HAQT - Helsinki metropolitan Air Quality Testbed

D7-3: Dissemination Activities Report

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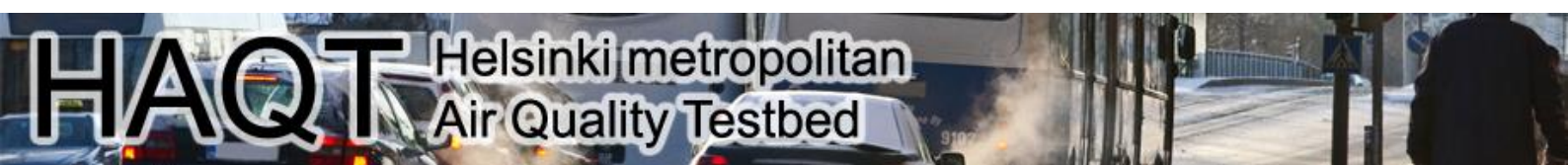

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Introduction

The HAQT project lasted for two years, during which a wide variety of dissemination activities were engaged in. This document outlines the main dissemination activities during the project.

Social media and internet

The principal tool for dissemination was the project website (haqt.fmi.fi). The website contains overview of the project, a news feed and an internal dissemination channel for the project partners (protected by password). The website will also contain all the public project documentations, stored there at least for the next 10 years. The front page of the project website is shown in Figure 1.

Figure 1: Screen capture of the front page of the project web site (haqt.fmi.fi).

The principal social media for dissemination was Twitter. It was used to advertise news and, for example, the project presence in various meetings. HAQT used Cityzer project Twitter account for tweeting (Figure 2).

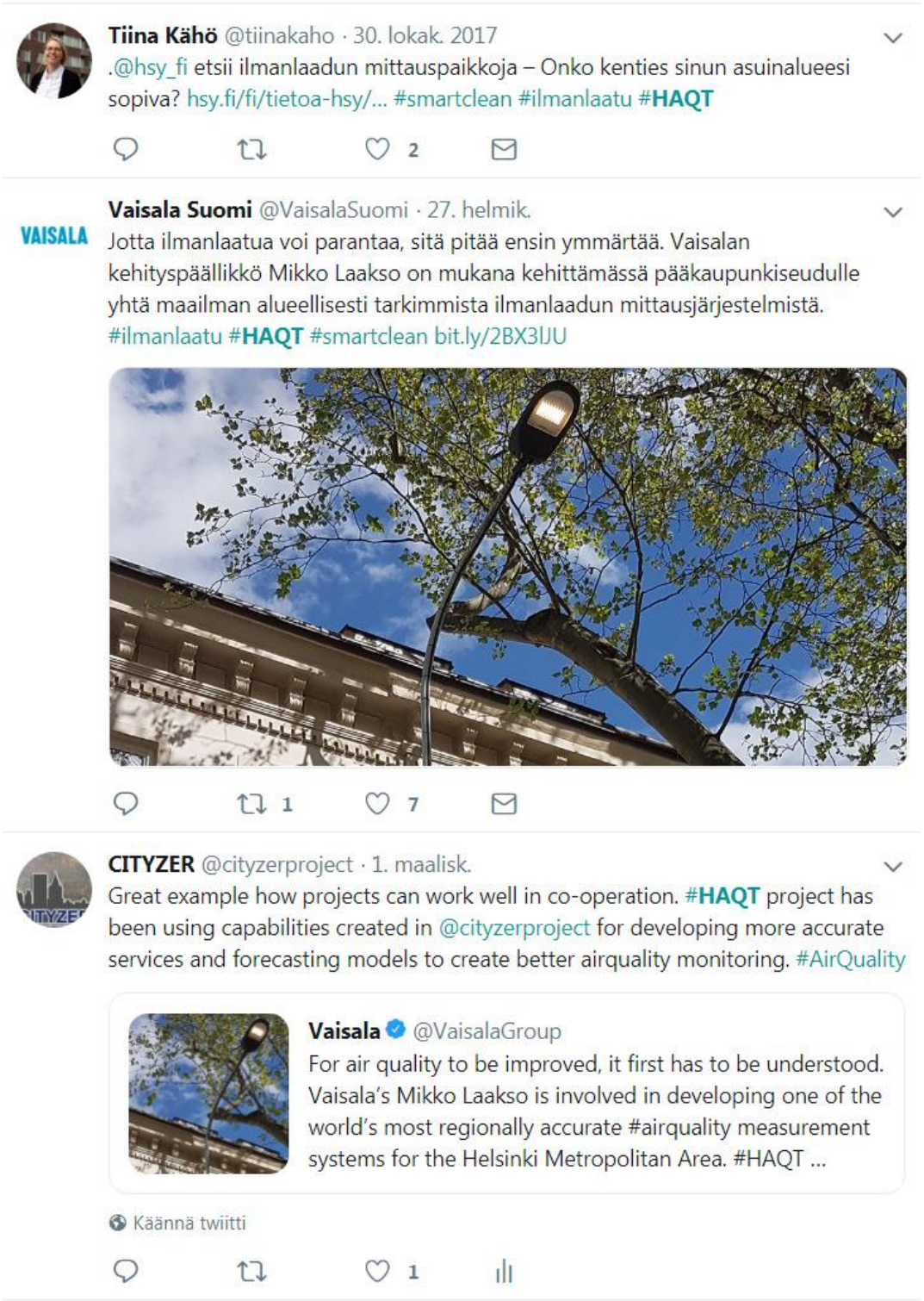

Figure 2: Screen capture of HAQT related Twitter tweets.

Within HAQT was also implemented the HSY Air Quality Map service for Helsinki region inhabitants (Figure 3) https://www.hsy.fi/en/residents/theairyoubreathe/Pages/airqualitymap.aspx . This service provides up-to-date information about air quality situation in the Helsinki metropolitan area, as well as an air quality forecast for the next 12 hours.

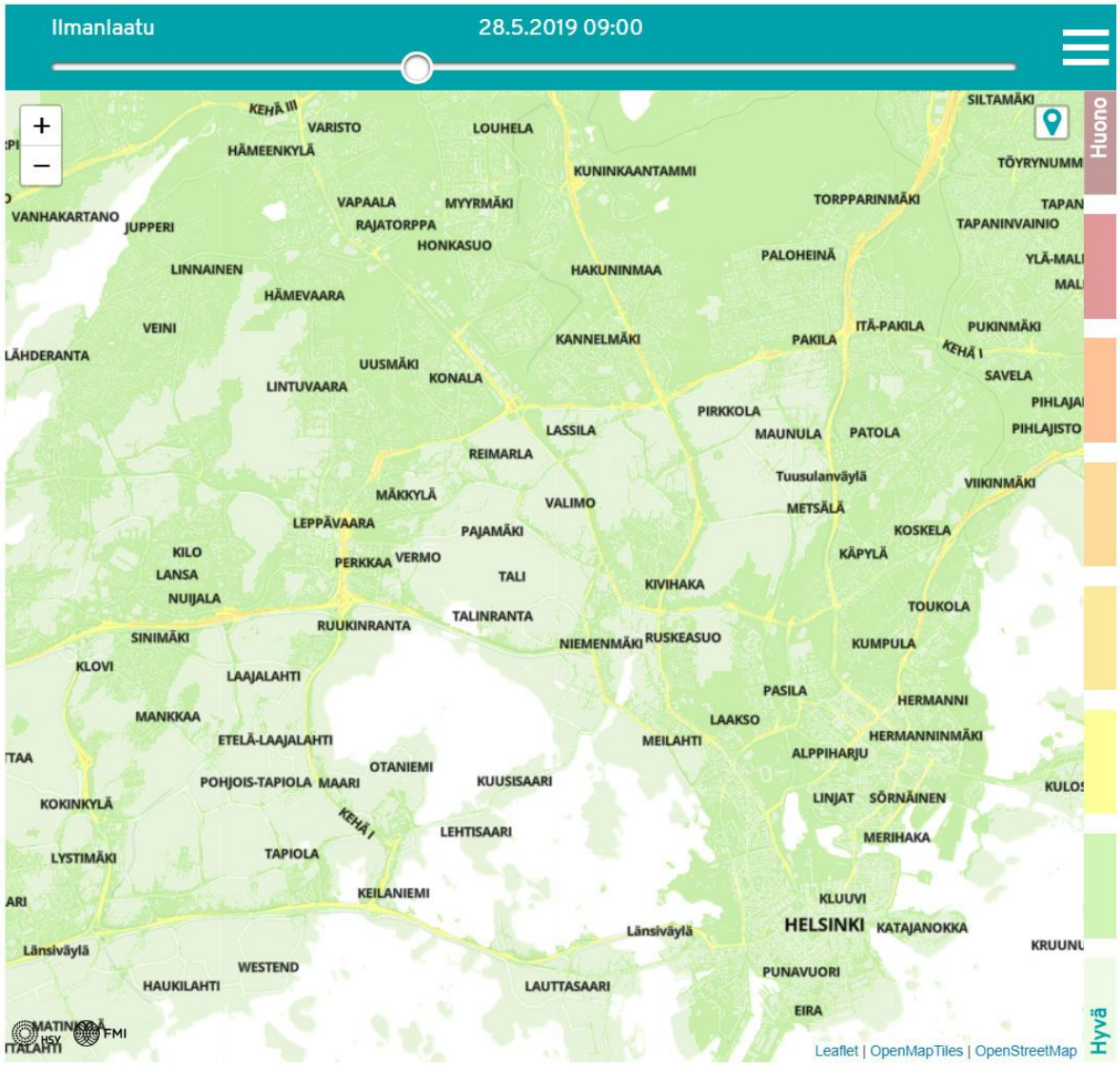

Figure 3: Screen capture of HSY Air Quality Map.

News, magazines and press releases

An interesting piece of dissemination was the opportunity to present the HAQT modeling and measurement system as “supergraafi” in the Tekniikka & Talous magazine (in Finnish). The supergraafi was published in Oct 22, 2018, in the 33/2018 issue of the magazine and can be seen at the following address:

https://www.tekniikkatalous.fi/supergraafit/infoa-ilmasta-ilmanlaatua-voi-nyt-ennustaa-korttelin-tarkkuudella-6745758

One press release was written with the topic of the launch of the HSY air quality service (Ilmanlaatukartta; hsy.fi/ilmanlaatukartta) that was implemented in the HAQT project. The original press release (in Finnish) can be found at the following address:

http://fmispace.fmi.fi/index.php?id=1041

There were also media releases. The first one was issued by the Finnish Meteorological Institute, as the prime of the HAQT project, at the beginning of the HAQT project. This release was issued at 16

May, 2017 and outlined the project for the general audience. The media issue can be found from the following link:

https://ilmatieteenlaitos.fi/tiedotearkisto/-/journal_content/56/30106/35522

Another media release was issued by HSY at Oct 30, 2017. This release was to locate suitable sites for installing new HAQT air quality sensors, asking the denizens of the Helsinki metropolitan area for tips.

HAQT sensors were also mentioned in an HSY media release at Jan 29, 2018 discussing the new sites in the HSY air quality network. The media release can be found at the following link:

https://www.sttinfo.fi/tiedote/hsy-mittaa-ilmanlaatua-uusissa-kohteissa?publisherId=4346&releaseId=65908938

Finally, there was a media release at Mar 6, 2018 related to the launch of the new air quality service Ilmanlaatukartta (hsy.fi/ilmanlaatukartta) for the Helsinki metropolitan area. This release was a joint effort by HSY and FMI, and can be found from the following link:

https://www.sttinfo.fi/tiedote/uusi-ilmanlaatukartta-kertoo-ja-ennustaa-ilmanlaadun-siella-missa-olet?publisherId=4346&releaseId=66607439

Separate media releases about the scientific publications produced in this project were made and are publically available from https://ilmatieteenlaitos.fi/tutkimustoiminta:

https://ilmatieteenlaitos.fi/tiedeuutisten-arkisto/-/asset_publisher/1R4q/content/uudenlainen-menetelma-aerosolisensoreiden-kalibrointiin?redirect=https%3A%2F%2Filmatieteenlaitos.fi%2Ftiedeuutisten-arkisto%3Fp_p_id%3D101_INSTANCE_1R4q%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview%26p_p_col_id%3Dcolumn-2%26p_p_col_count%3D1

https://ilmatieteenlaitos.fi/tiedeuutisten-arkisto/-/asset_publisher/1R4q/content/liikenne-ja-puun-pienpoltto-merkittavimmat-mustan-hiilen-lahteet-paakaupunkiseudulla?redirect=https%3A%2F%2Filmatieteenlaitos.fi%2Ftiedeuutisten-arkisto%3Fp_p_id%3D101_INSTANCE_1R4q%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview%26p_p_col_id%3Dcolumn-2%26p_p_col_count%3D1

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Scientific meetings

The HAQT project outcomes have been presented in various scientific meetings, both national and international.

Table 1 lists all the scientific meetings where the HAQT project or its results have been presented. As can be seen, the project has been presented to a different audiences both nationally and internationally.

Table 1: Scientific meetings with HAQT participation.

Meeting name, place and date	Meeting type	Description of participation
HSY ilmanlaadun tutkimusseminaari, Helsinki, Finland, Nov 8, 2018	National	Presentation about the benefits or air quality sensors in monitoring air quality
Ilmanlaadun mittaajatapaaminen, Turku, Finland, May 7-8, 2019	National	Presentation about HAQT results concerning sensor measurements for biomass burning
Air Quality 2018, Barcelona, Spain, Mar 12-16, 2018	International	Poster presentation on sensor tests and utilization of results
European Aerosol Conference 2019, Gothenberg, Sweden, Aug 25-30, 2019	International	Several presentations related to air quality measurements in Helsinki Area
Air Sensors International conference, Oakland, Sept 12-14, 2018.	International	Poster-presentation about the sensor measurements
IAPSC conference, Telford, UK, Nov 22, 2018	International	Presentation about the benefits or air quality sensors in air quality management
Air Pollution Conference Brazil, 4th CMAS South America, Minas Gerais, Brazil, July 22-24, 2019.	International	Presentation about the benefits or air quality sensors in air quality management and modelling

Other types of meetings

The project kickoff was an important dissemination action. In the kickoff, the key objectives of the project were described and interactive workshop was carried out with the participant to map out interests and needs of the relevant actors in the air quality field. Invited to the kickoff were, e.g., Siemens, Aeromon Oy, HSY, VTT, Forum Virium Helsinki, Demos Helsinki, Helsinki Business Hub, City of Helsinki, City of Espoo and City of Vantaa.

There will also be a joint Cityzer and HAQT final meeting, organized together with the Cityzer project that will be held in Aug 16, 2019. The meeting will be aimed for decision makers especially in the municipal sector as well as private enterprises. The theme of the meeting with me Smart cities and the meeting will be held in Finnish. The meeting title is “Älykkäät kaupungit – sää ja ympäristötiedon älykkäiden palveluiden ekosysteemit”.

Other dissemination channels

Other dissemination channels include, e.g., all the meetings that project partners had with other parties relevant for the project. For example, HSY had several meetings with other municipal organizations and other actors discussing air quality and mentioning the HAQT project.

Dissemination was also conducted through channels of other projects, in particular the Business Finland –projects Cityzer and NAQT, which are closely related to the HAQT project. The Cityzer project developed much of the infrastructure that HAQT then employed; whereas, NAQT was essentially a deployment of HAQT in Nanjing, China. In addition, the air quality monitoring, prediction and visualization concept actualized in HAQT and other Helsinki air quality projects is represented in the EU funded ERA-PLANET project SMURBS (Smart Urban Solutions for air quality, disasters and city growth, www.smurbs.eu) by Helsinki being one of the pilot cities for solving air quality problems. The Helsinki approach will be presented in the so-called SMURBS portfolio for the other cities around the world to replicate.

HAQT Publications

Following is the list of publications produced in the project:

[1] Kousa, A. 2018. Kattava ja reaaliaikainen ilmanlaatukartta pk-seudulle. Ilmansuojelu 2/2018: 15-17.

[2] Niemi, J.V., Kousa, A., Portin, H., Laakso, M., Alkkiomäki, E., Saukko, E., Janka, K., Timonen, H. Kuuluvainen, H., Rönkkö, T. 2018. Sensors in air quality monitoring in Helsinki: field test results and utilization of complementary sensor networks. Air Quality 2018. The 11th International Conference on Air Quality - Science and Application.

[3] Niemi, J.V., Portin, H., Mäkelä, T., Julkunen, A., Kousa, A., Laakso, M., Yli-Ojanperä, J., Saukko, E., Kuula, J., Kuuluvainen, H., Rönkkö, T., Timonen, H. 2019. Optical PM10 sensors and diffusion charging-based LDSA particle sensors – field test results and utilization in Helsinki. European Aerosol Conference 2019.

[4] kuula, J., Mäkelä, T., Hillamo, R., and Timonen, H.: Response Characterization of an Inexpensive Aerosol Sensor, Sensors, 17, 2915, 10.3390/s17122915, 2017.

[5] Helin, A., Niemi, J. V., Virkkula, A., Pirjola, L., Teinilä, K., Backman, J., Aurela, M., Saarikoski, S., Rönkkö, T., Asmi, E., and Timonen, H.: Characteristics and source apportionment of black carbon in the Helsinki metropolitan area, Finland, Atmospheric Environment, 190, 87-98, 10.1016/j.atmosenv.2018.07.022, 2018.

[6] Kuula, J., Kuuluvainen, H., Rönkkö, T., Niemi, J. V., Saukko, E., Portin, H., Aurela, M., Saarikoski, S., Rostedt, A., Hillamo, R., and Timonen, H.: Applicability of Optical and Diffusion Charging-Based Particulate Matter Sensors to Urban Air Quality Measurements, Aerosol and Air Quality Research, 10.4209/aaqr.2018.04.0143, 2019

[7] Kuula, J., Kuuluvainen, H., Niemi, J., Saukko, E., Portin, H., Aurela, M., Rönkkö, T., Timonen', H.: Long-term sensor measurements of ultrafine particulate matter emitted from local combustion sources, under review in Aerosol Science and Technology -journal.

[8] H. Timonen, J. Kuula, J. V. Niemi, A. Julkunen, T. Nousiainen, M. Aurela., Compact air quality sensor measurements in an urban street canyon during a street dust season, Air Sensors International conference, Oakland, Sept 12-14, 2018.

[9] Jarkko V. Niemi, Harri Portin, Taneli Mäkelä, Anssi Julkunen, Anu Kousa, Mikko Laakso, Eero Alkkiomäki, Erkka Saukko, Joel Kuula, Heino Kuuluvainen, Topi Rönkkö and Hilkka Timonen: Optical PM_{10} and diffusion charging-based LDSA particle sensors – field test results and utilization in Helsinki, European Aerosol Conference 2019

[10] S. Saarikoski, M Aurela, J Niemi, A Helin, L Pirjola and H Timonen: Comparison of biomass burning related black carbon measured with ae33 and sp-ams, European Aerosol Conference 2019.

[11] H. Timonen, S. Saarikoski, L. Williams, A. Eiguren-Fernandez, S. Hering, K. Teinilä, J. Niemi, M. Aurela: Field evaluation of the ADIc concentrator with Aerosol Chemical Speciation Monitor, European Aerosol Conference 2019.

[12]Kurppa, M., Hellsten, A., Roldin, P., Kokkola, H., Tonttila, J., Auvinen, M., Kent, C., Kumar, P., Maronga, B., and Järvi, L.: Implementation of the sectional aerosol module SALSA2.0 into the PALM model system 6.0: model development and first evaluation, Geosci. Model Dev., 12, 1403-1422, https://doi.org/10.5194/gmd-12-1403-2019, 2019.