

# Air4People: a Smart Air Quality Monitoring and Context-Aware Notification System (Summary) \*

<sup>1</sup>Alfonso Garcia-de-Prado, <sup>2</sup>Guadalupe Ortiz, <sup>2</sup>Juan Boubeta-Puig, <sup>2</sup>David Corral-Plaza

Grupo UCASE de Ingeniería del Software, Universidad de Cádiz

<sup>1</sup>Departamento Ingeniería en Automática, Electrónica, Arquitectura y Redes de Computadores

<sup>2</sup>Departamento de Ingeniería Informática

{alfonso.garciadeprado, guadalupe.ortiz, juan.boubeta, david.corral}@uca.es

## Summary of the Contribution

Air quality is one of the key topics in the focus of *Internet of Things* (IoT) applications and smart cities, since it plays an essential role for citizens nowadays and is currently a worldwide concern. Indeed, air pollution can seriously affect citizens' health; particularly, air pollution may worsen and favour certain illnesses or even cause death to specific risk groups. The fact is that due to this worldwide concern, several IoT systems for air quality monitoring have been created over the last years. Nevertheless, the problem is that monitoring alone is not enough; it is necessary to ensure compliance with the following requirements: (1) air quality information and alerts have to be updated in real time; (2) the information has to be actively provided to citizens in a user-friendly way; (3) the information provided to users, in particular to risks groups, needs to be adapted to their specific features and (4) the system should also take into account the type of activity the user is going to be involved in and adapt notifications accordingly.

Currently, most systems providing air quality information lack several of such key characteristics; as a result, information does not reach citizens in a simple way and notifications neither consider citizens' specific characteristics nor take their physical activity into account. In order to tackle these challenges effectively, and to pay special attention to context-awareness issues, we present Air4People: an air quality monitoring and context-aware notification system, which permits obtaining the user's air quality relevant context, processing both the data coming from IoT air information sources and from the user context, and notifying users in real time when a health risk for their particular context is detected.

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