Problem Statements – Food Access/Sustainable Farming

Access to transportation goes hand in hand → lack thereof

Weather in Buffalo is bad half of the year.

Do we know where all the food deserts reside throughout the region?

I'm a vegetarian. Where can I eat?

Is there a community garden near me?

I don't know if my food comes from good sources

Lack of knowledge around urban farming practices (i.e. starting a garden on empty lots)

How to make organic food prices more affordable?

Logistics/cost

How to determine what foods are good for you based upon your health issues

Where would inventory for urban gardens be?

Locations of supermarkets and farmers markets w/ times and directions

How do I find a farmer's market?

What is green farming?

Fast food is cheaper in the short term and quicker, making it an attractive option to working people short of money and time

What food options are currently available? How do I evaluate which ones are the healthiest?

Soil testing is expensive

A lot of people don't know how to cook

How to get farmers to share the harvest for farmers to communicate with each other

Solution Statements – Food Access/Sustainable Farming

Promote farming "excitement" for city residents

Farm areas in the city

Land trust for individuals who are willing to create a warm house on a city's vacant land?

Nutrition education and how to prepare food

Allow for food requests during winter months so farmers can visualize demand

Online store for farmers markets – reserve ahead of time; integration with existing service?

App to display pop up farmer's markets

App to sign up to donate leftovers for pickup on weekend

Use solar or wind energy to power farms

Database of various ailments and foods that can aid in better health based on personal health profile

Online and in-person cooking classes and instructions

Farm share "share" app ; extra share crops

Cheap home soil testing kits to encourage home gardens

Corner store farm share membership

An app that identifies the healthy options in your area

Incentivize instacart to select products from green sources

Create an app that keeps track of producers using green practices

App to connect people and resources in their communities

Apple Maps or Google Maps should provide preferences or categories for healthier food options

Create a "food desert" map using maps between grocery stores, corner stores, restaurants…

Mapping food deserts, where opportunities are for opening a new store/market

Create "how-to" guide on how to start an urban farm, provide access to resources

App to compare shop fast food and healthy food

Guide- how to prep garden during winter months and greenhouse education

Share sharing app for neighbors

CSA option to donate a share/ half-share to low income areas

Increase communication between rural and city areas. People in the city will know and talk to their local farmers. Increasing knowledge of both parties

Problem Statements – Building Development

Benefit is unknown – personal and community impact

What options are available for development? How can we identify areas for improvement?

I'm a renter; what can I do about suspected lead paint in my flat?

Which buildings can support garden top?

Green Code and other regulations require a lot of research. How can we make this more user-friendly?

Why/Do we use our natural resources wind/sun/snow to make development move off the grid?

How is my company doing relative to my community?

Solar panels are expensive. Lower income people should have more access to these.

How do I avoid products that aren't really "green", greenwashing?

Not a lot of experienced green developers

How to incentivize solar on new buildings

War on "sick" home eliminate lead and mold, not remediation but structure elimination

How to force companies to consider their solar and other green products price again? How to get the prices down?

Green materials are too expensive

Green building development isn't always the quickest/cost-effective

Cost

Solution Statements – Building Development

Mapping tool for buildings that can support garden tops

Solar potential or automatic climate control based on actual conditions

Weather microclimate info to show capabilities of building site or challenges (i.e. great location for wind turbine or wind tunnel effect)

Create taxes/incentives to new eco-friendly houses and buildings. Use an app to track these buildings

Sick houses can be geo-tagged by locals

Community organizations can pool resources and individual can be incentivized through social media standing

Incentivize builders to use green solutions with tax breaks

App for geo-pinning of available spaces

Encourage multi-use to reduce space waste (dead office buildings at night, empty homes at day)

App to show how much sun/wind a building gets

Wind energy from ventilation units is not properly incentivized. This adds significantly to green buildings

Better policies

Update or mandate policy to integrate green tech in building development

App/website for finding high-risk properties for lead

Renter's discount or incentivize for using green tech

App to compare traditional vs. green home improvement options: cost, impact, where to buy

3 to 6 block area uses the best house roofs for solar panels. (eminent domain) Benefit to owners of roof. Area also has a batter for storage (shed space and grid)

Eco-score (like Walkscore)

Crowdsourcing app to show support and comment on green policy initiatives and building codes

Making energy/green building plans transparent and accessible so community members can vote

Improvement cost/benefit calculator – how long does it take to pay off?

Community Solar – make it easier for communities to pool money to install solar panels to decrease energy costs – tech can help with an app to help people connect

An app that grading system of how your rental house is doing in energy efficiency

Company that allows renting/leasing of solar panels

Virtual "meter" for businesses so you can know their energy footprint

Write/create app to educate and promote "green" constructions and buildings

App could educate people on cheap material for green projects

Problem Statements – Waterways

Where does my waste water go?

Where does the runoff from my property go?

Understanding where watersheds are in our communities

How do we track the flow of pollutants introduced in other locations?

Aging infrastructure

Where/what are the problem areas?

How do water pollutants impact population disease rates?

How can I tell what the pollution level of local bodies of water as ecosystems are?

Information lacking about water quality

Conditions of lakes and rivers aren't monitored

Lack of understanding in complexity of water flows and ecosystems

How to measure longest run off

Lead pipes in old homes

Solution Statements – Waterways

Drone sub/mock fish to sample waters as game fish do or route

Species tracking solution

A way to track how much water a household wastes

Replace the pipe system in Buffalo w/built-in water testers

Heat map of what homes are up to date/which are not

Advertise upcoming replacement products

IOT-linked buoy network across Great Lakes and at mouths of feeder rivers

Write source cleanup tracking

Develop cheap home water testing kit

Map overlay of trouble areas what is contaminating, publish online

Sewage and overflow mapping

Treat snow and cold as energy source

Identify community wetlands and encourage clean up days

Interactive map to see where your runoff and usage goes

Use snow melt on roofing to provide natural water replenishment to water source

Treat snow and cold as a consumable resource

Do an inventory to see which to replace first

Publish geo-tagged waterway pollutant testing results…coordinate routine volunteer testing (a testing company may have to sponsor)

Use drones to review ecosystems on a real-time basis to track and provide feedback in near real-time

Geomap wastewater routes

Education outreach

Kayak launch sites mapping

Magnetic fishing and pull metal out of water with electromagnets

App to identify which fish is safe to consume

Problem Statement – Water Conservation

It's hard to keep track of quantity of personal water usage

How to we bring attention to the growing water crisis?

Lack of good options for home owners who want to conserve

How to utilize stormwater i.e. gutter drainage

My friend's faucet leaks 24/7 and it's a simple fix. How many others leaky faucets are there and can community members help?

Meter consumption people in house (# of) high use = volunteer leak inspection (save water)

How can we lower water consumption without affecting people's convenience?

No consumer incentive as water is perceived as "cheap"

Compare water use to other users show savings w/ repair options

How do I know if I'm using too much water compared to others?

I don't know my consumption compared to my peers in real time.

Cost of solutions available now

I don't know where points of inefficient use are

How do I identify where I'm wasting water?

How does water waste impact the environment?

Solution Statement – Water Conservation

Permeable surfaces to reduce waste

Monitor and report on historical usage

Comparisons to neighbors/greater city

Mapping application to identify areas that need more permeable surfaces could benefit the most

Education app about permeable surfaces and reporting storm water

Use snow on roofing to bring the water to natural watershed

Redirect gutter spout to your lawn or garden (rain barrel)

Cheap IOT device for tracking usage in pipes

App that can access real time data on water usage at home meter (QR Code/ AR app)

Create a contest where neighborhood block clubs or neighborhoods like Hamlin Park could track water usage and try to reduce it as a team and then get an award

An app that shows the water usage in real time (can also be used to prevent water leaks, floods)

Create cheap actuators, and sensors to monitor usage in taps

App to find a handy man to help – volunteer-based in low income areas; professionals pitch in to help

What can we use salt water for? Replace fresh water in certain tasks

Water bill- compare to neighbors

Wireless meter monitor to real time provide feedback

App displaying household water usage vs. similar homes across WNY and rewarding conservation

Using IOT sensors have small passthrough wireless devices monitor utilization of faucets and use analytics on an app to compare to peers/across community

IOT water sensors to measure usage, leaks, etc.

Lots of efficiency-based solutions are free – let's educate others!

Problem Statements – Food Waste

IS it cost efficient for food organizations/restaurants to donate food scraps?

I don't know who accepts food waste

Can food waste legally be donated? (liability in an often cited concern)

No incentive to donate unused food

How expired is expired food?

How to know when there is expiring good food left in a restaurant or grocery store?

How do we remove the risk of liability to encourage distribution of unused food to local companies in need?

Is ugly food a waste?

Is it possible to set up a food pantry system?

Who is willing to re-prepare/reuse the waste food professionally?

Too big portions before expirations

"Food waste is a thing"? How do we let people know it's an issue?

We need a better way to quantify food waste

Stores encourage buying more

Solution Statements – Food Waste

A device that can test the quality of food by its chemical makeup to determine if it is still safe to eat, or harmful to the body

Work to pass laws that protect food donors/share evidence it is not an issue

Site/app to connect restaurants or stores with NFP organizations for donations

Show donators who they are assisting

App to identify retailers who will discount foods before becoming waste

Split expiration dates and sell-by dates on packaging

Application that reports out surplus food in restaurants

PWA that is downloadable and contains FAQ info about expiry

Change policy

Sell/donate "ugly" produce to NFP orgs – connect via site or app

Develop boutique to sell ugly food as an upscale form of "corporate responsibility"

Food truck system that delivers donated food from restaurants

List of food kitchens/acceptors that can be filtered by item

An app to educate retail food parties (restaurants)

Create connected food share app to allow programs to distribute/collect food overage

Food share "opt-in"

Identify loss to stop it (start small)

Develop bio waste energy industry

Promote compost waste

Require businesses to report food waste, make the data publicly accessible so people can make decisions about where to eat and shop based on how the business handles food waste, and make it easier for food to be donated

Measure the weight of food waste to better inform businesses restaurants of their waste, make better decisions

Decrease prices of "old" food to encourage consumption/reduce waste

An app that educates users about how to shop sales and determine if they really need the product or are they only buying it because it's on sale

App to easily keep stock of goods you buy to eliminate duplicates and know when to buy more

Problem Statements - Transportation

Current system produces waste by producing side products that mostly don't get recycled

I need a better understanding of where routes go, how to process works, and what time buses and trains pick-up.

Buses run well, but snow makes stops difficult to get to

Apartment buildings only are on MAJOR bus routes

Parking a car with 4 people at $2 per hours for 2 hours is $4 vs. 4 people paying $2 each for 1 trip on subway is $16

Logistics of new options

What makes an option more "eco-friendly"?

Transitioning from current use of transportation

How do we integrate autonomous vehicle technology into transportation in the most eco-friendly way?

Time and safety

How do you make transportation available to everyone, even in the suburban/rural areas?

Where are the transportation gaps throughout the region?

NFTA needs to communicate how close the connecting buses are to each other at stops

How to create an app to share rides without submitting the drivers to the risk?

How can we use green energy production recharge electric vehicles?

What's the benefit of using eco-friendly vs. having my own car?

Where are the buses and trains right now? When are they going to be at my stop?

Solution Statements - Transportation

Develop renewable green tech to promote electric vehicles and wind energy

Create a 2-tiered bus system; an expensive and beautiful bus and a less clean bus and see where people gravitate

Adjustable microtransit routes based on demand/time of day

Find ride-sharing partners

Pay transportation fares w/ valuable recyclable products that can benefit society

Pay for transit with "social credits" and other benefits reaped by good behavior

Regenerative braking and potentially turbines

More expensive parking

Surge-based pricing

Buy One Get One passes

Self-driving buses (following a specific route is simpler and safer and allows more people to benefit from autonomous vehicle technology

System to better hold property owners accountable for snow shoveling

Better NFTA app

Weekend bicycle highways during the summer

An app that finds the hubs for automated cars, charging points, etc.

Map overlay of bus routes and population density driving habits

Request public transit route based on personal needs

Reduced bus fare for pledging to not take your car into city

Improved public transportation

Better apps to find/use public transit

NFTA bus: live tracker GPS for each bus, each route (mobile app)

Create RTLs to bring Uber-like function to public transportation, bring together existing solutions to solveables

App that tracks commuter behavior

Autonomous vehicles and air taxi transportation

GPS to phone app for city guests free to guest: points "I am on my way". Bus "I See" or "30 Seconds Out", "I Can Wait" "You're In Good Standing In An X-Rated Location For Your Safety/Comfort"

Wind turbine charger

Award free public transportation passes after using private transportation

Gamified community bike-riding app where you gain points for riding

App to track eco-friendly options with a reward structure

Problem Statements – Air Quality

I am not aware of a real time AQ notification system?

How can individuals address global problems?

How to tell if someone's car is polluting more than the norm?

No consumer incentive

Tree planting programs don't exist

Urbanization removes trees

We don't know how much air pollution a product creates in its production period

What are things we can do as individuals to make an impact on AQ?

What are the important metrics and criteria for air quality?

I don't know when air quality is bad

What AQ tech is currently being used to monitor AQ?

Recognizing the issue is a challenge

How can I tell what my local AQ is?

Develop low-cost green fuels to power our transportation needs

Solution Statements – Air Quality

Track and report air quality

Air drone sampling coordinated with medical data

AQ/Ozone alerts

Reduce carbon-based energy production – more green energy production

A platform to plan and crowdfund tree planting in communities

An app that shows which tree is more CO2 absorbing

App to track how much CO2 is removed by trees in your backyard

A network scanner at various times and days (i.e. weekend, sunlight/middle of the night and "hot spots")

Plant trees

Tree planting incentivized based on map of air quality

App: volunteer matching to neighbors who want gardens but don't have time

Make a gardening app for community gardens; users can collectively care for the gardens. An app would alert community members when gardens need to be tended

Community weather station access for real time AQ alerts (local)

Tap into Buffalo Open Data to provide real time AQ results to help people with pulmonary conditions

Local pollution detection stations spaced around the city. People can connect securely and read data about their local areas' AQ. Then application gives suggestions on what means can be taken to reduce/clean the pollution and the air. It gives people a sense of local pride in communities.

Bike share community memberships

Allow consumers to "rate" businesses, plants, etc. based on how eco-friendly they are

Outlaw smokestacks and force factories to filter air back into factory

Notify worst offending businesses of their impact on the area

A tool (simple) that measures the air pollution/quality, small, inexpensive

Ongoing data collection in public health mapped publicly by zip code

Mobile AQ data collector. Put sensors on cars, buses, police vehicles to monitor AQ

Station on streets "roving"

Purchase solar or wind energy products

Problem Statements - Recycling

People don't know what is recyclable

Knowing what is and isn't recyclable

What can be recycled clean vs. dirty

Recycling rules are different in every city/town

My household/ area doesn't have a recycling program

Different standards for different counties/states – hard for Buffalo implants and newcomers

Adherence to curbside recycling

How to signal that the recycling bin is full?

Do we have handle regular garbage collection correctly? If we increase containers for normal garbage, do we limit recycle contamination?

Not everything recycled can be repurposed/used. Are there "high priority conversion" items?

How do I know what happens to my recyclables?

No incentive to recycle – it's easier to put everything in one bin, why should people sort their waste?

Solution Statements - Recycling

Easier to use receptacles for in-home recycling

Plastic, polythenes water bottles

Machine-learning that can tell if a pictured item is or isn't recyclable; apply to an app where users take a photo and are given an answer

Database by barcode/item

List top 10 and worst 10 items

Barcode scanner app that tells you if a product's packaging is recyclable

Website or guide to what "numbers" can be recycled by community

Put a scale on trucks and incentive participation by weight of recycling

App: map public recycling options, show the nearest

Have more recycling bins accessible to the public

App that recognizes by zip code to tell which laws, rules, and options are applicable to your area

Stop buying things

On-demand pickup options for full bins, people who go through more than others

People tweet pictures of their recyclables and create a bot to respond with fun facts about "why recycle"

App to find drop-off points for uncommon items

Scan barcode for bottle returns, and person gets money from return at home

More specific schedules for pickup

Raise the bottle return deposit

App for neighborhood contest to track how many times your house puts bins out for pickup

Tax incentives for towns in WNY that have the highest rate of recycling – identified via heat map

Make recycling bins larger than garbage bins

Encourage recycling by rewarding it. Charge for every time your regular garbage can is out. This way, it pays to recycle.

Problem Statements – Energy

How to avoid energy monopolies?

Businesses/offices leave monitors/tvs etc. on 24/7

How can wind be used more efficiently? (free fuel)

How can I sign up for community solar?

What counts as renewable? Is it easily available? Will it meet all of my needs?

How do people know if their appliances are energy-efficient?

How can we save energy as a community?

How to save energy with "always on" tech?

How do I know what devices in my home draw the most/phantom energy?

I don't know where my energy originates from

Businesses have to keep lights on at night so cameras can record. Energy waste!

Do we tap into the natural resources effectively in the region?

How can we better educate on the value of renewable energy?

How can we develop tech that will lower costs and raise efficiency using renewables?

How can we better associate eco-friendly appliances with cost efficiency, especially for lower-income communities?

How can I create a consistent amount of energy?

What is the impact of my current energy source?

How can we inform users about how much money they can save?

Where am I wasting energy?

How do we use water conversion to our watershed with the snow?

Solution Statements – Energy

App to shut off inefficient appliances

Utilize unused sources of energy such as wind from ventilation systems and air conditioning units

Neighborhood batteries and solar priorities on roofs selected in batteries range every 3 or 6 blocks

Purchase products that are eco-friendly, from light bulbs to surge protectors

Smart thermometers

Community app for rewards for saving energy based on energy saving devices

 Use modern wind community turbines to deliver energy (high st).

City program to install panels on roofs of businesses for a share of the energy

Timers on refrigerators to turn them off at night

Green tech walk to tour efficient green homes (like garden walk)

Promote awareness with social media campaign defining expectations

Tracking electricity and energy usage in homes through an app connected to Con Edison. The app should work similar to data usage for cell phone companies

An app that informs users about the efficiency of their current appliance

Visualize impact and compare to community/other users

Utilize geo-thermal energy for powering homes

Heat Map of the city displaying energy efficiency levels

Tracking energy usage by outlet

Stationary bikes that produce electricity in the parks

Create tax incentives for small renewable energy generators/power plants

We can use turbines to harness new untapped wind sources. Such as high volume ventilation fans and HVAC

Using devices to track "windiest" areas in the region

Guide to the most energy efficient equipment devices for home/office

AVD motors furnace fridge a/c wash dry fans 40% vs. 90% "high efficiency"

Problem Statements - Landfills

What do you do with old electronics?

I don't know when buildings are coming down.

Burden on individual

I have no idea what the total weight/size of my trash footprint is

What material should be used in order for a landfill to be self-maintained?

Access to compost bins is limited

What numbers are collected in my recycling?

Do you need to fully clean all items for recycling?

Store produce too much waste.

How someone can signalize something usable that can be donated in their place

What are good things to take to curbsize garbage picking

Show reuse/recycling options – regular options too

Where else would I put things? Compost? Recycling? Reuse? Donate?

What's the definition of "usable"?

Public composting access?

What's usable or desirable may change over time

What wonstitutes a usable material? And how do I know this?

What usable materials are entering landfills?

Solution Statements - Landfills

Site to advertise "usable garbage" to take for homeowners

State tax deduction for repair costs

An app that shows warehouse that gives reusable materials, before they end up in landfill

Biological sensor to detect organic compounds

Better visualization and market definitions

Educate users on what is reusable. App? Database?

App that shoes nearest compost, lets individuals sign up for compost acceptance

Uber for usable waste

Monthly box sending reusable trash to a place

Smart trash cans that measure weight and report back

Weight tracker

Organized landfills to separate waste based on degradability

Incentivize

A tech company that gets notified when buildings are demolished; collect rubble and materials to donate to construction companies for reuse of materials

Website to incentivize/identify good waste practices

Tracking plastic waste from stores

App to rate restaurants on recyclables (i.e. "they use Styrofoam")

Water usage data visualization

Make an app to share something in good shape available for free

Easier way to locate or identify sites for electronics and times for drop off – app, website, etc.

Buffalo already accepts electronics on Seneca Street. Make this more available with more drop off locations

An online forum where people can inform others on the use of potential use of an old or outdated electronic. An example is people using old toothbrushes to clean hats or shoes.

Site to advertise "usable garbage" to take for owners

Dare to Repair Café app

Angie's List for home item repairs