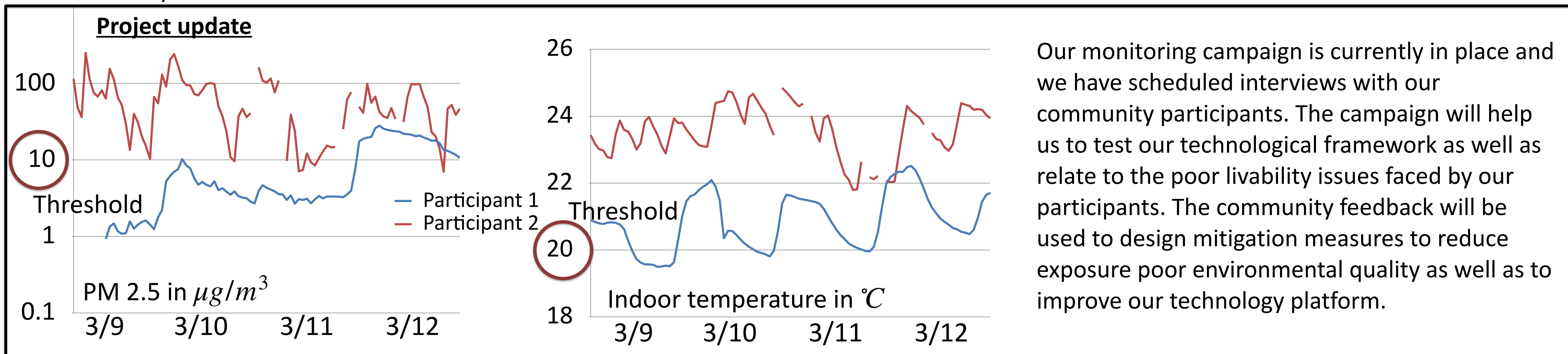


Developing technological solutions to improve indoor air quality and thermal comfort in urban communities

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PG+FY2020

Problem statement Residents living in South Bronx and Harlem, NYC experience very high asthma rates related to poor air quality and extreme heat. Both are working class neighborhoods whose residents are predominantly people of color. In collaboration with our environmental and social justice organizations in the neighborhood, we decided to develop a community driven framework to improve the indoor livability of the residents.

Intellectual merit The project will develop a technology framework that will include community driven monitoring program to predict and forecast indoor air quality and thermal conditions as well as design appropriate measures to reduce exposure. The project will develop a sensing and communication platform based on open source technologies that will predict targeted risks associated with poor environmental quality. The project will also help us understand the linkages between indoor and outdoor air quality.



Our monitoring campaign is currently in place and we have scheduled interviews with our community participants. The campaign will help us to test our technological framework as well as relate to the poor livability issues faced by our participants. The community feedback will be used to design mitigation measures to reduce exposure poor environmental quality as well as to improve our technology platform.

Intellectual merit {current} The project will impact the everyday lives of people in the 2 communities. The residents will now have a platform to better understand their immediate environment as well as take the necessary steps to take evasive actions to reduce risk related to air quality and extreme heat.

Intellectual merit {extended} The current project will help us to optimize our socio-technology framework, which can then be scaled to any other vulnerable communities around the country. The partnerships that we have built with leading community organizations in the neighborhood will help us to continue the program beyond the end of the grant.

Next steps The monitoring campaign will continue through the summer and our planned interviews will help us to relate the data with the everyday lives of our participants. The interviews and focus group meeting will help us to device measures to reduce exposure.