

European Network on New Sensing Technologies for Air Pollution Control and
Environmental Sustainability - *EuNetAir*

COST Action TD1105

INTERNATIONAL WG1-WG4 MEETING on

New Sensing Technologies and Methods for Air-Pollution Monitoring

European Environment Agency - EEA

Copenhagen, Denmark, 3 - 4 October 2013

POSTER SESSION

Action Start date: 01/07/2012 - Action End date: 30/06/2016 - Year 2: 2013-2014

Development of a Portable Sensor-System for Air Quality Monitoring



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Function in the Action: WG2 and SIG2 Member

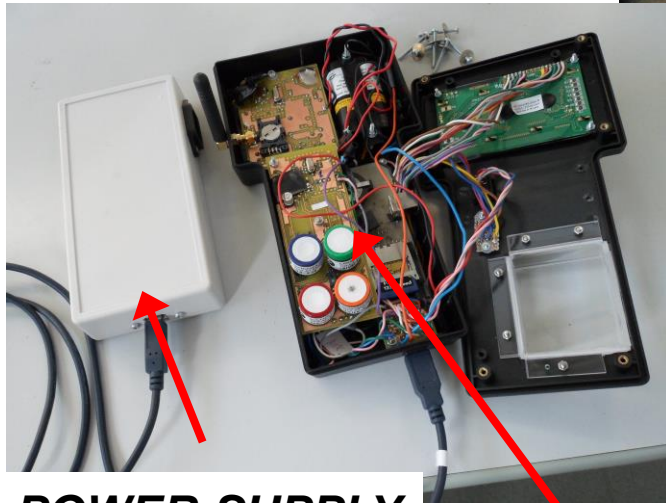
ENEA, Brindisi, Italy

Scientific Context and Objectives

- Detecting and checking effectively **air quality in urban areas** needs a widespread employment of portable and, possibly, **cheap and reliable gas detector systems**
- Main issues to be addressed in order to build sensors and systems for air quality control are: **interfering gas influence, baseline stability, sensitivity, temperature and humidity influence, power consumption and small dimensions (portability)**

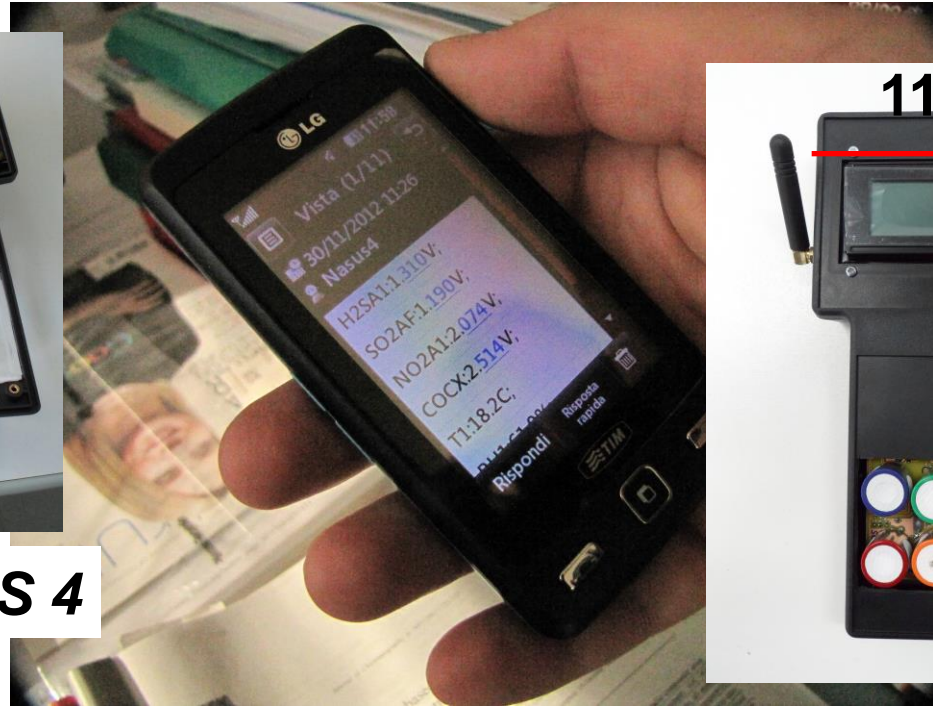


Our attempt to response the problem: *Nasus IV*



**POWER-SUPPLY
UNIT**

NASUS 4

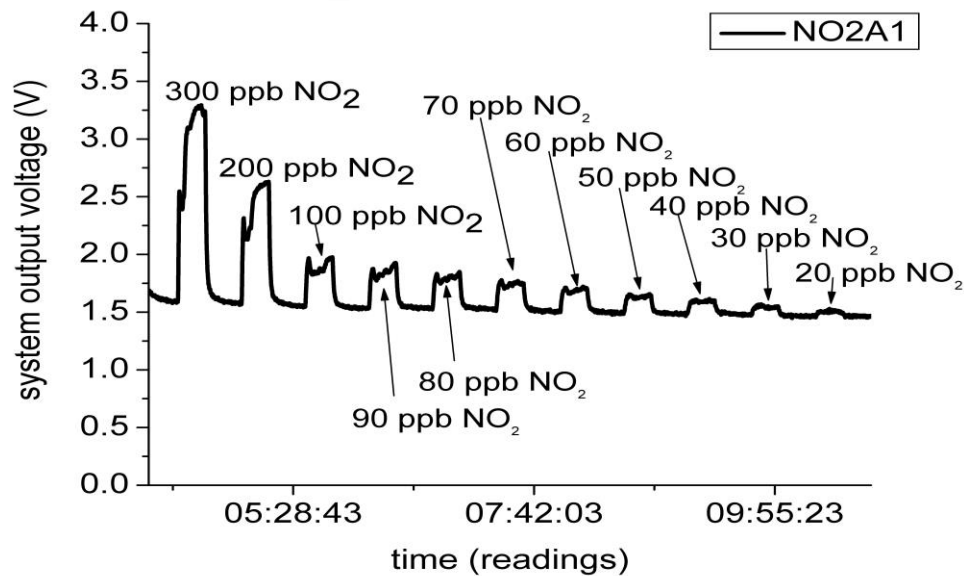


- **hand-held device**
- average power consumption: 0.15W
- average battery autonomy: 46hrs
- fully remote operated by GPRS-GSM networks
- real time monitoring
- 4 electrochemical gas sensors onboard + temperature + RH
- solar-cells automatic power switching (**smart power management**)

CONCLUSIONS and Future Activities

- Lab tests executed showing good performances.
- In field tests (NO_x , CO, SO_2 , O_3 , VOC) in collaboration with ARPA-PUGLIA, Regional Agency for Environmental Protection are in progress.

NO₂ Lab tests



Monitoring local-site **ARPA-PUGLIA:**
Air quality network, Brindisi Industrial Zone
Brindisi, Italy

Acknowledgements:

- IT National Project PON R&C ICT & AAL: BAITAH
- IT National Project PON Smart Cities: RES-NOVAE