



Integrated air quality sensor for energy efficient environmental control

INTASENSE

Grant No: 28037

Deliverable Report

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Deliverable	D2.6 Ethical issues reviewing the results of the project
Lead beneficiary	7. ULANC
Nature	Other
Dissemination level	CO
Date due	Month 36
Date delivered	



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Technologies for ensuring, monitoring and/or controlling a high quality indoor environment, particularly in relation to energy efficient buildings

D2.6) Ethical issues reviewing the results of the project: A review report on the potential ethical issues associated with the implementation of the project results and outputs. This will include a number of end-use scenarios including secondary applications. The report will also consider end-of-life and disposal of nano-structures. [month 36]

An *Ethics Review* was carried out on the proposed *INTASENSE* project on 10th May 2011. Two ethical issues were identified by the panel assessment:

1. Demonstration of an awareness of the safety and/or ethical issues concerning the potential hazards of nanostructures to humans (specifically for research staff).
2. The potential dual use of project results.

Throughout the *INTASENSE* project, partners have had in mind the health and safety of themselves and their co-workers as documented in the comprehensive risk assessments undertaken included in D2.5 'Risk assessment of the handling and use of nanomaterials in *INTASENSE*'. Throughout the project, partners have been kept up-to-date with information regarding the toxicity of the nanomaterials used in the production of the *INTASENSE* system and are aware of the European Commission's Recommendation regarding a Code of Conduct for Responsible Nanosciences and Nanotechnologies.

As stated in D2.5, the nanomaterials used in *INTASENSE* are not airborne at any point in the fabrication and production process. Severe mechanical abrasion would need to be applied to the sensor surfaces to create any airborne particles. Such mechanical abrasion does not occur during the fabrication of the sensors or their integration into the *INTASENSE* system.

All *INTASENSE* partners implement safe disposal practises in compliance with the EC WEEE [Directive 2012/19/EU](#). The *INTASENSE* systems are currently, and will continue to be, scrapped in accordance with the WEEE Directive and the sensor components themselves incinerated. During the development of the sensors when faulty/expired sensors are disposed of, they are double bagged and incinerated in accordance with the relevant COSHH and REACH guidance.

The implementation of the *INTASENSE* system into a building would have no ethical impact on the building's occupants. The wireless communications between the sensor nodes would transmit sensor data only. The commissioning and integration of the *INTASENSE* system within a building would be unobtrusive, whatever the end use scenario, whether it is a hospital, underground station or hotel.

At the outset of the project Gooch and Housego (GAH) supplied a signed dual use letter of declaration, stating that GAH "do not intend to promote this [*INTASENSE*] technology in the defence sector. Furthermore it is highly unlikely that any IP generated by GAH within this project would be applicable for use in the defence industry." To date, GAH have not generated any IP out of the *INTASENSE* project, thereby negating any concerns regarding dual use.