



SHERPAS

Sensors for Heterogeneous Environmental Real-Time mapping and
Personalised Assessment Services

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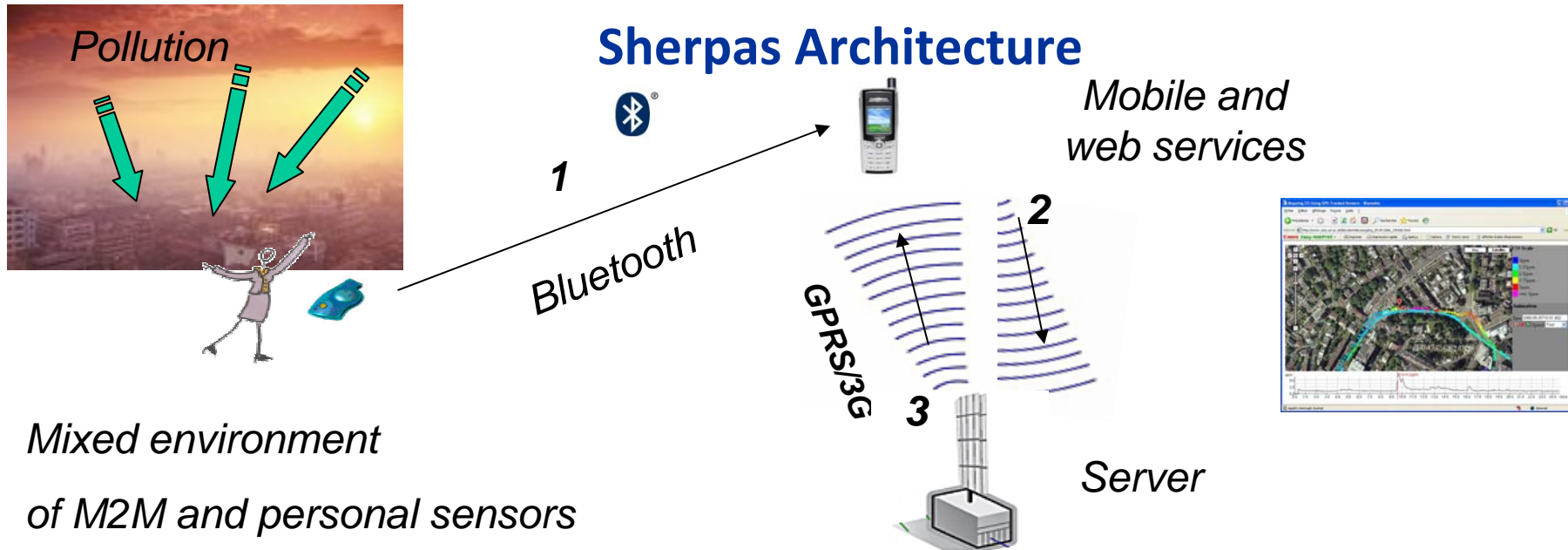


Why Sherpas?

Impact of air pollution on life expectancy

- ✚ A Eurobarometer survey conducted in 2007 in 27 EU countries “Attitudes of European citizens towards the environment” reveals that air Pollution is a concern for 40 % of EU citizens (3 rd most important concern).
- ✚ Air pollution is a key part of human health: Oxidative stress affects people for skin, hair and respiratory tract.
- ✚ There is a growing evidence of the physiological impact of air pollution on heart rate variability, blood pressure, blood oxygen saturation and cardiovascular inflammation.
- ✚ It is possible to mitigate and reduce the impact of air pollution on the body through dietary antioxidants, exercise and cosmetics.
- ✚ This solution can be tailored and optimized for each citizen.





Sherpas aims at integrating in the same system:

- ➔ Bluetooth sensors (environmental, physiological and geo-positioning)...
- ➔ Personal Area Networks relaying data through mobile phones over mobile Internet to a distant server.
- ➔ Citizen centric and social networking applications around environmental monitoring.

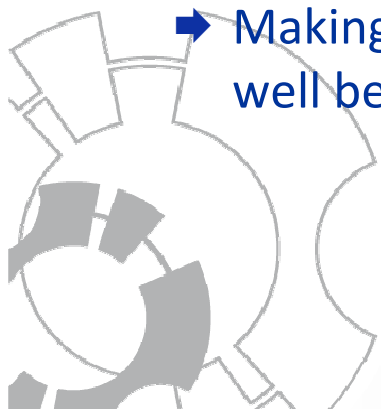
✚ **For individual users, Sherpas proposes personalized recommendations related to**

- ➔ real-time personal pollution exposure.
- ➔ previous personal pollution exposure.



✚ **Sherpas will provide a basis for new citizen centric services.**

- ➔ With applications for different age groups and areas (urban, mountainous, coastal areas)
- ➔ Possibility of exchanging advice to reduce the impact of environmental stressors.
- ➔ Making EU citizens aware of the correlation between lifestyle and personal well being.



Sherpas technological bottlenecks

- ✚ Data fusion and analysis
- ✚ Algorithms for exercise, nutrition and cosmetics recommendations
- ✚ Electronic integration, miniaturization and autonomy
- ✚ Sensors performance



- ✚ **Partners in: France, Italy, Spain, (Switzerland)**
- ✚ **SMEs and universities**



PLANNING

- D1 Feasibility: Current research review – Baseline ($t_0 + 3$ months)
- D2 Definition: Overall system design ($t_0 + 6$ months)
- D3 R & D - Prototype construction ($t_0 + 18$ months)
- D4 Pre production: System deployment and pilot phase ($t_0 + 21$)
- D5 Initial exploitation Measurement evaluation report.Pilot ($t_0 + 24$ Months)
- D6 Full exploitation: Marketing approach and Exploitation strategies ($t_0 + 30$ months)