Enhance Environmental Awareness through Social Information Technologies

EVERYAWARE

# Guidelines for using the EveryAware sensor box

## 1. Switch on/off

Switch the sensor box on by connecting it with the external battery. The fan at the air inlet will start rotating when the connection is good. Switch off the sensor box by removing the connection with the battery. We suggest to switch the box on for some time before going out to make measurements, so that the sensors 'warm up' and measurements become stable. If possible, 1.5 hours in advance would be best, but even half an hour helps.

## 2. Connect with the mobile phone

A connection between mobile phone and sensor box is established by the AirProbe app on the smartphone. The app can be installed from the Google Play website. The sensor box has to be on in order for the connection to be possible. Details on how to connect can be found in the AirProbe documentation.

The mobile phone app is used to download data from the sensor box, visualise it, but also tag the live tracks. We encourage a large usage of tags, to describe your location, feelings or circumstances.

## 3. Battery life

The battery has a life of about 7 hours. Blue leds indicate the battery status (4 leds showing battery remaining in increments of 25%). Charging is performed by a USB – micro-USB connection with the computer or an electricity socket with the correct adaptor. During the day, the battery can be also topped up using the solar panel of the EveryAware backpack. The battery works in both charging and discharging mode simultaneously. So it can remain connected both to the solar panel and to the sensor box during the day. We suggest recharging the battery using an electricity socket or computer after every usage of the box (e.g. in the evening at home).

**4. How are measurements taken?**

Measurements are made while walking or cycling through the gaming area. If the ambassador stands still for a while, the measurements continue. The focus of the Challenge is on the outdoor environment, so measurements should be taken **outdoor** as much as possible. Different urban environments are included in the gaming area, e.g. roads with different topology, urban green, squares, etc., and the measurements may be taken in all of these environments. It is important that the **sensor box has a free flow of air**, which means that the inlet with fan and the outlet should be open at all times. Coverage of the air inlet with clothes for example will cause erroneous measurements! The sensor box can be used handheld, attached to the belt, bike or backpack, or in any bag that leaves free the air inlet and outlet.


**5. When?**

Measurements can be made at any hour of the day on any day of the week (24/24, 7/7). However, **measurements during the daytime hours of working days** should be emphasized. The spread of the measurements in time is very important. Measurements **should not be made at fixed time intervals, but rather at different hours of the day** during the data collection phase.

Meteo: measurements should be made **under dry conditions** (not in heavy rain).

**6. Where?**

Measurements are taken outdoor, at the street side, in parks, pedestrian or cycling zones, on crosswalks, so **at any urban micro environment that is reserved to pedestrians and cyclists**. The objective of the measurements is to get a representative image of the concentrations that cyclists and pedestrians are exposed to while moving around the city. It is therefore meaningless to try and capture a large number of measurements in locations where pedestrians and cyclists do not normally go (e.g. at a centre strip of a busy road, inside a roundabout). Indoor measurements should be minimized as well.

**7.Uploading of the data**

The uploading of the data will be done automatically when the connection with the smartphone is established. Any historic data will be uploaded from the sensor box upon connecting with the smartphone (see the documentation of AirProbe). It is important to upload all data at least once every 24 hours (e.g. in the evening at home). Uploaded data can be accessed at the EveryAware project website www.airprobe.eu .