



Datacenter Community Development

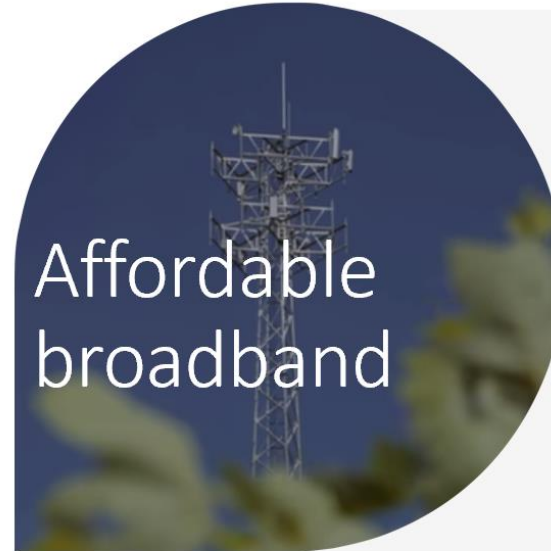
Investing in People, Developing Communities

Our community development programs

Addressing community priorities through ecosystems of local partnerships, teaming to deliver diverse outcomes — social, economic, and environmental



Affordable broadband



Building and delivering access to affordable broadband in all datacenter communities

Building digital skills and career pathways in the communities in which we operate, enabling full participation in the 21st century economy

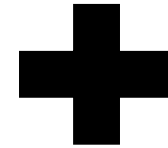


Environmental sustainability



Serving the needs of a growing population embracing a future based on cloud computing while leaving a positive ecological footprint

Why this new initiative?



Empower students to **make a difference** in their local communities

Drive **social innovation** amongst youth through community pitch offs

Learn from the students and be **community relevant**

Help students gain skills and experience in entrepreneurship, strategic planning, and creative problem-solving, making them **winners in the job market**

Net Impact Pilot – FY19



Net Impact Conference

Lifting Communities in Tech's Backyard: An Impact Workshop with Microsoft)

Expo - We connected with 500+ students

Community Pitch Off Competition

San Antonio – Food Bank Operation Management Application

Phoenix – Food Computer in high school

Des Moines – Hydroponic Community Garden

Chicago – Panhandling Intervention

Implementation and Activation

San Antonio – April 26

Phoenix – May 7

Chicago – May 9

Des Moines – May 10

A scenic landscape at sunset or sunrise. The sky is a gradient of blue, orange, and yellow. In the foreground, a dirt road winds across a grassy hill. Three wind turbines are visible on the ridge. In the background, there is a large body of water and rolling hills under a hazy sky.

How can Microsoft best engage with local communities that host its datacenters to address local needs and drive shared value?

DIY Hydroponics

Microsoft Net Impact
Finale Report

Time: 4-6 PM

Location: Des Moines

Community: Seven organizations throughout Des Moines area

College: Iowa State University

Team Members: Carina Grady, Max Friestad, Aaron Ramsey

Agenda

- Problem Statement
- Goals
- Solution
- Solution Implementation
- Cost Breakdown
- Prototype
- Partners
- Impact Created
- Website
- Challenges
- Future Direction

Problem Statement



“In Iowa, 360,540 people are struggling with hunger—and of them, 115,890 are children [3].”



As the state that has the third highest number of farmlands, as well as a \$14.8 billion revenue of agricultural production, it's surprising how many people go hungry.

Our Goals

- 1) Easily provide fresh produce to those with food insecurity.
- 2) Increase environmental sustainability awareness.
- 3) Increase community engagement.
- 4) Promote technical education.



Solution: *Hydroponics*

Sustainable farming.

PVC pipe, plastic container, and pump.

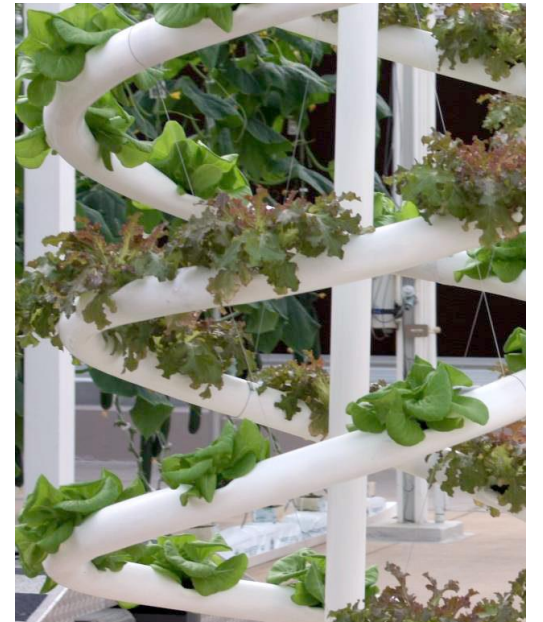
Indoor gardening for 24/7 produce.

Can grow inside your own home.

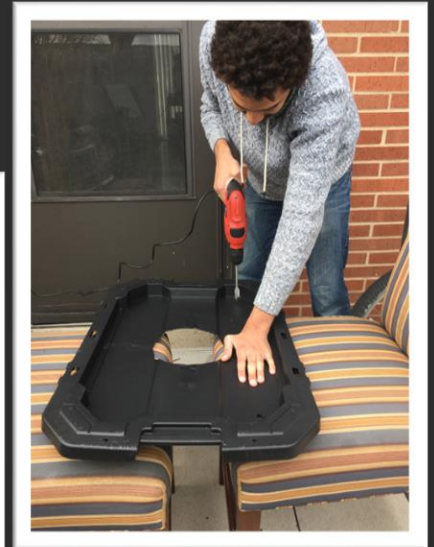
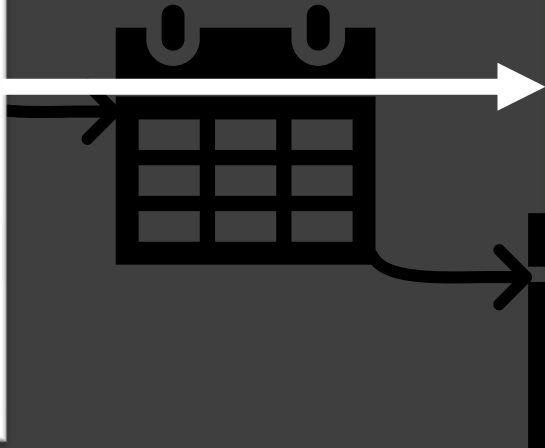
Minimal maintenance.

Low cost.

Open-sourced website.



Solution Implementation



Cost Breakdown

	<i>Item Bought</i>	<i>Cost</i>	<i>Total Spent</i>
1	Website Domain and Host	\$99.00	\$99.00
2	Website Theme	\$39.00	\$138.00
3	3 Pipes, 3 Tubs	\$188.11	\$326.11
4	Plant Pots and Pumps	\$385.97	\$712.08
5	Clay Pebbles	\$221.82	\$933.90
6	3 Pipes, 6 Tubs, 3 Lids 4 Y-Connectors	\$297.58	\$1,231.48
7	Fabrication Fee	\$600.00	\$1,831.48
8	PVC Plugs	\$62.62	\$1,894.10
9	Pumps (Mernards)	\$179.82	\$2,073.92
10	Pumps (Amazon)	85.46	\$2,159.38
11	25 Gallon totes	\$167.64	\$2,327.02
12	Slim PVC	\$13.68	\$2,340.70
13	Vinyl tubing	\$51.66	\$2,392.36
14	O-rings	\$4.96	\$2,397.32
15	Hose Adapters	\$17.20	\$2,414.52
16	Hose Splicers	\$2.56	\$2,417.08
17	Slim PVC caps	\$7.68	\$2,424.76
18	Hose Splitters	\$6.56	\$2,431.32
19	Shirts	\$75.00	\$2,506.32
20	Fabrication Fee	\$1,500	\$4,006.32

Prototype



PVC Pipe

Plants

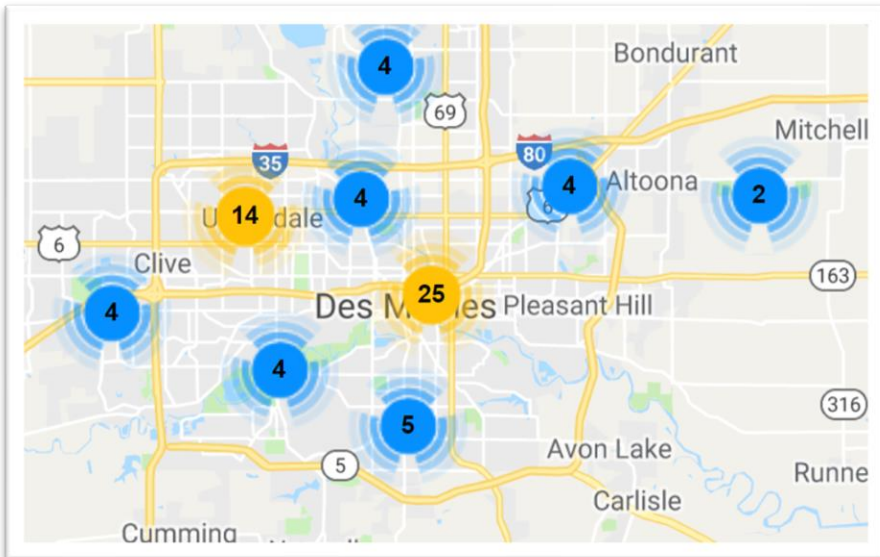
25 Gallon Tub

The pump takes the water from the tub to the top of the PVC pipe, where the water streams down and touches the roots of the plants.

Our Partners



Eat Greater Des Moines is a central Iowa-based non-profit organization that facilitates and builds connections to strengthen the area's food system. Our mission is to unite the community by providing quality food access for all. We build community through food. By bringing people to the table, we empower partners in our community to connect, support one another, and move ideas into action through information sharing, building relationships, and providing education on the most urgent issues related to food in our community.



We are working with Aubrey from Eat Greater Des Moines to find end-users in the Des Moines affordable housing organization.

Website: <https://www.eatgreaterdesmoines.org/>

Our Partners

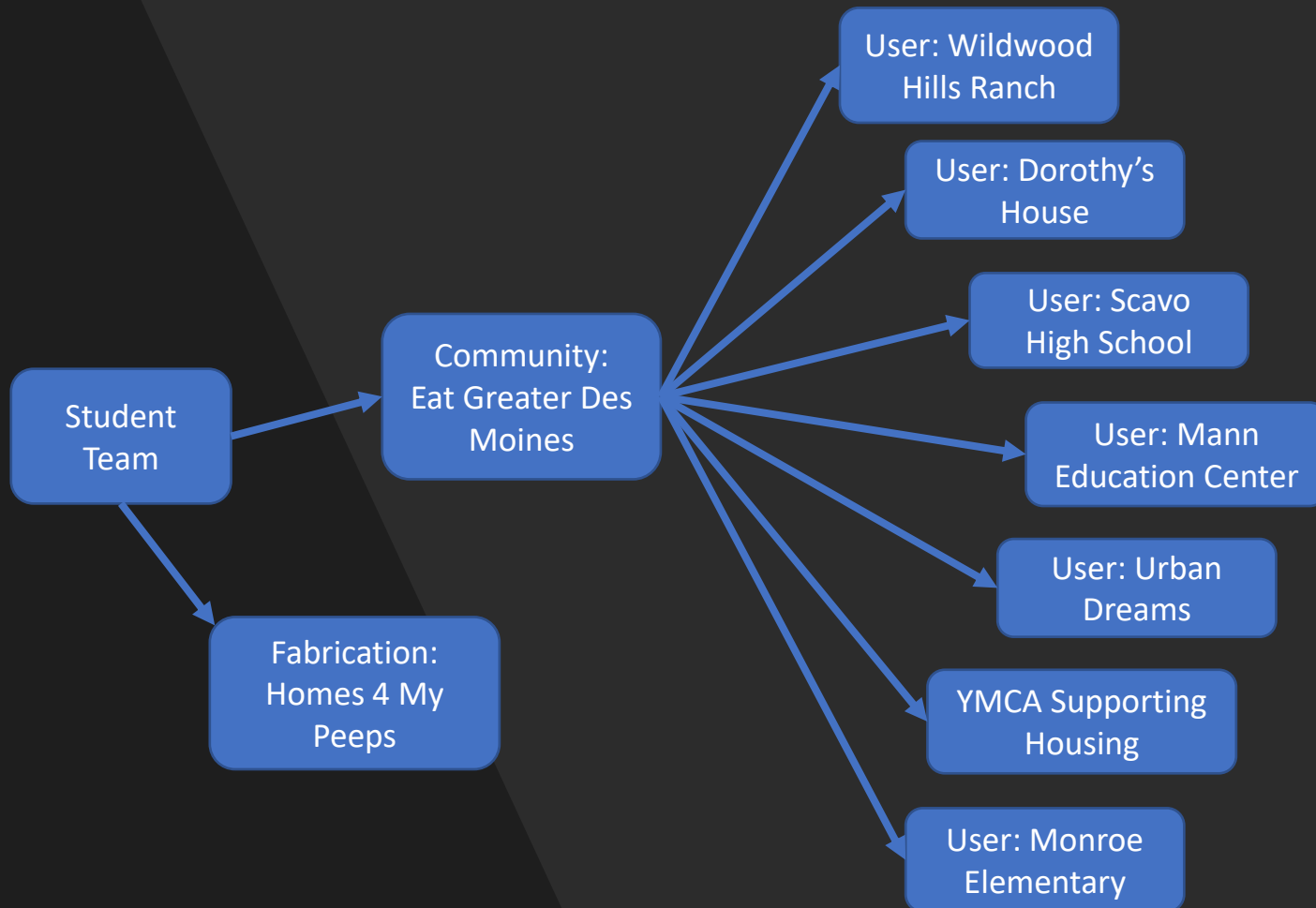


Home 4 My Peeps' mission is to provide green housing and sustainable living solutions to blighted communities. Past projects include community gardens, vertical farming, book libraries, and home remodeling.

We are working with David from Homes 4 My Peeps to help produce many hydroponic gardens to those with food insecurity.

Website: <http://www.homes4mypeeps.org/>

Beneficiaries, Partners, Users



Type	#
No of community partners:	7
No of people impacted:	2175
No of students involved:	4

Impact created in the Community

What is the most important change that occurred in your community as a result of your project?

- Reliable source of fresh, healthy produce for those in need.
- Self-sustaining, indoor, vertical-growing, year-round supply of produce.
- More awareness about low-cost hydroponics.



Making the Project Available to Everyone

<https://www.diyhydroponics.com>

Website will include instructions, pictures, videos, and other information relating to this project.

Goal: to open-source the project in a website to show that anyone can start their own hydroponic garden within the comforts of their own home.



Challenges & Learnings

- What are the major challenges that you faced?
 - Communication
 - Time management
- What can Microsoft do differently?
 - Funding confusion
- What recommendation would you give to future teams?
 - Start earlier
 - Plan out purchases and building ahead of time

Future Direction Project

How will your project be self-sustaining overtime?

- The website will be available indefinitely for the community to build their own hydroponic system.
- Because seven organizations and 2000+ people in the community are affected by this project, the idea of hydroponics has a good chance of spreading around.

Who will continue the project?

- The website will act as a liaison as a FAQ to keep the project self-sustaining. It is expected to be finished by May 31st.
- David Houston from Homes 4 My Peeps is an excellent resource to use for those who would like help in building their own hydroponic system.

Any Questions?