THE EVERYAWARE PLATFORM

A key technological novelty of EveryAware is the design and the implementation of the EveryAware platform that will handle both sensor and subjective data acquisition.
The platform will host a modular system based on two hardware components: a smartphone controlling the data acquisition and a modular sensor box with several pluggable sensors.
This approach guarantees high scalability of the overall system and allows for an optimal distribution of sensors (e.g., wearable sensors for air or noise pollution).
At the same time web-interfaces will allow users to easily upload their sensor readings, and equally easily tag these with subjective information.

CONCEPT

There is now overwhelming evidence that the current organisation of our economies and societies is seriously damaging biological ecosystems and human living conditions in the very short term, with potentially catastrophic effects in the long term. The enforcement of novel policies may be triggered by a grassroot approach, with a key contribution from information and communication technologies (ICT). EveryAware integrates a participatory sensing approach with a monitoring of subjective opinions in order to investigate the mechanisms by which the local perception of an environmental issue, corroborated by quantitative data, evolves into socially-shared opinions, eventually driving behavioural changes.

EveryAware is tapping on the concept of citizen-science. Individuals will be engaged in case-studies where they will be able to directly monitor parameters of their environment (such as noise pollution or air-quality) during their normal activities by allowing the gathering of a continuous flow of geo-localized sensor data and personal perceptions. The final goal being that of understanding how relevant, reliable and personalized information affect our perception and eventually our decisions, both at the individual and the collective level.

Tell me, I forget.
Show me, I remember.
Involve me, I understand
Chinese proverb

MAIN OBJECTIVES

Distributed ICT tools to increase the public participation to the monitoring activity of their own environment by low-cost sensing equipment.

Monitor personal exposure of people to (airborne) environmental pollution and relate it to their activity patterns (and eventually their health).

Extract relevant and reliable environmental information by efficient algorithms from the raw data and opinions collected by distributed sources.

Stimulate fundamental shifts in public opinion with subsequent change in individual behaviour and pressure on policy; stimulate an efficient usage of shared resources in urban areas by promoting self-organization processes of inhabitants in several aspects of their daily life.

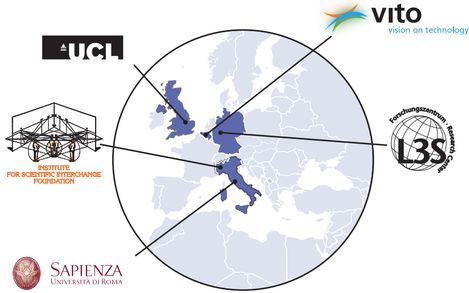
Join the challenge

www.everyaware.eu

CASE STUDIES AND WEB-EXPERIMENTS

Case studies involving different numbers of participants will test the scalability of the platform, aiming at involving as many citizens as possible leveraging on the low cost and high usability of the sensing devices.

Noise pollution: this case study is aimed at mapping levels of noise in urban environments together with affective information (feeling, notions of nuisance).
The participation to this case study is quite simple.
Download the free Widenoise application (iPhone and Android) on your smartphone and join the experiment.



1 | Fondazione ISI - Institute for Scientific Interchange ISI - Torino -Italy
2 | Research Center L3S - Leibniz Universität Hannover - Hannover - Germany
3 | Sapienza Università di Roma - Physics Dept. - Rome - Italy
4 | Flemish Institute for Technological Research VITO - Mol - Belgium
5 | University College London - London - United Kingdom

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Air-quality: this case study requires the full-fledged EveryAware platform. Participants will use a portable sensor box and will contribute to the monitoring of air-quality parameters. The comparison between the data coming from sensors and subjective opinions generated by users will provide very interesting insights about which environmental parameters have the strongest impact on user's environmental perception.

Web experiments: the web is acquiring the status of a platform for social computing, able to coordinate and exploit the cognitive abilities of the users for a given task. EveryAware is developing and running a versatile platform to implement and host experiments in the form of social "games".
The advantage of this experimental methodology is that every useful piece of information and detail of users' interaction with the system will be fully available and leveraged for benchmarking as well as for the modeling activity.
In this way the effects of social interactions can be observed in a controlled environment with a larger statistical basis.

Join the experiments at

www.xtribe.eu

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