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**Project consortium SmartAQnet – Aerosol Akademie**

# 13. Newsletter SmartAQnet

**January 2019**





## Newsletter January 19 Smart Air Quality Network

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**WP0: Project management**

Participation in the monthly Jour Fixe of the consortium and WP leaders as well as organization of the international workshop of the project on 04 and 05 December at HMGU in Neuherberg.

Weekly Jour Fixe of the steering committee performed by phone (Thursday, 16:00).

**WP1: Data mining and campaigns**

- Ongoing installation/substitution/maintenance process of EDM80NEPH and EDM164 in Augsburg together with M. Hank and M. Uebach from Grimm:

In September 2018 we started to install the scientific scouts together with Grimm (M. Hank and M. Uebach). There is still ongoing work on the installation of the scientific scouts. Currently there are still some unsolved problems: (a) after long negotiations we didn't get a permission to operate the scientific scout at the additional traffic-site Schertlinstraße, (b) we have still problems with power supply in the pedestrian zone and (c) we are still waiting for SWA to disconnect power at the small HMGU container at Königsplatz in order to be able to move it to the rural background site (Lindenau Hof).

Marcus Hank and Maximilian Uebach visited Augsburg multiple times during installation period, on: 4<sup>th</sup>, 5<sup>th</sup>, 14<sup>th</sup>, 19<sup>th</sup>, 20<sup>th</sup>, 28<sup>th</sup> of September and 8<sup>th</sup>, 9<sup>th</sup> of October for installation, site inspection or preparation for IOP. During last period, multiple hotspot and calibration tours were made on: 31.08.; 04. + 05.09.; 19. + 20.09.; 27.09.; 01.10.; 08. + 09.10.; 16.10; 26.10.; 13.11. and 11.12.2018.

Usually the tours were either made alone by M. Kowalski and T. Kusch or together with M. Hank and M. Uebach when they have visited Augsburg for inspection. The calibration tours included moving the mobile reference device, Grimm's EDM164 to the location near sampling site, positioning it on a roof of the van and performing the parallel measurement. Since mid of October, the calibration tour is limited to the three sites: Rotes Tor, KiTa Kindergarten and private house, balcony near Rosenaustraße.

Currently we are preparing the searching for the 35 additional locations to install the scientific scouts in the city of Augsburg.

Additionally, M. Kowalski took part in the second Intensive Observation Period's mobile measurements, performing bike shift (dayshift on 15 November).

The measurements of ceilometers to study the North-South profile of mixing layer height in Augsburg (IGUA, Aerosol measurement station at HSA and at the Klostersgarten) are continued

**WP2: Data collection / Devices**

During inspections few devices were replaced (e.g. Rotes Tor and some LÜB sites), this task was performed by Grimm team. HMGU EPI team cooperates closely with GRIMM company team with regard to installation, maintenance and calibration of the deployed Scientific Scouts.

Further uploading of papers and Web addresses in Gittutorial about monitoring of air pollution by new concepts for sensors and data accumulation in relation to existing networks (folder Sensors and devices). Further, a folder Guidelines was created.

**WP3: Data aggregation and analyses**

The actual data from HMGU EPI measurement station were transmitted several times, latest transfer was made on 19.11.2018 directly to BW sync folder. Further data were transferred to KIT (meteo data to Marcel Köppke on 14.12), to Ulrich Uhrner on 12.11 and comparison data for GRIMM company on 9.01.2019.

The sub-contract of KIT/IMK-IFU with ZAE to collect data about residential heating is ongoing and Robert Kunde (ZAE) discussed first results of anonymisation and location of residential emissions as well as clustering and last working steps with KIT/IMK-IFU and TUG.

**WP4: Data application**

Further uploading of papers and Web addresses in Gittutorial about status of application (market and technical status) of personal sensors to detect air pollution exposure and for personal health protection (folder Networked sensing). New reports were finished:

- Analyses of citizen about air pollution exposure (Analyse der Informationen der Bürger über Luftbelastungen)
- Analyses of status of proposals for measures of health protection (Analyse des Standes zu Vorschlägen von Maßnahmen für die persönliche Gesundheitsvorsorge)
- Availability of Apps for smart phones to get air quality information (Verfügbarkeit von Apps für SmartPhones zur Erfassung der Luftqualität)
- Availability of Apps for smart phones to inform citizen about measures for health protection (Verfügbarkeit von Apps für SmartPhones zur Beratung der Bürger über Maßnahmen für die persönliche Gesundheitsvorsorge)

**WP5: Data oriented dissemination and application**

The „International workshop on assessing fine-granular modelling and measurement of particulate matter“ was organized by the project on 04 – 05/12/2018 in Munich/Neuherberg. All partners participated in this workshop (in total 58 participants) and presented the status of their work. All abstracts of the 30 presentations will be published by KIT. HMGU EPI hosted and participated in the organization of the international workshop of the project on 04 and 05. December at HGMU EPI in Neuherberg. Christina Schmidt (Aerosol-Akademie) registered the participants, collected, and transferred the financial contributions by all participants for the catering, supported by Regina Pickford and a student from HMGU. Klaus Schäfer (Aerosol-Akademie) welcomed the participants, prepared a summary of all discussions for the topics ‘Project mid-term meeting’ and ‘Future collaboration’, which he presented at the end of the workshop, and performed together with Till Riedel (KIT/TECO) the First Meeting of the Advisory Board. Some material is at the home page also: <http://www.smartaqnet.com/INTERNATIONAL-WORKSHOP-04-05-DECEMBER-2018/>.

The following abstracts were submitted for the DACH-Meteorologentagung in Garmisch-Partenkirchen in the period from 18 to 22 March 2019:

- Probing the planetary boundary layer with unmanned aerial systems, Andreas Philipp et al.

- Spatial analysis of the autumn SmartAQnet measurement campaigns in September and November 2018, Erik Petersen et al.

- Determination of the boundary layer height with Unmanned Aviation systems and Ceilometer, Johanna Redelstein et al.

The following abstracts were submitted for the EGU General Assembly in Vienna from 7 to 12 April 2019:

- Examination of potential predictors for the forecast of particulate matter concentration in Augsburg (Germany), Johanna Redelstein et al.

- Results of two intensive observation periods for evaluating a Smart Air Quality Network in Augsburg, Germany, Erik Petersen et al.

### **Further information**

There is no additional information at this time.