COST
EUROPEAN COOPERATION IN SCIENCE AND TECHNOLOGY

TD1202 Mapping and the Citizen Sensor   **2012|2016**

http://www.citizensensor-cost.eu

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hackAIR: a Collective Awareness Platform for Outdoor Air Pollution

Liu, H-Y.[1], Grossberndt, S.[1], hackAIR consortium[2]

[1] Norwegian Institute for Air Research, Kjeller, Norway; [2] http://www.hackair.eu/partners

NILU

Overview

Open technology

Developing an open technology platform that users can use to access, collect and improve information on air quality in Europe. It consists of:

1. A customisable web application for local air quality information
2. A mobile app that citizens can use to access to air quality information or contribute measurement

Multiple data sources

Combining existing air quality datasets with a number of community-driven data sources, including:

1. Open official air quality datasets
2. Air quality information derived from mobile phone pictures of the sky and webcams;
3. An easy-to- build open hardware sensor module that transits regular air quality measurements via Bluetooth;
4. A low-tech measurement setup involving paper filters and aquarium air pumps.

Co-creation and engagement

It starts by designing the requirements for the hackAIR possibilities with users and in line with technical possibilities, via citizens' observatories in Norway and Germany, and completes by citizens' behavioural changes survey and impacts analysis.

Impacts

Improve air quality data in Europe through participatory sensing technology and citizen engagement

Facilitate citizens to access air quality information in Europe by using hackAIR web application and a mobile app.

Engage citizens directly in measuring outdoor air quality levels in Norway and Germany

Empower citizens via a range of activities from data collection, to knowledge exchange with stakeholders, using hackAIR tools for collaborative sensing and mapping, behavioural changes surveys, and information decision-making.
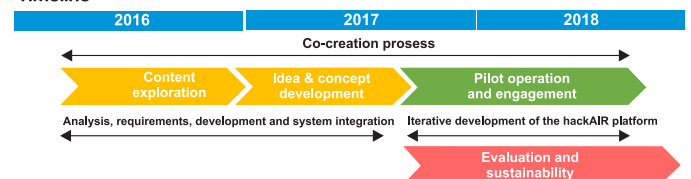
Sustainability

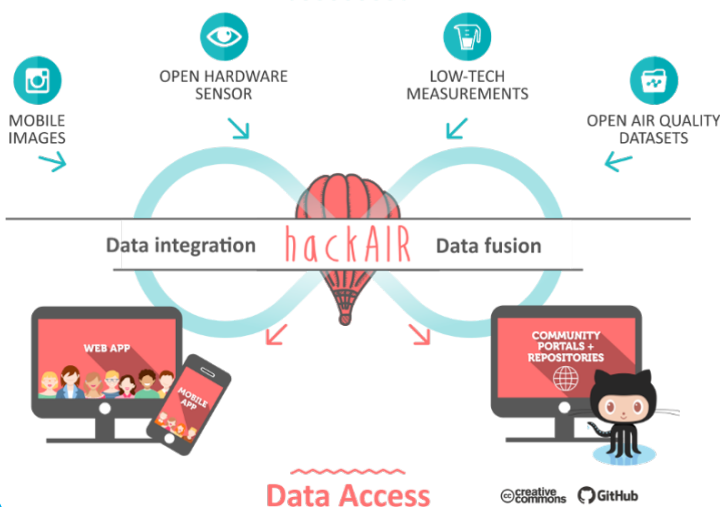| Indicator of success	Germany	Norway	Total
No. of additional simple users interested in adopting hackAIR	78,000	3700	81,700
No. of additional advanced users interested in adopting hackAIR	800	40	840
No. of companies interested in using hackAIR open data for developing services	10	4	14
No. of additional NGOs / civil society organisations interested in adopting hackAIR	5		

Pilot in Norway and Germany

Indicator of success	Germany	Norway	Total
No. of total community members in pilot areas	400.000	19.000	419.000
Simple users participating in pilots (1-2% of potential simple users)	5.000	3.000	8.000
Advanced users participating in pilots (1-2% of potential advance users)	200	90	290

Timeline

Partners