Air Quality Community Action Network (AQ-CAN)

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DENVER PUBLIC HEALTH & ENVIRONMENT
Denver's Nationally Accredited Public Health Department

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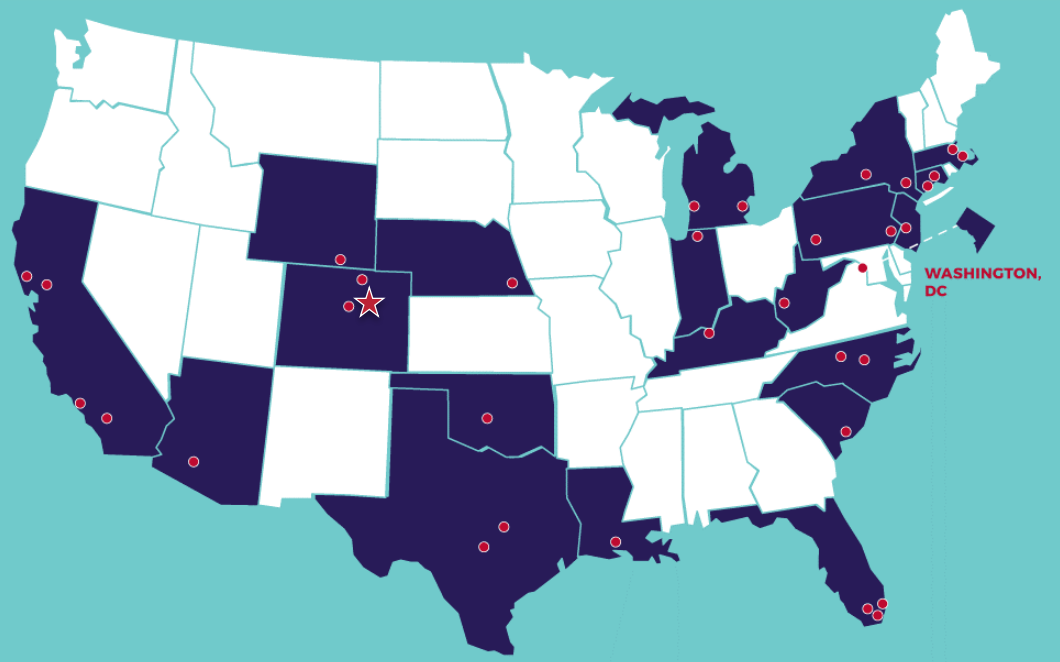
ENVIRONMENTAL QUALITY
DENVER PUBLIC HEALTH & ENVIRONMENT

What Is Bloomberg Mayors Challenge?

The Mayors Challenge is a competition that encourages mayors and their teams to come up with bold, new ideas that have the potential to solve urban problems and improve quality of life. The program has run contests across the United States, Europe, Latin America and the Caribbean.

It's an initiative to help city leaders think big, be bold, and uncover inventive – and ultimately, shareable – ideas that tackle today's toughest problems.



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The Problem

Denver families spend an average of $3,100 a year on asthma-related medical costs, resulting in more than $30 million spent annually.

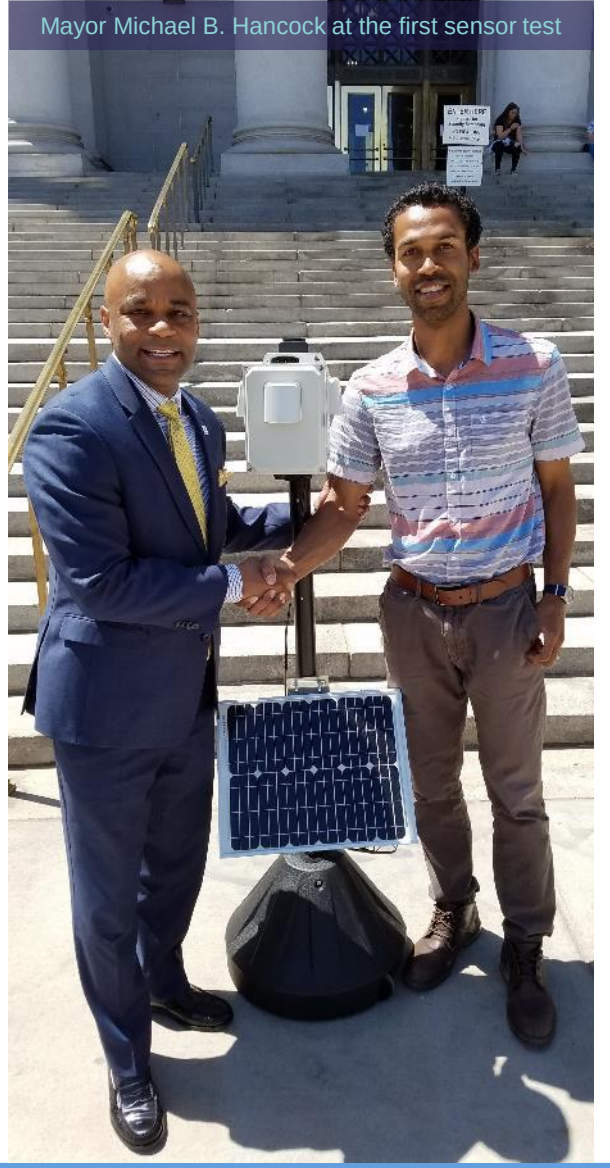
The Idea

The City of Denver will use cutting-edge air pollution sensor technology to create a city-wide air quality monitoring program at public school buildings, resulting in better informed policy decisions using environmental, health, and economic data.

WHAT MAYOR MICHAEL B. HANCOCK IS SAYING:

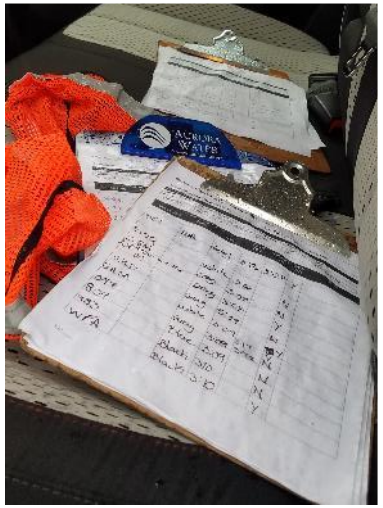
"Without local air-quality data paired with increased awareness and advocacy, children and their families will continue to develop chronic lung disease, miss school and work, struggle with increased healthcare costs, and experience decreased income-earning and career opportunities."

— Michael B. Hancock, Mayor of Denver, CO



Mayor Michael B. Hancock at the first sensor test

Test 1: Behavior Change (Anti-idling)



What we were testing…

The most effective method of influencing idling of vehicles

How we tested…

- Parent pledge sent home
- Anti-idling signage
- Active messaging* – text & Facebook

What we learned…

- Manual tracking is inefficient, unreliable, and unsustainable
- Schools do not have a standard or optimized pick-up/drop-off procedures

Test 2: Stakeholder Buy-in

What we were testing…

An effective method for gaining buy-in from school principals

How we tested…

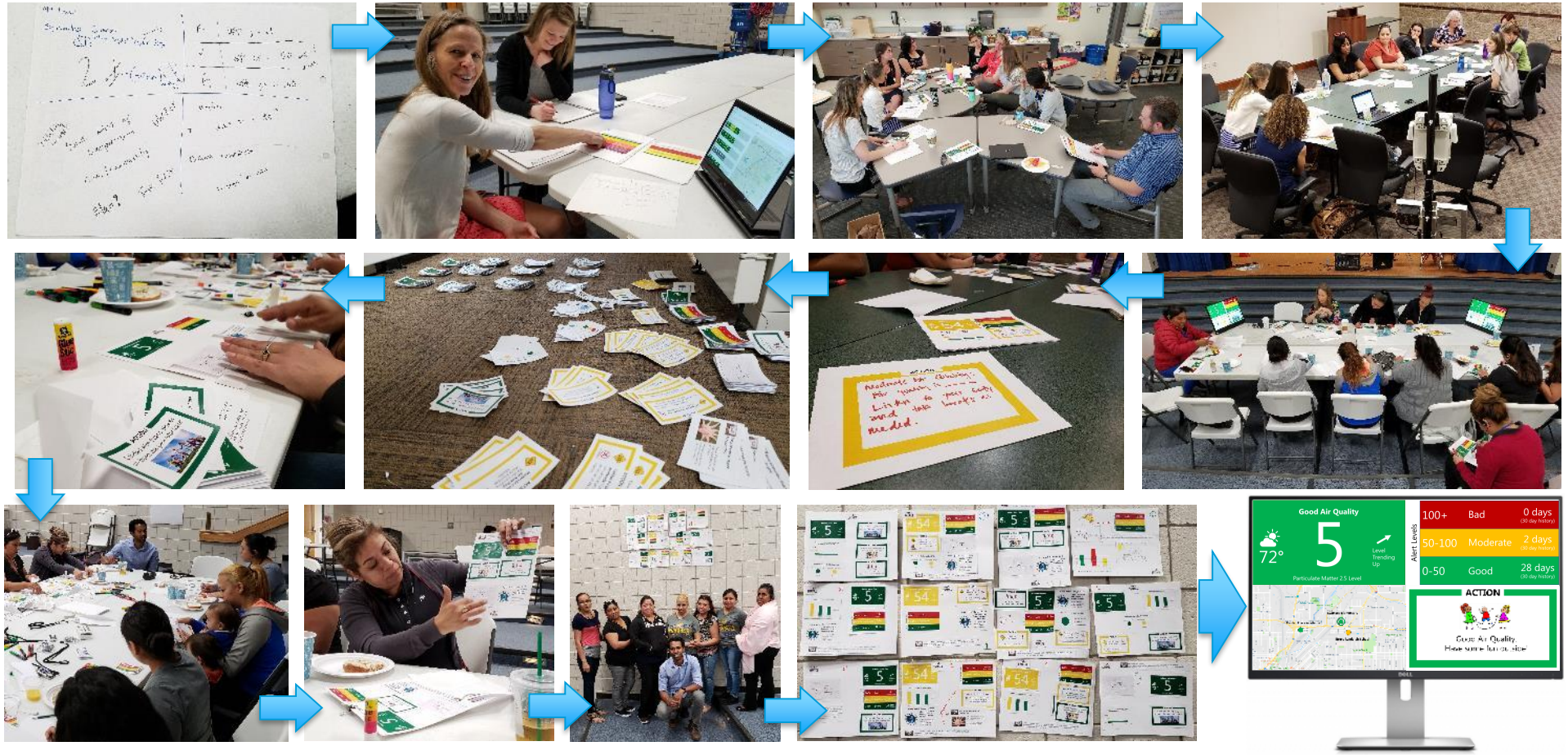
- Co-creative development – talking with the principals about what they care about.
- Incorporating direct feedback on prototypes

What we learned…

- Principals do not have free time
- Communication must be short with big take-aways highlighted
- Include an easy to understand and follow, call to action

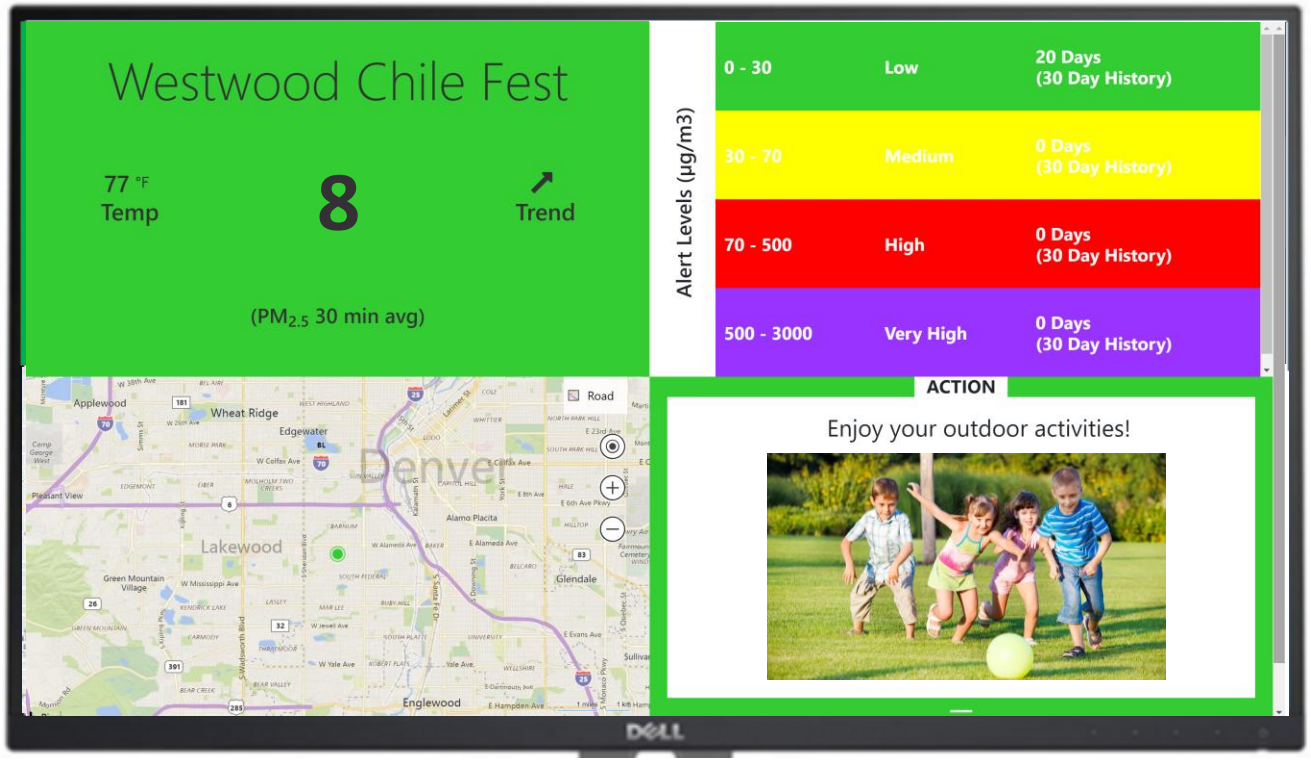
Test 3: Data Communication (Dashboard Development)

- Focus groups with nurses, teachers, and parents
- Collaborative element development

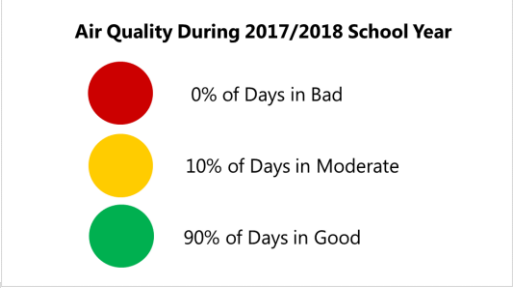


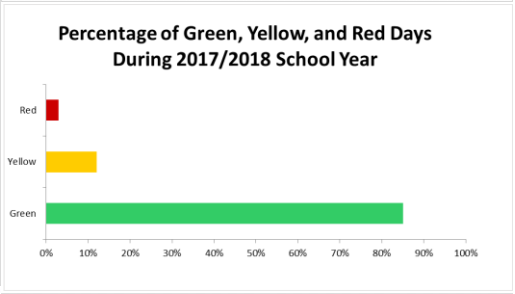
Community Dashboard

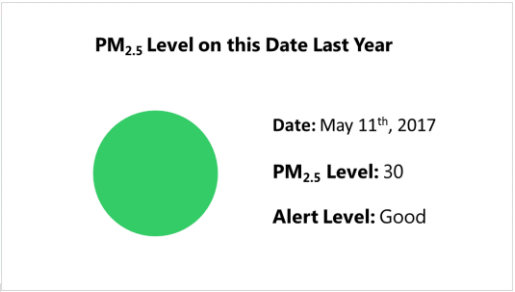
- Near real time data
- Customizable tiles
- Various action prompts

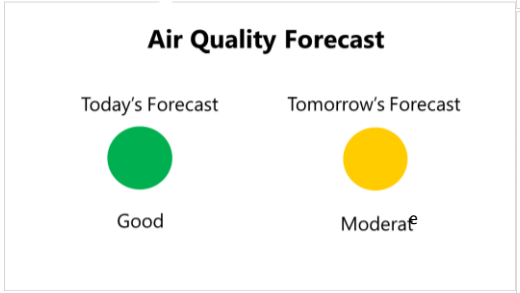


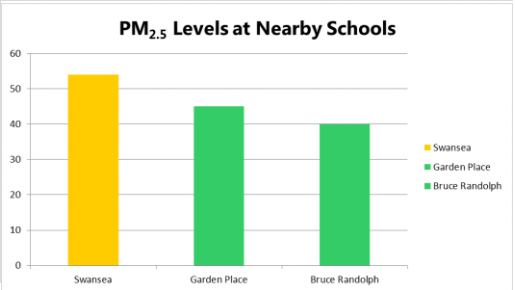
Particulate Matter 2.5 is so small that is can go into our lungs and then into our blood. When it enters our blood it can travel to places in our body like our heart and brain and cause damage.











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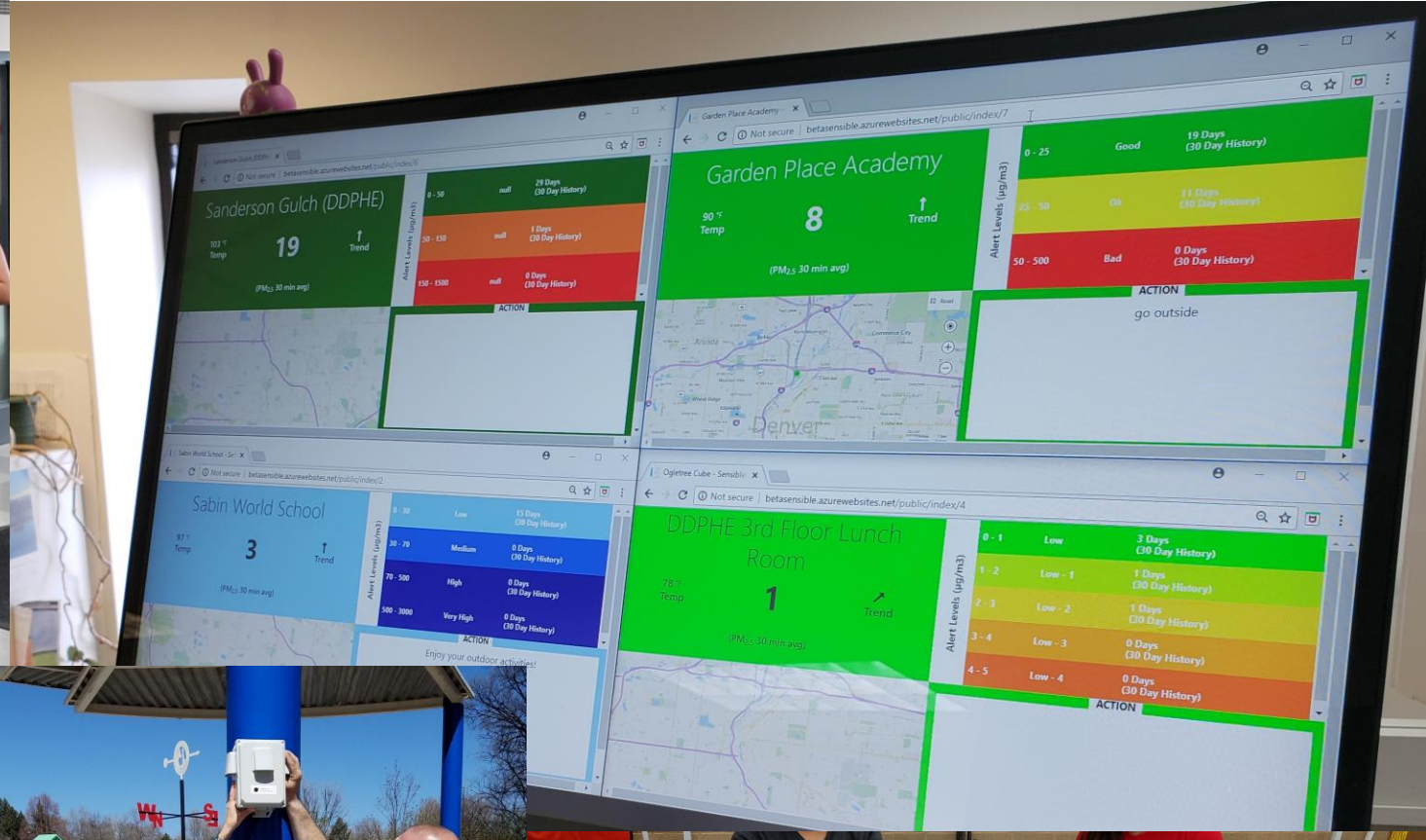
Swansea (DEH)
8


Sanderson Gulch (DDPHE)
19
Trend
Garden Place Academy
8
Trend
Alert Levels (µg/m3)
0 - 25 Good 19 Days (30 Day History)
50 - 500 Bad 0 Days (30 Day History)
ACTION
go outside
Sabin World School
3
Trend
DDPHE 3rd Floor Lunch Room
1
Trend
Low 3 Days (30 Day History)
Low - 1 1 Days (30 Day History)
Low - 2 1 Days (30 Day History)
Low - 3 0 Days (30 Day History)
Low - 4 0 Days (30 Day History)

SABIN WORLD
ELEMENTARY

EASY
FACIL
NEEDS WORK
HARD

VIA
VERDE

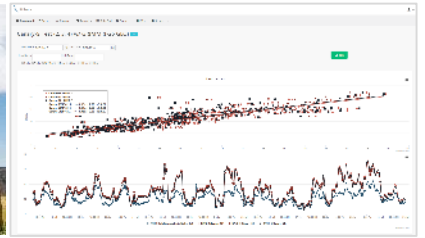
OUR WESTWOOD AIR QUALITY
NUESTRA CALIDAD DEL AIRE EN WESTWOOD
WHAT IS PM 2.5?
¿QUÉ ES PM 2.5?
AIR QUALITY AFFECTS YOUR HEALTH
Air pollution causes:
LA CALIDAD DEL AIRE IMPACTA TU SALUD
La contaminación del aire causa:
IMPROVE YOUR LOCAL AIR QUALITY
MEJORA TU CALIDAD DEL AIRE LOCAL
PROTECT YOURSELF
PROTÉGETE A TI MISMO
Some major sources of PM 2.5 are:
Algunas fuentes importantes de PM 2.5 son:

Community Science:
COMMUNITY ACTION
ENVIRONMENTAL RESULTS
THE TRUST FOR PUBLIC LAND

What's Next?!

Continue working with schools to identify air pollutions patterns and put programs in place to reduce exposure and reduce local pollution sources

Continue refine the sensor technology and work with the data platform developer on ways to correct data utilizing regional reference instrumentation



Win the grand prize of $5 million in October. Scale to encompass the schools within Denver that are most impacted by air pollution.

Thanks to Collaborators!

Bloomberg Philanthropies

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