

SONYC: A Cyber-Physical System for Monitoring, Analysis and Mitigation of Urban Noise Pollution

<http://wp.nyu.edu/sonyc>



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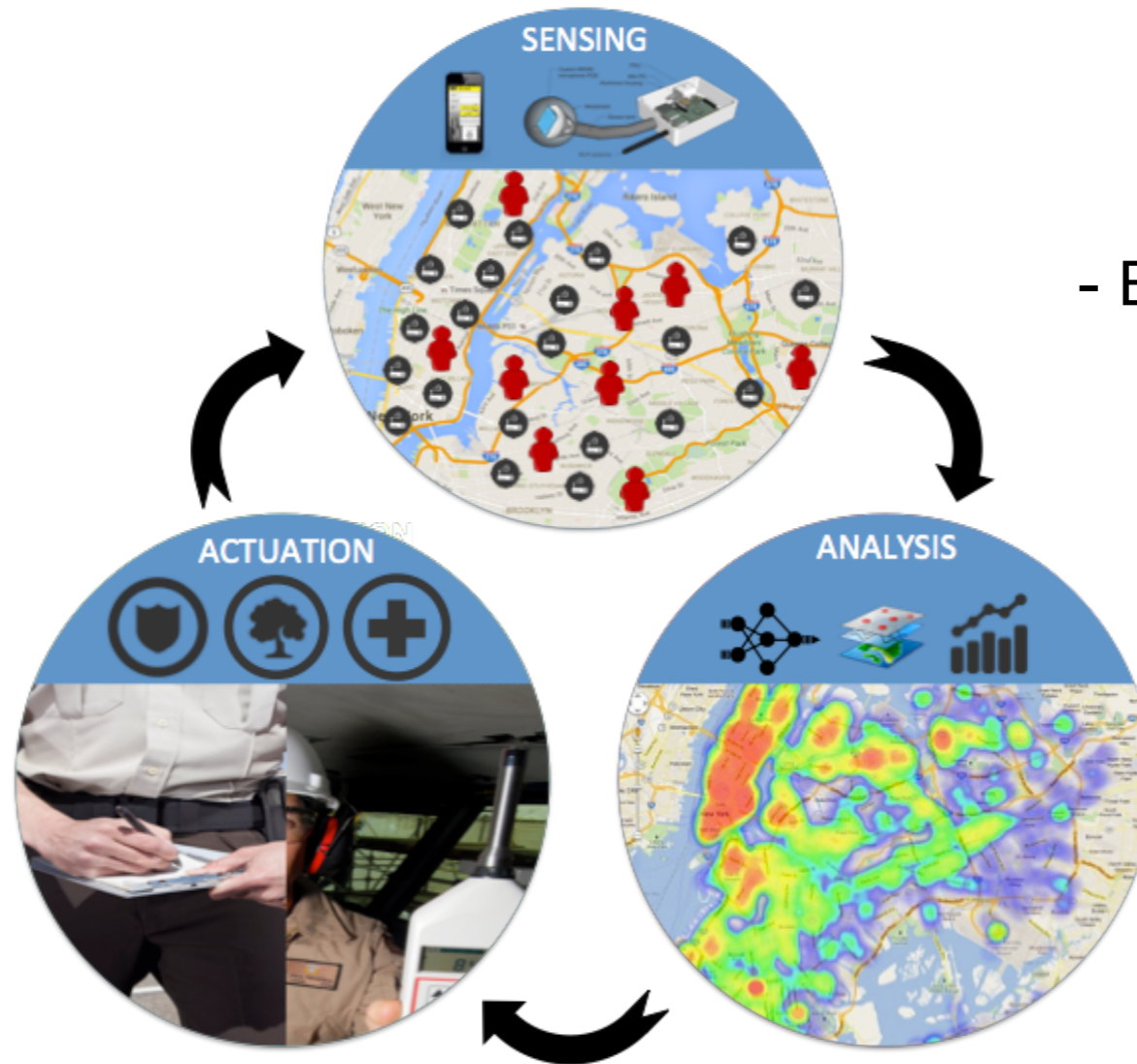
Description

Challenges:

- Limited noise monitoring, planning and mitigation capacity
- Complex system of autonomous systems w/ humans in the loop

Solutions

- Sensor network of humans/machines
- Data-driven modeling, detection and planning
- CitSci and HCI for seamless human/cyber interactions



Scientific Impact

- Framework for decentralized, indirect control in CPS
- Bringing humans-in-the loop at scale
- Integrating big data and CPS approaches

Broader Impact

- Better urban noise mitigation
- New research in STEM/ social sciences
- STEM/CPS outreach/education

Learning

Already collected ~14 years of acoustic data and ~30 years of sound pressure level (SPL) data for training our low power sound classifiers

Building trust with diverse range of partners across the city that control infrastructure is key !