The built environment has a profound effect on our environment, economy and society. Because of this, it is imperative that we improve “the system-level environmental performance of buildings and communities, while developing a deeper understanding of indoor environmental quality, quality of life, and energy use” (Mascaro Center for Sustainable Innovation, n.d.) It is with this in mind, that Dr. Bilec began her work with the Larimer community in 2009 to raise awareness of the environmental risks present in the area and how residents could mitigate that risk.

GOAL: ENSURING HEALTHY, HIGH PERFORMANCE BUILDINGS AND COMMUNITIES
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PARTNERSHIP: KINGSLEY ASSOCIATION AND PITT BRING COMMUNITY TOGETHER AROUND ENVIRONMENTAL RISKS
In 2009, Dr. Bilec began working in the Larimer community with graduate students to explore portable office space using shipping containers and an undergraduate research team who designed multi-generational, sustainable housing, energy assessments. Through her work with these groups, Dr. Bilec began to get to know the community, and saw the need to inform residents about environmental risks and provide them with tools to mitigate them. Through this, her partnership with The Kingsley Association was sparked, and the Environmental Justice Community Alert Matrix was developed. This project puts the Larimer community at the center of the work, with 24 local residents serving on a Community Action Team to assess environmental risks in their residences and in other places in the community.

ACCOMPLISHMENTS: GIVING COMMUNITIES THE TOOLS TO FIGHT ENVIRONMENTAL RISKS
The Environmental Justice Community Alert Matrix (EJCAM) not only informs Larimer residents about environmental risks they face in their community, but also gives them the tools to fight these risks. The project began with a survey conducted in partnership with The Kingsley Association to determine community needs. By doing this, the group saw that there was more to be done to raise awareness of environmental issues in the area. To ensure the community voice was a key part of this effort, the University of Pittsburgh’s Mascaro Center for Sustainable Innovation trained 24 Larimer residents as the Community Action Team. This team is able to assess environmental risks and provide tools to mitigate those risks in their own homes and in the homes of their peers.

The Community Action Team also helped to guide the development of and co-facilitate the Urban Transition Cities Movement, a workshop that builds community resilience around societal challenges such as climate change. This workshop was attended by 72 residents and promoted peer to peer education, transferring knowledge about environmental risk factors from resident to resident.
MUTUAL BENEFITS
Employing a participatory research method enabled community members to play a key role in this research. Not only did this give community members the ability to understand the technical activities, it also reshaped the way the researchers performed their work because the community’s perspective added valuable context and insight, allowing researchers to receive more authentic data. This project also promoted a mutually beneficial partnership by giving community members the ability to co-develop and co-facilitate trainings around environmental risks. This not only allowed community members to learn and implement facilitation techniques, but also gave their fellow community members a chance to learn directly from their peers, which has been shown to be an effective training method.

METHOD: COMMUNITY-BASED PARTICIPATORY RESEARCH
As part of the Mascaro Center for Sustainable Innovation’s partnership with The Kingsley Center, they used community-based participatory research to implement a bicycle mobile monitoring campaign to engage the community to collect and analyze air quality data, even installing a website to provide residents with air quality data from the community. This keeps with the ideals of community-based participatory research as it focuses on action oriented results (Israel, Schulz, Parker & Becker, 1998). By working with community residents, researchers, and students, the Mascaro Center for Sustainable Innovation was able to give information to “all partners involved to direct resources and influence policies that will benefit the community” (Israel, Schulz, Parker & Becker, 1998, p.181).

This partnership between the community, Mascaro Center for Sustainable Innovation, and The Kingsley Center allowed the development of a replicable model that can foster community partnerships with academia. This is especially important given the barriers to involving communities of color and low income communities in health research. This partnership will allow for more robust community involvement in environmental research in the years to come.

References
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WANT TO LEARN MORE ABOUT COMMUNITY BASED PARTICIPATORY RESEARCH? CHECK OUT THESE RESOURCES:
Handbook of Community-Based Participatory Research (Coughlin, Smith & Fernandez, 2017)
Community Research in Other Contexts: Learning From Sustainability Science (Silka, 2010)

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