

Mapping urban ambient air pollution with a mobile sensor network

Jan Blachowski, Paweł Stefaniak, Artur Skoczylas, Bartosz Jachnik, Sergii Anufriev, Monika Chojwa

¹ KGHM Cuprum Research and Development Centre, ² Wrocław University of Science and Technology



MOBILE SENSOR NETWORK CONCEPT AND DESIGN

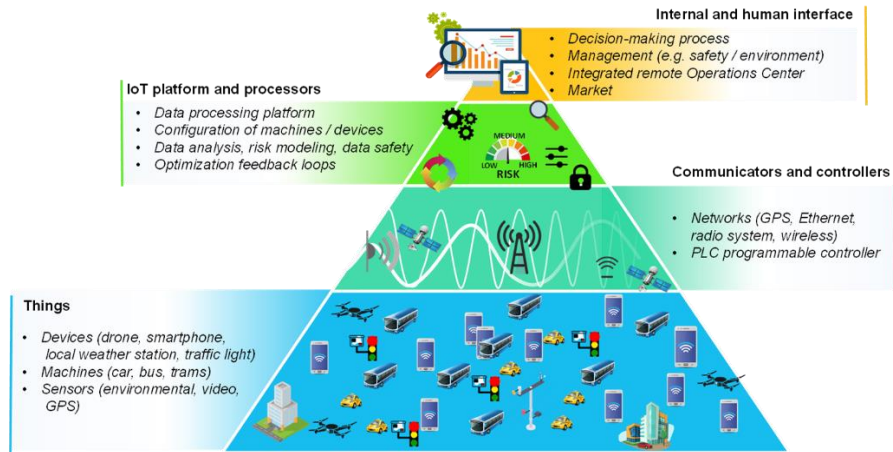


Fig. 1. General architecture of Internet of Things for real-time smart pollution monitoring (Stefaniak et al. 2020)

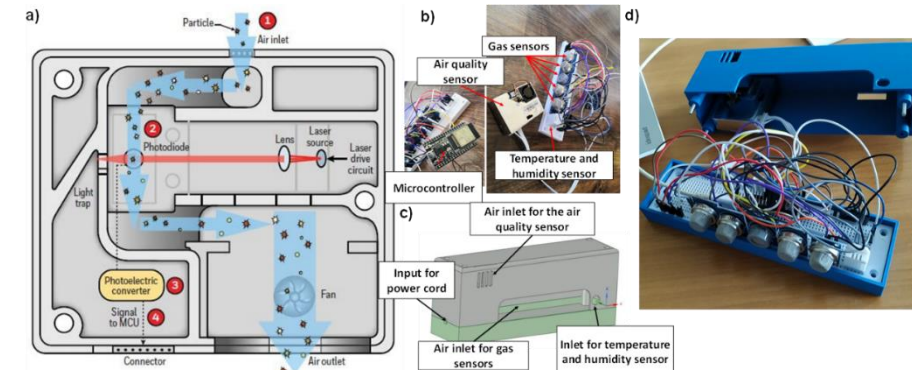
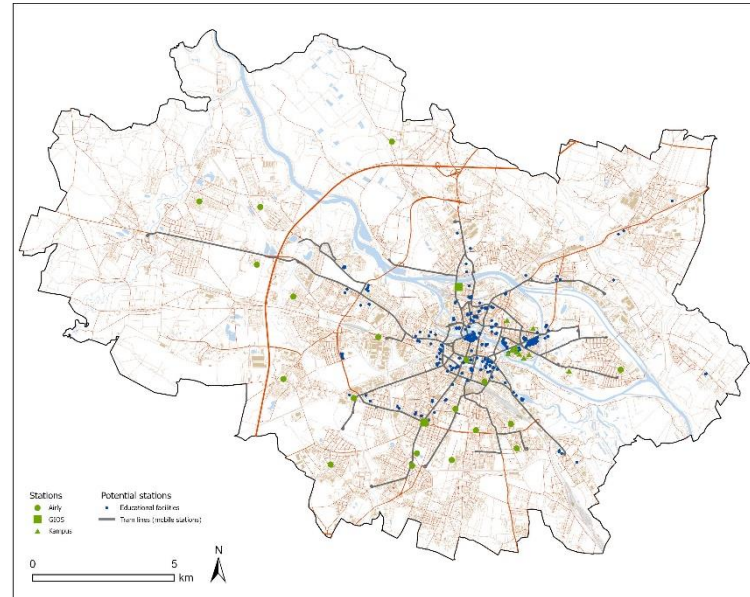


Fig. 3. The principle of operation of the laser particulate matter sensor, b) device prototype, c) housing of the measuring unit, d) prototype unit (Stefaniak et al. 2020)

Fig. 2. Concept of the mobile monitoring network

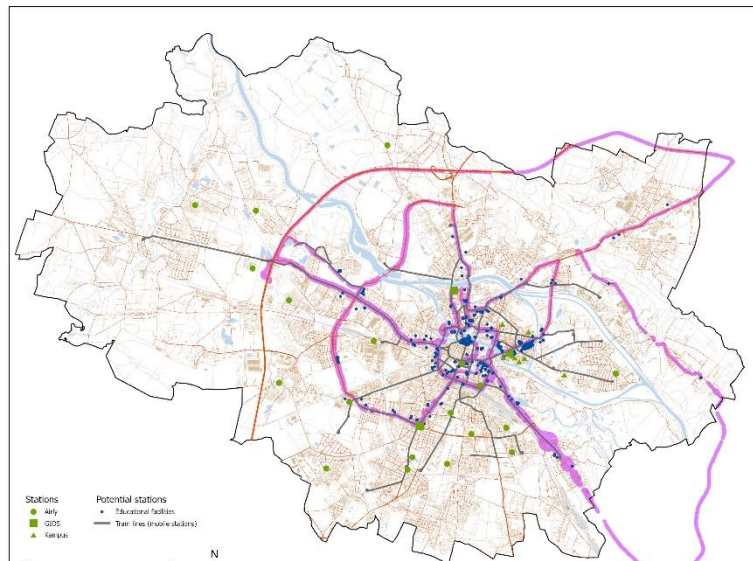


Fig. 4. Route of mobile measuring device

PRELIMINARY TESTS AND RESULTS

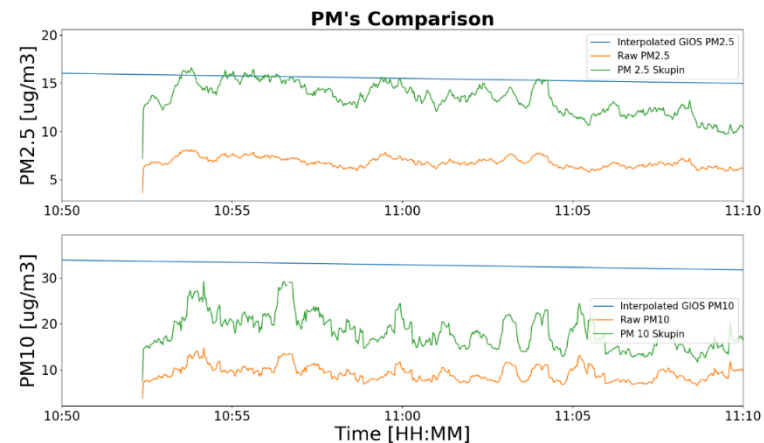


Fig. 5. Measurement error analysis

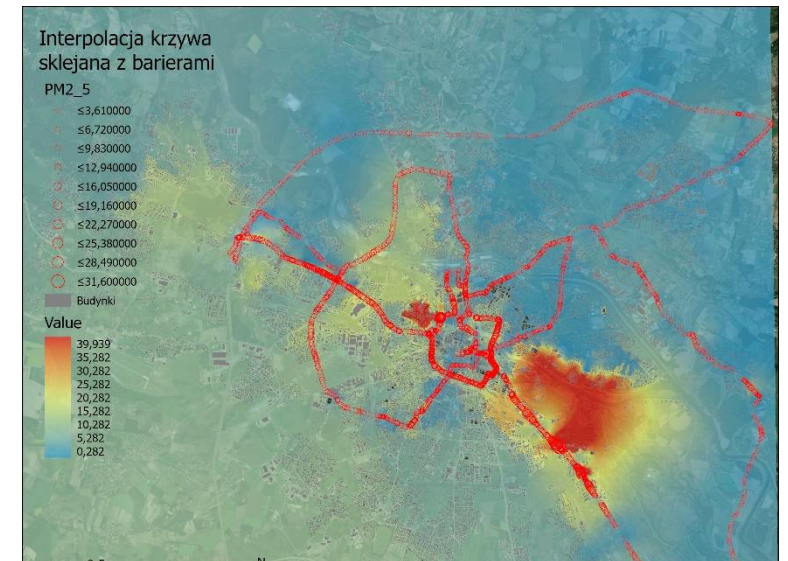


Fig. 6. Results of interpolation with barriers