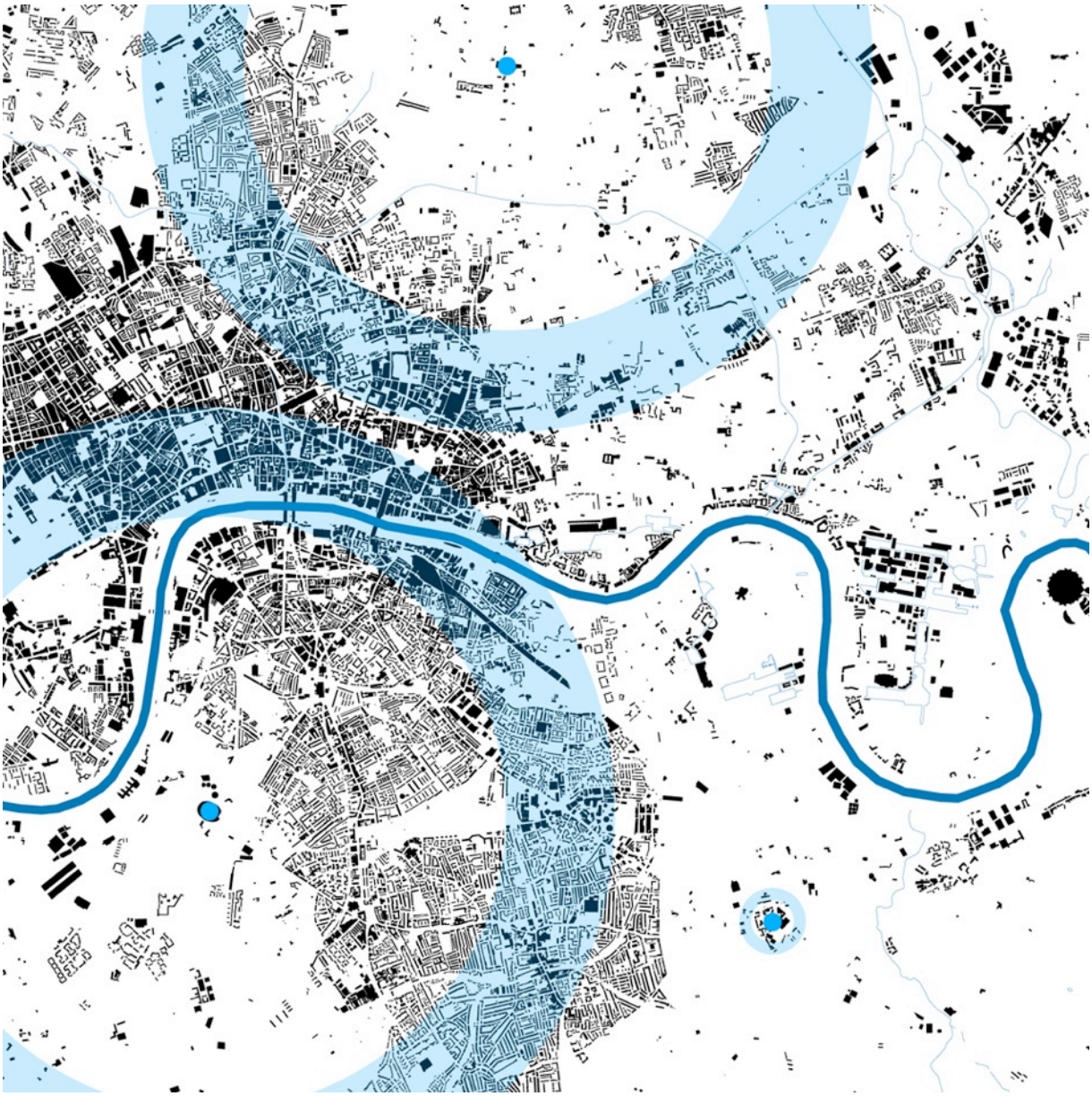
Project description

At the moment, we are bound to the americans military GPS and network companies. As we are using digital maps empowered with GPS, which are curated and therefor have impact on our navigation and experience of our environment, we also have to think about the available technology.
The technology is closed at the moment and can be curated or shut down at any time. This navigation system is open. Which means it is not run by companies nor control. The goal is to gather interested people on the web platform openps.info to develop the necessary software, hardware and testing processes. Anybody who is interested, from beginner to professionals can participate and contribute their knowledge to the community and this system.
To use given things in cities and reuse them for the projects needs is the agenda of this project.

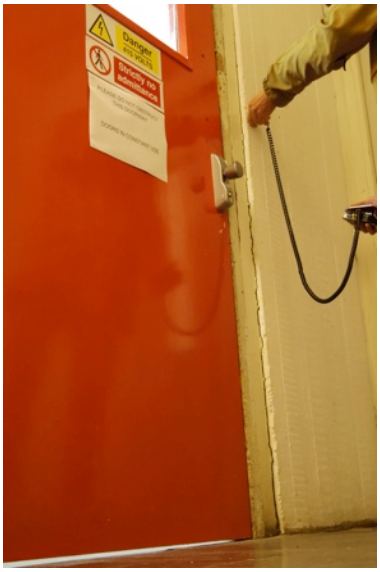
The idea is to use seismic activity, produced by generators in power plants, turbines in pumping stations or other large machines running in factories.

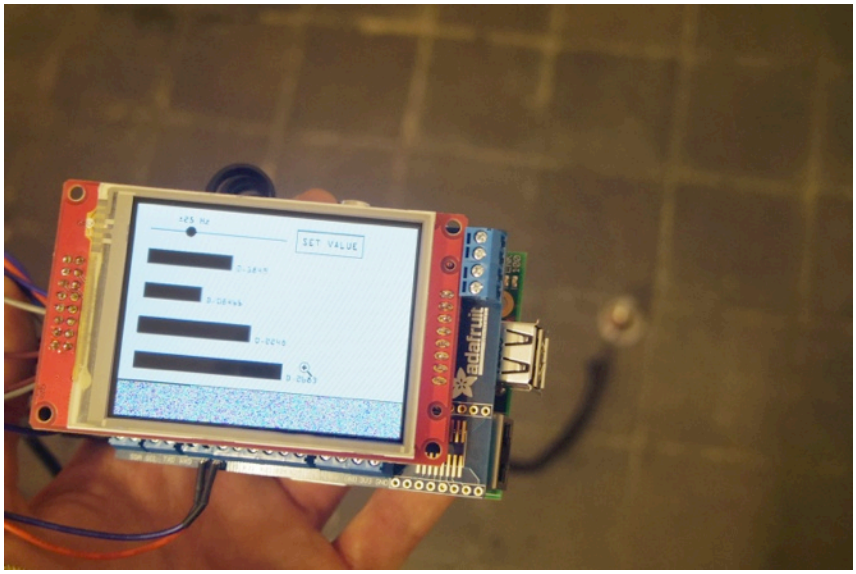


These generators, machines etc. are producing seismic waves, distributed over the ground.
The sensor prototype can detect seismic waves on the ground, walls or anything with enough contact to the ground.

At the current stage of this project the sensor can detect and collect different frequencies.
To calculate the noise in a city out of the received signals from the ground, the sensor has to be tuned into a specific frequency. To record a specific frequency from one machine, turbine etc. the sensor has to be as close as possible to the seismic source once to receive a clean and strong signal.

These captured frequencies and their positions are stored in a database.





When at least three signals are received and their positions on a map are known, one can calculate the position within these three signals via triangulation and the signal strength.
In this early stage, the project will still rely on GPS and maps. With the process of expanding the new network of seismic sources, it can be possible to build an own positioning system.

Exhibited at the Work in Progress show, Royal College of Art, 2013: