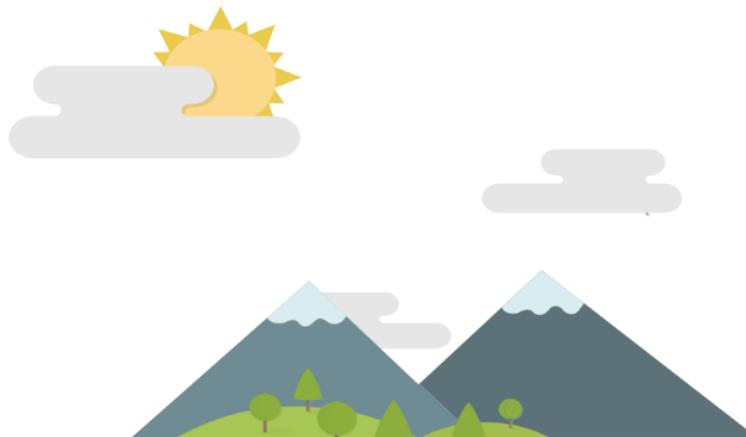




D8.9: Network of Interest (closing meeting report)

WP8 – Communication, Dissemination and Exploitation



Document Information

Grant Agreement Number	688363	Acronym	hackAIR
Full Title	Collective awareness platform for outdoor air pollution		
Start Date	1 st January 2016	Duration	36 months
Project URL	www.hackAIR.eu		
Deliverable	D8.9 – Network of Interest (closing meeting report)		
Work Package	WP8 - Communication, Dissemination and Exploitation		
Date of Delivery	Contractual	31 December 2018	Actual 27 December 2018
Nature	Report	Dissemination Level	Public
Lead Beneficiary	BUND		
Responsible Author	Arne Fellermann		
Contributions from	ON:SUBJECT, NILU, DRAXIS		

Document History

Version	Issue Date	Stage	Description	Contributor
0.1	12/12/2018	Draft	Draft for consultation	BUND
0.2	20/12/2018	Draft	Draft for consultation	BUND, NILU, ON:SUBJECT, DRAXIS, VUB
1.0	27/12/2018	Final	Final Report	BUND, NILU, ON:SUBJECT, DRAXIS, VUB

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This deliverable contains original unpublished work except where clearly indicated otherwise.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
2.1	Establishment of network	5
2.2	Air Sensing Group.....	5
2.3	hackAIR Events	6
2.3.1	hackAIR – Introduction Webinar 27th April 2016	6
2.3.2	hackAIR – 18th November 2016	7
2.3.3	hackAIR webinar “Air quality & participatory sensing - how to make it a match made in heaven?” 26th September 2017.....	7
2.3.4	Air Sensing webinar: hackAIR's hidden features – 3rd May 2018.....	8
2.3.5	Round Table "New opportunities for air quality sensing: lower cost sensors for public authorities and citizen science initiatives" on Wednesday, 24 October 2018.....	8
3	Conclusion activities network of interest	13



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.

hackAIR knew that it was not alone in working on air quality monitoring and citizen science. Instead it functioned as part of a larger collective body of similar projects, organisations, companies and other stakeholders. So hackAIR, as part of its activities to disseminate and communicate the project, also carried out a number of activities to ensure that it was not working on closed off chambers but in cooperation or in exchange with others.

So within the three project years, the hackAIR partners organised an email group, 4 webinars and workshops, one larger policy roundtable in cooperation with the JRC and participated in over 70 events in order to ensure that hackAIR was active in the middle of the movement on citizen in air quality monitoring.



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.

With this initial network the project build a conversation that would continue the next years and involved the air sensing group as well as several hackAIR events as well as numerous external events that the project partners participated in.

2 Activities

2.1 Establishment of 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 was able to identify around 50 stakeholders, which were informed about the project. This list of stakeholders is constantly updated, whenever the project 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.

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.

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.



Until December 2018 the email list steadily grew to 76 members, representing various organisations, initiatives and private persons. It will continue to exist and serve conversations beyond hackAIR.

2.3 hackAIR Events

In order to establish personal ties between different organisations and ensure an open exchange between the project and others, hackAIR organised several events throughout the projects duration.

In total the project organised five dedicated events as part of the activities around the 'network of interest'.

- hackAIR Introduction Webinar - 27th April 2016
- Air Sensing Workshop & Webinar - 18th of November 2016
- Webinar "Air quality & participatory sensing" - 26th of September 2017
- Webinar: hackAIR's hidden features - 3rd of May 2018
- Final conference – Roundtable - 24th of October 2018

2.3.1 hackAIR – Introduction Webinar 27th April 2016

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.

2.3.2 hackAIR – 18th November 2016

On a second event on November 18th, 2016 in Berlin hackAIR invited participants to get an overview of several projects and initiatives. It had a total of 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).

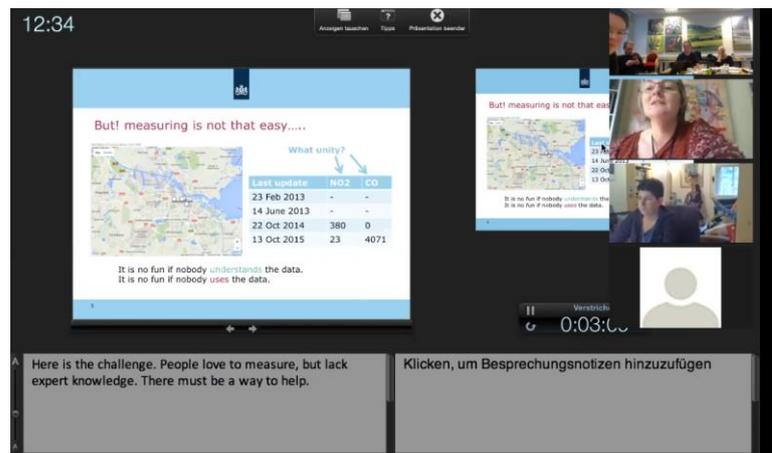


Figure 2. Screenshot of the workshop interface (18th November 2016)

2.3.3 hackAIR webinar “Air quality & participatory sensing - how to make it a match made in heaven?” 26th September 2017

Focused more on the preparation of the pilots and the development of the platform and hardware, hackAIR waited in the first half of 2017 with interacting with other projects but returned to its network of interest in the summer of that year and organized a webinar to bring different active stakeholders together on the 26th of September 2017.



Figure 3. Screenshot of the workshop interface (27th September 2017)

23 participants engaged in a very interesting discussion on the role and perspectives of governments and citizen science, the challenges of data validation and sensor calibration in AQ monitoring, gave feedback on the hackAIR application in development and discussed thoughts on how to increase user engagement.

2.3.4 Air Sensing webinar: hackAIR's hidden features – 3rd May 2018

hackAIR organized a further webinar on Thursday the 3. May 2018. Its focus was to present the final piloted version of the hackAIR platform and present what has been going on in the pilots since the platforms launch in February 2018.

With 10 registered participants we were able to brainstorm on possible lessons and collaborations for the future and answer some questions about the current state of the project.

Recordings of the presentations were later published in a blog post here: <http://www.hackair.eu/hackairs-hidden-features>.

2.3.5 Round Table "New opportunities for air quality sensing: lower cost sensors for public authorities and citizen science initiatives" on Wednesday, 24 October 2018

With the projects end in 2018 already after the last webinar the idea was born to bring together all relevant stakeholders of citizen science on air quality in Europe in order to gather the current state of the art.

After first concept ideas hackAIR contacted the Joint Research Centre of the European Commission (JRC) to jointly host a roundtable "New opportunities for air quality sensing: lower cost sensors for public authorities and citizen science initiatives" in Frankfurt on the 24th of October.



hackAIR
COLLECTIVE AWARENESS
FOR AIR QUALITY

European
Commission
Joint Research Centre

New opportunities for air quality sensing: lower cost sensors for public authorities and citizen science initiatives
Round Table | 24 October 2018 | <http://bit.ly/hackAIR-roundtable>

- **Where?** Saalbau Griesheim, Schwarzerlenweg 57, Frankfurt (Main), Germany
- **When?** Wednesday, 24 October 2018 | 09:30-16:30

Figure 4. Invitation Screenshot (24th October 2018)

The roundtable turned out to be a highly qualitative gathering of 48 professionals in the field of citizen science in air quality and a programme that was dense and did leave the audience highly appreciative of the discussion.

The day specifically asked the questions:



- What requirements do we see to make best use of the data gathered by low-cost air quality sensors (quality assurance, calibration, integration)?
- How can we scale the impact of low-cost sensing in air quality beyond single initiatives?
- How can we better use and communicate the air quality data that is available across initiatives?

The day in several interactive rounds dealt with a number of different topics. In the first block the central question was how to increase the uptake of air quality from lower-cost sensing systems information in policy and society. The day identified different reasons to involve citizens, bottom-up initiatives, science institutions as well as government institutions and agencies.

In the second block in the afternoon, the roundtable dealt with the question on how to make use of air quality data from multiple sources. There several different aspects were analysed in focus groups that created short key points on each subject:

- Data quality: coping with varying levels of data quality
- Interoperability: comparing and integrating measurements from multiple sources
- Modelling: analysing and learning from the multitude of air quality measurements available
- Calibration: improving the quality of air quality information
- Data management: sharing data and honouring sources, confidentiality and ownership



Figure 5. Twitter Photo Roundtable (24th October 2018)

Finally, the day made suggestions on how to move ahead, which is important to discuss given that a single day often calls for further action. In a nutshell, the day considered the following actions most important and urgent to take:

- Sharing the results with the wider community and ensuring the re-use of existing practices, e.g. via the ECSA (European Citizen Science Association) Working Group on

Air Quality, but also within the European Network of Air Quality Reference Laboratories (AQUILA).

- Collecting outcomes from research projects, which show interdisciplinary results on the crosscutting themes discussed in this Joint Statement.
- Keeping networked organizations aligned or forming a coordinated effort by relevant (country-based) bodies of institutions to keep an overview and up-to-date policy diagnosis of the learning curve that is currently taking shape.
- Facilitating exchange and dissemination of (inter-) disciplinary knowledge by the various actions and research projects that are being organized and rolled-out, both by local governments, research groups, civil groups and citizen science communities.
- Taking up some of the recommendations of this document in smaller groups, including the organisation of a series of follow-up meetings on dedicated topics, elaborating further on the feedback received in Frankfurt.

The JRC has kick-started the idea to formulate a public statement of the roundtable that will be published online and will feature the most important key points of the days discussion. This document was not yet ready by the time of this report but will be available online by the beginning of 2019.

2.4 External Events

By the end of the hackAIR project, hackAIR project partners had participated in 74 external events, including at least the most important. They did so either in order to present the project in presentations or poster sessions or to network with other stakeholders.

Start date	Description	Partner present
16.02.2016	Fachgespräch Luftreinhaltung (DUH)	BUND
24.02.2016	Clean Air Working Group of the European Environmental Bureau	BUND
01.03.2016	ENGINE	CERTH
17.04.2016	European Geosciences Union General Assembly 2016	NILU
22.04.2016	Design & the City: MAKING SENSE. ADVANCES AND EXPLORATIONS IN PARTICIPATORY SENSING.	ONSUB
09.05.2016	Living Planet Symposium 2016	NILU
17.05.2016	SWEEM-1st International Workshop on the Social Web for Environmental and Ecological Monitoring	DRAXIS + CERTH
18.05.2016	Technology Forum: "Technology Forum aims to bring in contact industrial bodies and research organisations towards the development of innovative products with international perspective."	DRAXIS
18.05.2016	CAPS community meeting and workshop	Draxis
19.05.2016	First International ECSA Conference 2016	DRAXIS + NILU
31.05.2016	GEO European Projects Workshop	NILU
07.06.2016	Citizen Observatories for Water Management (COWM) workshop	NILU
07.06.2016	Making Sense workshop: Co-Designing for Citizen Sensing (Brussels)	VUB



29.06.2016	CAPS Policy Workshop on Digital Social Innovation	VUB
01.09.2016	28th Annual conference International Society for Environmental Epidemiology (ISEE)	NILU
10.09.2016	Eindhoven Maker Faire	ON:SUBJECT
12.09.2016	ISEEM / Conference on internet science	DRAXIS/CERTH/NILU
23.09.2016	New perspectives for the control and prevention of air pollution in urban environments.	NILU
26.09.2016	ICT Proposers' Day	DRAXIS
26.09.2016	Inspire: Infrastructure for Spatial Information in the European Community	DRAXIS
13.10.2016	CIENS Urban Conference	NILU
13.10.2016	Mapping, Sensing and Crowdsourcing Information	NILU
18.10.2016	Round table BRAL 'citizen air quality meter'	VUB
22.10.2016	Climathon workshop in Thessaloniki	DRAXIS
08.11.2016	European Stakeholder Round Table on Citizen and DIY Science and Responsible Research and Innovation	BUND
14.11.2016	Workshop (Un)Plugging Data in Smart City-Regions	VUB
01.12.2016	Project update to the Clean Air Working Group of the EEB	BUND
05.12.2016	VDI/DECHEMA/GDCh Expert Forum on Atmospheric Chemistry – New and emerging technologies: Impact on air quality and climate	BUND
12.12.2016	kick-off meeting COST Action CA15212: Citizen Science to promote creativity, scientific literacy, and innovation throughout Europe	NILU
01.02.2017	Digital Social Innovation Fair 2017 (Rome, Italy)	DRAXIS
27.02.2017	Haldenkanalen som nasjonalt laboratorium for det grønne skiftet (Eidsverket, Norway)	NILU
13.03.2017	SmarterLabs – Citizen Science for Brussels Air (Brussels, Belgium)	VUB
27.03.2017	Researchers Breakfast on Air Quality & Citizen Science (Brussels, Belgium)	VUB
07.04.2017	Seminar at students at the University of Thrace	DUTH
23.04.2017	European Geosciences Union General Assembly 2017 (Vienna, Austria)	NILU
05.05.2017	Making Sense – Citizen Science Air Quality Meet up (Amsterdam, Netherlands)	ONSUB
06.05.2017	Athens Mini Maker Faire	TEI
22.05.2017	Levende grønne byer (Oslo, Norway)	NILU
06.06.2017	GDC webinar 'Gamification, a driver for behaviour change in sustainable cities' (online)	VUB/DRAXIS
08.06.2017	Beijing International Forum on Metropolitan Clean Air Actions (Beijing, China)	NILU
13.06.2017	Urban Air Quality Partnership – Stakeholders Workshop (London, UK)	DRAXIS
10.07.2017	2nd CAPS Community Workshop (Volos, Greece)	ALL
09.09.2017	82nd Thessaloniki International Fair	DUTH
18.09.2017	REQUA Final Workshop (Thessaloniki, Greece)	DRAXIS



26.09.2017	14th international conference on urban health	NILU
18.10.2017	NTNU Sustainability Science Conference (Trondheim, Norway)	NILU
25.10.2017	Lecture 2 – Air pollution Teacher Course (Tromsø, Norway)	NILU
06.11.2017	Anti-air pollution measures Exploitation event in Brussels	DRAXIS, CREVIS
08.11.2017	Citizen Science Researchers Meeting on Air Pollution (Brussels, Belgium)	VUB/DRAXIS/CREVIS
15.11.2017	Clean air working group (Paris, France)	BUND
17.11.2017	Bundesdelegiertenversammlung (Berlin, Germany)	BUND
22.11.2017	4th International Conference on Internet Science (Thessaloniki, Greece)	CERTH, DRAXIS, VUB
28.11.2017	Air Quality Roundtable with DUH (Berlin, Germany)	BUND
20.12.2017	Smart Citizens Lab workshop #3: luchtkwaliteit bij vuurwerk meten	ONSUB
22.01.2018	Citizen Science Lab: Air Pollution	ONSUB
14.02.2018	Connected Technologies for Social Good, organized by CAPSSI (Brussels, Belgium)	CREVIS, VUB, ONSUB
03.03.2018	Towards Clean Air with Open Data, organized by Open Knowledge Belgium (Brussels, Belgium)	VUB
03.03.2018	Open Data Day in Frankfurt and Stuttgart, Germany	BUND
09.03.2018	Netzwerktreffen Kurs Zukunftspiloten (Bad Harzburg, Germany)	ONSUB
25.04.2018	Researchers Breakfast on Air Quality & Citizen Science (Brussels, Belgium)	VUB
22.05.2018	4th International Conference on Decision Support System Technology (Heraklion, Greece)	CERTH
25.05.2018	Green Week Partner Event	DRAXIS, ONSUB, CREVIS, NILU
03.06.2018	Annual Conference of the European Citizen Science Association	DRAXIS, ONSUB, VUB, NILU
10.06.2018	2018 IEEE Image, Video, and Multidimensional Signal Processing Workshop	CERTH
14.06.2018	Facebook event	NILU
19.06.2018	Dissemination event at NILU (icecream and boller)	NILU
14.09.2018	Citizen Science Interoperability Experiment Kickoff (Stuttgart, Germany)	ONSUB
21.09.2018	Measuring together - citizen science (Bilthoven, Netherlands)	ONSUB
24.09.2018	'A community engaging air quality monitoring network' at 10th IUHPE -Health Promotion in the Life Course, hosted by the Norwegian University of Science and Technology, Trondheim	NILU
25.09.2018	Crowdsourcing for the common good (Urbino, Italy)	DRAXIS
27.09.2018	Workshop with PM sensor, Science fair, Oslo	NILU
26.10.2018	Mozfest, London	ONSUB
14.11.2018	CAPTOR International Conference, Milan	ONSUB
25.11.2018	'Setting up a citizen science community for air quality monitoring', at Urban Transitions 2018, 25-27 November 2018, Sitges	NILU



3 Conclusion activities network of interest

At the end of the project hackAIR can be proud of the network of interest it has built and it can be sure that its conversations and ties will last beyond the project. The air sensing email group will serve as a table for further discussions and the public statement derived from the last event, the roundtable, will be available for further projects to build on.

With regard to the envisaged key indicators of this category, this report can cite the relevant key indicators of the WP7, where not only where the workshops well received, especially the participation of hackAIR partners in external events far exceeded our plans and expectations.

Indicator	Target	Achieved
O7.10 Number of meetings of network of interest	4	5
O7.11 Total number of participants	100	107
O7.12 Number of external meetings with hackAIR representation	10	74

