FACT SHEET
Bike Sensors to Map Heat

Climate Issue: Urban Heat Island
- Worldwide, cities are experiencing increasingly severe heatwaves
- The effects of these heatwaves are often felt unequally, with marginalized populations experiencing greater severity
- Many cities do not have sufficient data on heat and humidity for their locality
- Data is often provided from weather stations located outside of the city
- High-quality temperature and humidity data allows policy makers to implement effective urban cooling strategies.

Cities need accurate heat and humidity data in order to understand the true climate impacts on their citizens and to develop responsive policy.

Bike Sensors: An Efficient Way to Collect Data
Bike sensors are easy to install
- Portable sensors attach to bikes and track air temperature and humidity
- Data is geo-tagged, meaning that the bike sensor provides data wherever it goes.

They collect high quality, detailed data
- Bike sensor data is sensitive and accurate enough to capture temperature changes from one city block to another
- By gathering data from citizens’ bike movements, cities can gain a deeper understanding of how residents experience temperature in different neighborhoods
- Bike sensor data can also be used to identify neighborhoods disproportionately burdened by heat and humidity
- These efforts allow cities to more effectively direct resources to communities most in need.

Bike sensors are a low-cost, user-friendly strategy for cities to gather important data on heat and humidity.

Explore Bike Sensor Data

IN A NUTSHELL
- Cities require high-quality temperature and humidity data to prepare for heatwaves and protect their citizens
- Cities can use bike sensors to collect this data.

WHAT CAN YOUR CITY DO?
PARTNER with universities or other institutions to expand bike sensor data collection efforts
DEVELOP citizen-science campaigns to scale up usage of bike sensors
PUBLISH data on local climate vulnerability once available to ensure transparency
DESIGN responsive climate resilience strategies
PRIORITYZE vulnerable communities for urban cooling strategies.