# D8.4: Network of Interest established (first meeting report)

WP8 – Communication, Dissemination and Exploitation

## Document Information

| | | | | |
|---|---|---|---|---|
| **Grant Agreement Number** | 688363 | **Acronym** | hackAIR | |
| **Full Title** | Collective awareness platform for outdoor air pollution | | | |
| **Start Date** | 1st January 2016 | **Duration** | 36 months | |
| **Project URL** | www.hackAIR.eu | | | |
| **Deliverable** | D8.4 – Network of Interest established (first meeting report) | | | |
| **Work Package** | WP8 - Communication, Dissemination and Exploitation | | | |
| **Date of Delivery** | **Contractual** | 31 December 2016 | **Actual** | 21 December 2016 |
| **Nature** | Report | **Dissemination Level** | Public | |
| **Lead Beneficiary** | BUND | | | |
| **Responsible Author** | Arne Fellermann | | | |
| **Contributions from** | Wiebke Herding (ONSUB), Hai-Ying Liu (NILU), Sonja Grossberndt (NILU), Panagiota Syropoulou (DRAXIS) | | | |

## Document History

| Version | Issue Date | Stage | Description | Contributor |
|---|---|---|---|---|
| 0.1 | 13/12/2016 | Draft | Draft for consultation | BUND |
| 0.2 | 19/12/2016 | Draft | Draft for consultation | BUND, NILU, ONSUB, DRAXIS |
| 1.0 | 20/12/2016 | Final | Final version for submission | BUND, NILU, ONSUB, DRAXIS |

## Disclaimer

Any dissemination of results reflects only the author's view and the European Commission is not responsible for any use that may be made of the information it contains.

## Copyright message

© hackAIR Consortium, 2016
This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both. Reproduction is authorised provided the source is acknowledged.

# Table of Contents

1 Introduction ..... 5
2 Activities ..... 5
3 Next steps ..... 13
Annex ..... 14
List 1: List of Activities ..... 14

# Executive summary

The project hackAIR aims at improving awareness about air quality in Europe and contributes to a change towards more pro-active and environmental friendly behaviour. hackAIR builds an open technology platform that citizens can use to access, collect and improve air quality information in Europe.

As part of its activities to disseminate and communicate the project, hackAIR also carries out a number of activities to ensure a fruitful exchange with similar projects, organisations, companies and other stakeholders that are active in the field of air quality monitoring and citizen science. This report is the first report on the creation of this so called “network of interest“.

# 1 Introduction

hackAIR recognises that it is active in an ecosystem of various organisations, projects and initiatives also involved in air quality monitoring on different levels. Therefore, an important part of the dissemination activities of hackAIR in the first phase of the project is to build awareness and interest about the project in the wider air quality community. There is a broad range of stakeholders with potential interest in the hackAIR project, including, but not limited to, researchers, policymakers or municipalities, but also advocacy organisations, grassroots initiatives or businesses and application developers.

hackAIR aims to involve these diverse stakeholders in order to achieve several outcomes:

- to provide input for the development of the hackAIR platform;
- to promote the use of the platform;
- to gather feedback on the project activities; and
- to discuss options to further exploit the results of the project with regard to sustainability of the project.

# 2 Activities

## 2.1 Establishment of an initial network

With the start of the project in January 2016, the project partners started a collection process of all relevant and known stakeholders to the project. This collection was based on the first analysis that already had been carried out for the project proposal in 2015 and additional proposals. Initially, the project partners was able to identify around 50 stakeholders, which were informed about the project. This list of stakeholders is constantly updated, whenever the project partners establishes new contacts.

Within the first months, the project partners reached out to a number of organisations with offers of dialogue and cooperation, using direct contacts, emails or phone calls. Information about the project was additionally spread via email groups like the “Clean Air” email list of the European Environmental Bureau.

An overview of the most important related to hackAIR projects can be found on the hackAIR website: http://www.hackair.eu/related-projects/

## 2.2 Air Sensing Group

In order to maintain an exchange with interested stakeholders beyond external discussion forums, the project organised a dedicated “Air Sensing” google group, which was launched on the 2nd of August 2016, and until December 2016 it has already attracted 34 external members. This email group intends to foster coordination between the different initiatives in the field of participatory sensing of air pollution and focusses on topics of interest to the participants, such as data quality, campaigning, visualisation or the sharing of data. Additionally it serves as a mean to inform stakeholders directly about progresses in the hackAIR project.

## 2.3 hackAIR Events

Together with the "Air Sensing" google group, a number of events is planned to ensure the dialogue about hackAIR and project related topics.

- The first event took place on the 27th of April 2016, when hackAIR organized a webinar (Figure 1) to present the project to interested stakeholders. The invitation was sent to the list of interested stakeholders, to subscribers of the hackAIR newsletter and other email groups. It gave 8 participants the opportunity for questions and the project a good estimate of the interest for further discussion.

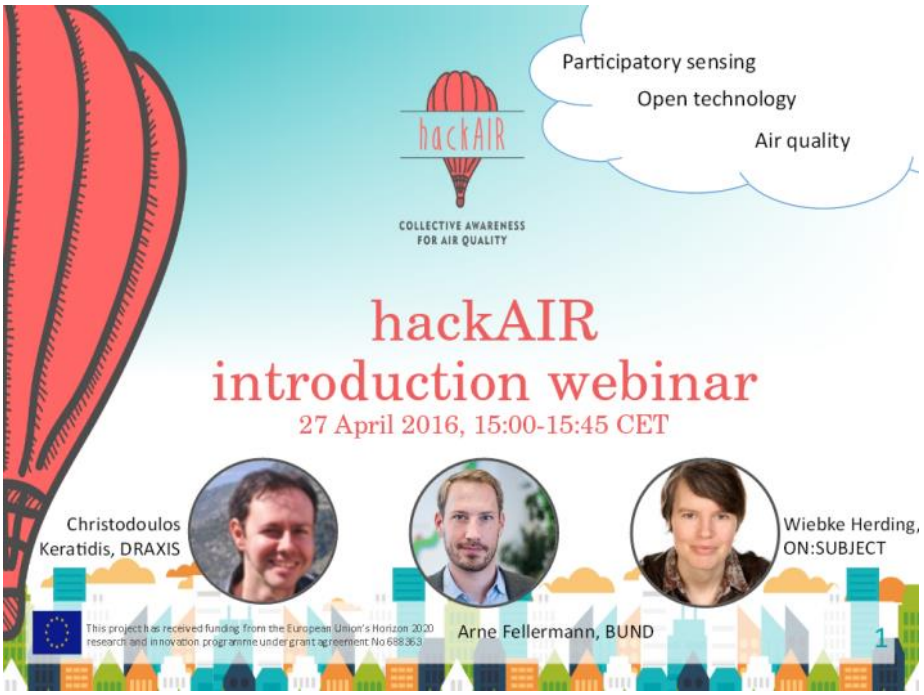


Figure 1. Screenshot of webinar presentation (April 27th, 2016)

Participating institutions were the Centre for Social Innovation (CSI), the Vrije Universiteit Brussel (VUB), the Trinity College Dublin, the Helmholtz-Centre for Environmental Research, the European Environmental Citizens' Organisation for Standardisation, the German Environmental Aid (DUH) and the Health and Environment Alliance HEAL (Table 1).

- Based on the feedback from the webinar (Table 2, Figure 2), hackAIR decided to prepare the launch of the "Air Sensing" google group and a second event to take place on November 18th, 2016 in Berlin. This event attract 23 participants from 8 European countries, 5 locally in Berlin and 18 virtually over the conference tool ZOOM. The event featured presentations from the German Environment Agency (UBA) and the Dutch National Institute for Public Health and the Environment (RIVM). All participants were also asked to provide their feedback on the hackAIR platform mock-ups.

Table 1. Agenda

| | |
|---|---|
| 10:45 | Start arriving for the online and in-person meeting - informal hello & coffee |
| 11:00 | **Welcome & Introduction**<br>Wiebke Herding (ON:SUBJECT) & Arne Fellermann (BUND) |
| 11:15 | **Round of introductions**<br>Who's here? Initiatives & projects working on air quality and participatory sensing |
| 11:45 | **Current developments in official monitoring networks in Germany and the EU**<br>• Ute Dauert (German Environmental Agency, UBA) |
| 12:30 | **What governments can do to stimulate citizen science - a perspective from the Netherlands**<br>• Hester Volten, Joost Wesselink & Frans Snik (RIVM) |
| 13:00 | Lunch |
| 14:00 | **hackAIR: current plans and co-creation**<br>Feedback and perspectives, including:<br>• User-centred design (Yaela Golumbic) (Sensing the Air)<br>• Gamification (Stavros Lounis)<br>• and all other participants |
| 15:00 | Coffee break |
| 15:20 | **Campaigning, participatory sensing and data quality**<br>• Discussion: How can we use the data gathered to make an impact on air quality? |
| 16:15 | **Conclusion and outlook.** How to improve coordination between projects and increase the impact of participatory sensing? |
| 17:00 | End of the workshop |

Table 2. Feedback on Prototype.

| Impressions | Keep |
|---|---|
| • Overall positive<br>Great that "Good" is the first thing that catches the eye.<br>It creates some tension that most of the map is kind of red.<br>• First Impressions – a lot, possibly too much information.<br>• Complex.<br>• I think it looks good, there is a lot of information on each page. | • I like the comparison to other cities.<br>• A simple, easy to interpret air quality indicator – however, the challenge is that this has to operate in different contexts for different audiences dependent on their health or other needs.<br>• Personal profiles.<br>• Local information, clear indication of current situation, "how do you |

<table>
<tr><td>

- It has a very nice and sophisticated graphical interface, and provides a lot of info.
- Great for a millennial or tech savvies, challenging for other demographics.
- Very dark, generally friendly, lots of information.
- Seems to be an open data platform (well designed) with a social dimension ~ attractive.

</td><td>

feel?".
- Ask for user's feelings.

</td></tr>
<tr><td>Change</td><td>Delete</td></tr>
<tr><td>

- Maybe moving the contributors and their contributions to another page, perhaps profile page, rather than the main one.
- The 15% on the center needs elaboration via a Word on what I am looking at, rather than the phrase (That was for what to change).
- Map overview, zoomed out, better to be personalised to where you are and show air quality in your location – finer grained detail to enable individuals to make decisions. This is difficult though, air quality can change from street to street.
- Have one main think to look at (e.g., map), add other information as optional buttons.
- Quantification / numbers. Recommendations?
- Air-Quality Index instead of pollutants measurement i.e. in $mg^3$?
- Compare feature is good to interest people but I would prefer to see more cities - like the top 10.
- Simplify Home: Information about data now, maybe time period.

</td><td>

- I think the colour spectrum is too much, maybe just green to red.
- Such a 'great atmosphere' categories.
- Pictures- if they are not of that specific day and place.
- Friends & profiles; "improve your rank".
- Photo upload (I don't see the point).

</td></tr>
<tr><td colspan="2">Questions</td></tr>
<tr><td colspan="2">

- How is data collected?
- Has the development of the interface gone through a user-led or co-design process with a citizen that has a real need for the service?
- Why day averages? What are they based on? What pollutants are presented?
- What is the AQI here? For me, as a scientist, it's always something relative, and may be driven by whatever reason.
- What are the numbers? How does 'submit your feelings' influence the index?

</td></tr>
</table>

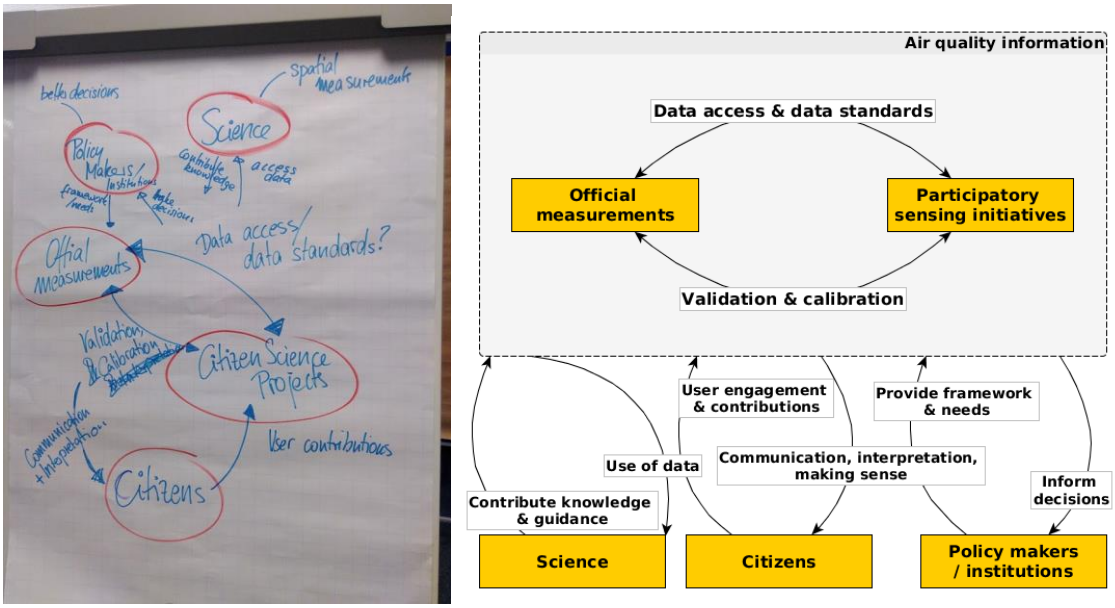


Figure 2. Summary of challenges / relationships

## 2.4 hackAIR co-creation workshops

The hackAIR project involves stakeholders into a co-creation process as part of WP2 T2.2 (Co-creation of services). Integral part of this co-creation process are workshops that use a combination of methods and tools, in order to collect user and technical requirements for the hackAIR platform. These workshops also involve stakeholders, and as such they serve the purpose of establishing and maintaining contact to the stakeholders and therefore support the network of interest.

NILU and BUND have organized four co-creation workshops in 2016, two in June (Figures 3 and 4), one in October (Figure 5) and one in November (Figure 6). In total, these workshops had 28 participants.

Figure 3. Co-Creation Workshop 1 – Oslo – June 21th, 2016 (8 participants).

Figure 4. Co-Creation Workshop 1 – Berlin – June 27th, 2016 (4 participants).

Figure 5. Co-Creation Workshop 2 – Oslo – October 19th, 2016 (7 participants).

Figure 6. Co-Creation Workshop 2 – Berlin – November 10th, 2016 (9 participants).

## 2.5 External Events

By the end of 2016, the hackAIR project partners had already participated in 27 external events. They did so either in order to present the project in presentations or poster sessions or to network with other stakeholders. These events included amongst others the following selection:

- a dedicated session on citizen science in air quality at the biannual Clean Air Working Group of the European Environmental Bureau (EEB) on the 24-25 February 2016

- Making Sense. Advances and explorations in participatory sensing during the Design and the City conference in Amsterdam, Netherlands on the 22 April 2016

- The ECSA Citizen Science Conference 2016 in Berlin, Germany on 19-21 May 2016

- 28th Annual conference International Society for Environmental Epidemiology (ISEE) in Rome, Italy on the 1-4 September 2016

- The Eindhoven Maker Faire in Eindhoven, Netherlands on the 10 September 2016

- Mapping, Sensing, and Crowdsourcing Geographic Information in London, UK on the 13-14 October 2016

- The Round table 'citizen air quality meter' in Brussels, Belgium on the 18 October 2016

  (Please consult the Error! Reference source not found.)

# 3 Next steps

At the end of the first project year, hackAIR successfully established the network of interest, which is expected to grow with the continuing involvement of additional stakeholders. The project will further develop the email group into a platform of exchange for the participating initiatives. Additionally, the project will continue organising local and web-based events to discuss questions identified by the network participants. With the combination of these two tools, as well as with our on-going participation in external events and additional meetings with organisations, hackAIR contributes to the exchange on citizen science and air quality and capacity building beyond the scope of the project.

Next steps:

In 2017, hackAIR will organise one or two further workshops/webinars, open to all interested stakeholders. The workshops are intended to be held in the 2nd and 4th quarter of 2017. Furthermore, the "Air Sensing" Google group will be promoted to include additional members and furthermore discuss points of shared interest like:

- The relationship between classic and citizen science in Air Quality.
- How to bring together different initiatives and improve coordination.
- How to ensure data quality.

The current deliverable will be updated twice: D8.7_-Network of Interest workshop report (M24) and D8.8-Network of Interest closing meeting report (M36).

# Annex

## List 1: List of Activities

| Activities | Date | Partner |
|---|---|---|
| Presentation hackAIR at expert panel talk "Fachgespräch Luftreinhaltung" (DUH), Berlin | 16. February 2016 | BUND |
| Dedicated session "Air quality measurement: science and innovative citizens' initiatives" at Clean Air Working Group of the European Environmental Bureau (EEB) | 24-25. February 2016 | BUND |
| European Geosciences Union General Assembly 2016 (Vienna, Austria) | 17-22 April 2016 | NILU |
| Making Sense. Advances and explorations in participatory sensing during the Design and the City conference (Amsterdam, Netherlands) | 22 April 2016 | ON:SUBJECT |
| hackAIR introduction webinar (online) | 27 April 2016 | ON:SUBJECT, BUND, DRAXIS |
| Living Planet Symposium 2016 (Prague, Czech Republic) | 9-13 May 2016 | NILU |
| 1st International Workshop on the Social Web for Environmental and Ecological Monitoring (SWEEM) | 17 May 2016 | CERTH |
| CAPS community meeting and workshop (Berlin, Germany) | 18 May 2016 | DRAXIS |
| Technology Forum 2016 (Thessaloniki, Greece) | 18 May 2016 | DRAXIS |
| The ECSA Citizen Science Conference 2016 (Berlin, Germany) | 19-21 May 2016 | DRAXIS |
| GEO European Projects Workshop (Berlin, Germany) | 31 May – 2 June 2016 | NILU |
| 10th GEO European Projects Workshop (Berlin, Germany) | 1 June 2016 | NILU |
| Making Sense workshop: Co-Designing for Citizen Sensing, (Brussels, Belgium) | 7-8 June 2016 | VUB |
| Citizen Observatories for Water Management (COWM) workshop (Venice, Italy) | 7-10 June 2016 | NILU |
| hackAIR Co-Creation Workshop 1, Oslo | 21 June 2016 | NILU |
| Co-Creation Workshop 1 – Berlin | 27 June 2016 | BUND |
| CAPS Policy Workshop on Digital Social Innovation organised by the DSI4EU (Brussels, Belgium) | 29 June 2016 | VUB |
| Launch of the "Air Sensing" Google group - email discussion list for interested stakeholders | 2. August 2016 | |
| 28th Annual conference International Society for Environmental Epidemiology (ISEE) (Rome, Italy) | 1-4 September 2016 | NILU |
| Eindhoven Maker Faire (Eindhoven, Netherlands) | 10 September 2016 | ON:SUBJECT |
| 1st International Workshop on Internet and Social media for Environmental Monitoring (ISEM 2016) during 3rd International Conference on Internet Science (Florence, Italy) | 12-14 September 2016 | CERTH, DRAXIS |
| Workshop New Perspectives for the Control and Prevention of Air Pollution in Urban Environments (Bucharest, Romania) | 23 September 2016 | NILU |
| ICT Proposers' Day (Bratislava, Slovakia) | 26-27 September 2016 | DRAXIS |
| CIENS Urban Conference: Smart and green cities – for whom? | 13 October 2016 | NILU |

| | | |
|---|---|---|
| (Oslo, Norway) | | |
| Mapping, Sensing, and Crowdsourcing Geographic Information (London, UK) | 13-14 October 2016 | NILU |
| Round table 'citizen air quality meter' (Brussels, Belgium) | 18 October 2016 | VUB |
| Co-Creation Workshop 2 – Oslo | 19 October 2016 | NILU |
| European Stakeholder Round Table on Citizen and DIY Science and Responsible Research and Innovation (Berlin, Germany) | 8 November 2016 | BUND |
| Co-Creation Workshop 2 – Berlin | 10 November 2016 | BUND |
| Workshop (Un)plugging Data in Smart City-Regions (Brussels, Belgium) | 14 November 2016 | VUB |
| Air Sensing Meeting: Citizen Science on Air Quality (Berlin, Germany) | 18 November 2016 | BUND |
| Informal meeting on hackAIR and Expair | 30. November 2016 | VUB, BUND |
| Project update to the Clean Air Working Group of the EEB | 1. December 2016 | BUND |
| VDI/DECHEMA/GDCh Expert Forum on Atmospheric Chemistry – New and emerging technologies: Impact on air quality and climate (Frankfurt am Main, Germany) | 5-6 December 2016 | BUND |
| Citizen Science COST Action – Citizen Science to promote creativity, scientific literacy, and innovation throughout Europe (Berlin) | 12-13 December 2016 | NILU |