separated from that natural world life in the city becomes the more important creating opportunities for interaction and engagement with the natural world is. Engagement with the natural environment has been shown to “increase mental acuity and creativity, boost health and wellness, and improve human relationships.” Yet these opportunities are often too hard to come by especially for those with low environmental agency, often those on the lower end of the socioeconomic spectrum.

In large urban areas, such as San Francisco and Los Angeles, community gardens have traditionally served a need for outdoor garden space for apartment dwellers. Operating on publicly owned land—often as part of an urban park system—community gardens offer small plots of land for long-term lease to local residents. Residents can grow food or decorative plants in their plots and build social connections with fellow gardeners at the same time.

In both San Francisco and Los Angeles, the waiting lists for space in a community garden are very long. In San Francisco, the Parks and Recreation Department supports and manages a program of 38 community gardens on city-owned property, where members can grow produce and ornamental plants for personal use. In the highest density, neighborhoods, community gardens are full, often with waiting lists twice as long as the number of plots in the garden. In addition, turnover rates of plots can be as low as a few percent per year. As a result, people often wait years for an available plot in their neighborhood community garden.

At the same time, there are residents in these communities that have private yards that go largely unused because the residents don't have the time, knowledge, or physical energy to maintain and cultivate them.

Our Approach

I. Secondary Research

NATURE DEFICIT DISORDER:

Richard Louv, in *Last Child in the Woods*, argues that all humans, especially children, are spending more time indoors, which makes us feel alienated from nature and perhaps more vulnerable to negative moods, anxiety, depression or reduced attention span. He describes this as a new epidemic called "Nature-Deficit Disorder".

Combining research studies and anecdotal evidence, Louv argues that contact with nature increases mental acuity, creativity, health and wellness, and improves human relationship. The more contact with technology we have in our lives, the more contact with nature we need to keep us healthy. Louv's Nature Principle is about the power of living in nature—not with it, but in it.

Nature-Deficit Disorder is not a formal diagnosis, but a way to describe the psychological, physical and cognitive costs of human alienation from nature, particularly for children in their vulnerable developing years.

THE TREND FOR CITIES:

As millions of people look toward cities for economic opportunities, cities are experiencing intense and focused growth. The urban population has grown exponentially over time from 746 million in 1950 to 3.9 billion in 2014. The UN projects that in 2050 66% of the world's population will live in cities.

We have come to an impasse - the clear long term trends toward urban growth combined with the reality of the current unsustainable consumption of cities means that *it is crucial for the cities of today to become the sustainable cities of the future.*

SOCIAL SUSTAINABILITY:

On one hand, it is clear what our cities are doing to our planet. What about what our cities are doing to us, the human race?

Our problem is an increasing disconnect between people and their relationship to, and understanding of, natural systems and cycles that play a role in creating an urban experience that is short of being socially sustainable.

Ultimately if the urban experience is not sustainable, the economic engine that is our cities is threatened as people burn out under the intense pressures to operate in a speed that is not in harmony with the natural cycles of human beings.

Dr Andreas Meyer-Lindenberg of the Central Institute of Mental Health in Mannheim, Germany found city dwellers' minds are less adept at handling stress...and a group of Dutch researchers led by Dr Jaap Peen discovered that living in a city roughly *doubles the risk of schizophrenia*. Urban living was found to raise the risk of anxiety disorders and mood disorders by 21% and 39% respectively

The bottom line is, city dwellers cannot relate to their environment in a time and speed that is natural to the human experience unless they actively seek to change the atypical urban experience.

II. Primary Research

STAKEHOLDER INTERVIEWS:

We spoke to 20 people across a few different categories:

8 <i>Apartment Dwellers</i>	5 <i>Single Family home owners</i>	2 <i>Condo dwellers</i>
1 <i>Landscape architect</i>	2 <i>Community Gardens Organizations</i>	1 <i>Pollinator Habitat Organization</i>

INSIGHTS

- There is a lack of natural space people can interact and engage with due to specific barriers to access.
- Demand for community gardens has far outpaced supply for many years.
- Because demand for land is so extensive developing new publicly owned and operated community gardens is not a viable option in many cities.
- The average urbanite lacks the knowledge about plants and local environments needed to garden.
- The urban natural environment is often degraded with air and soil pollution.
- Barriers to wildlife movements are particularly challenging in urban areas.
- Time - people spend at least 6 times as much time watching TV and playing games everyday than leisure activities (which could be in nature)

The Concept



The Challenge

How might we help cities be more socially, environmentally and economically sustainable by increasing access to - and interaction with - green space/nature for urban dwellers?

The Problem

Our research has shown that interaction and participation with nature is challenging for the average city dweller.

WHAT DO WE MEAN BY INTERACTION?

- Meaningful
- Experiential
- Proactive
- Tactile
- Sustainable

Opportunity

We envisioned a concept that will create time and space efficient ways for urban dwellers with limited knowledge of the natural environment to interact with nature by cultivating or restoring a piece of natural space while creating social connections within their communities.

Does CULTIVAR Move the Needle?

Our hypothesis began with the idea that nature-deficit disorder can be mitigated in urban environments by increasing opportunities for people to connect with nature through gardening and handling of soil and plants. We also discovered a social benefit by increasing community interaction and engagement. CULTIVAR stands poised to create positive transformation within communities by providing a service that allows these connections to happen, and facilitating the gardening process by providing kits and soil evaluations. We believe that the CULTIVAR platform will also increase community knowledge about pressing sustainability concerns, like pollinator habitats and native plants, as well as small-scale permaculture and urban farming.

Social Return On Investment

Theory of Change

What Is The Problem You Are Trying To Solve?	Who Is Your Key Audience?	What Is Your Entry Point To Reaching Your Key Audience?	What Steps Are Needed To Bring About Change?
<p>- Nature deficit disorder: People living in cities lack access to nature or to the resources, time and energy required to take care of their natural spaces (yards, street planters, etc). The insufficient access to nature has negative implication in people's lives, especially children. According to Richard Louv, nature deficit disorder is connected to alarming effects in children such as attention disorders, depression, and obesity.</p> <p>- People who live in urban areas without access to private nature spaces struggle finding opportunities to be in nature. Their interaction with nature is reduced to visit public parks and other preserved natural spaces, mostly located outside the city. Those who want to have a more proactive access to nature, such as growing a garden or a orchard find few and exclusive opportunities to do so.</p>	<p>People living in urban areas such as San Francisco and Los Angeles, who either don't have access to nature spaces and would like to share their skills, time and resources to grow a garden in other people's property and people who have access to private nature spaces and need help maintaining them.</p>	<p>The idea of a community garden is very strong in people's minds. Our entry point is the creation of an online community garden that serves as the platform for people to share their spaces, skills and time. The goal of our platform is to make it really easy for people to feel safe sharing their spaces and to offer all the resources needed to grow, maintain and enjoy gardens.</p>	<ul style="list-style-type: none"> - Creation of a database of private nature spaces offered by their owners to the online community garden. - Creation of a database of people who want to have access to private nature spaces. - Design of a frictionless relationship between owners and gardeners. - Design of ancillary services required to sustain the community. - Design of a platform that makes it easy for people to find matches within the community, creates a space of transparent communication and a market for products and services related to the community.

<p>- People who have access to private nature spaces such as backyards, street planters and window gardens struggle keeping up with the resources, time and energy required to maintain their spaces. Moreover, taking good care of a private nature space requires knowledge and resources that in many times are not sufficient.</p>			
<p>What Is The Measurable Effect Of Your Work?</p>	<p>What Are The Wider Benefits Of Your Work?</p>	<p>What Is The Long-term Change You See As Your Goals?</p>	
<p>- The amount of private nature spaces shared in the community. Measured by square meters.</p> <p>- The number of people who have proactive access to nature.</p> <p>- The time spent by people in nature spaces.</p>	<p>- Incrementing the area of private nature spaces in cities that are been used proactively in activities like growing food and planting pollinator gardens.</p> <p>- Reducing the risk of suffering from diseases and conditions associated to nature deficit disorder.</p> <p>- Creating connected nature spaces by articulating independent and privately owned gardens in cities for the benefit of pollinators and other wild species.</p> <p>- Food autonomy for communities who struggle finding healthy and affordable food.</p>	<p>Creating and empowering a community of gardeners and yard owners to use all the resources available for the benefit of nature and people in urban areas.</p> <p>Create a new paradigm of connected nature in urban areas that drastically change people's attitude toward nature and our role in it.</p>	

Impact Value Chain

Inputs	Activities	Outputs	Outcomes
<p>Service model with expert advice</p> <p>Community connection between would-be's and underutilizers with mutual reviews</p> <p>Evaluations of soil and space to facilitate gardening activities</p> <p>Curated kits and boxes with planting guidelines and advice</p> <p>Connections with soil labs and garden retailers and nurseries</p> <p>Connections with end-consumers of locally farmed produce (individuals and restaurants)</p>	<p>Build out partnerships with soil lab, nurseries and other providers</p> <p>Hire and train staff</p> <p>Build out website and blog interface</p> <p>Develop connection interface along with sharing and search guidelines</p> <p>Develop review system</p> <p>Blogging and knowledge sharing</p> <p>Establish best practices for service routes and delivery of curated products</p>	<p>1000 Communities,</p> <p>10,000 gardens shared</p> <p>20,000 garden kits and supplies</p> <p>Set target for initial income</p>	<p>More community engagement</p> <p>Increased opportunities for gardening</p> <p>Mental health benefits (not measurable)</p> <p>Increased pollinator habitats</p> <p>Increased urban farming</p>

Quantification of Social Impact

EXPECTED OUTCOMES

We expect that we will have both measurable and unmeasurable results. We will see some immediate benefits to both gardeners and garden space owners, including, but not limited to:

- People on waiting lists at community gardens will be able to find garden space close to where they live.
- More community engagement
- Increased opportunities for gardening
- Mental health benefits (not measurable)
- Increased pollinator habitats
- Increased urban farming

Outcome	Metric
Increase in amount of garden space made available to people seeking space to garden.	- Number of gardens shared through CULTIVAR - Number of square feet of garden space shared through CULTIVAR
The number of people with increased exposure to nature through gardening.	- Number of sharing relationships formed through CULTIVAR.
Increase in time spent gardening.	- Number of hours spent gardening by CULTIVAR members (estimated through surveys)



Monetization of Social Value

The sharing/access economy is here to stay. As urbanization grows and land availability dwindles, the benefits inherent in sharing garden space to grow food and flowers is becoming increasingly apparent to urban dwellers. The monetization model is a multi-pronged approach offering the connection and review service, expert advice and evaluation, and sales of specialized, curated custom kits.

By engaging communities interested in beautifying their public and private environments, or using underutilized private spaces to grow gardens, we want to dramatically impact the way people connect with each other in their spaces and communities.

In a world where communities are increasingly becoming more aware and interested in growing and buying local food and supporting pollinator habitats, we seek to improve overall community engagement, provide space and access to nature and improve gardening experiences by sharing knowledge and expertise.

Our new service model seeks to integrate community connection, easy access, expert advice, and convenience of location. We believe our solution is compelling, economical and will be embraced by urban communities interested in local gardens.

The Business of CULTIVAR

The Business Model

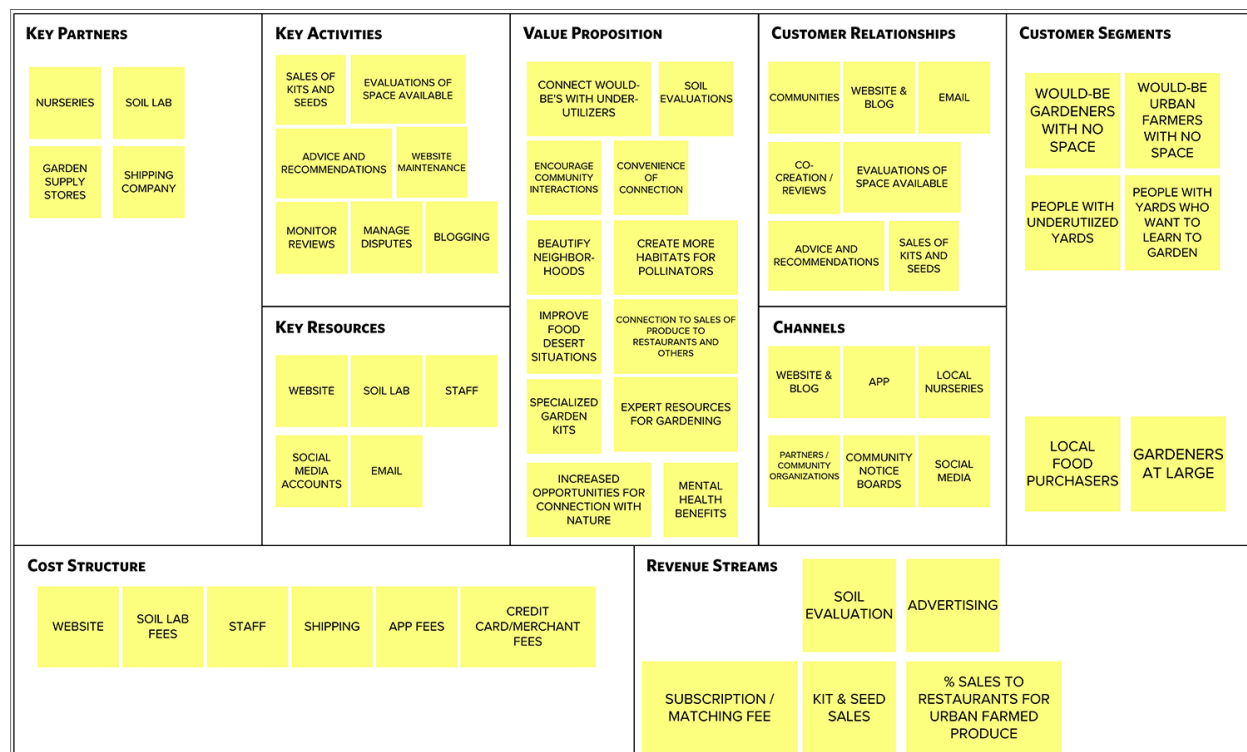
There are opportunities to generate revenue by charging a usage or subscription fee, as well as additional paid services like soil and space evaluation, and sales of garden kits.

Cultivar looks to break into two industries showing steady growth. First, the \$36.9 billion DIY yard and garden industry and second, professional landscaping.

Growth in DIY gardening is being led by millennials, especially those with an interests in food. The connection to food and foodie culture represents further opportunity for profitable partnerships and activities.

- 74% of all US households participated in lawn and garden activities in 2016.
- The average amount per household was \$407.
- The number of households purchasing landscape design, installation and maintenance services has doubled in the past 6 years.

* <http://gardenresearch.com>



Competitive Analysis

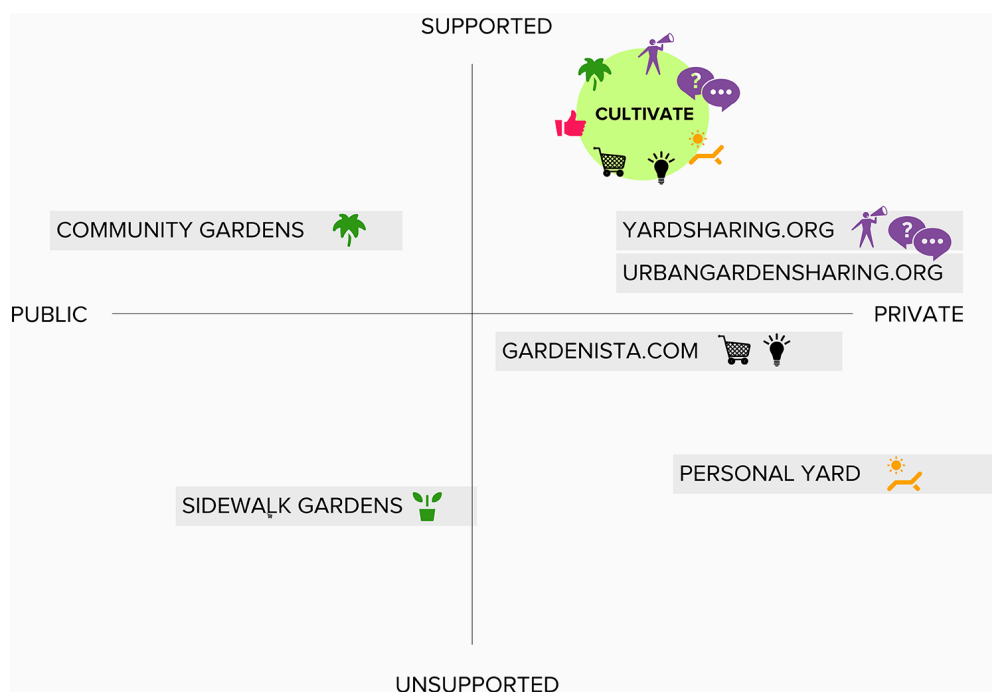
The competitive matrix below illustrates options currently available to urban gardeners:

- Personal backyards – to which a distinct segment of the population does not have access
- Sidewalk gardens – which are on public land but whose maintenance is the responsibility of the adjacent property owner. In addition, sidewalk gardens are not part of any support network of knowledge and resources about gardening.
- Community gardens – Which are on public land and include support networks, but are in short supply.
- Other services aimed at sharing private yards – Which provide very limited functionality and include no support network.

Our nearest competitors are **yardsharing.org** and **urbangardenshare.org** as well as local community gardens.

Yardsharing.org and urbangardenshare.org act simply as message boards, like Craigslist, and community gardens are simply unavailable by virtue of limited supply and high demand.

Gardenista.com and other websites like them are elegant blogging platforms with an online store for easy purchasing. Items are curated but not customized to each purchaser's needs. There is no space-sharing or space-access component.



HOW ARE WE DIFFERENT?

CULTIVAR is uniquely positioned to match the two sources of demand from people who want space to garden and people who have excess space, as well as provide resources to them, such as soil evaluations and customized gardening plans.

CULTIVAR sits in the upper right quadrant of the matrix. CULTIVAR will provide a matching service to help people find their ideal match in terms of gardening knowledge, preferences for ecological practices, and preferences in terms of garden type. CULTIVAR will also provide auxiliary services to members to determine what to plant and how to maintain it.

Value Proposition

For urban dwellers who would like to garden, we provide access to space, knowledge, and support to meet the needs of beginning and intermediate gardeners.

For urban dwellers with unused outdoor space, we provide access to a community of gardeners, support in creating their desired garden, and possible opportunities to make money from their space.

Potential Challenges/Risks

Our central challenge is creating a system that will make people comfortable with sharing their space. We see that there is lots of demand from people who are looking for space. There is less demand for people to find neighbors to garden in their space. In other words, the demand for space is higher than the supply of space. Nevertheless, we do find that some people have underused space and like the idea of sharing.

Our first step as a business will be to test the assumption that we can create an arrangement in which urban residents with outdoor space will feel comfortable sharing their space. We will experiment with:

- Paying people for use of their space
- Allowing people with space to restrict the hours during which their yards can be accessed
- Providing oversight of the neighbors using their space
- Growing fruits, vegetables, or other plants of value for the people lending their space
- Using credit scores, social media profiles, and other publicly available information to screen neighbors looking for gardening space.



Next Steps

Explore how to manage the many variables in space and relationships.

A Path toward Sustainable Cities

We realize that this is small step but also believe that these small changes in human behaviour DO move the needle towards bigger change.

Our objective from the beginning has been to create opportunities for environmental autonomy, and to serve stakeholders' needs by bridging communities together.

Our service model seeks to integrate community connection, easy access, expert advice, and convenience of location. We believe our solution will play an integral role in ensuring a environmentally, economically and socially sustainable future for cities and the people who call them home.

Appendix

1. <http://www.sfindicatorproject.org/indicators/view/8>
2. http://millerlab.nres.illinois.edu/pdfs/Standish_2012_Improving%20city%20life%20-%20options%20for%20ecological%20restoration%20in%20urban%20landscapes.pdf
3. <http://www.un.org/en/development/desa/news/population/world-urbanization-prospects-2014.html>
4. <http://www.citylab.com/weather/2015/10/the-pretty-much-totally-complete-health-case-for-urban-nature/411331/>
5. http://msue.anr.msu.edu/news/what_are_the_physical_and_mental_benefits_of_gardening
6. http://www.huffingtonpost.com/jill-l-ferguson/physical-and-mental-benefits-of-gardening_b_9750328.html
7. <https://www.theguardian.com/cities/2014/feb/25/city-stress-mental-health-rural-kind>
8. <http://www.Gardenresearch.com>