

Summary of air quality sensors and recommendations for application

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Summary

This report presents the state-of-the-art review of existing literature on low-cost sensors (costing less than 100\$) that can be used for measuring common air pollutants such as particulate matter (PM), carbon monoxide (CO), ozone (O₃) and its precursor pollutants such as nitrogen dioxide (NO₂), and nitric oxide (NO). The focus of this report is to enable the end-user (the iSCAPE project partners and the scientific community and policy makers in general) in taking informed decisions on the selection of low-cost sensors by striking a right balance between the sensor characteristics and the user requirements, as shown in Figure 1.

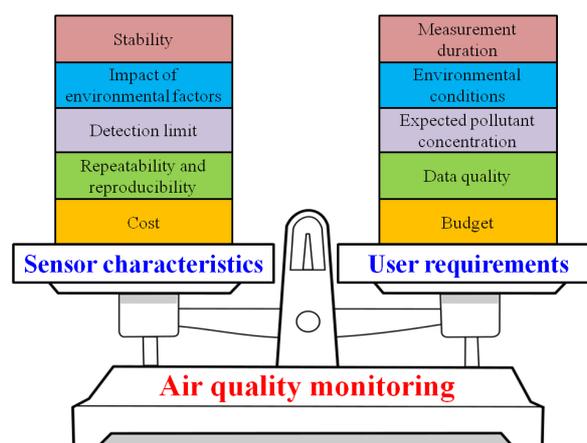


Figure 1: Low-cost sensor selection for air pollution measurements – striking the right balance between sensor characteristics and user requirements¹.

¹ Reference: Aakash C. Rai, Prashant Kumar, Francesco Pilla, Andreas K. Skouloudis, Silvana Di Sabatino, Carlo Ratti, Ansar Yasar, David Rickerby, 2017. End-user Perspective of Low-cost Sensors for Outdoor Air Pollution Monitoring. *Science of the Total Environment*. (in press)

In addition to the report, the team of D1.5 also submitted a review article titled as ‘*End-user Perspective of Low-cost Sensors for Outdoor Air Pollution Monitoring*¹’ to an international journal to target the larger audience (e.g., scientific community, policy makers, general public) interested in the applications of low-cost sensors for monitoring the air pollution. This review article assessed the performances of different low-cost air pollution sensors and outlined the challenges, best practices, and future outlook for effectively deploying them.

The full report will be published in autumn 2017.



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