FEBRUARY 2021

2021 PEAC POLICY IDEATHON

HOUSTON'S FIRST CITY-WIDE IDEATHON FOR HIGH-SCHOOLERS

www.peacusa.org
peac.usa1@gmail.com

IN SUPPORT OF unicef USA for every child

Child Friendly Cities Initiative | unicef for every child

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NOTE FROM PEAC ORGANIZING COMMITTEE

PEAC's 1st Ideathon was a successful endeavor that had over 100 individuals involved in the planning, execution and carrying out of our mission to introduce public policy to high school students. This event served as a foray for students from all across Houston into the realms of government, public policy, climate change, and public health. Both our COVID-19 and climate change challenges encouraged students to take a localized approach to affecting change, and our students delivered boldly. The winners impressed our judges with innovative solutions that could be acted on with limited resources. It was an honor to work with our esteemed partners to carry out such a groundbreaking event. The committee hopes to strengthen the connection between Houston's students and city leaders for years to come to catalyze the youth generation's involvement in the public sphere. We cannot wait to see how these proposals are used to impact our city.

- Vishaal Kuruvanka, Vaishnav Kuruvanka, Sashreek Bhagavatula, Nandita Ramkumar, Usman Baig, Karthik Goli

NOTE FROM PEAC CEO

To us at PEAC, it is of utmost importance that we cultivate the next generation of student leaders. Our 2021 Ideathon was created to act on this in Houston and inspire youth action. We always knew what students were capable of, but our Ideathon showcased student ideas to a larger audience. More importantly, our students have taken a step towards understanding the world not as it should be, but as it is. Understanding, building and collaborating is the basis on which PEAC was founded. I am proud to see that we are continuing to build new avenues of engagement for our students. We plan to expand this event next year to more youth across the country and hope that you will join us on this journey. This event would not have been possible without the help of our partners, judges, and mentors. We hope this is the first step in the right direction of bringing younger people into the limelight.

- Vishaal Kuruvanka

NOTE FROM UNICEF HOUSTON CFCI DIRECTOR

We, at Mayor's Office of Education, were honored and proud to work with PEAC and UNICEF on this powerful and uplifting event. It was very impressive to see the enthusiasm and diligence of the young leaders who dedicated countless hours to craft well-thought out policy proposals and spent an entire work day that Saturday to perfect their ideas. It was also inspiring to see how many adults including judges, mentors, and presenters spent precious weekend time to uplift youth voices and encourage their visions for a stronger and healthier Houston. Through the Child Friendly Cities Initiative, we look forward to continuing to partner with PEAC and similar organizations who seek to prioritize youth leaders and create spaces for them to connect with decision-makers regarding the policies and programs that affect them directly. Thank you everyone who participated, your commitment plants the seeds for transformational change and your collaboration fortifies the community impact we need.

- Laura Cuellar

ABOUT PEAC USA

Promoting Education Across the Country (PEAC) is a platform to support youth social entrepreneurs at the community level. Through unique chapter projects, custom leadership programming, and a network of national leaders, PEAC empowers youth entrepreneurs to make societal impact.

PEAC's mission is led by campus chapters that engage in their community through partnerships with schools and local institutions. The beauty of our organization is that each campus chapter takes a different mold and adapts to address community needs. From college advisory panels to hosting coding workshops for middle school students, our chapters are enhancing their communities with the goal of fostering a greater conscience for social responsibility in the future leaders of tomorrow.

PEAC now has 15 active chapters nationwide, with its eyes set on growing its outreach.

OUR IMPACT

5000+

STUDENTS SERVED THROUGH WEBINARS, WORKSHOPS, IN-PERSON TUTORING AND EVENTS

32

CHAPTER PROJECTS COMPLETED/IN PROGRESS

95%

OF OUR STUDENTS ARE MORE CONFIDENT IN SOLVING SOCIETAL ISSUES

75%

FEMALE CHAPTER LEADERSHIP

ACKNOWLEDGEMENTS

EVENT PARTNERS

Thank you to the City of Houston's Office of Sustainability, Mayor's Office of Education, UNICEF Houston, and UNICEF CFCI for partnering with us on this event. Our Ideathon would not have been possible without the help of Laura Cuellar, the Houston program manager for UNICEF's Child Friendly Cities Initiative, and Olivera Jankovska, the program manager for the UNICEF Houston office.

WORKSHOP LEADERS

Juliet Stipeche, *Director of Mayor's Office of Education*
Dr. Keila Lopez, *Pediatric Cardiologist and Houston's HER Task Force member*
Thomas Pommier, *City of Houston Office of Sustainability*
Dr. Richina Bicette, *Asst. Prof at Baylor College of Medicine*
Laura Cuellar, *Program Manager for UNICEF Child Friendly Cities Initiative*
Brett Perlman, *CEO at Center for Houston's Future*
Mashal Awais, *Director of Houston's Youth Climate Council*

JUDGES

Dr. Michael Mosser, *Professor at the University of Texas at Austin*
Kevin Kalra, *COO of Montessori Children's School Inc.*
Mashal Awais, *Director of Houston's Youth Climate Council*
Stephanie Coates, *University of Houston Energy Office*
Brandon Denton, *Assistant Director at City of Houston Mayor's Office of Education*
Dr. Catherine Cubbin, *Professor at the University of Texas at Austin*
Amy Looper, *Co-Founder/COO of OneSeventeen Media, PBC*
Brandon Mack, *Black Lives Matter Houston*
Dr. Namkee Choi, *Professor at the University of Texas at Austin*
Dr. Paula Cuccaro, *Assistant Professor at The University of Texas Health Science Center at Houston School of Public Health*
Nishka Bommareddy, *Program Coordinator at CityMatCH*

MENTORS

Abdullah Ozair, *Texas A&M University*
Ja'brea Bennett, *University of Houston*
Neha Daga, *University of Houston*
Siyu Zhao, *University of Texas at Austin*
Rimsha Seyed, *University of Houston*
Shivani Mukhi, *Immatics Biotechnology*
Giselle Reyes, *University of Texas at Dallas*
Ananiya Balaji, *University of Texas at Dallas*

ABOUT THE 2021 PEAC POLICY IDEATHON & CHALLENGES

OVERVIEW

PEAC's 2021 Policy Ideathon engaged Houston high school students in addressing issues of Climate Change and COVID-19 in Houston. Being one of the nation's largest cities, Houston serves as a leader in emerging trends and a model for innovative ideas and bold solutions. The City has recently shifted its focus to tackling two issues of monumental importance: climate change and COVID-19. As a way of including fresh perspectives to the city's approach, PEAC set its eyes on Houston's youth generation to source energy, talent, and ideas. The 2021 Ideathon was the first of its kind in Houston and was attended by students representing 17 different schools from across the city. Students learned more about issues facing Houston from city leaders and collectively produced 10 proposals on how Houston could effectively handle the COVID-19 pandemic or climate crisis.

COVID-19 CHALLENGE

Scenario: The Coronavirus pandemic has had large scale economic and health consequences worldwide. Evaluate the impact the pandemic has had on the following issues and propose solutions to two out of the three topics on how the city can:

a. Support the mental health and well being of teenagers during COVID-19 and after the pandemic

b. Finding ways to educate underprivileged/minority communities affected by the digital divide about CV19

c. Effectively distribute the vaccine throughout the greater Houston area (stressing inclusivity)

CLIMATE CHANGE CHALLENGE

REFER TO THE HOUSTON CLIMATE ACTION PLAN TO GET MORE INFO ON EACH CHALLENGE: HTTP://GREENHOUSTONTX.GOV/CLIMATEACTIONPLAN/CAP-APRIL2020.PDF

Scenario: Climate Change has been a growing global concern over the past few decades. Like many global trends, it requires international coalitions to be formed that create goals and enforce standards. The United States has begun to take action towards climate goals put forth by the United Nations, which has led to Houston creating its own Climate Action Plan for the city to achieve its goals on a local level. Propose solutions to two out of the three following topics related to Houston's Climate Action Plan.

a. What can you or your school do to reduce the use of single-use plastics to minimize waste and promote the use of recycled materials? Also consider repurposing materials. (If you are homeschooled please think about your single-use plastic use throughout the day) - **Materials Management - Goal 1 (CAP page 72)**

b. How can local Houston workforces be trained to contribute to Houston's energy transition? Many of Houston's workforce participants are not educated on the energy transition happening within the city. Create solutions for how local workforces can be trained to fill highly-skilled and paid jobs created by the renewable energy transition. - **Building Optimization - Goal 3 (CAP page 66)**

c. State and national change starts at the local level. For the United States and Texas to reach net-zero carbon emissions, Houston's small business and communities must be involved in the effort. Develop a plan to incentivize local community members and small businesses to reduce carbon emissions or switch to clean energy. - **Energy Transition - Goal 1 (CAP page 43)**

OUR IMPACT IN NUMBERS

STUDENT PARTICIPATION FROM

17 HOUSTON HIGH SCHOOLS

17 DIFFERENT ZIP CODES

96%

OF STUDENTS FOUND OUR CLIMATE CHANGE AND COVID-19 WORKSHOPS INFORMATIVE

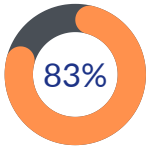
96%

OF STUDENTS FOUND THIS EVENT WAS AN EFFECTIVE INTRO TO CLIMATE CHANGE AND COVID-19 ISSUES

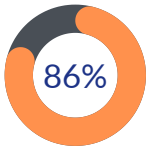
93%

OF STUDENTS FOUND OUR IDEATHON WAS AN EFFECTIVE INTRO TO PUBLIC POLICY

WERE ABLE TO TALK TO A CITY LEADER



HAVE A BETTER UNDERSTANDING OF HOW TO GET INVOLVED WITH HOUSTON'S CLIMATE ACTION PLAN



HAVE A BETTER UNDERSTANDING OF HOW TO GET INVOLVED WITH HOUSTON'S COVID-19 RESPONSE

"THE EVENT ALLOWED TO TO EXPAND MY KNOWLEDGE OVER CLIMATE CHANGE AND COVID- 19 WHICH WILL ALLOW ME TO OPEN DISCUSSION AT MY SCHOOL TO ACT ON THESE MATTERS."

- STUDENT FROM GLENDA DAWSON HIGH SCHOOL

CLIMATE CHANGE PROPOSALS

1ST PLACE

Anlly Moreno, Alejandra Guerrero, & Kayla Le

PEAC HS Ideathon Climate Change Challenge

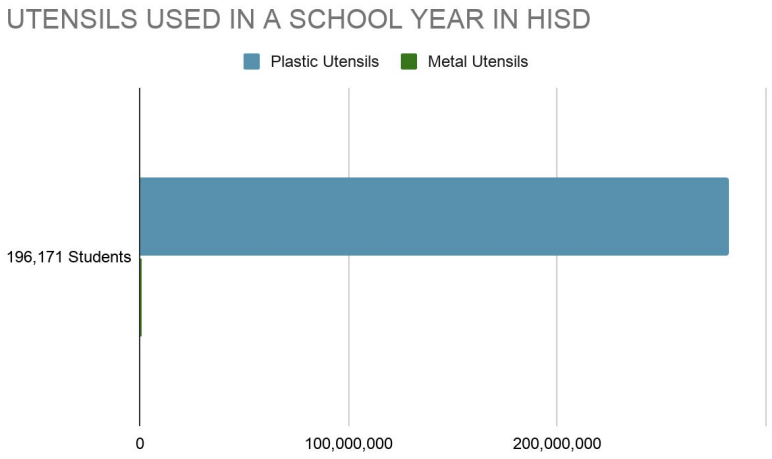
The cheap yet durable material, plastic, has become an essential element of products. But millions of plastic is wasted worldwide, harming our environment. This nonrenewable material emits carbon dioxide that kills our Earth. As students, we know that there is a large amount of single-use plastics that are used in our schools daily. These single-use plastics include utensils that are used during breakfast and lunch, such as plastic spoons, forks, straws, and trays, which create a large amount of waste that could be recycled instead. However, we, as students, have not been taught how to recycle and why it is important to do so. For this reason, our schools must promote the use of recycled materials and reduce the amount of single-use plastics that are used daily by students at schools to reduce carbon footprint.

Houston ISD alone has about 196,171 students attending their schools (). If you multiply this number by the number of plastic utensils used during breakfast and lunch in a day by each student, the answer would come out to be about 1,569,368. That's just the use of single-use plastic utensils in a day by 196,171 students, now multiply that by the number of days that are in a school year. If there are about 180 days of school, then that means that the total amount of single-use plastic utensils that are used by students in a school year is about 282,486,240. Most of these single-use plastic utensils are not being recycled, so a large amount becomes waste.

To reduce the amount of single-use plastic utensils, we propose that schools switch to using reusable utensils such as metal. To do this, schools will have to place dishwashers in their cafeterias, as well as, metal forks, spoons, straws, and trays. This proposal is for the students as well as for the community. The first step of this proposal is for the schools to buy metal forks, straws, spoons, and trays to replace the plastic utensils. The next step to this proposal would be

to make one-time purchases of commercial dishwashers to place in the cafeterias. This alone allows schools to save around $3,000 on reusable utensils.

As our proposal is directed towards a local school district, this plan had been proven to work by Minnetonka Middle Schools. They've taken on this solution by replacing disposable utensils with reusable alternatives. With results, they have found the schools prevented 6,712 pounds of trash and expect to save $23,000 over three years. They've also found that they reduced greenhouse gases by 77% and water consumption by tens of thousands of gallons. The following graph is a visual representation of the difference between the numbers of plastic utensils and metal utensils used in a school year in HISD.



With this proposal, we strive to achieve a reduction of single-use plastic utensils in HISD. If schools switch to reusable utensils, there will be a massive reduction in the waste that is produced by schools in HISD. Think about it, with reusable utensils, students will be using the same utensils in a school year meaning that instead of students using 8 single-use plastic utensils a day, they will only be using 4 reusable utensils a day. The result of this proposal would be beneficial to the community as well as the environment because around 784,684 reusable utensils would be needed by the students of HISD.

However, because our proposal involves a change with minors, we might run into some problems. Young children are careless about a lot of things, so for that reason they might throw away the reusable utensils in the trash. Another problem our proposal might encounter is the danger of the utensils. Since, kids are fools, they might hurt themselves with the utensils. To prevent this, we suggest that schools show videos explaining how to responsibly use and put away their utensils

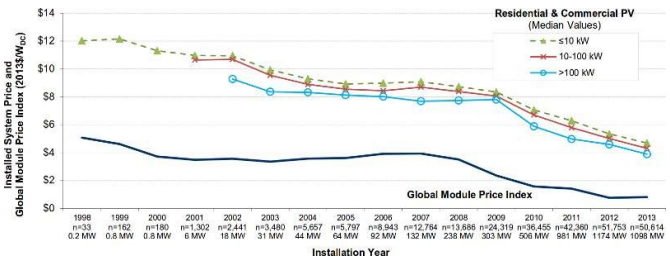
At the end of the day, we are trying to make a change in our schools because they produce too much waste by using single-use plastic utensils. To approach this, we propose reducing the amount of single-use plastic utensils used in schools with reusable utensils instead. With this step taken, the lunch system of schools alone can make an impact in climate change.

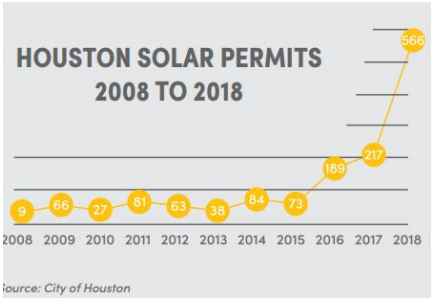
As climate change becomes an increasingly alarming issue, solutions that target the local levels of a community are vital to bringing about change. Today, we will be focusing on our community— the city of Houston. More specifically, the switch to clean energy in middle-lower income communities and small businesses. In general, switching to renewable energy is often driven by the prospect of saving money, so to target those on the lower end of the economic ladder, incentives should consist of financial aid and lowering the cost of obtaining clean energy. To promote the switch to clean energy in local communities and small businesses, incentives like property tax abatements, community solar models, solar co-ops, and rebates could sway community members and small businesses to make the switch.

In order to increase the use of renewable energy in local communities and small businesses, specifically targeted incentives should be enacted. Regarding local businesses, property tax abatements and green grants should be promoted to fund the transition to renewable energy. Property tax abatements are “granted by the city and can provide full or partial relief

from property and other taxes for a specified period of time" (Hales). This relief can promote the use of renewable energy by incentivizing local businesses to switch to renewable energy to lessen the cost of property taxes, a switch that is beneficial overall. Regarding local communities, the community solar model/solar co-ops, and rebates could incentivize communities to make the transition to renewable energy. Community solar models are "defined as a solar-electric system that provides power and/or financial benefit to multiple community members" (Roberts). Likewise, solar co-ops "allow multiple homeowners to come together and aggregate their purchase reduces costs dramatically, making solar affordable for many more households" (Houston CAP). Bulk purchase efforts like these have "led to 78 installations in Houston and The Woodlands with a total capacity of 689 kW" (Houston CAP). With a raised awareness of the potential savings, group purchases could entail, switching to solar energy in communities will be less expensive and popularized. In communities of low income, community solar models would be most beneficial in lowering their electricity bills while still contributing to the Houston goal of reaching net-zero emission.

The following graphics show the cause and effect relationship of lowering solar panel costs and the increased use of solar panels. By lowering the cost, more people are inclined to buy them.





While trying to approach making this switch to renewable energy, there could be potential problems encountered such as the dependence on a natural resource that is

uncontrollable by humans, lack of knowledge in the matter, resource locations, and cost. Making the investment in renewable energy comes with great cost and knowledge. Before taking on this approach, professional knowledge and/or research should be considered as well as a budget plan. One would only take on this plan in a location with radiant sunshine for a majority of their seasons.

By enacting targeted incentives, small businesses in our communities can make the switch to net zero-emission in order to combat climate change. This combat will be harsh and difficult, but it is one that opens the door to a healthier Earth.

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https://www.houstonchronicle.com/news/article/Cheaper-solar-power-means-low-income-families-can-15881162.php

2ND PLACE

Alexander Perez, Eti Gulati, Brianna Gonzalez, Diego F.-Castro y

Background:

Status Quo:

1. "Why does this topic render attention on the municipal scale?" Increased public concern as recorded in the Rice opinion survey entitled "Kinder Houston Area Survey" in 2020 as over 75% regarded the issue of climate change as "serious" and nearly 70% attributed this concern to human activity. Furthermore, this level of perceived concern (identifying climate change as a "very serious" issue in the survey) has stayed consistent from survey to survey over the past few years indicating that the concern for climate change has sustained and is yet to diminish. In addition, a greater percentage of participants attribute climate change to human activity as opposed to "normal climate cycles" suggesting that if anything, public distress has increased, and according to the ongoing trend, will continue to do so in the coming years. Results displayed in figure 1.
2. Schools have yet to emphasize and act on the effects of climate change. In a single day, education facilities produce on average 4.7 pounds of waste per person. According to a poll done by the Houston NPR, 80% of teachers and parents say schools should cover a climate change talk/plan when only less than 40% have a discussion with students over the effects and possible solutions of climate change.

- Relevant Definitions:
    - Municipal Green Procurement: It is an act of legislation that will raise public awareness about the regulation or banning of certain materials such as single use plastics, plastic bags, and polystyrene and will serve as a push factor reducing waste output, operating costs, and conserving natural resources.
    - Clean Energy: According to TWI-Global, clean energy is "energy that comes from renewable, zero emission sources that do not pollute the atmosphere when used, as well as energy saved by energy efficiency measures."
    - Climate Change: According to NASA, "Climate change is a long-term change in the average weather patterns that have come to define Earth's local, regional and global climates. These changes have a broad range of observed effects that are synonymous with the term."
- The last known winter in Houston where most of us remember when snow actually came was in 2018. A decade or so before the snowfall was enough to build a miniature snowman. Climate change has halted our ability to truly enjoy this exciting weather phenomena.

Solution:

Small Businesses

1. Incentivizing businesses to reduce waste
    - Urging businesses to accept the Municipal Green Procurement of 2022 as it will reduce waste, decrease operating costs, and conserve natural resources within city departments.
        i. One way to align with the procurement is by charging a small fee of around 10 cents per polythene bag as requested by customers, as they can have tragic effects on marine life and play a large role in water pollution. It is also suggested that the fee is donated to organizations that are striving or advocating for net-zero carbon emission like PEAC, Green Houston's Office of Sustainability,or the Houston Gulf Coast Region's Citizens' Environmental Coalition. It can also be allocated towards costs related to making the shift towards clean energy, though it is ultimately to the business owner's discretion on where to distribute the obtained funds.
        ii. Additional methods to better align with the procurement that are specific to restaurants are using less single-use plastic for take away containers and instead using containers produced from recycled plastic, sourcing food from chains that use clean energy and irrigation that involves recycled ground water, as well as continuing the encouragement of using digital menus via QR codes beyond the pandemic.

2. Offering assistance to small business owners on adopting clean energy practices
        i. Establish a brief manual consisting of previously recommended practices that can be distributed to business owners to serve as aid in becoming more environmentally friendly as a small business
        ii. Assign city government liaisons to the establishments that have made the commitment to embark on the journey to lower carbon emission and greater usage of clean energy. The role would not need to render a full time occupation but the individual would ideally be readily available to answer any inquiries on behalf of the small business and guide them when necessary
3. Appealing to monetary advantages
    - Offering a badge to small businesses that recognizes them as environmentally conscious
        i. This badge would enhance their reputation as well as offer them exposure through a potential article on these esteemed small businesses in local journals, such as the Houston Chronicle, or a spotlight from city officials for increased press exposure which could lead to an increase in customers.

ii. The badge would be a digital addition that can be added to the business's logo or branding

4. Requesting a more direct monetary appeal through a $1,000 annual (value can be adjusted) tax rebate/credit for businesses that achieve a higher level of recognition in regards to being environmentally conscious as identified by the highest badge degree offered.

i. Can work in conjunction with the badge system as suggested above or autonomously

Schools

Urging schools to minimize waste, repurpose resources, and promote the usage of recycled materials

1.Houston Schools raise awareness of the Municipal procurement of 2022

i. This will raise the public awareness on the Municipal Agreement of 2022 and allow ample time right now for schools to transition to be in accordance with the new legislation

2. Approve Houston schools to have recyclable materials be accepted to the City Reuse Warehouse (refer to figure 2) and be a part of community organized composting programs established by private-public partnerships

i. Schools are a contributing part of any community and are also consumers as well in the community. Therefore, allowing schools to be a part of this program will significantly reduce waste and enforce recycling programs in Houston schools via applying recycling bins and amplifying the use of compost gardens from waste created by school lunches (figure 3).

ii.Setting up a system in libraries and classrooms through which students can give pieces of paper that are no longer of use to them but have a blank side so that they can be repurposed for single-side printing or as scratch paper for fellow students and school faculty

3. Introducing recognition program for schools to embellish their local reputation

i. Similar to small business, public schools and districts that have displayed consistent practices involving recycling, reducing, and reusing, using cleaner sources of energy, and reducing water consumption will have the opportunity to receive a badge of recognition in accordance to their efforts. Specific ways to achieve this are outlined below

- Using environmentally printers like the Epson WorkForce WF-3450, that use less ink, which is made using a non-sustainable resource, petroleum, per page.
- Encouraging students to print double-sided when possible
- Switching to more water conserving toilets such as the KOHLER K-3988-0 Wellworth Toilet and the Niagara 77001WHCO1 Stealth 0.8 GPF Toilet.
- Limit shower times for athletes and users of the school gymnasium

- Establishing an environmental science club at school to help raise awareness on the threat of climate change. The officers of this club can help facilitate paper and plastic recycling efforts across the school by collecting the material that is recycled from smaller bins from individual classrooms and storing them in central recycling bins that serve the whole school which can then be distributed to the appropriate recycling center.
- Utilizing more environmentally friendly heating systems, like those powered by geothermal energy, would also aid in earning a distinguished badge that acknowledges efforts towards being environmentally conscious.

Where to derive the financial funds for schools and small businesses alike:

1. Renewable Energy Alliance Houston (REAL Houston) helps connect Houston's energy community and provides industry stakeholders chances to consolidate, encourage innovation and add visibility to Houston's renewable energy businesses.
2. Additional stakeholders in Houston to help fund our proposed projects are: Buffalo Bayou Partnership, Centerpoint Energy, COH Mayers Department, etc.

Data to back up the solution:

Figure 1: Rice University

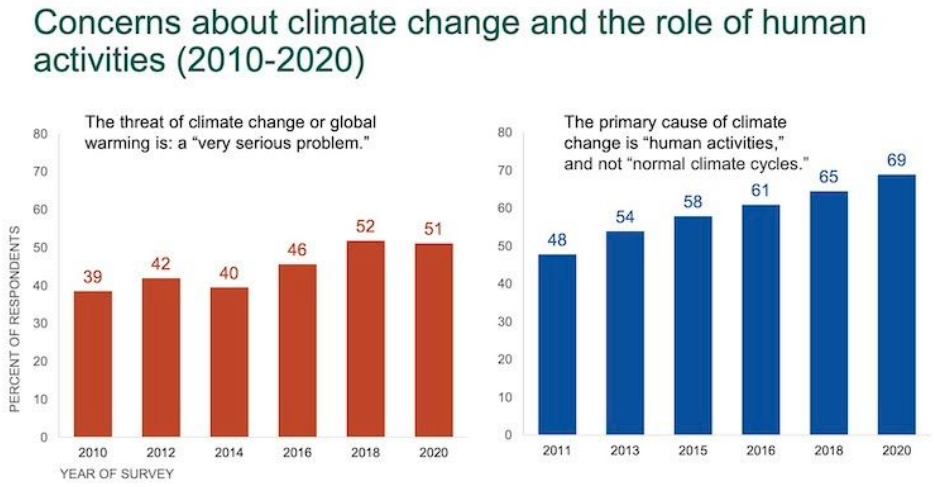

Figure 2: (CAP PDF pg. 75)

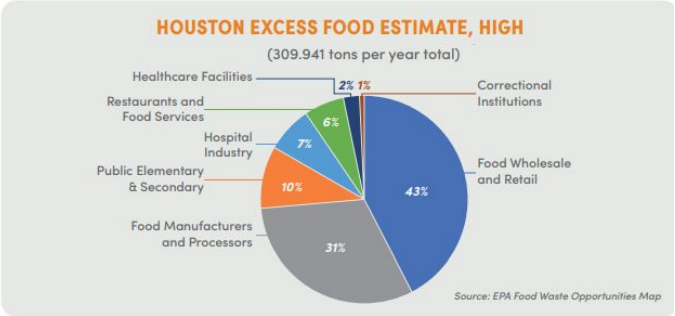

Figure 3: (CAP PDF pg. 44)

Outcomes:

Encouraging schools and small businesses to act on climate change by enacting the Municipal Green Procurement of 2022, will be able to intricate the idea of:

- Short Term:
    - Lowering the amount of waste (paper, plastic, water) used and the amount of air and water pollution produced in the city of Houston through incentivizing small businesses and schools through monetary benefits and increased positive publicity
    - Progress of schools and small businesses will be measured through evaluations conducted by city government officials until carbon emission rates begin to be recorded by the businesses themselves
- Long Term:
    - Small businesses and schools who participate in the first wave can serve as a source of enticement for other local businesses to join their efforts
    - Increase in job opportunities and salaries in Houston's clean energy industry as more students become attracted to the fields through increased discussion in the media and in schools and the proposed establishment of environmental science clubs in schools

Potential problems/barriers:

- Resistance to reduce waste and switch to clean energy due to financial restraints
- Stakeholders may not agree to grant us monetary funds but would be encouraged through public recognition and city granted awards/certificates
- If efforts are not cautiously dispersed throughout all areas in Houston, this proposal could potentially exacerbate the city's socioeconomic disparities
- Resistance from school districts refusing to implement changes in their system or even to raise awareness

Conclusion:

According to Houston residents and environmental scientists alike, climate change is a pressing concern, especially in large metropolitan cities like Houston. The initiative to

reach net zero carbon emissions would best be accomplished through efforts coordinated by the municipal government in conjunction with the educational institutions and small businesses. This proposal suggests specific methods for small businesses and schools to make smooth transitions to using clean energy as well as outlines practices and equipment that can be utilized to reduce paper, plastic, and water consumption. CNBC reported, “the hardest part isn’t that the technology isn’t here, the hard part rather is integrating these technologies together to reap the benefits.” The solutions that are detailed in this proposal integrate communities with schools and businesses and can be modeled in other cities as well as on the state level.

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3RD PLACE

Haseeb Ahmed
Gurkiran Kaur
Maya Kuruvanka
Abby Sweeney
Klein High School

Solution of Climate Change Challenge

Although climate change has been one of the most heavily debated topics within current events, the fact remains that the world's climate is rapidly evolving and poses as one of the greatest challenges of the century.

Climate change defines as the change in global or regional climate patterns, attributed largely to increased levels of atmospheric carbon dioxide produced by mankind primarily through the burning of fossil fuels and human waste. Throughout the course of the last century, global carbon dioxide emissions increased steadily at a rate of more than 2% per year, increasing global surface temperature 0.8 degrees Celsius with 2016 ranking as the warmest year on record. Problematically, the impacts of climate change have materialized negatively through intense heat waves, fluctuating sea levels, natural disasters, and food insecurity.

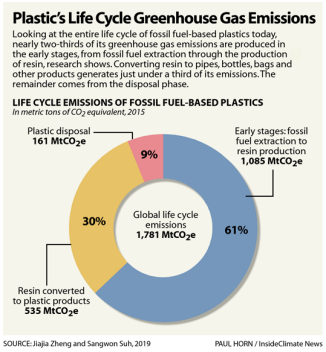
As noted by NASA, a steady trend of hotter temperatures and changes in climate patterns links directly with weather-related natural disasters. This appears evident nationally and globally. In California, exceptionally high temperatures caused years of drought, leading to devastating wildfires still terrorizing the state to date. The Southwestern region of the United States such as Texas, Arkansas, and Mississippi have experienced more than 100 days of weather over 100 degrees Fahrenheit, attributing to severe heat droughts, the worst being recorded in 2011 and trends arising for the worst drought to occur in 2022. Affecting the same region, a substantial increase of Atlantic hurricane activity has surged within the past couple of decades since 1980 due to higher sea surface temperatures, causing massive property destruction and displacement of citizens. Global situations include an incident in January 2018 in Cape Town. Officials announced that the city of 4 million people were months away from "Day Zero", the day that they would run out of municipal water, due to large scale droughts brought by evolving rain patterns in that region of Africa. Additionally, monsoon rain damage within Asia has increased ten fold because of a rise in global warming, recently causing 55 casualties within India due to hillside debris from a tea plantation collapsing.

With the ongoing trend of rising global temperature, iced territories of Greenland, the Arctic Circle, and Antarctica have accelerated the melting process of glaciers and ice caps and slowed the reformation of ice, increasing sea levels. According to the US Space Agency, sea levels have risen 8 centimeters in the last 23 years and will worsen in the nearing future, potentially invading almost a meter on the mainland by the end of the century. This invasion of coastal areas has started to cause soil erosion and threaten farmland, housing, and communities. With approximately a fifth of the world's population living in low-lying coastal areas, these at risk people could be displaced by this ongoing trend. With the rise of sea levels, more moisture will be added to the air which will inevitably create severe downpour across the world. For example, Houston has become 167% more susceptible to tropical storms and torrential rain.

The ability to adapt, mitigate and reduce carbon emissions will be decisive and necessary to preserve the world for future generations. To help the world overcome the impacts and hardships of climate change, our generation must step up to make a difference. Urging the government to take bold and ambitious actions, using energy wisely, investing in renewables, and so much more can help make our planet a safe and healthy home.

Introduction to Proposal of Topic I

"Paper or plastic?" The invention of plastic in 1907 was a cutting edge idea created with positive intentions in mind. It was cheap to make and not restricted by the scarcity of natural resources. Social and economic constraints were not an issue when dealing with plastic, but the long term effects could not be more negative. Plastic waste is one of the biggest contributors to climate change, it's made to last and often sits in landfills for 400+ years. In the city of Houston, plastic waste accounts for 1/4th of all air pollution. Similarly, paper in landfills causes methane emissions into our atmosphere, therefore leading to irreversible changes in the climate. Forestry is one of the top four contributors to this threat and the process of making paper cuts down over 2 billion trees per year. As we learned in school, trees produce oxygen, store carbon, and without them, there would be no chance of life. Single-use plastic and paper contribute to the problem of climate change, but there is a simple solution our community can make to alleviate our carbon footprint. In order to save our city from the threat of climate change, we propose the idea to cut out single use plastics in schools; specifically during the lunch hour, and going paperless in classrooms. These proposals could diminish greenhouse gas emissions in Houston and make a huge environmental impact for generations to come.



Proposal of Solution to Topic I.

Our group has a solution that is tailored towards the Klein community and is easily applicable to other schools in Houston. With Covid-19 affecting learning and students being online we think this has shown us how much we can really achieve in the world of virtual learning. Since students learn from home it has shown us that learning could essentially go paperless. Teachers already put all assignments and worksheets online for virtual students and it wouldn't be very difficult for on campus students to do their assignments online since they could collaborate with students from home as well. This pledge to go paperless would reduce a lot of waste at school and encourage unity by practicing sustainability school-wide . We understand that going completely paperless for teachers would be difficult since a lot of teachers are not very well-versed with technology in their day to day lives. For this we propose the districts to set up workshops for teachers and staff to be better equipped to use technology. Klein ISD has staff development days once a month and that could be a great time to help teachers navigate their way through paperless learning.

With this pledge to go paperless in the classroom, we thought about what we could do to make an impact in other parts of the school, mainly the cafeteria. Hundreds of students buy lunch from school and by doing so, up to 1000 styrofoam plates are being thrown away daily, amounting to approximately 5000 of these single use plates a week. To minimize the waste we thought about something that colleges across the country use, which are reusable trays. Instead of throwing away your plate, you would only throw away food waste and the trays could be placed on a conveyor belt where they could be taken to sinks in the kitchen. For a more cost friendly option, they could also be dropped off in a container near trash cans which can later be taken to the kitchen to be cleaned in industrial dishwashers. This would also reduce waste as the plastic

containers that styrofoam plates come in could be cut completely and the school would save funds by not having to purchase more. In addition to reusable trays, we also propose the idea of biodegradable utensils. At Klein we have a garden in the courtyard which is maintained by the Earth club. We could utilize the utensil compost in the garden or make this trash into compost to use in the community. Our district frequently gives grants to schools to provide more resources to improve the student body. If this is successful at one school it could be implemented at schools across the district. Even though these may be small scale solutions, but done in mass, there could be big changes not only at school but the whole city.

Data for Solution I

In an Oklahoma State University study, they report that one student who utilizes single use plastic products during lunch produces 67 pounds of trash in a school year. The polystyrene used in lunch trays is petroleum-based and doesn't break down for hundreds of years and 225 million lunch trays are being thrown away a year, ultimately leeching pollutants into the water and air.

The polystyrene in the trays is a known neurotoxin and suspected human carcinogen. Polystyrene has a high carbon footprint as it's made from fossil fuels. In addition, unlike other types of plastics such as beverage bottles and milk jugs, its recycling level is virtually zero. It is not biodegradable, either. This means polystyrene that is littered will end up eventually in our watersheds and the world's oceans where it can have devastating impacts on our freshwater and marine life.

Problems of Solution I

The main problem we come across when proposing this solution is funds. We could alleviate these funds by having local sponsors. Local businesses like Raising Canes or even Methodist sponsor sports so we could find eco-friendly companies to help buy biodegradable utensils or reusable trays. Another problem we find with paperless learning is cheating. Since assignments are online, students can easily collaborate on assignments they're not supposed to by copying and pasting. Teachers can help eliminate this problem by using plagiarism software when submitting assignment and lockdown browsers which prevents students from cheating on tests.

Introduction to Proposal to Topic III

The City of Houston, since its founding in 1836, has been a continual economic powerhouse. Prior to the emergence of oil at Spindletop, it was the trade center of the Southwest region. The discovery of oil changed the economic growth and the success of Houston forever. In its infancy, the city of Houston began as a budding city in newly acquired land and has become the chief producer and distributor of oil nationwide. Everything in the city is centered around oil. Houston's oil industry is the most significant taxpayer, employer and ultimate catalyst for the city's vast economic growth. But there is one problem, oil will not be here forever.

As many have learned since elementary school, oil and gas are fossil fuels and thereby are non-renewable resources, as one day our access to them will be depleted. The emissions created by Big Oil and Gas industries have been detrimental to our air quality, with Houston's

among the worst in the country. Houston is a thriving ecosystem with an extremely diverse community who despite their cultural differences have one common interest- the success of their city. The interest in sustainability can be another uniting factor in working for the best interests of the city.

To achieve the level of sustainability that the city of Houston requires, it's a necessity that it has the support of Houston's big businesses. The Greater Houston Partnership is a place where many successful businesses come together from a wide variety of industries to cultivate economic growth and strengthen the community. Their main mission is to preserve the success of Houston and continue to improve it. The Energy Corridor, the biggest industry in the Partnership, is home to Big Oil giants such as Exxon-Mobil and Shell. For these large conglomerates to prioritize Houston's prosperity of Houston's and their own economic growth, there is a strong need to focus on the sustainable transition to renewable alternatives to oil and gas.

Proposal of Solution to Topic III

Before state and national changes occur in the switch to clean energy sources, we have to make sure the local community is on board with the change. We must first see if the local people of Houston would like the new energy sources and see if we can come in with the new and out with the old. Old energy, such as coal and fossil fuels, cause lots of pollution, and a lot of the damage is irreversible. Some new and cleaner sources of energy could be water, wind, and solar. We are targeting the local community and small businesses, and we can incentivize them to switch to cleaner energy sources through giving them government subsidies when they switch. Lots of people are in need of this money to have their businesses to be successful, so if we tell people that by switching to clean energy, they can earn money for their business or themselves, people would be willing to change. Some ways that they could change to cleaner energy sources is by switching to electrical plans that are the cleanest that the city can offer and walk and bike more, to reduce the pollution caused by cars, putting solar panels on roofs to access solar energy, and building wind turbines for the whole city. For the solar panels, the government can provide some, and then by using them more and more, the government can provide more and more.

Some of the resources required would be more bicycle lanes around the city to efficiently traverse, have readily available solar panels and people to attach the solar panels and labor workers to install wind turbines for the whole city. The ways we can target the people is through TV advertisements on the local news, we can have radio channels talk about it, and we can go to the local businesses and advocate for them to switch. The stakeholders in all of these plans are the local people and the small businesses, as they are the building blocks of a successful city and nation.

By 2030, we expect at least 20% of all of Houston to switch to one of the renewable resources, and by 2050, we expect at least 50% of all of Houston to have switched. The promise of environmental sustainability with the combination of low taxes will inspire even more corporations big and small to move to Houston. Hewlett-Packard Enterprise; a Fortune 100 Company, is an example of that, as they have migrated their global headquarters to Spring Texas. HPE has made a pledge that by 2025 they will have 80 percent of their manufacturing spending will be allocated to suppliers with science-based targets in environmental sustainability. As a corporate tech giant, HPE has made it a goal to be the change in environmental responsibility in encouraging the reduction of their employees' carbon footprints. HPE offers incentives to their

employees for utilizing greener alternatives commuting to work. These alternatives include biking to work, taking public transportation and walking (if applicable).

Data for Solution III

According to CAP, from 2017-2018, the amount of solar panel permit owners increased by 150%, which is a big growth. Using this knowledge, we made our own timeline and included our own growth levels that we think are accurate. In 2002, the GME Sun Club installed solar panels and gave some of their energy to Houston. If the local businesses set up their own, they can have lots of available energy.

Problems of Solution III

The major problem that comes up with the plan is that people do not see a reason in changing their energy sources. Whether it be because they do not believe in climate change or they just don't care, people are going to not change. In the past, there was no incentive to change, but with the introduction of government subsidies being a reward if you change, people will be willing to change more. Once that happens, they'll see how it is better for them and the world, and will tell the people around them to change, fostering a clean and resourceful community. Another problem is with the solar panels. Some people might not have roofs that could support solar panels. One way we can solve this is by having them share the energy produced by the panels with a place that can support solar panels. There should be more than enough energy to go around and should solve this problem.

Conclusion

The outcome of this plan is a cleaner, more resourceful Houston. We want to lower or even eliminate the pollution caused by certain energy sources. We can measure the outcome of the local populations through research and data, comparing the air pollution from this year to the year of 2050. We can also measure how many people are using newer energy sources yearly, and compile the information into a graph. Another outcome is that our city carbon footprint would be reduced, and we would be seen as a clean energy city. With the reduction of single use plastic and paper in school and the implementation of cleaner energy in business can prevent the fast approaching problem of climate change.

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COVID-19 PROPOSALS

1ST PLACE

Covid-19 Ideathon Proposals I & II

Ishan Arora	Carnegie Vanguard HS	9th
Pranav Dubey	Obra D. Tompkins HS	11th

Background:

The world this past year has been dealing with an outbreak of a disease that has been spreading rampantly. This disease, called Covid-19, is something that has not been studied in depth before, and there is an insurmountable number of unknowns that follow this disease. In an effort to combat the raging spread of this disease, health officials from all over the world suggest people to limit contact and distance themselves from other people in an effort to slow down the spread of the disease. However, many communities are lacking in information about Covid-19 due to lack of technology and the disease has left lasting effects on other communities such as deterioration of mental health in teenagers.

Policy I:

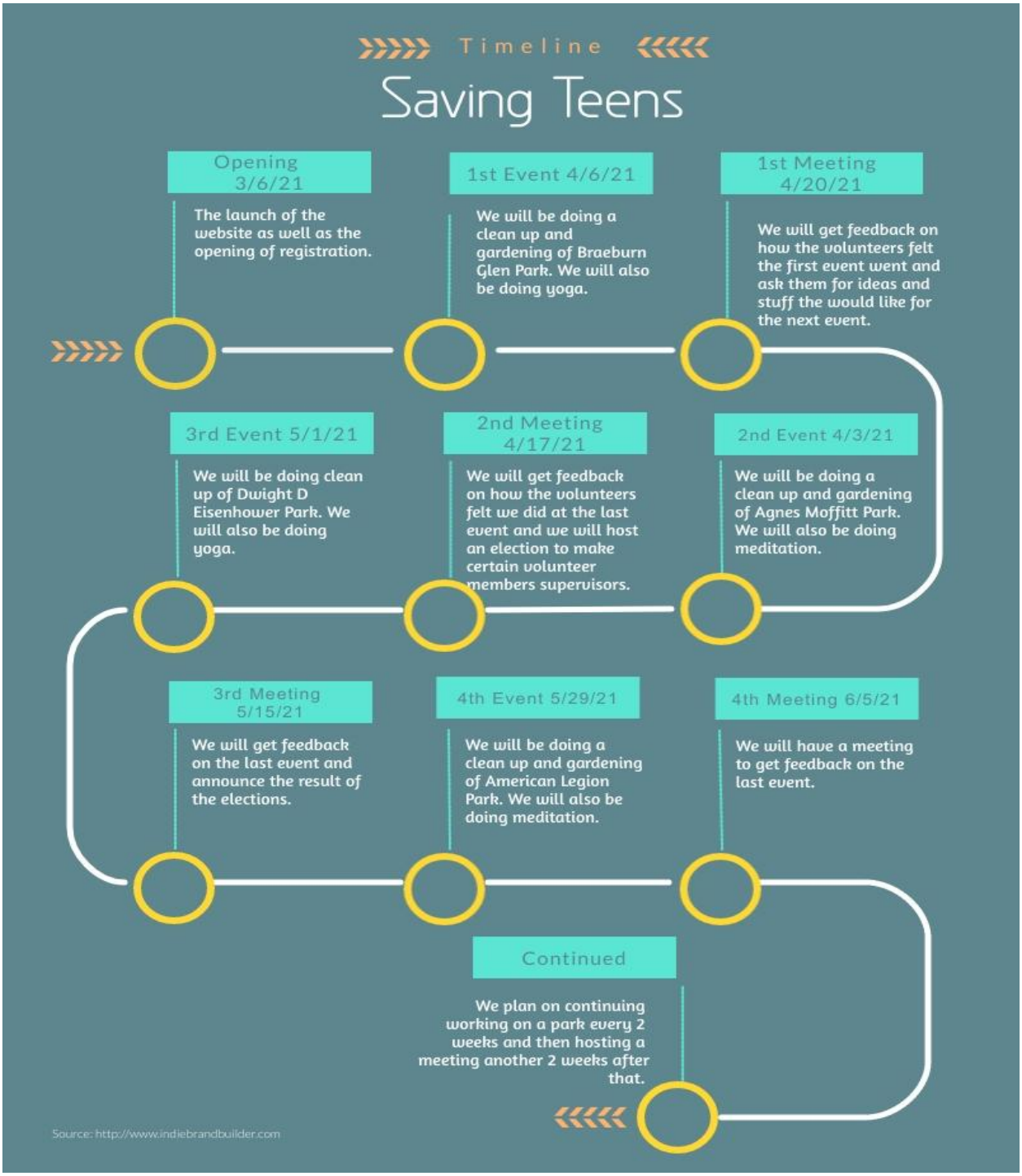
So in order to fight this ever-growing and difficult problem, my partner and I propose the solution of making an organization called Saving Teens, this organization is made up of teen volunteers who will help clean and garden Houston's public parks. Now this solution is supposed to kill 2 birds with 1 stone. Not only will the teens also help clean up our public parks and make them into more beautiful places to play and hang out for our community, but they will also get a chance to socialize more. After all, isolation is the main cause of depression in teens.

The volunteers will not only help with making Houston's public park a better place but they will also make new friends along the way. During events, volunteers will be able to participate in different mental activities such as yoga and meditation. The purpose of these activities is to provide the teens with a place to fix their mental state of mind in peaceful terms rather than ones that are considered by some as more hostile.

Safety is a priority at these events and all members would be required to wear a mask, while hand sanitizer, as well as extra masks will be provided. The equipment used at these events are gloves, spades, shovels, seeds, fertilizer, rakes, trash bags, hand sanitizers, masks, yoga mats, and lunch. The stakeholders in this organization would be all people who live in Houston. All teens who volunteer at these parks will be able to earn volunteer hours to help them with their college applications. Also to allow for a chance for all volunteers to socialize more, and to help out some people with money difficulties at home, lunch will be provided.

About a week before the event volunteers can sign up for what day they want to attend the event, as well as whether they want to clean up or garden, and what allergies they have, and what option they would want for lunch all through the organization's website. Also, at every event, there will be supervisors who will make sure everything is running smoothly. The supervisors will either be other teenagers who were voted into the position by their peers or someone assigned to the position by the organization. After each event, there will be a meeting 2

weeks after in which we will get feedback from the volunteers and it will give the volunteers more opportunities to socialize.



Our solution is proven to work because yoga, meditation, and social interaction have numerous benefits. “Yoga’s mental benefits are fairly well documented...teenagers who practice yoga show more positive moods, less anxiety, and depression.” “Yoga breeds connection...teens

will learn to accept one another more fully, no matter their clique, social interests or popularity ranking"(Jacqueline Buchanan). It seems that not only does yoga improve depression but it has a wide variety of benefits. Meditation on the other hand, "The practice of mindfulness exercises such as meditation will improve focus and concentration. Meditation can also help with self-esteem and memory," And while the volunteers are cleaning the environment they are socially interacting with each other. And these interactions, "Better mental health – it can lighten your mood and make you feel happier, lower your risk of dementia – social interaction is good for your brain health." In fact, a recent study discovered that anxiety (29.2%), stress (21.6%), and depression (17.8%) were the top health problems for people before they started mediation. 63.6%, however, reported that after meditation their conditions greatly improved.

The result of undergoing this proposition that my partner and I proposed knows no bounds. The environment gets benefitted, Houston's community gets benefitted, and most of all teens get benefitted. Their overall mental health becomes dramatically positive, and everything from their school work to social life will be at the top of its game. The outcome of this proposition is saving the lives of thousands of teens as well as making Houston a more beautiful place to live.

Potential problems however that we might face are that there will be less volunteer turnout because of Covid-19. However, this problem has a low chance of coming to fruition simply because of the fact that teens are still attending school as well as many other activities, so the potential for a low turnout seems unreasonable. Another problem that can occur is too little equipment for volunteers. This problem also seems unlikely simply because volunteers are supposed to sign up for the event a week in advance, so based on that a certain number of tools are brought, and just to be safe so are a few extra. So it is very unlikely that a large number of volunteers show up and there are too few tools to go around.

Policy II:

In order to educate more underprivileged and minority communities with less access to technology about Covid-19, my partner and I have proposed a solution of installing televisions that repeatedly play news channels that are informative about Covid-19 throughout Metro buses and stores in the communities. Metro buses are a common method of transportation throughout many communities that lack more advanced methods of transportation such as personal cars due to money shortages. Since over 50,000 people travel through Metro bus weekly, installing mini-televisions in the front of most or all 1,236 Metro buses would be able to inform many people about the dangers of Covid-19, how to protect yourself and others against it, and current or new information about it or the vaccine. Along with the Metro buses, they can be installed on Metro's Park & Ride platforms where the crowd of people that visit is the largest in order to inform the most people at once.

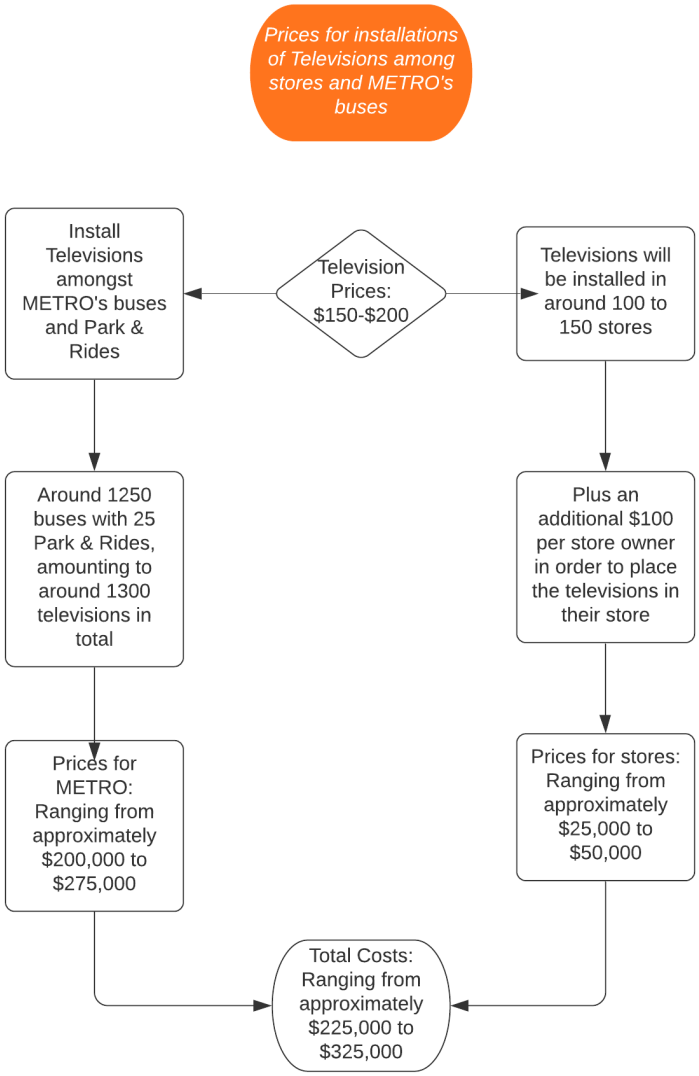
Another place that the television can be installed is in storefronts. In order to install the televisions inside of stores, the store owners can be offered a sum of money in order to make sure the television is up and running at all times, while the sponsors, which would be UNICEF and

the city of Houston, can help in supplying for the upkeep of the televisions and supply of the televisions. Just like in the Metro buses, the televisions will constantly be playing news or information about Covid-19. This way people that walk to their work or other places will also be able to gain information about Covid-19 even though they don't go on the Metro buses. The stakeholders in this proposal would be people in the underprivileged communities since they would be able to gain information on Covid-19, the sponsors of the project, which are UNICEF and the city of Houston, and Metro since it's their buses.

This solution is statistically backed up by facts such as the number of daily watchers that news channels receive and the number of people that travel through Metro buses in smaller communities. The top 3 news channels are watched by around 8 million people daily, morning and evening news inclusive. This provides evidence that news channels are respected amongst people and that they are informative enough for people to continuously watch them, which would be beneficial in showing that the people in the communities would watch the news as well for information about covid if they were given access to the technology. Another statistic that supports the proposal is that, as mentioned before, there are 50,000 riders of Metro buses in Houston alone, amounting to around 23 million people a year. With that many people, the information would be able to quickly spread around about how to protect themselves and others from Covid-19.

The outcome of this plan is for more people to be informed about covid and safety measures that they can take in order to protect themselves against it. This can be measured by utilizing public data online about the daily covid count in certain areas. For the chosen communities, the daily increase in the number of people that have covid can be seen and recorded before the project starts. A month after the project finishes, it should be recorded again, and if it goes according to plan, the number of people that gain covid daily in those communities should decrease.

A problem that would come across during the process of this proposal is safety issues. While installing the televisions or traveling around in order to help choose the stores for which the televisions should be installed, people might be crowded together while working on it; however, this can be regulated by informing the workers to stay a certain distance apart from each other and to wear masks. Another problem would be convincing store owners to allow the installations of the televisions; however, this isn't that big of a problem since if they're offered to be paid for it, then they will most likely accept.



Conclusion:

Covid-19 has been disastrous for many people throughout the world and has directly affected various communities in Houston. With the lack of social interaction and technology, many people are suffering from the decline of their mental health and many lack the information needed to properly protect themselves from Covid-19. In order to fix these problems, my partner and I came up with 2 solutions, the first of which is to create an organization whose primary focus is to tend to Houston's public parks while helping teens interact with one another and improve their mental health. The second solution is to install televisions along storefronts, Metro Park & Rides, and Metro buses. These solutions will be executed through step-by-step plans that include timeframes and costs of supplies as described above. Based on the information provided above, we believe that our proposals would greatly benefit Houston as a whole.

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2ND PLACE

Marco Castillo
Patrick Martinez
Malik Tennard
Karen Blanco
COVID-19 Challenge Ideathon
February 1, 2021

COVID-19 Challenge Essay (Response to Problems II and III)

COVID-19 has, to an unprecedented extent, impacted the entirety of the world, and yet while many steps have been taken in order to reduce the effects it brought upon the globe, the continuing aftermath of the epidemic cannot truly be quantified, much less be given a do-all be-all solution. Beginning in the city of Wuhan, China, the first recorded cases of the COVID-19 virus could be traced down to wholesale food markets.The virus originated in populations of wild and domesticated animals that were being sold, exchanged, and handled by various market employees, customers, and passerbys. Given the lack of cognizance towards the virus, it managed to propagate rather quickly within and around the Wuhan markets. By March 2020, managed to be declared a pandemic by the World Health Organization. Nations like the United States, Mexico, the United Kingdom, the European Union, and the African countries were soon faced with the COVID-19 virus, resulting in millions of infected individuals and inevitably, thousands upon thousands of deaths. In a hurry to develop a vaccine, two prominent pharmaceutical companies, Pfizer and Moderna, initiated multiple clinical trials in hopes of developing a potential vaccine before the end of 2020. By the late months of that same year, trial results were deemed promising by both Pfizer and Moderna, where tested vaccines were resulting in approximately 95% efficacy rates. After trials upon trials of the newly tested vaccines, the competing companies soon distributed their vaccines all throughout the globe, in an effort to seize the growing number of COVID-19 cases that were ravaging the globe. Even after the distribution of the vaccine, ramifications that the epidemic had on the globe were insurmountable. Restrictions in physical interactions and significant decrease in employment, among many other factors, has limited the ability of many people to remain up to date on the current status of the COVID-19 epidemic and any potential solutions that could resolve the virus once and for all. While media outlets and other forms of online communications attempt to resolve this issue, one of the glaring problems to this is that specific audiences- like the elderly and underprivileged- are not fully catered towards due to a lack in their ability to fully utilize the technologies and communications around them. This lack of education towards key audiences

demands a major call to action. As such, our group proposes a solution to Problem II: a policy that motivates teenagers to distribute flyers containing updates and additional information on the COVID-19 epidemic to elderly/ underprivileged communities, where, in exchange for their valiant service, are granted a city-sponsored letter of recommendation that can be used to bolster the teenager's recognition towards future opportunities and careers, as well as community service hours. To respond to Problem III, our group would like to propose an addition to the policy in which a focus towards distributing COVID-19 tests and vaccines to minority/ underprivileged communities to public hotspots (like churches, schools and nursing homes, etc.) via Mobile Vaccine Distribution Centers (MVDC) can allow individuals from these destitute backgrounds to get easy and reliable access to the vaccine.

SOLUTION TO PROBLEM II

Our group has constructed a marvelous solution to the dispensation of COVID data that is efficient and reliable. It consists of mainly 2 things: teenagers and flyers. The distribution of flyers that contain important COVID information, can be handed out with the help of teenagers. Upon doing so, the teenagers would be rewarded with community hours, which help tremendously with college applications. To magnify your view, our solution proposes schools and churches to promote the distribution of flyers in exchange for community hours. And you can also, possibly, include a competition, rewarding the top 10 teenagers with the most community hours a city sponsored recommendation letter, which also provides massive help in college applications. The process would start with the interest from the teenager. They would then apply/ sign up to be part of the event and then travel, with their own form of transportation(unless the school/church can provide a form of transportation) to the designated area such as but not limited to: local markets, pharmacys, elderly houses. This solution provides efficiency and is set up to be easily executed because it is time coherent, methodical and highly inexpensive. It's crucial and necessary to follow this procedure or proposal as it provides sharp advantages in every aspect: originality, budget, and streamlined. The only barrier that may stop this overture proposition is the form of transportation. This can leave confusion as a concrete answer of transportation may not be found at first glance to the problem. However once settled, the transportation barrier should be easily subdued.

SOLUTION TO PROBLEM III

Getting the information out was one thing, but being able to distribute and hand out vaccines is a different problem we run into. Luckily our group has been able to come up with a

plan which will successfully handle effective vaccine distribution throughout the Houston area. Not only will our plan be effective, but it will also focus on giving out vaccines to minorities and underrepresented communities. Our plan will revolve around a mobile vaccine distribution center. Inside the truck we will hold two to four fridges, each containing 150 to 200 doses, each fridge locked for safety precautions. Each center is usually able to allow four to five patients in at a time, but for safety measures we will only allow two to three inside in order to maintain social distancing. Our staff will consist of five to six certified nurses, three which will be inside the mobile center applying vaccines and sanitizing after each patient. The other two to three nurses will be outside collecting waiting patient's personal and medical information which is needed prior to getting the vaccine. Throughout our process we will drive to schools, churches, nursing homes and other local areas where there are many people with underlying diseases. Because our plan involves the distribution center to be mobile, we will be able to effectively distribute vaccines; not only do we go to the patients, but we go to underrepresented patients who otherwise would have a low chance of getting the vaccine. Despite the fact that we are going to them, there are still some barriers that may get in the way of getting as many people vaccinated as possible. One of these barriers is that the cost can accumulate easily since there are going to be multiple mobile distribution centers that are going to be used to implement our plan. Some examples of things that increase the amount of money going into our solution is that as more centers go around the greater Houston area, more money will have to be spent on gas, especially since it's a medical recreational vehicle, which consumes more gas than any other regular vehicle. In addition to the gas issue, we will also have nurses who we will need to pay due to their service; however, this may be fixed by contracting nurses who are willing to volunteer in order to help those communities in need.





CONCLUSION

Even as the COVID-19 pandemic has impacted everyone in the world in one way or another, we as a small collective group of high school teenagers want to be able to at least remedy some of the effects the pandemic has caused, particularly to communities and individuals who are widely considered to be in most need of assistance. To summarize the major points made in this proposal, we would like to see into fruition a policy that encourages teenagers to play a role in the distribution of education regarding the COVID-19 epidemic by allowing these teens to hand out flyers/ pamphlets to the audiences that would benefit the most from this information: the elderly and underprivileged. In exchange for their efforts, community hours and a city-sponsored letter of recommendation could be rewarded to teens that display the most commitment to the cause of aiding their community. Not only will this letter serve as a major award for teens, but it will also help teens gain further recognition from various institutions, including colleges and universities, workforces, and various other future opportunities. In addition to this, we would like to propose another solution for the problem regarding the topic of vaccine distribution for underprivileged/ minority communities: a proposal in which the distribution of COVID-19 vaccines throughout various public hotspots via portable vaccine distribution vehicles (aptly named a Mobile Vaccine Distribution Center (MVDC) by our group) that can allow individuals from the more impoverished and underrepresented communities to gain reliable access to the vaccine, as well as testing.

Policy:

ii). Implement a system where teenagers would distribute flyers in exchange for community hours

- The system revolves around community hours that can be given to teenagers upon distributing flyers in popular zones where minorities/ underprivileged tend to go. Events can be hosted in schools/churches
- *Add On* One can also administrate a possible competition where the Top 10 teenagers with the most hours can receive a city sponsored recommendation letter.

iii). Create a Mobile distribution Center, which is ultimately a portable way to set up and distribute the vaccine.

- Possible options include medical recreational vehicles(MRv), and shipment containers with the addition of wheels
- There would be 5-6 certified(to vaccinate) nurses; 3-4 to apply the vaccine, 2-3 collecting personal information prior to their medical background.

- Each vehicle would contain around 150 doses within 2 fridges to keep at the appropriate temperature
- Would contain a fixed schedule

covid 19

African Americans and hispanics diagnosed with covid at a 2x rate than other Ethnic groups, hospitalized at 4x the rate, and are dying at 3x the rate of other ethic groups.

potential issues:

(lower) - Access to Care
- Communication/language barrier (hispanics)
- financial limitations
- cultural reasons

African American distrust on American Medicine based by their bad history

lack in trust toward science / Medication / Medicine

Response of Experts "Frontline workers and first-responders should get vaccinated first to continue caring for covid patients." After, should be Elders (over age of 65) and those who have other diseases that weaken or put them at risk of severe covid.

People who have:

- kidney disease
- heart disease
- lung disease
- obesity
- diabetes

↑
Tend to have more of a "burden" on the Healthcare system as they stay in hospitals for longer periods of time

*Find ways on now these people can get vaccinated * Most efficient way to get vaccines to those in need

younger
What to focus on Right Now
↓
give people community hours to give flyers to elder houses
← how to get to the elderly with poor knowledge of technology

how to seek people with specific disease?

3RD PLACE

COVID-19 Proposal

Introduction

For our proposal, we are focusing on effectively distributing the vaccines through the Greater Houston area and finding ways to educate marginalized groups affected by the digital divide about COVID-19. The COVID-19 pandemic has grown exponentially into one of the most pressing global issues since December of 2019. The United States has reached a total of 2.48 million COVID cases. Those who are particularly at a disadvantage are those living in underprivileged communities who don't have access to testing, treatment, and prevention approaches regarding COVID-19. Lots of underprivileged communities have a higher chance to suffer from chronic disease as well, and this affects the likelihood of how severe their COVID cases are. These communities also suffer from a lack of proper technology hindering their ability to educate themselves about COVID. From Harris County's data, African American and Hispanic people are more likely to be affected per capita by the pandemic than any other ethnic group.

Solutions

I. When distributing the vaccine through the Greater Houston area, prioritizing the distribution of the vaccine by the concentration of COVID cases is most beneficial to the citizens of Houston. The entities essential to this solution are the City of Houston government, pharmaceutical companies that produce vaccines, and hospitals that will administer them. First, by dividing the Greater Houston area into zip codes, we can see the amount of COVID cases by the thousands. To make this effective, we have to divide the amount of COVID cases in the specific zip code area by the total amount of COVID cases in Greater Houston. This way, we can properly include those who are at a bigger disadvantage than their counterparts. First, we will collect data on the concentration of COVID cases per zip code and divide it by the total number of COVID cases in Greater Houston, approximately 485,000 cases. For data collection, personnel is needed, specifically those who work in the Houston Planning and Development department, who have

information about the demographics of Greater Houston. After we have collected our data, we will create a plan prioritizing the zip codes that have higher COVID concentrations

A. Timeline

Order	Approximate Time	Resources	Plan
Data collection	1-2 weeks	Personnel in the City of Houston government,	Collect the amount of COVID cases per zip code and divide by the total number of COVID cases in Greater Houston.
Strategy	1 week	Personnel to analyze data and create a priority list.	Prioritize zip code areas by the highest concentration of COVID cases.
Distribution	4-5 weeks	Personnel to distribute. vaccines	Personnel distributes vaccines in order of highest COVID concentration.

B. Data to Support

There are a total of 485,071 coronavirus cases in Greater Houston and 164,220 in Harris County. Harris County has the highest concentration of COVID cases at 33.85% of the total cases in Greater Houston and therefore will need to be prioritized. Austin County, on the other hand, has a total of 1,638 cases which is 0.33% of the total COVID cases, and does not need to be as highly prioritized (Taylor, 2020).

C. Outcomes & Limitations

With this plan, we will be able to effectively distribute vaccines to the population of Greater Houston while stressing equity by giving importance to zip codes with high COVID concentration. Once the majority of the population has been vaccinated, we will reach herd immunity which will allow us to effectively put an end to the coronavirus pandemic. The areas with high COVID concentrations strongly correlate with socioeconomic status and race; therefore, prioritizing those areas when distributing the vaccine stresses inclusivity of all groups. The biggest limitation would be producing enough vaccines to adequately administer to the large

population of Greater Houston. With many different companies making huge strides in the development of vaccines, this problem will soon be overcome as the production of vaccines grows exponentially.

II. To address the digital divide towards underprivileged communities about COVID-19, representation in the medical community is needed as well. Representation in the medical community is key to educate underprivileged communities to gain their trust because of the history of distrust from the medical community in general towards marginalized persons. To educate these groups about COVID-19, they need better access to technology as well. With the technology, we can create websites or digital platforms for these groups to see that they have representation in the medical community. Our plan is to use the city's budget to fund people in specific zip codes that can't afford to give laptops to their students. As well as hardware, they need access to internet connection. The entities necessary for this solution are doctors in the Greater Houston area and the city government.

A. Timeline

Order	Approximate Time	Resources/People Needed	Plan
Finding Representation	2 weeks	Personnel to do research on medical personnel that can represent underprivileged groups	Use the information to approach African American, Native American, and Hispanic/Latino doctors.
Digital platform	3 weeks	Personnel to create the websites	Create a website to inform others about COVID-19 and precautions that should be taken.
Providing hardware and internet access to marginalized groups	4 weeks	City budget, people to deliver hardware and install internet access	Use the city's budget to fund the hardware for the marginalized groups

B. Data to Support

In Modern Healthcare, the distrust towards the COVID vaccines in the BIPOC (Black and Indigenous People of Color) and Hispanic/Latino communities is justified through the systemic inequities they have faced historically. Dr. Nicollette Louissaint affirms that the "way to begin healing the mistrust is to increase black representation in the medical field" (Modern Healthcare).

C. Outcomes & Limitations

For this solution, we should be able to distribute the proper devices and internet connection for the underprivileged people in the Greater Houston area. We want to help educate minority groups about the proper precautions and information about the vaccine. The potential barriers in our solution would be how strong the internet connection is and how effective the website is to enlighten African-American, Hispanic/Latino, and Native American groups about the virus and the ramifications of not following certain protocols. These barriers would be solved by placing emphasis on high-quality internet connection in areas of minority groups and having areas designated for internet hotspots that everyone has access to. We will also regularly update the website with new information and encourage the use of the website.

III. In conclusion, the lack of representation in minority groups affects their view on COVID-19 and the vaccine. Our plan is to distribute the vaccine to high concentrated areas in COVID cases and provide hardware and internet to those who lack knowledge about the virus.

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GET INVOLVED AND SUPPORT US!

PEAC's Environment and Health Inequities Youth Network

We envisioned this Ideathon being an introduction to public policy, and are committed to growing students' involvement as problem solvers in these fields beyond our event. To keep students engaged in conversations around Climate Change/Environmentalism and Public Health in Houston, we have created a city-wide network for passionate students to collaborate on community impact projects. This network is open to all current students (post-secondary included) and can be joined through **applying at bit.ly/peacnetworkhtx**.

Partner with us to host an Ideathon in your city!

We at PEAC see youth as future leaders and want to uplift their perspectives and broaden their opportunities. This is why we're interested in partnering with organizations across the nation to duplicate this event in their city. The more students we can inspire to take action on these challenges, the better. Please email us at peac.usa1@gmail.com if interested.

Create a Chapter!

We at PEAC are passionate about empowering youth to lead change in their local community. If you are interested in starting a chapter at your school or college and joining a national network of student youth leading action, fill out the chapter interest form on our website. If you'd like to explore other ways to get involved with our mission of youth empowerment, email us at peac.usa1@gmail.com!

Contribute to our Cause

PEAC is a registered 501(c)(3) nonprofit that can broaden their impact with your support! Any contributions you make will go towards hosting city-wide events like our 2021 Ideathon, scaling students' community-impact projects, expanding our chapters' scholarship programs and more! Check out what our impact has been since our start at www.peacusa.org/ourimpact. Visit our website or reach out to peac.usa1@gmail.com regarding donation inquiries.
EIN: 82-1845762

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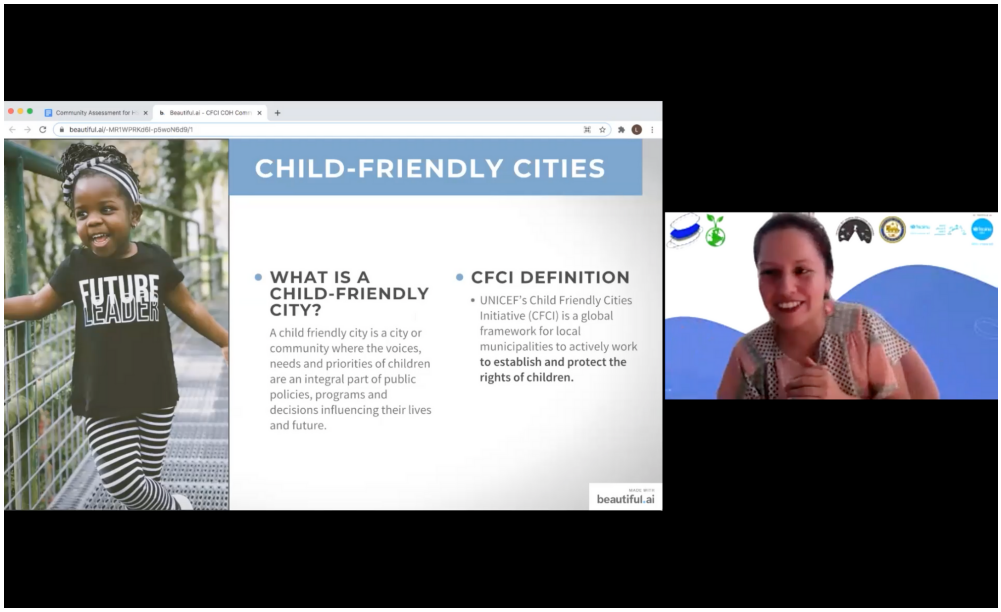
IDEATHON PICTURES

BRETT PERLMAN



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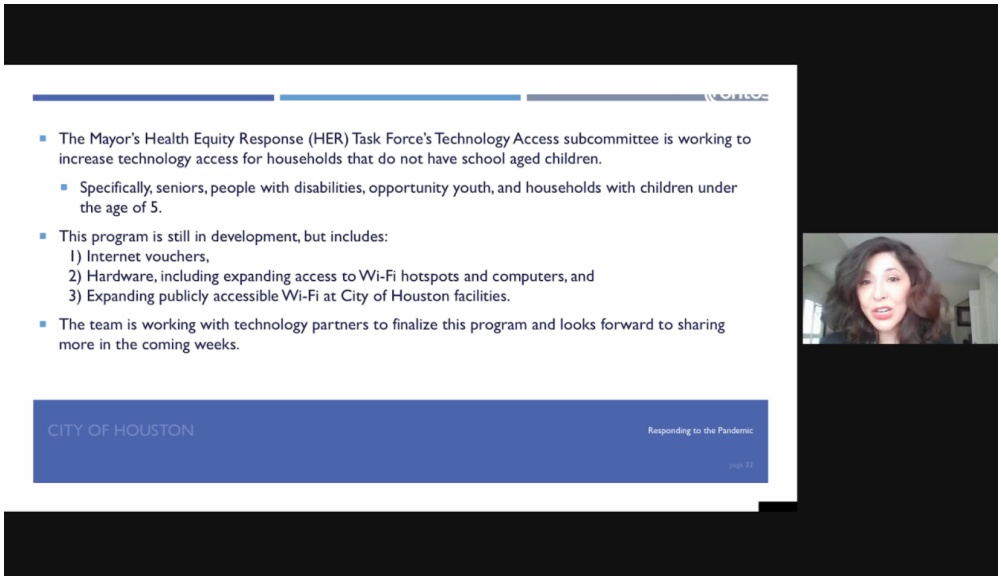

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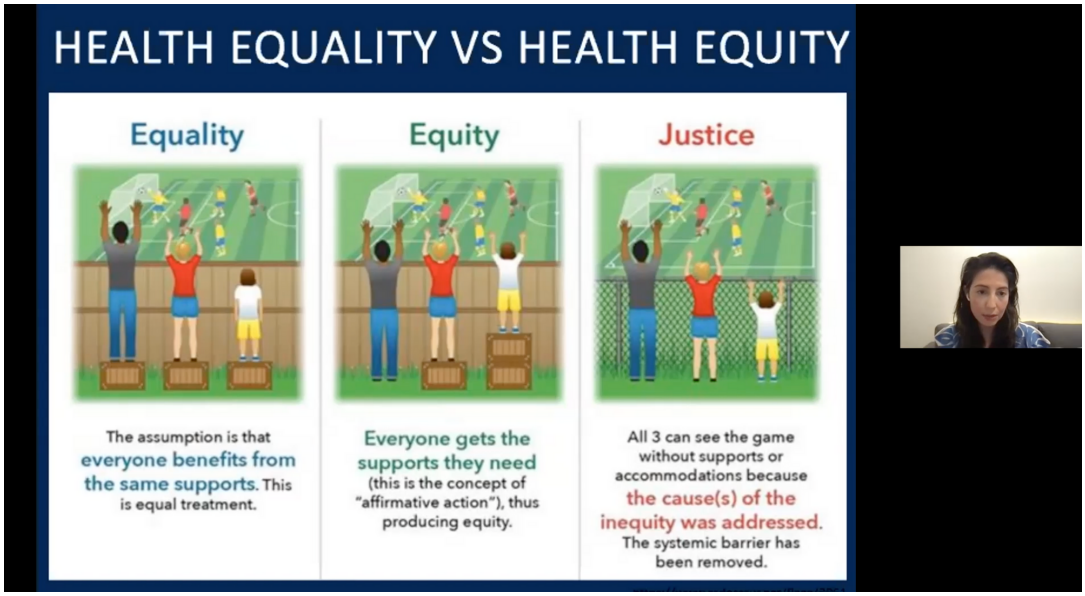

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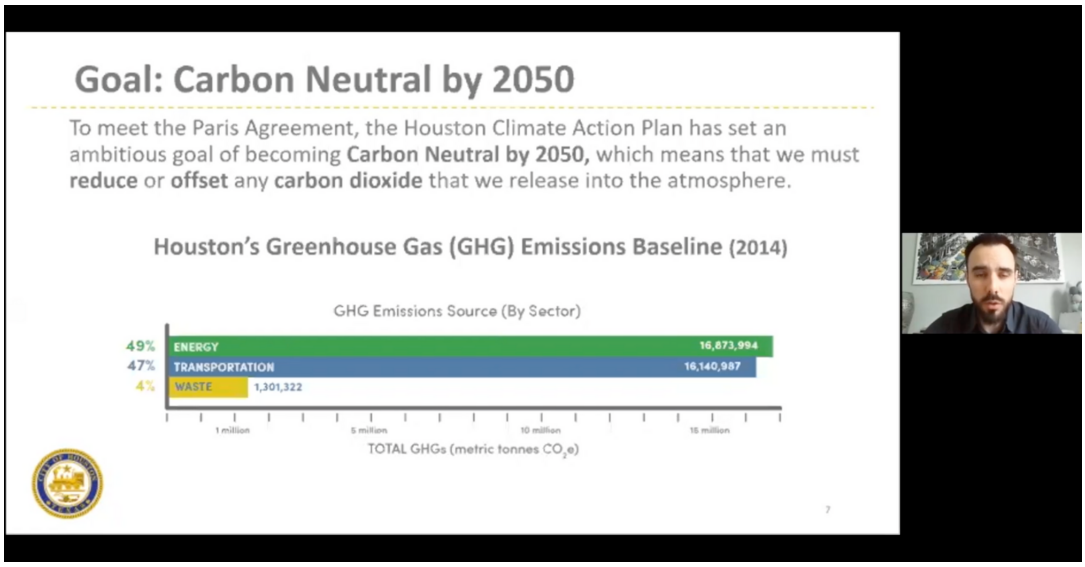

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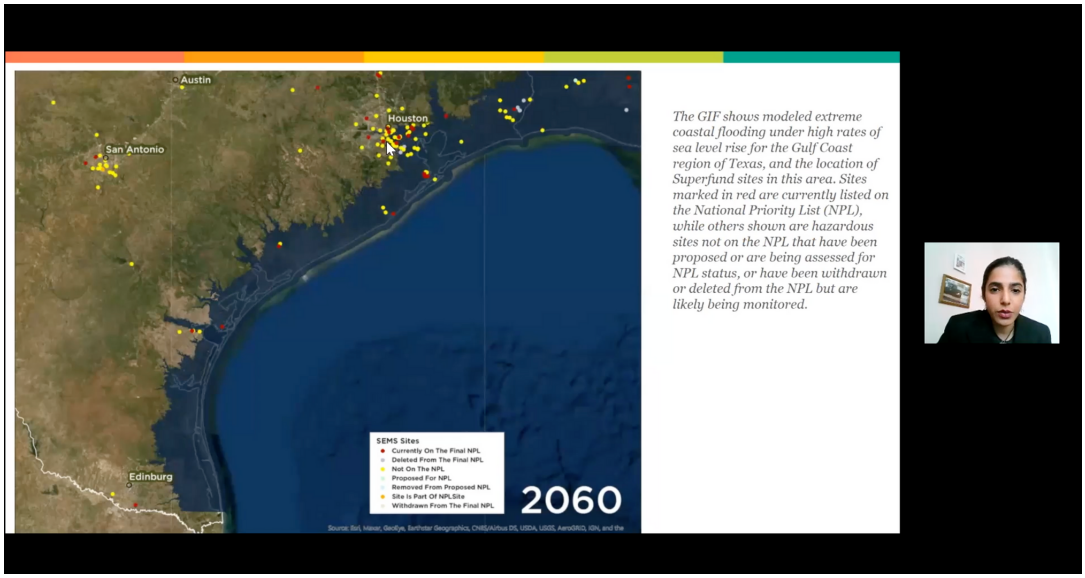
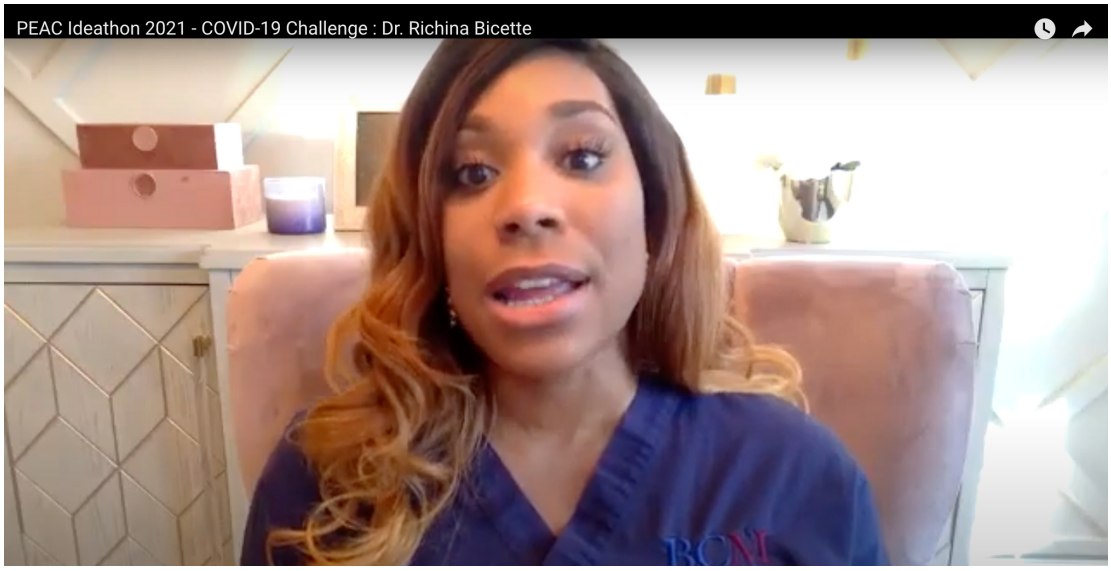
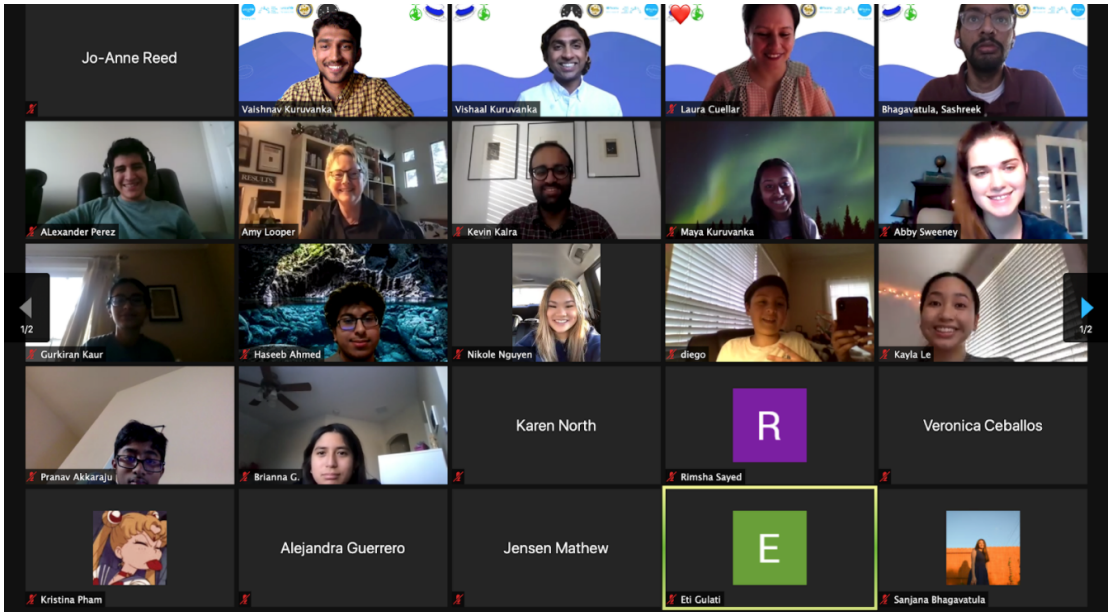


MASHAL AWAIS

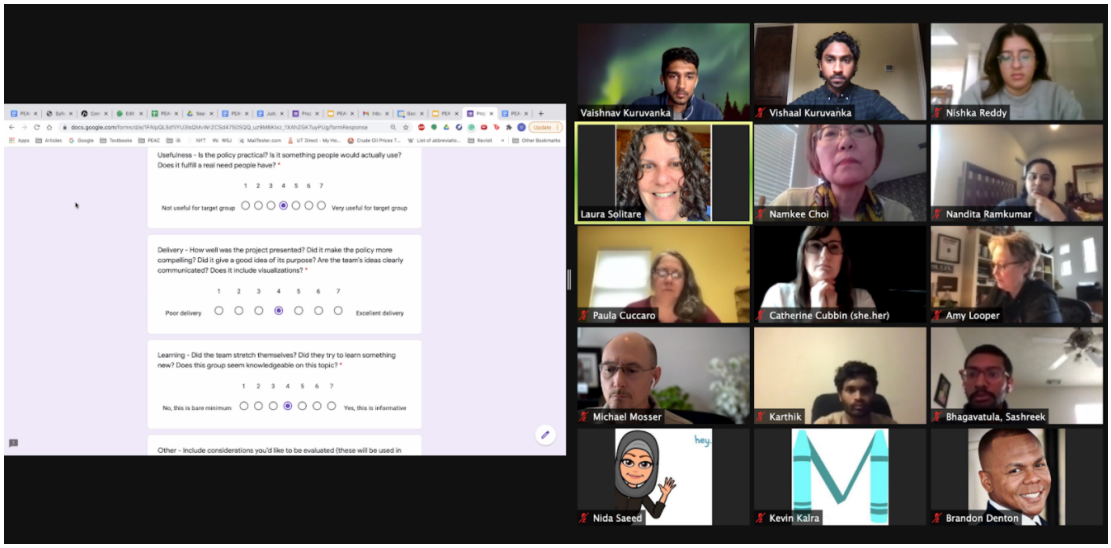
IDEATHON PICTURES



DR. RICHINA BICETTE



DURING EVENT



JUDGES