Rain Gardens

Uplift JMA

Problem Statement: Explore how Microsoft can and does use their voice on climate-related public policy issues. Present a new public policy initiative to accelerate carbon, water, waste, or ecosystems opportunities.

Our focus is water levels in Chicago, specifically, flooding in low-lying communities.

PROBLEM DATA

According to the Chicago Metropolitan Agency for Planning, the Chicago region experiences significant and repeated damages from flooding. Between 2007 and 2014, $2.319 billion in damages were paid out from public and private sources statewide, according to a 2015 Illinois Department of Natural Resources report that reviewed the cost and prevalence of urban flooding.

SOLUTION

Our solution is to create rain gardens in low-lying communities because they are most affected by flooding. Rain Gardens are something that flushes the water down to the ground. It's like a pit for water. The water that comes out the pipe would go into the rain garden and soak into the dirt.

SOLUTION DATA

Rain gardens are a cheap way to address the issue.

According to Rutgers University, a 1,000 square foot rain garden can hold 25,000 gallons of water a year.

MICROSOFT

Microsoft technology can assist in promoting and managing rain gardens by using its cloud computing and artificial intelligence capabilities to monitor and analyze the performance and benefits of rain gardens. Microsoft could use its cloud computing and artificial intelligence technologies to collect and process data from sensors and cameras installed in rain gardens, such as soil moisture, water quality, plant health, biodiversity, etc. This data could help evaluate the effectiveness of rain gardens in reducing runoff, improving water quality, enhancing habitat, etc. and provide feedback and recommendations for improving their design and maintenance.

As Chicago creates the rain gardens, Microsoft can use their technology to gather data on how helpful the rain gardens are. This can be done through sensors and cameras installed in the rain garden.

Best Solution:

Rain gardens are the best solution because they are cheap, gardens are a way to make the community look nice, and they can provide us with more oxygen.

DECARBONIZE BUILDINGS

UPLIFT MDKM

Problem Statement:

Explore how Microsoft can and does use their voice on climate-related public policy issues. Present a new public policy initiative to accelerate carbon, water, waste, or ecosystems opportunities.

Our group is focusing on reducing carbon emissions.

Problem Data

According to the analysis, "They found that nine of the top 10 zip codes with the largest percentages of high test results were neighborhoods with majorities of Black and Hispanic residents, and there were dozens of homes with shockingly high lead levels. One home, in the majority-Black neighborhood of South Chicago, had lead levels of 1,100 parts per billion (ppb) - 73 times the Environmental Protection Agency (EPA) limit of 15ppb."

Solution

We are focusing on decarbonizing new & existing buildings in Chicago.
Clean buildings

- Equitably decarbonizing new and existing buildings with a particular focus on buildings located in Chicago's historically underserved communities

Solution Data

The Environmental Protection Agency (EPA) estimates that we spend approximately 90 percent of our time indoors. In Chicago, approximately 82 percent of buildings use fossil-fuel powered appliances such as gas stoves and boilers that spew planet-harming carbon emissions into our communities and release toxic pollution inside our homes, like nitrogen dioxide and particulate matter, that cause negative health impacts.

Microsoft

Microsoft can help the city of Chicago to implement the solution by creating technology that can pull data to determine which buildings needs replacement

What is Chicago going to do? Chicago is going to decarbonize new and existing buildings, focusing on and prioritizing Chicago's historically underserved communities.
What is Microsoft going to do? Microsoft is going to create a data collection tool to gather information on how effective the decarbonization of buildings is in reducing carbon emissions.

The end goal: This plan helps to reduce carbon emissions in Chicago by over 30% since 70% of emissions in Chicago comes from buildings.

The Best Solution

This is the best solution to address our issue because it will help reduce carbon emissions in Chicago.