



CASE STUDY

# Healthy Greens JC

Vertical farming for a healthier Jersey City

City	<b>Jersey City</b>
Population	<b>256,747 (2020)</b>
Country	<b>United States of America</b>
Region	<b>North America</b>

Healthy Greens JC is a joint initiative between the Jersey City Department of Health and Human Services (HHS), Jersey City Housing Authority (JCHA) and AeroFarms to deliver healthy, local-sourced vertically farmed produce in efforts to tackle food insecurity by merging technology, education and food access. The initiative has resulted in two operational vertical farms, with eight more in development. The goal is to bring healthier food options to low-income communities and to increase education on nutrition and healthy eating. Healthy Greens JC is the first comprehensive urban vertical farm programme in the United States.



# Overview

Healthy Greens JC includes the construction and maintenance of 10 vertical farms located throughout Jersey City in the US State of New Jersey. The first farm opened in the town of Kearny in 2017 and the second one opened in Jersey City in 2021. The farms provide better access to healthy food for individuals and families facing food insecurity through the provision of access to leafy greens and classes on healthy and nutritious diets. According to data in the [2020 Map the Meal Gap study](#) for Hudson County, which surrounds Jersey City, one in eight individuals (12.2%) and one in five children (18.2%) are food insecure, meaning they lack consistent access to adequate food to live a healthy and active lifestyle.

This project aims to address Jersey City's food insecurity by merging vertical farming technology, food access and health education in the most vulnerable parts of society. Unlike many outdoor community gardens, the Health Greens JC project will help Jersey City residents have access to healthy food throughout the year. The project is meant to have a participatory approach where the success is determined by collaboration among various actors: government, technical partner, hospitals, other local organizations and, most importantly, people.

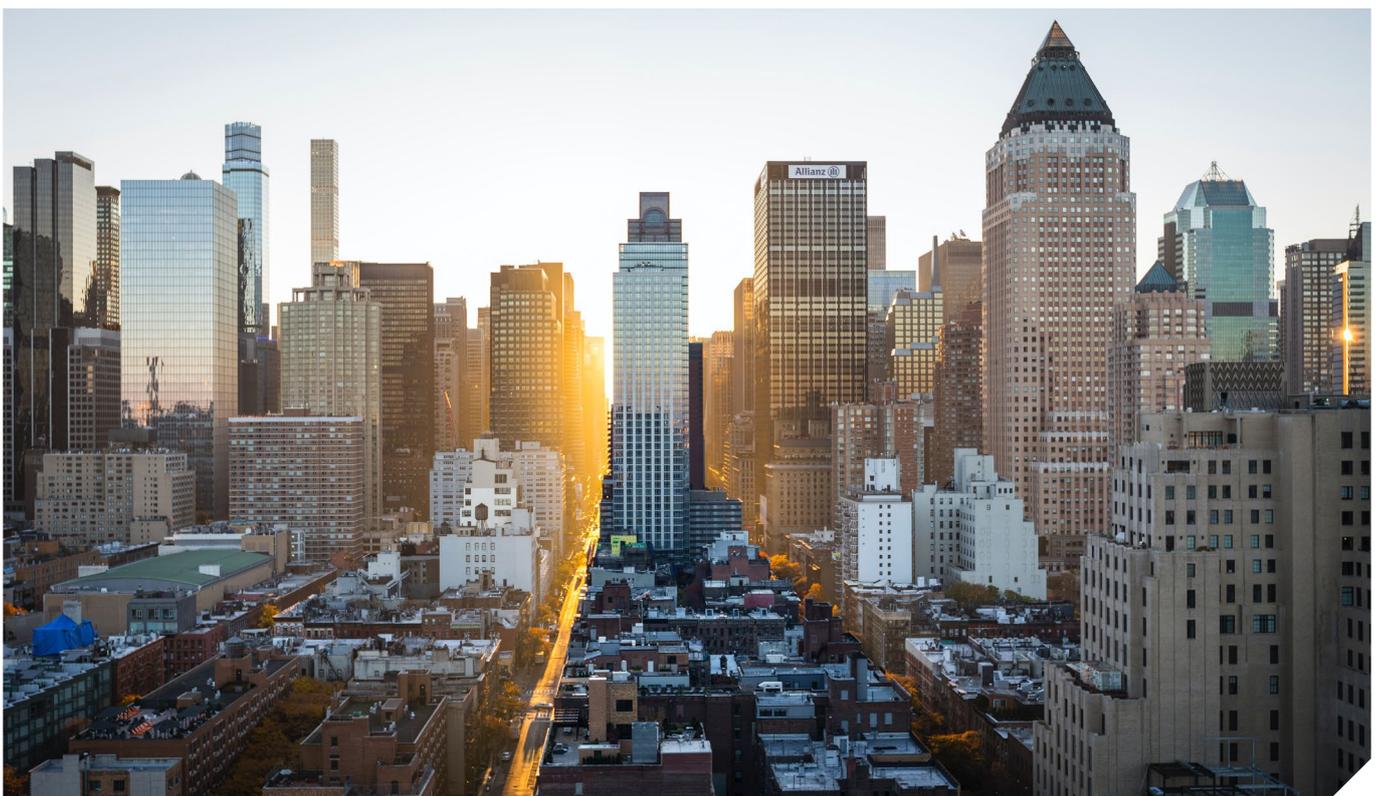
Cooperation between the public and the private sector is key to the project. From the public sector, the city commits to spending \$1 million to develop the 10 vertical farms over three years to provide free leafy greens to people from lower economic backgrounds. The city also provides the premises for the vertical farming sites, such as schools, senior centres and other strategic areas, which will provide proximity to the targeted community and increase the success of the project. Sustainable indoor agriculture company AeroFarms focuses on providing the technical expertise to construct and run the vertical farms.

Jersey City is also in charge of communications and community engagement. The city envisions a society that not only has better access, but also has good nutritional knowledge. It provides classes offered to voluntary participants on how to prepare delicious meals that are nutritionally balanced. The community engagement programmes are not only designed for adults, but also children through visits to the vertical farming sites. People are encouraged to join the programme voluntarily and attend several training sessions that will help to improve their knowledge of nutritious food.

This project is measuring impact based on data collected using wearable technology rings provided by Oura Ring and will be used to further assess the impact of such policy on the health and productivity of the volunteers. Additionally, health data from participating residents will be obtained through free quarterly health screenings provided by Quest Diagnostics. The initial data results are expected to be available at the end of 2022 following a period of the effective implementation of the project.

The plan for the Healthy Greens JC project emerged from Jersey City's policy initiative related to food security, health, academic research and data capture. In collaboration with the World Economic Forum, the city explored the idea of vertical farming and cooperated with AeroFarms as its private partner, which provides vertical farming expertise. Two sites of vertical farming are currently up and running. While the remaining farms are in development, the COVID-19 pandemic has become an obstacle, especially in engaging the community as mobilization had been limited.

Cooperation between Jersey City and AeroFarms is covered under a service agreement that has been negotiated to meet project expectations.



# Key decisions and tactics

## 1 Providing equitable access to free, fresh healthy food

Equitable access to affordable, healthy food is a key challenge in the city, usually in low-income neighborhoods. Healthy Greens JC works to improve access to fresh, locally sourced fruits and vegetables for communities at a low cost at convenient locations. Identifying locations that are most suitable for vertical farming and accessible for distribution were a key decision for the effective implementation of the project.

## 2 Awareness campaign for nutritious and healthy diets

Communication campaigns and engagement activities have increased knowledge among the community on what constitutes a nutritious diet. Classes offered to participants provided information on a balanced diet and the importance of consuming nutritious foods. The community engagement programmes targeting adults and children help instill the habit of eating a healthy diet. This will help to improve knowledge of nutritious food in a larger group of people in and eventually lead to changing the trends in consumption patterns at a larger level.

## 3 Minimal impact on the environment

Healthy Greens JC aims to be an environmentally friendly initiative by using recycled water, minimizing costs and waste. The project also helps minimize the usage of fossil fuels in different areas of crop production. As it does not use chemicals or pesticides, it makes the produce safer for consumption. It will also reduce supply chain inefficiencies and help achieve maximum productivity in a minimum area. As the transportation required is much less, it also saves fuel costs, making the process more efficient, clean and profitable.

## 4 Public investment in sustainable health solutions

Public investment in health and the reallocation of public assets were essential to enabling this collaboration. The \$1 million in upfront costs allotted to AeroFarms for the engineering, construction and maintenance of the vertical farms was a part of the city's capital budget. In addition to investment from the city, federal and state grants could also support this health initiative. In the long term, as the health level of the community increases and health costs decline, the city is expected to be able to benefit from the cost savings on health services and, depending on the outcome, will be able to allocate some of the savings to sustain the project.

## 5 Attracting the interest of the right partners

The partnership, formed through a collaboration with the World Economic Forum, brought together Jersey City, AeroFarms, Ora Rings and Quest Diagnostics to drive impact on advancing health in cities. Each partner brings their own expertise to the project to help ensure overall success. Local partners include the Boys & Girls Club, Head Start Early Childhood Learning programmes and Community Food Bank of New Jersey's SNAP-Ed programme, which lead community outreach, distribution (through early childhood or senior citizen meal programmes) and healthy eating education.





## Best practices

- Optimal utilization of resources, as more idle assets of the city could be used for better public benefit
- Effective community engagement through training, education and cooperation with local partner organizations
- Effective public-private collaboration through division of expertise between the city and the private sector



## What did the public sector offer?

- \$1 million from the city's capital budget
- Providing locations: senior centres, schools, public housing complexes, community centre, and municipal buildings
- To support some of the activities, including the community engagement
- Relationships with the Community Food Bank of New Jersey, Boys & Girls Club and Head Start to expand reach



## Impact

- 10 vertical farms expected to be built throughout Jersey City providing approximately **19,000 lbs** of vegetables annually for **3 years**
- Expected health benefits for programme participants include decrease in rates of high blood pressure, diabetes and heart disease



## What did the private sector offer?

- AeroFarms: engineering, construction, operations and maintenance of the vertical farms
- Water-efficient aeroponic technology to grow food indoors (no soil)
- Industry expertise
- Oura Rings: technology wearables and data analytics
- Quest Diagnostics: health check-ups



## Replicability

1. Connecting to global and local partners through a convening entity to address a common goal in the Healthy JC case was the Healthy Cities and Communities initiative, led by the World Economic Forum
2. Partnering with private sector companies to provide technology wearables and health service support to measure impact

## For more information

[Healthy Greens - City of Jersey City](#)

[Jersey City Vertical Farming Project - City of Jersey City - Department of Health & Human Services \(HHS\)](#)

[Press Release: City of Jersey City](#)

[Programme lifecycle: Jersey City Healthy Greens - Innovate JC](#)

[Healthy Greens JC - Jersey City TV](#)

[Jersey City's Community Vertical Farm Programme - Jersey City TV](#)