

# EVOTION

727521 – EVOTION

DELIVERABLE No: D8.2

## Second Dissemination Report

Authors: Mariola Sliwinska-Kowalska and Ewa Kotylo (NIOM), Niels Henrik Pontoppidan (OTC), Giorgos Dritsakis (UCL), Dario Brdarić (IPH), Katerina Vardonikolaki (UOA), Louisa Murdin (GST), Nikos Dimakopoulos (ATC)

Dissemination level	
PU	Public



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 727521

Project acronym and GA no	EVOTION- 727521
Project full Title	Evidenced based management of hearing impairments: Public health pOlicy making based on fusing big data analytics and simulaTION
Project Type	Research and Innovation Action
Start date – end date	1 November 2016 – 31 October 2019
Website	<a href="http://www.h2020evotion.eu">www.h2020evotion.eu</a>
Deliverable type	R – Report
Delivery date	M24 (31 OCT 2018)
Authors/contributors:	Mariola Sliwinska-Kowalska and Ewa Kotylo (NIOM), Niels Henrik Pontoppidan (OTC), Giorgos Dritsakis (UCL), Dario Brdarić (IPH), Katerina Vardonikolaki (UOA), Louisa Murdin (GST), Nikos Dimakopoulos (ATC)  Reviewers: Niels Henrik Meedom (OTC), Lyubov Trenkova (PRA)
Contact:	Mariola Sliwinska-Kowalska (msliwinska@imp.lodz.pl)
To be cited as:	Sliwinska-Kowalska, M., Niels Henrik Pontoppidan, Giorgos Dritsakis, Dario Brdarić, Katerina Vardonikolaki, Louisa Murdin, Nikos Dimakopoulos, 2018. Second Dissemination Report, Deliverable D8.2 to the EVOTION-727521 Project funded by the European Union. Nofer Institute of Occupational Medicine, Lodz, Poland.
Subject and keywords:	This report presents dissemination activities and it targets European health professionals, user groups, and other stakeholders.  Keywords; scientific papers, conferences, workshops, social media, networking, press releases, health professionals, public health, audiologists, patients.
Disclaimer:	This document's contents are not intended to replace consultation of any applicable legal sources or the necessary advice of a legal expert, where appropriate. All information in this document is provided "as is" and no guarantee or warranty is given that the information is fit for any particular purpose. The user, therefore, uses the information at its sole risk and liability. For the avoidance of all doubts, the European Commission has no liability in respect of this document, which is merely representing the authors' view.

## Table of Contents

Executive Summary.....	1
1 Communication Activities and Indicators of Success .....	2
2 Periodic Plan for the Second Period of the Project (M13-M24) .....	3
3 Monitoring Report by the Type of Dissemination Activity.....	3
3.1 Scientific papers.....	3
3.2 Presentations about EVOTION outcomes at scientific events .....	4
3.3 Dissemination through the EVOTION website .....	5
3.4 Liaising with other external research activities .....	5
3.5 Organization of EVOTION workshop .....	7
3.6 Use of social media.....	7
3.7 Other communication activities .....	7
3.8 Summary of completed activities in M1-M24.....	9
4 Dissemination Activities by Target Groups.....	10
4.1 Scientific Community.....	10
4.2 User groups.....	10
4.3 Other stakeholders.....	12
5 Monitoring Feedback of Dissemination Activities.....	13
6 Concluding Remarks .....	13
References.....	14

Appendix I: Spreadsheet of SyGMA dissemination activities in EVOTION project

Appendix II: Brochure targeting health professionals

## List of Tables

Table 1: Communication channels and Indicators of Success in the EVOTION project

## List of Figures

Figure 1: Number of activities by Communication Channels completed in M1-M24 versus target Indicators of Success over entire EVOTION project

## List of Abbreviations

AMC – Athens Medical Centre

ATC – Athens Technology Center

CITY – The City University

EMP – Empelor GmbH

GST – Guy's and St Thomas's NHS Foundation Trust

HA – Hearing aids

HL – hearing loss

ICCS – Institute of Communications and Computer Systems

IPH – Institute of Public Health for the Osijek-Baranya County

NIOM – Nofer Institute of Occupational Medicine

OTC – Oticon A/S

PRA – Pazardzhik Regional Administration

UCL – University College London

UNIMI – Università Degli Studi Di Milano

UOA – University of Athens

WHO – World Health Organization

## Executive Summary

This deliverable presents the periodic plan and monitoring report of dissemination activities of the second year of the project (M13-M24) and updates the achievements for the period M1-M24. The activities are categorized by the type of activity and by the target group (health professionals, user groups, other stakeholders).

Periodic plans are developed and updated based on project's target Indicators of Success and the level of activities which were conducted and executed during the first year of the project. Recommendations of the Reviewers concerning the EVOTION Periodic Report in M18 on dissemination activities have been also taken into consideration.

During the reporting period, four conference proceedings and two open journal scientific papers were published, increasing the total number of scientific publications from eight to fourteen. In the same period, the total number of oral and poster scientific presentations, which have been delivered during international and national conferences and workshops, increased from 26 to 40. Activities in the area of promotional campaigns and synergies with other external research, including H2020 projects, substantially exceeded the original plans. Moreover, several channels of communication were used to reach a wider audience of interested parties, such as public and governmental institutions or the general public: articles published in non-specialized magazines, articles to websites, press releases and a TV campaigns.

The dissemination of information to potential users was enhanced by use of social media. In order to ensure the effectiveness of this process, information concerning all developments and ongoing dissemination activities was regularly published on the EVOTION website ([www.h2020evotion.eu](http://www.h2020evotion.eu)) as well as five other internet platforms.

Over the reporting year, the dissemination activities reached all the potential user groups, including a substantial number of scientists and health professionals, public health policy representatives, audiologists and patients.

The actual dissemination activities were in line with the periodic plan for the second period of the EVOTION project (M13-M24).

Following the recommendations submitted by Reviewers of the EVOTION Interim report (M18), dedicated activities will be launched in Year three of the project, in order to maximize the number of publications in referred scientific journals and to strengthen the links between data collected by EVOTION and public (health) policy impact.

# 1 Communication Activities and Indicators of Success

WP8 (Task 8.1) focuses on planning, carrying out and monitoring of dissemination activities planned for EVOTION project. In order to disseminate the concept, vision and results of the project, various communication channels were identified, and several types of activities were planned for execution. In principle, dissemination activities are to target not only scientific communities with an interest in EVOTION outcomes, but also European user groups such as audiologists, public health bodies and hearing loss patients, as well as other stakeholders in the EVOTION eco-system.

The dissemination activities include: (i) the production of scientific papers to be submitted and published in journals, international conferences, and workshops; (ii) the development of seminars and presentations about EVOTION outcomes to be presented in other national and international events including research and technology focused events organized by the industry, professional bodies, patient associations and other related stakeholders; (iii) dissemination through the EVOTION website to ensure the quick outreach of project outcomes and information about ongoing activities and events organized and/or attended by the project; (iv) liaising with other external research activities (at national and European level), including related networks and projects; (v) organization of EVOTION workshops towards health policy making stakeholders (EVOTION users), HL patients and related clinical scientific communities; (vi) the systematic use of social media for a continuous and early announcement of the project outcomes and the formation of communities interested in these outcomes.

Table 1 lists target Indicators of Success by Communication Channel for the entire EVOTION project.

Table 1. Communication channels and Indicators of Success in the EVOTION project

Communication Channel	Indicators of Success
European and International Events and Conferences	<ul style="list-style-type: none"> <li>- 20 papers in conferences</li> <li>- 2 workshops</li> </ul>
International exhibitions and events of Horizon2020	<ul style="list-style-type: none"> <li>- Participation in 3 exhibitions</li> <li>- Participation in 3 Horizon2020 events</li> </ul>
Publications in Scientific Journals	<ul style="list-style-type: none"> <li>- 10 Open Access journal publications</li> </ul>
Online dissemination through Internet	<ul style="list-style-type: none"> <li>- 1 website</li> <li>- 8 press releases</li> <li>- 4 promotional campaigns</li> </ul>
Communities and Social Research Networks	<ul style="list-style-type: none"> <li>- 5 accounts on social networks</li> <li>- Over 40 connections on other networks</li> </ul>
EVOTION presentation Materials	<ul style="list-style-type: none"> <li>- 5 brochures</li> <li>- 8 posters to be utilized in workshops and conferences</li> </ul>
Traditional communication channels	<ul style="list-style-type: none"> <li>- 10 articles to national non-specialized magazines</li> <li>- 10 articles to websites</li> </ul>
Collaboration with other projects	<ul style="list-style-type: none"> <li>- Synergies with at least more than 2 EU projects</li> </ul>

## 2 Periodic Plan for the Second Period of the Project (M13-M24)

Periodic plan for the Months 13-24 was set based on the target Indicators of Success which were conducted and executed in the first year of the project. It was assumed that more articles will be published in scientific journals and that the objectives as well as results of the research will be disseminated during conferences, symposia and workshops. A wide promotional campaign was planned in order to reach all target groups and result in connecting with many stakeholders from European partner countries, other European countries and non-European countries. To the same end, the activities related to the use of EVOTION website ([www.h2020evotion.eu](http://www.h2020evotion.eu)) and social media were to be continued. Special emphasis has been given to liaising with other external research activities, including projects executed within H2020 program.

Upon considering the results of the D8.1 report for project's first implementation period, authors emphasized the necessity to increase activities in the field of publications in non-specialized magazines. Authors assume that in the long run, as the EVOTION platform becomes validated, it would be desirable to develop a strategy for enhancing collaboration with external policymaking partners.

The recommendations submitted by the Reviewers to the EVOTION Interim Report in M18 were also to be taken into consideration in regard to the activities planned for M13-M24. These include maximizing publications in referred scientific journals and strengthening links between data collected by EVOTION and public (health) policy impact.

## 3 Monitoring Report by the Type of Dissemination Activity

### 3.1 Scientific papers

Over the second period of the project the number of published scientific papers increased from eight to fourteen. During the months 13-24, four Conference proceedings and two open-journal scientific papers were published. They had different thematic scopes and were addressed to public health policy scientists, researchers who create and use Big data repositories as well as scholars working on protection from noise-induced hearing loss and audiologists. All papers published during months M13-24 are listed below.

#### Conference proceedings (M13-24)

- Ye, B., Basdekis, I., Smyrlis, M., Spanoudakis, G., Koloutsou, K. A Big Data Repository and Architecture for Managing Hearing Loss Related Data. Proc. of the Biomedical and Health Informatics (BHI) 2018 and the IEEE Conference on Body Sensor Networks (BSN), Las Vegas, Nevada March 2018 (MoP0.73). DOI: 10.1109/BHI.2018.8.
- Sliwinska-Kowalska, M., Pawlaczyk-Luszczynska, M., Dudarewicz, A., Zaborowski, K. EVOTION platform as a tool of prevention of noise-induced hearing loss in hearing impaired subjects using hearing aids (In Polish). Biuletyn Polskiego Stowarzyszenia Protetyków Słuchu 2018; 70(2): 19-20. <http://psps.pl/uploads/Biuletyn/b70.pdf>.
- Dudarewicz, A., Pawlaczyk-Łuszczynska, M., Sliwinska-Kowalska, M., Katrakazas, P., Pontoppidan, N.H., Koutsouris, D., Zaborowski, K. Predicting impact of loud incidents on individual hearing for public health policy in the framework of EVOTION. Proc. of the 11th European Congress and Exposition on Noise Control Engineering – EURONOISE 2018, Heraklion, Crete - Greece | 27-31 May 2018; 375-380. [http://www.euronoise2018.eu/docs/papers/65\\_Euronoise2018.pdf](http://www.euronoise2018.eu/docs/papers/65_Euronoise2018.pdf)
- Dudarewicz, A., Zaborowski, K., Wolniakowska, A., Pawlaczyk-Luszczynska, M., Sliwinska-Kowalska, M. The Risk of Temporary Hearing Threshold Shift in Bartenders. Proc. of the 47th International Congress and Exposition on Noise Control Engineering „Inter-Noise 2018”, Chicago, USA, 26-29.08.2018; 1-12. <https://internoise2018.org/>

### Open access journal publications (M13-24)

- Gutenberg, J., Katrakazas, P., Trenkova, L., Murdin, L., Brdarić, D., Koloutsou, N., Ploumidou, K., Pontoppidan, N. H., Laplante-Lévesque, A. Big Data for Sound Policies: Towards Evidence-Informed Hearing Health Policies. American Journal of Audiology 2018 ([https://doi.org/10.1044/2018\\_AJA-IMIA3-18-0003](https://doi.org/10.1044/2018_AJA-IMIA3-18-0003)).
- Dritsakis, G., Kikidis, D., Koloutsou, N., Murdin, L., Bibas, A., Ploumidou, K., Laplante-Lévesque, A., Pontoppidan N.H., Bamiou, D.-E. Clinical Validation of a Public Health Policy Making Platform for Hearing Loss (EVOTION): Protocol for a Big Data Study. BMJ Open 2018; 8:e020978. DOI: 10.1136/bmjopen-2017-020978.

The full list of articles published over the period of M1-M24 is presented in Appendix I (Spreadsheet of Sygma dissemination activities) (Appendix I).

### 3.2 Presentations about EVOTION outcomes at scientific events

Over the second period of the project the number of oral and poster scientific presentations at international and national conferences, symposia and workshops increased from 26 to 40. During the months 13-24, seven oral presentations and 5 poster presentations on EVOTION outcomes were delivered. The overarching goal of the presentations was to spread the information about EVOTION objectives and present the results as well as connect interested parties, such as computer/big data scientists, physicians, audiologists, public health specialists, general policy decision makers and University students. The list of presentations in M13-M24 is presented below.

#### Oral presentations at conferences and workshops (M13-M24)

- Pontoppidan N (OTC). Hearing aids and listening in complex environments: intents, attention, behaviour, and processing. MRC & UCL Ear Institute: Real-world assessment of hearing aids and listening behaviour. London, 11.2017.
- Pontoppidan, N (OTC). Virtual PM18 Summit. London 08.01.2018 (<http://h2020evotion.eu/events/event/virtual-summit-pm-18-jan2018/>)
- Bamiou, D.E (UCL). EVOTION: big data supporting public health hearing policies – an overview. Advanced Amplification and Aural Rehab Masterclass, UCL Ear Institute UCL Ear Institute, London, 21-23.02.2018.
- Sliwinska-Kowalska, M (NIOM). EVOTION platform as a tool of prevention of noise-induced hearing loss in hearing impaired subjects using hearing aids. IV Symposium of the Polish Association of Audiologists, Poznan, 12-13.04.2018.
- Damiani, E (UNIMI). Security and privacy concerns in big data platform. 5th UAE Cyber-Security Symposium Khalifa University of Science and Technology, Abu Dhabi, United Arab Emirates, 25.04.2018.
- Dritsakis, G (UCL). EVOTION: Big Data supporting Public Health Policies for Hearing Loss. UCL Translational Research Office (Business & Innovation group) meeting. London, UK, June 2018.
- Anisetti, M (UNIMI). Big Data Assisted public health policy making in Smart Cities. Workshop for students: Video & Image Processing System, Xidian University, Xi'an, China, 29.06.2018.
- Smith, A., Koloutsou, K., Trenkova, L., Brdarić, D., Katrakazas, P. Using big data analytics to formulate public health policy for hearing health. 9th Annual Meeting of the Coalition for Global Hearing Health (CGHH), Cape Town, South Africa, 26-28.10.2018.
- Saunders, G. Big Data and decision support for public health hearing policies. 34th World Congress of Audiology „Cape Town 2018”, Cape Town, South Africa, 28-31.10.2018.



## Poster presentations at conferences (M13-M24)

- Gutenberg, J., Laplante-Lévesque, A., Pontoppidan, N. eHealth and Big data in Audiology - EVOTION a European Research Project generating Big data evidence. Medical Informatics Europe Conference MIE 2018, The Swedish Exhibition & Congress Center, Gothenburg, Sweden, 24-26.04.2018.
- Pontoppidan, N.H., Rossing, R., Christensen, J.H., Bamiou, D.-E., Dritsakis, G., Katrakazas, P., Koutsouris, D., Spanoudakis, G., Ye, B., Bibas, A., Kikidis, D., Śliwińska-Kowalska, M., Murdin, L., Sladen, M., Dimakopoulos, N., Brdarić, D., Trenkova, L., Anisetti, M., Economou, A., Papagrigoriou, P. EVOTION: Big data supporting public hearing health policies. International Hearing Aid Research Conference 2018 „IHCON 2018”, Granlibakken, Lake Tahoe, California, USA, 15-19.08.2018.
- Dudarewicz A., Zaborowski, K., Wolniakowska, A., Pawlaczyk-Luszczynska, M., Sliwinska-Kowalska, M. The Risk of Temporary Hearing Threshold Shift in Bartenders. 47th International Congress and Exposition on Noise Control Engineering „Inter-Noise 2018” Chicago, USA, 26-29.08.2018.
- Bamiou, D.-E., Kikidis, D., Dritsakis, G., et al. Big Data supporting Public Health Policies for Hearing Loss. 19<sup>th</sup> International Association of Physicians in Audio-Vestibular Medicine (IAPA) conference, Hurghada, Egypt, 18-20.10.2018.
- Sliwinska-Kowalska, M., Wolniakowska, A., Zaborowski, K., Dudarewicz, A., Pawlaczyk-Luszczynska, M. Comparing predictive vs actual impact of short exposure to noise on hearing for developing public health policy making model in the framework of EVOTION. 34th World Congress of Audiology „Cape Town 2018”, Cape Town, South Africa, 28-31.10.2018.

The full list of presentations over the period of M1-M24 is presented in Appendix I (Spreadsheet of Sygma dissemination activities) (Appendix I).

### 3.3 Dissemination through the EVOTION website

The EVOTION website ([www.h2020evotion.eu](http://www.h2020evotion.eu)) was launched in M1 as described in the DOA and in Deliverable 1.1. (Meedom et al., 2016). The key updates to the EVOTION website during the 2nd year included a) updating the overall description to target layman rather than specialists, b) addition of a new section of the website for targeting the EVOTION participants, c) adding outcomes from EVOTION in terms of public reports, data sets, code, and movies demonstrating the progress of the project, and d) adding the presentation of the members of the External Advisory Board. Finally, the consortium has been collecting testimonials from research participants which will emerge on the website within the 3rd year.

The recommendations submitted by the Reviewers to the EVOTION Interim Report in M18 were taken into consideration in regard to improve the website, make it more attractive and enhance the accessibility of information. This work continues in the coming months.

The total number of visits to EVOTION website in the second period was over 52,000 visits, compared to approx. 30,000 in the first period.

### 3.4 Liaising with other external research activities

During the second year of the project, liaising activities with several external research activities were conducted. These activities took place through synergies with EU projects and contact with other external research projects, as well as participation in H2020 event. This included also extension of EVOTION work and further investigation of issues that occurred in EVOTION.

### 3.4.1 Connection with EU projects

Connections with EU projects are particularly noteworthy. Their overall number increased from three in year one to eight in year two of the project, thus significantly exceeding the number originally proposed in the application (two connections).

EVOTION continues the communication with five other projects funded from PM 18 Data Supporting Health Policies, namely Big data against childhood obesity (BigO, [www.bigoprogram.eu](http://www.bigoprogram.eu)); Meaningful Integration of Data, Analytics and Services (MIDAS, [www.midasproject.eu](http://www.midasproject.eu)); Participatory Urban Living for Sustainable Environments (PULSE, [www.pulseproject.info](http://www.pulseproject.info)), Collective wisdom driving public health policies (CrowdHEALTH, [www.crowdhealth.eu](http://www.crowdhealth.eu)) and Big data for precision medicine (iASiS, [www.project-iasis.eu](http://www.project-iasis.eu)).

Evotion project was presented by EMP to the CIPSEC Consortium and Advisory Board (H2020 project on Critical Infrastructure Protection). Target group included Research Centers associated with H2020 projects, among others (Barcelona, Spain, May 2018).

Marco Anisetti (UNIMI) presented EVOTION BDA at the H2020 Toreador user focus group meeting in Milan (12.2017) (<https://www.musicworldexpo.gr/index.php>).

Use and adaptation of Auditory Training material was developed for H2020 HOLOBALANCE project by UCL as an example of EVOTION-inspired activities.

### 3.4.2 H2020 events

Nikos Sarris (ATC) participated in Trade Fair (Horizon 2020 event) on ICT Proposers' Day 2017 (11.2017). One hundred researchers and clinicians were reached by discussing and exchanging ideas on a technical perspective of the EVOTION concept.

### 3.4.3 Liaising with other research activities

During the second year of EVOTION project, Niels Pontoppidan (OTC) participated in the strategy meeting for the Spend2Save – an initiative organized by the UK charity, the Ear Foundation, initiated by European hearing health professionals and European user groups. The objective of Spend2Save is to raise the awareness about the cost of untreated hearing loss and the cost-efficiency of hearing loss treatment.

Two synergies with other research activities were developed by UCL, namely TACT project and MoCA validation activity. TACT project is a pilot study to ensure people with hearing loss and dementia start and continue to use HAs; it's further investigation of link between hearing aid usage and cognition, additional to EVOTION. Validation of MoCA used EVOTION cognitive screening tools for the hearing impaired patients with aim to develop a quality tests to identify whether people with hearing loss might have dementia or not.

### 3.5 Organization of EVOTION workshop

In NOV 2017 the EVOTION Project Coordinator (OTC) invited the other projects that received funding from the PM-18 2016 call on Big data supporting public health policies for a Virtual PM18 Summit on 8 JAN 2018 to initiate mutual relationships and potentially organize joint activities. EVOTION installed a separate Basecamp area for the communication between coordinator groups of the PM-18 projects: BigO, CrowdHEALTH, iASiS, MIDAS, and PULSE. In addition to the joint focus on big data supporting public health policies, the projects cover various medical areas: childhood obesity, lung cancer, Alzheimer's disease, urban health, and with a general health policy focus. The iASiS project later invited for a PM18 Cluster symposium meeting on Big Data in Precision medicine in Athens on 11 July 2018 in the frame of the 6<sup>th</sup> Hellenic Forum for Science, Technology & Innovation. Previously reported in "First Periodic Report" (EVOTION Project Consortium, 2018).

GST worked with London schools to arrange a workshop for prospective biomedical science undergraduates which took place in May 2018 at the Harris Westminster Sixth Form College. The focus of this school leavers workshop was to use the EVOTION project to illustrate both hearing loss and its consequences and the nature of research collaborations at an international level.

### 3.6 Use of social media

EVOTION explores social media for a continuous and early announcement of the project outcomes and the formation of communities interested in these outcomes.

#### 3.6.1 Twitter account

In the first year of the project Twitter account was launched ("@h2020evotion") through which important events and activities are highlighted instantly. Similar EVOTION platforms have been initiated on Mendeley, Research Gate, YouTube, and LinkedIn in the second year of the project. These platforms will support a continuous and early announcement of the project outcomes and will significantly increase the formation of communities interested in EVOTION tools and solutions.

#### 3.6.2 Articles to websites

Four non-scientific articles to websites were delivered for the purposes of recruiting patients as well as propagate the resolution of novel generation hearing aids and utility of EVOTION platform (see Appendix I). Contributing partners were UCL, GST and PRA:

1. "EVOTION: Big data supporting public health policies for hearing loss", ENT & Audiology News website and magazine (<https://www.entandaudiologynews.com/features/audiology-features/post/evotion-big-data-supporting-public-health-policies-for-hearing-loss>);
2. "EVOTION research study: Identifying what factors are linked to effective hearing-aid use and benefit" Action on Hearing Loss website (<https://www.actiononhearingloss.org.uk/live-well/our-community/our-blog/evotion-research-study-identifying-what-factors-are-linked-to-effective-hearing-aid-use-and-benefit/>);
3. EVOTION recruitment (<https://www.guysandstthomas.nhs.uk/research/studies/ent.aspx#na>);
4. "EVOTION project - Supporting decisions in public health policy-making" (<http://www.pz.government.bg/page.php?155>).

### 3.7 Other communication activities

Other communication activities included press releases, brochures preparation and distribution, promotional campaigns popularizing the EVOTION concept among health professionals and user groups at different events, and publishing articles in non-specialized magazines.

### 3.7.1 Press release

Two press releases appeared in Greek (in Athens by AMC) and English (in London by GST) newspapers.

### 3.7.2 Brochure

A brochure targeting health professionals was prepared by OTC (Meedom et al., 2018), translated to Greek (UoA) and distributed among almost 1500 participants of the events attended by the EVOTION partners (Appendix II).

IPH prepared and translated a similar brochure and leaflet in Croatian for autumn 2018 Trade Fair in Osijek in Croatia.

### 3.7.3 Promotional campaigns

EVOTION project was promoted during several events and TV promotional video. These activities are listed below:

1. Presentation of UoA: "Hearing disorders - Prevention of hearing loss in professionals exposed to music" Seminar - Evotion was promoted in one slide during a seminar in professional musicians and sound engineers on Sierra Studios (Athens 11-2017).
2. Presentation of UoA at "Singing Voice and Hearing" Seminar - A short presentation of Evotion (2 slides) was given during a seminar attended mainly by singers and musicians. The seminar was held in the Modern Music Creation and New Technology Department of Musical Studies, National and Kapodistrian University of Athens (01-2018).
3. EVOTION outcomes were presented at the regional meeting of European Federation of Environmental Health in Amsterdam, Netherlands, organized in connection with World Hearing Day 2018 where IPH raise public health awareness on EVOTION platform (03-2018).
4. EVOTION project was promoted during EVOTION Auditory Training work disseminated at UCL Ear Institute APD Masterclass by Prof. Bamiou (UCL, 3-2018).
5. International Clinical Trials Day 07-2018 – GST designed, set up and manned an EVOTION stand at the King's Health Partners International Clinical Trials Day event in June 2018. The event was targeted at patients, the public and professionals to inform about research participation opportunities in various different fields.
6. Mariola Sliwinska-Kowalska (NIOM) delivered a promotional video on a Polish TV channel. Program was first aired on September 1st, 2018, and appeared several times over the next few days ([http://tvtoya.pl/catchuptv/show/potega\\_zdrowia,16215](http://tvtoya.pl/catchuptv/show/potega_zdrowia,16215)). The material drew audience's attention to the topic of new generation of hearing aids and to the use of EVOTION platform as a tool for noise-induced hearing loss prevention in hearing impaired subjects using hearing aids.
7. PRA presented EVOTION project at the regular meeting of the Regional Development Council of Pazardzhik region held 15.6.2018 (<http://www.pz.government.bg/news.php?extend.1451>). Participants included representatives of municipalities (local authorities) within Pazardzhik region and also, representatives of regional associations of employers and Trade unions, all responsible for decision-making on regional policy matters.
8. On 22.9.2018 EVOTION was presented to a group of representatives of the Pazardzhik Territorial Organisation of the Union of Deaf People in Bulgaria (patients' user group) during their own internal workshop. Their involvement in the upcoming validation of the platform as a policy-making tool was also discussed.

### 3.7.4 Exhibitions

EVOTION project outcomes were presented at MedTechBazaar2018 by OTC and at Autumn Trade Fair 2018 in Osijek by IPH.

### 3.7.5 Articles to non-specialized magazines and newspapers

Over the second period of the project, three articles to non-specialized magazines were delivered.

Two articles were published in English by GST (The GIST magazine and Lambeth Life).

One article was published in Croatian by IPH (Croatian regional newspaper "Glas Slavonije").

### 3.8 Summary of completed activities in M1-M24

Over the second year of the EVOTION project, all Partners have been very active in dissemination activities.

The status of dissemination activities by Communication Channels completed in M1-M24 is more than satisfactory. It is particularly noteworthy to underline the large number of connections to EU projects and promotional campaigns, which significantly exceeded original plans. Altogether, eight connections with EU projects (with two planned) and fourteen promotional campaigns (with four planned) were executed.

Figure 1 shows in tabular format an overview of the progress of dissemination activities against expectations.

According to the D8.1 report conclusions, the number of articles published in non-specialized magazines increased significantly. Namely, the number went from 1 article in the first period to 4 in the second period, and included publications in 2 languages – English and Croatian. The number of publications in referred journals, as recommended by the Reviewers, increased from two to four. This number is expected to grow quickly in the future, as more clinical research results become available, the platform is validated and the demonstration models are completed.

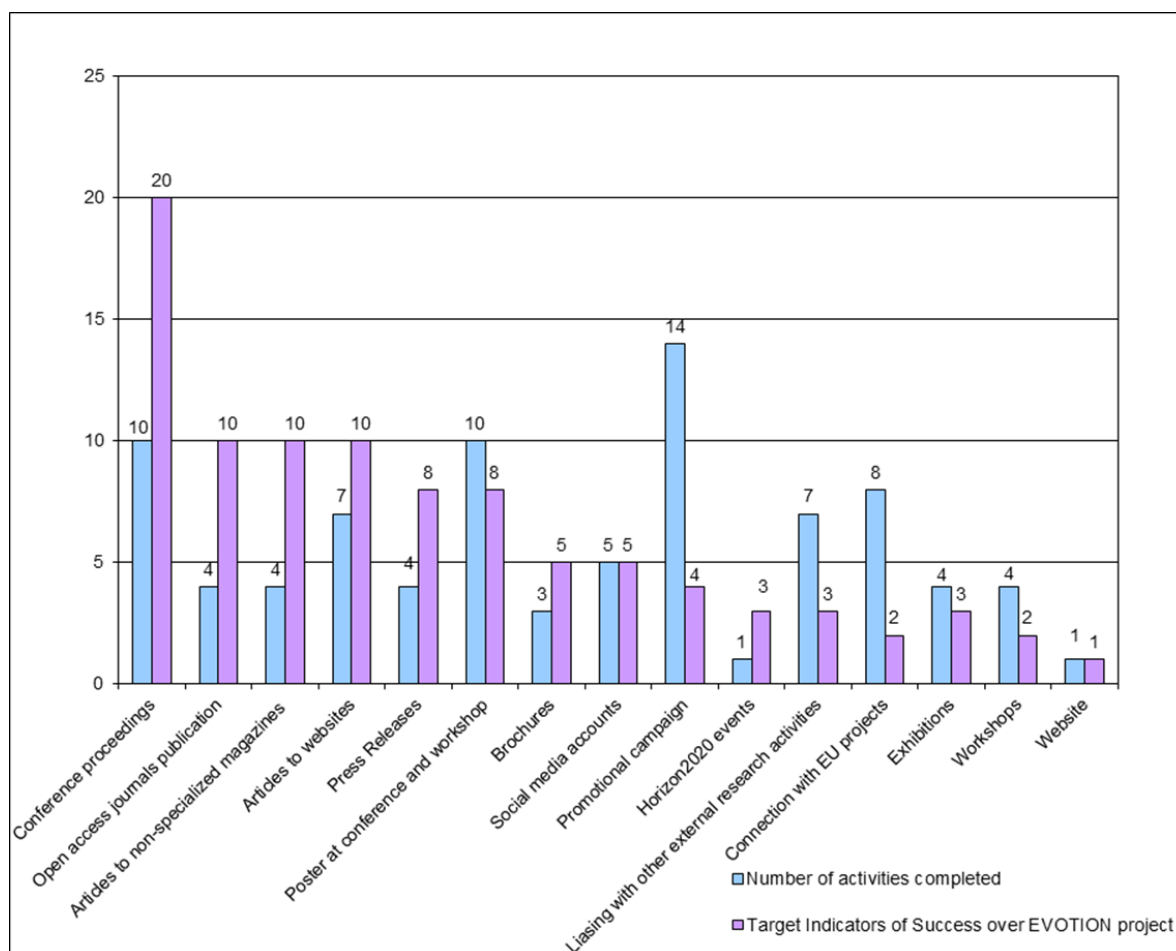


Figure 1. Number of activities by Communication Channels completed in M1-M24 versus target Indicators of Success over entire EVOTION project

## 4 Dissemination Activities by Target Groups

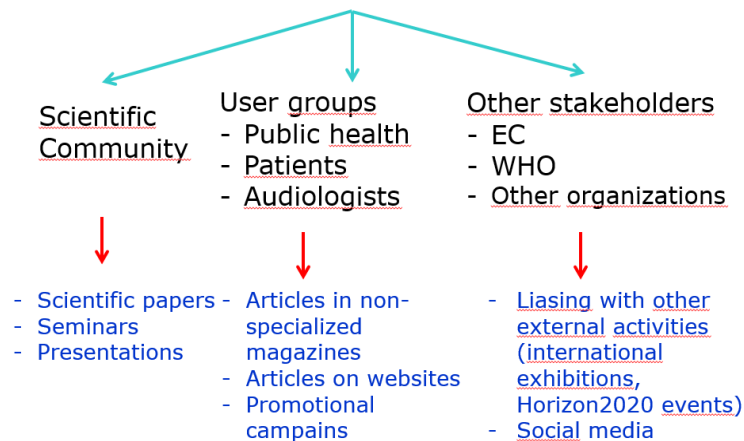
Given the multidisciplinary nature of EVOTION, the information and the outcomes of the project should reach several target groups. Those groups as well as respective Communication Channels have been identified earlier and are presented in the graph underneath.

**EVOTION**

Projekt finansowany  
ze środków Unii Europejskiej



### T.8.1 – Target groups



During the second year the Consortium has provided EVOTION outcomes to other researchers of different fields of expertise, health professionals and users group, including public health specialists, audiologists and patients, as well as other stakeholders.

#### 4.1 Scientific Community

Reach-out to European and international scientific communities was performed mainly through oral and poster presentations at international and national conferences and seminars, as well as publishing scientific articles in open access journals and as Conference Proceedings. These actions were aimed at researchers who create and use Big data repositories, hearing research and public hearing health policy scientists, as well as scholars working on protection from noise-induced hearing loss. Direct presentations on EVOTION goals, methods, ideas and results, which were delivered during a total of 38 scientific conferences reaching several thousand of researchers. Additional impact was created by publishing in a of total 14 scientific papers on EVOTION, which likely have reached several hundred more recipients in the world of science.

#### 4.2 User groups

##### 4.2.1 Public health organizations

Dario Brdarić (IPH) presented EVOTION project and related to this project development of public health policies in front to 17 international public health experts at a regional meeting of European Federation of Environmental Health (EFEH) in Amsterdam, Netherlands in December 2017. The Federation is an organisation whose full members are national associations representing the interests of environmental health professionals throughout the World. The Federation works to disseminate knowledge concerning environmental health and promote co-operation between countries where environmental health issues are transboundary. It promotes the interchange of people working in this sector and the exchange of Member's publications of a scientific and technical nature. Experts from Scotland, England, Northern Ireland, Slovenia, Netherlands, Denmark, Estonia, Wales, Portugal, Finland Croatia and Ireland attended the meeting.

IPH also presented EVOTION at Osijek Autumn Fair in October 2018 in Osijek, Croatia. Around 200 exhibitors from Croatia and abroad presented their activities. More than 16,000 people visited Autumn Fair from Croatia and other countries as Bosnia and Herzegovina, Serbia, Hungary etc. IPH presented EVOTION activities and outcomes. Attendees from medical companies were present at Fair and they were interested in EVOTION outcomes.

PRA presented EVOTION project at the regular meeting of the Regional Development Council of Pazardzhik region held 15.6.2018. This is the regional decision-making body responsible to voting decisions that concern the regional development in all policy areas public health included. Participants at the meeting included representatives of 12 municipalities (local authorities) within Pazardzhik region and also, representatives of regional associations of employers and Trade unions, as well as NGOs active in the field of regional development. The presentation increased awareness among these user groups of EVOTION and some of them were interested in participating in the validation focus groups.

Public health awareness on EVOTION platform has been also raised by several press releases and promotional campaigns conducted by all Partners in their countries. High impact is to be expected from the distribution of EVOTION brochure among over 1500 potential users of this sector.

During the second year EVOTION participated in the strategy meeting for the Spend2Save initiative initiated by European hearing health professionals and European user groups. The objective of Spend2Save is to raise the awareness about the cost of untreated hearing loss and the cost-efficiency of hearing loss treatment – and this group is very interested in the perspectives of using a platform like EVOTION for their case.

In addition to dissemination activities of EVOTION Partners, great support has been given by the President of the European Association of Audiologists, Mr. Mark Laureyns who holds an active seat in the External Advisory Board to EVOTION. Through this contact EVOTION is planning to disseminate directly to the European community of hearing health professionals during the 3<sup>rd</sup> year. As also expressed at the 2<sup>nd</sup> Year Advisory Board meeting, this stakeholder group are likely to be interested in presentation which include tangible examples of how the data and methodologies implemented by EVOTION addresses their professional needs.

#### 4.2.2 Audiologists

A large number of internal and external events (talks, workshops etc.) at UK and Greek hospitals increased awareness about the project among audiologists and other clinicians, e.g. hearing therapists.

In Greece, UoA has reached the Hellenic Association of the Hearing Aid Acousticians – HAHA which is in collaboration with European Association of Hearing Aid Professionals. The former is the biggest association of audiologists, acousticians and sellers in Greece and the latter represents a total of 20,000 hearing care professionals from 13 countries across Europe.

In Great Britain, audiologists have been targeted for EVOTION by GST through the adoption of the study onto the UK National Institute of Health Research ENT/Audiology portfolio of supported studies; through the presentation of EVOTION at conferences and in specialist and general clinical journals (ENT news, MBJ), and through workshops organised at the three national recruiting centres.

In Poland, about 200 audiologists and hearing aid providers have been directly targeted through the presentation of EVOTION platform and the model of noise-induced temporary threshold shift delivered by Mariola Sliwinska-Kowalska (NIOM) at the IV Symposium of the Polish Association of Audiologists in Poznan. Many more audiologists received information on EVOTION through an article, which was published in a specialized magazine for this professional group.

#### 4.2.3 Patients

The ongoing clinical validation study and calls for participation by all clinics spread the word about the project among the hearing impaired population. Huge numbers of patients expressed an interest to participate and many of them were eligible and were actually recruited. Participants often spoke about the



project to friends and relatives with subsequent enquiries for participation. Some participants were particularly enthusiastic about the project, e.g. a UCL patient who posted a link about it on her social media page about hearing loss.

In Great Britain, patients have been targeted for EVOTION by contact with specific UK based patient charities (Ear Foundation, Action on Hearing) which have placed information about EVOTION on their websites. Patients and the public have also been targeted through activities such as the GST patient recruitment drive including a BBC television news item, public science workshops (Pint of Science UK), School leavers' workshop, local healthcare providers brochures and local news websites in the areas where recruitment has been carried out.

Patients recruitment drive 07-2018 - GST designed and executed a programme of events to facilitate access to recruitment for potentially eligible participants to EVOTION during the peak recruitment periods from April to September 2018. This was executed in conjunction with the Public and Patient Involvement team from King's Health Partners and was a multifaceted programme including wall displays in areas with high access rates by hearing impaired populations, communication with local and regional press, and social media usage.

In Greece, UoA has reached patients through the otologic and musicians clinic and through promotional campaign and participation to an event other than conference or workshop. The campaign focused on patients who are prone to music-induced hearing loss, including sound engineers, musicians and singers.

PRA presented EVOTION to a group of representatives of the Pazardzhik Territorial Organisation of the Union of Deaf People in Bulgaria (patients' user group) during their organisation's internal workshop. This is the largest HL patients' NGO in the country mainly protecting the interests of deaf people. Their involvement in the upcoming validation of the platform as a policy-making tool was discussed.

In addition to dissemination activities of EVOTION Partners, great support has been given by the Vice President of the European Federation of Hard of Hearing, Ms. Lidia Best, who holds an active seat in the External Advisory Board to EVOTION. Through this contact EVOTION is planning to disseminate directly to the European community patient or hearing impaired association during the 3<sup>rd</sup> year.

### 4.3 Other stakeholders

EVOTION project dissemination activities also reached out to other stakeholders such as academics, medical doctors, clinicians other than audiologists, staff from university professional services and people from the industry.

As a Consortium we have identified almost 40 stakeholders in UK, Denmark, Greece, Poland, Croatia, Italy, and Bulgaria particularly interested in EVOTION outcomes. These are different types of bodies including public health authorities, governmental bodies, non-governmental organizations (NGO) educational institutions (Universities), health professionals institutions (hospitals), hearing aid professionals organizations, patients associations and non-profit organizations. The end-product of EVOTION will be presented at various stages through contact persons of identified stakeholders, making the implementation of EVOTION solutions more efficient.



## 5 Monitoring Feedback of Dissemination Activities

The general feedback on EVOTION dissemination is positive, people acknowledge the ambitious scope, e.g. the significant number of participants embedded in every day hearing care. People are also curious on what the Public Hearing Health Policies means, and their feedback is similar to the feedback from policy makers, that they would like to see tangible demonstrations of how EVOTION makes use of data from users and clinical records to support health policies. The Consortium is well aware of this wish and many of the upcoming deliverables, in particular D3.2 PHPDM Models v2, which has been rescheduled for January 2019.

## 6 Concluding Remarks

In conclusion, significant progress has been achieved in the area disseminating goals and results of the EVOTION project, as well as sharing project information with wide groups of potential EVOTION platform users. The periodic plan set for months 13-24 has been executed in full. The number of scientific publications increased significantly (from eight to fourteen), while the research results have been disseminated during 40 conferences and scientific symposia.

The progress in the area of promotional campaigns and synergies with other external research exceeded original plans. Special emphasis was put on European programs executed within the H2020 framework. More potential users were reached thanks to employment of social media, which was supported by launching of 4 new internet platforms. The requirements contained in conclusions of the D8.1 report have been fulfilled by increasing the number of articles in non-specialized magazines from 1 to 4. EVOTION project was also presented at industrial exhibitions.

In the upcoming, third year of the project, emphasis will be put on fulfilling the European Commission recommendations, submitted by the Reviewers to the EVOTION Interim Report in M18. Namely, efforts will concentrate on maximizing publications in referred scientific journals and strengthening links between data collected by EVOTION and public (health) policy impact. Authors of the project expect that the number of such papers will grow quickly in the third period of the project, as more clinical research results become available, the demonstration models are completed, and the EVOTION platform is validated.

EVOTION platform will be validated by questionnaires and qualitative analysis combined with conversational analysis (includes audio-visual recording) on small focus groups (Murphy et al. 1998, Dawes et al. 2014). Validation process will be in line with Expected Impacts and Key Success Indicators. As soon as EVOTION platform becomes validated, a special strategy will be developed for enhancing collaboration with external policymaking partners and stakeholders. Validation and possible platform outcomes will also be disseminated to publicity.

The main message behind the EVOTION project – “[Big Data Supporting Public Hearing Health Policies](#)” will still remain the guideline for all the dissemination activities that will be pursued onwards.

## References

- Anisetti, M., Ardagna, C., Bellandi, V., Cremonini, M., Frati, F., Damiani, E., n.d. Privacy-aware Big Data Analytics as a Service for Public Health Policies in Smart Cities. *Sustain. Cities Soc.* To appear <https://doi.org/doi:10.1016/j.scs.2017.12.019>.
- Anisetti, M., Bellandi, V., Cremonini, M., Damiani, E., Maggesi, J., 2017. Big Data Platform for Public Health Policies, in: *Proceedings of the 2017 IEEE Smart World Congress*. Presented at the 2017 IEEE Smart World Congress, San Francisco, CA.
- Brdarić, D., 2016. *Predstavljeni Obzor 2020.*, Erasmus+, CEEPUS i EVOTION.
- Dritsakis, G., Kikidis, D., Koloutsou, N., Murdin, L., Bibas, A., Ploumidou, K., Laplante-Lévesque, A., Pontoppidan N.H., Bamiou, D.-E., 2017. Clinical Validation of a Public Health Policy Making Platform for Hearing Loss (EVOTION): Protocol for a Big Data Study. *BMJ Open*; 8 2017. Open access DOI: 10.1136/bmjopen-2017-020978.
- Dudarewicz, A., Pawlaczyk-Łuszczynska, M., Śliwińska-Kowalska, M., Katrakazas, P., Pontoppidan, N.H., Koutsouris, D., Zaborowski, K. 2018. Predicting impact of loud incidents on individual hearing for public health policy in the framework of EVOTION. *Proc. of the 11th European Congress and Exposition on Noise Control Engineering – EURONOISE 2018, Heraklion, Crete - Greece | 27-31 May 2018; 375-380.* [http://www.euronoise2018.eu/docs/papers/65\\_Euronoise2018.pdf](http://www.euronoise2018.eu/docs/papers/65_Euronoise2018.pdf).
- Sliwiska-Kowalska, M., Pawlaczyk-Luszczynska, M., Dudarewicz, A., Zaborowski, K. 2018. EVOTION platform as a tool of prevention of noise-induced hearing loss in hearing impaired subjects using hearing aids. (in Polish). *Biuletyn Polskiego Stowarzyszenia Protetyków Słuchu* 2018; 70(2): 19-20. <http://psps.pl/uploads/Biuletyn/b70.pdf>
- Dudarewicz, A., Zaborowski, K., Wolniakowska, A., Pawlaczyk-Luszczynska, M., Sliwiska-Kowalska, M. 2018. The Risk of Temporary Hearing Threshold Shift in Bartenders. *Proc. of the 47th International Congress and Exposition on Noise Control Engineering „Inter-Noise 2018”, Chicago, USA, 26-29.08.2018; 1-12.* <https://internoise2018.org/>.
- Gutenberg, J., Katrakazas, P., Trenkova, L., Murdin, L., Brdarić, D., Koloutsou, N., Ploumidou, K., Pontoppidan, N. H., Laplante-Lévesque, A. 2018. Big Data for Sound Policies: Toward Evidence-Informed Hearing Health Policies. e *Special Issue: 3rd International Meeting on Internet and Audiology 2018*.
- Gutenberg, J., Katrakazas, P., Trenkova, L., Murdin, L., Brdarić, D., Koloutsou, N., Ploumidou, K., Pontoppidan, N. H., Laplante-Lévesque, A. 2018. Big Data for Sound Policies: Towards Evidence-Informed Hearing Health Policies. *American Journal of Audiology* 2018.
- Ktrakazas, P., Trenkova, L., Milas, J., Brdaric, D., Koutsouris, D., 2017. The EVOTION Decision Support System: Utilizing it for Public Health Policy-making in Hearing Loss, in: *Conference Proceedings ICIMTH 2017*. Presented at the ICIMTH 2017, Athens.
- Kikidis, D., Bibas, A., Koutsouris, D., Katrakazas, P., Pontoppidan, N.H., Spanoudakis, G., 2017. Evotion project: Big data collection through hearing aids towards public health policy improvement, in: *4th Congress of European ORL*. Presented at the 4th Congress of European ORL, Barcelona, Spain.
- Meedom, N.H., Pontoppidan, N.H., Kønig, T., Vatti, M., 2016. Project Website and Communication Infrastructure, Deliverable No. 1.1 to the EVOTION-727521 Project funded by the European Union. Eriksholm Research Centre, Oticon A/S, Oticon, Denmark.
- Pontoppidan, N.H., Li, X., Bramsløw, L., Johansen, B., Nielsen, C., Hafez, A., Pedersen, M.K., 2017. Data-driven hearing care with time stamped data-logging, in: *Proceedings of International Symposium on Auditory and Audiological Research (ISAAR)*. Presented at the International Symposium on Auditory and Audiological Research (ISAAR), Denmark.

Prasinos, M., Spanoudakis, G., Koutsouris, D., 2017. Towards a Model-Driven Platform for Evidence based Public Health Policy Making, in: 29th International Conference on Software Engineering and Knowledge Engineering. Presented at the 29th International Conference on Software Engineering and Knowledge Engineering, Pittsburgh, US. doi:10.18293/SEKE2017-035.

Spanoudakis, G., Kikidis, D., Bibas, A., Katrakazas, P., Koutsouris, D. & Pontopidan, N. H. 2017. Public health policy for management of hearing impairments based on big data analytics: EVOTION at Genesis. Proceeding of the 17th International Conference on Bioinformatics and Bioengineering (BIBE 2017), Washington, USA, 23-25 October 2017. <http://openaccess.city.ac.uk/18205/>.

Tietz, L.H., Katrakazas, P., Laplante-Lévesque, A., Pontoppidan, N.H., Koloutsou, N., Spanoudakis, G., Koutsouris, D., 2017. Associations between hearing performance and physiological measures - an overview and outlook, in: Conference Proceedings ICIMTH. Presented at the ICIMTH 2017, Athens.

Trenkova, L., 2016. Областна администрация Пазарджик е партньор по международния проект EVOTION.

Trenkova, L., Spanoudakis, G., Laplante-Lévesque, A., Smith, A., Milas, J., Brdarić, D., 2017. Decision modelling in Public Health Policy-making: EVOTION and Hearing Loss, in: Data 2017. Presented at the Data 2017, London.

World Health Organization, 2017. WHO resolution on Prevention of deafness and hearing loss.

[www.h2020evotion.eu](http://www.h2020evotion.eu)

Ye, B., Basdekis, I., Smyrlis, M., Spanoudakis, G., Koloutsou, K. A Big Data Repository and Architecture for Managing Hearing Loss Related Data. Proc. of the Biomedical and Health Informatics (BHI) 2018 and the IEEE Conference on Body Sensor Networks (BSN), Las Vegas, Nevada March 2018 (MoP0.73). DOI: 10.1109/BHI.2018.8.

APPENDIX I: Spreadsheet of SyGMA dissemination activities in EVOTION project







Researcher	Dissemination Activities	Sigma Dissemination Activities (To be completed only by WP8)	Venue	Date	Title	Authors	Presenters	Journal / Conference /	Open Access	Articles / links	Number of Participants	Other comments
UNIMI	Oral presentation at workshops	Organization of workshops	Criminology	2017-09	The application of an EVOTON-like platform for different Privacy-aware Big Data Analytics as a Service for Public Health policies in Smart Cities	Anisetti 2017 Anisetti L.M., Adalgoso, C., Bellandi, V., Cimmino, M., Frati, F., Damiani, E.	Marco Anisetti, UNIMI	Revolutions in Innovation Workshops, "La Ricerca a supporto				
UNIMI	Open access journal publications	Articles in Journal	UK	2017-10				Journal of Sustainable Cities and Society				
UNIMI	Commission with EU projects	Participation to Work shop	Milan, Italy	2017-12			Marco Anisetti, UNIMI	B2017 coordinator user focus group meeting				
UNIMI	Oral presentation at workshops	Participation to Work shop	Kidian, China	2018	Big Data Assisted public health policy making in Smart Cities		Marco Anisetti, UNIMI	Kidian University				
UNIMI	Other	Other publication eg. proceedings	Elsevier	2018	Elsevier Series on "Next Generation Technology Driven Medicine And Smart Healthcare" accepted for publication	Eriesto Damiani, UNIMI (as Editor)		Elsevier				
Usa	Brochures	Flyers	Athens, Greece	2018-05	Recruitment brochure for patients, translated and modified	Katerina Vardoulaki						
Usa	Brochures	Other	Kalamata, Greece	2018-05	14th Annual Conference of Otolaryngology	Krisis, D., Vardoulaki K					National Conference, 150 participants	
Usa	Brochures	Other	Loutra, Greece	2018-10	24th Conference of Otolaryngology	Krisis, D., Blaz, A., Koutouris, D., Karakostas, P., Portogedina, N.H., Spasoulakis, G					National Conference, 400 participants	
Usa	Posters at conferences	Participation to Conference	Barcelona, Spain	2017-10	EVOTON project: Big data collection through hearing aids towards public health ed for improvement		Dimitris Kridis, Usa	4th Congress of European ORL				
Usa	Promotional campaign	Participation to an event other than con	Athens, Greece	2017-05	Hearing disorders in musicians		Katerina Vardoulaki	Music Word Expo-Conference, Athens		<a href="http://www.european.orl.com/">http://www.european.orl.com/</a>		
Usa	Promotional campaign	Participation to an event other than con	Athens, Greece	2017-11	Professionals exposed to hearing loss in		Katerina Vardoulaki	Audis Engineer Seminar, AIR RA Studios, Athens				
Usa	Promotional campaign	Participation to an event other than con	Athens, Greece	2018-01	Signify, Voice and Hearing		Katerina Vardoulaki	Modern Music Creation and New Technology (Master %), Department of Musical Studies, University of Athens				



APPENDIX II: Brochure targeting health professionals

# EVOTION

BIG DATA SUPPORTING PUBLIC HEARING HEALTH POLICIES

## Doing more?

The EVOTION project is the first of its kind.

It has successfully initiated the largest research study of hearing problems with concurrent collection of dynamic data from patients in standard clinical pathway.

The cross-European partner organizations includes policy makers, technicians, clinicians, and researchers working closely together to create this innovative Big data platform.

We invite healthcare stakeholders, industry and researchers for out-of-box collaboration in the field of Big data in healthcare through profound insights about the factors that affect hearing health and wellbeing.



Follow us on Twitter

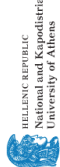
# EVOTION

BIG DATA SUPPORTING PUBLIC HEARING HEALTH POLICIES

**oticon**  
PEOPLE FIRST



**CITY UNIVERSITY LONDON**



**NOTER INSTITUTE OF OCCUPATIONAL MEDICINE**

**Guy's and St Thomas' NHS Foundation Trust**



Eriksholm Research Centre / Oticon

University College London/Ear Institute

Institute of Communication and Computer Systems (ICCS), NTUA

City University London, CeNACS

University of Athens, Dep of Otolaryngology

Noter Institute of Occupational Medicine

Guy's and St Thomas' NHS Foundation Trust

Athens Technology Centre SA

Institute of Public Health for the Osijek-Baranya County

Pazardzhik Regional Administration

University of Milan, SESAR

Athens Medical Group

Empelor GmbH

## Contact:

Homepage: <http://h2020evotion.eu>

e-mail: [info@h2020evotion.eu](mailto:info@h2020evotion.eu)



EVOTION is the first project of its kind.

Our mission is to enable and realize hearing health policies qualified through collection and integration of solid evidence and the development of a Big Data informed decision support system for the improvement of hearing loss prevention, rehabilitation, and treatment.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 727521.

## Background

Hearing loss is, according to World Health Organization, one of the most prevalent chronic conditions and the 5th cause of disability.

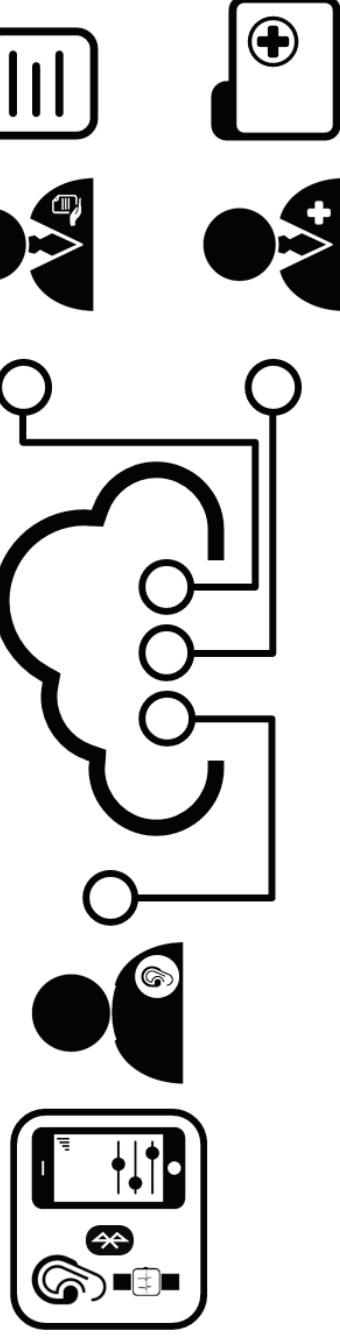
Hearing loss increases the risk of cognitive decline, mental illness, and depression, and leads to social isolation, unemployment/early retirement, loss of income and work discrimination.

The main intervention for hearing loss is the provision of hearing aids. However, there is limited evidence of use and thus need for more evidence to support policy making within the area of hearing health care.

## Method

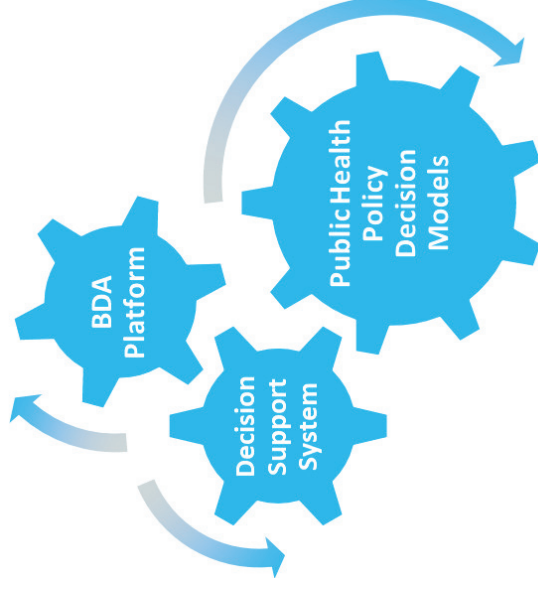
EVOTION is building an innovative multi stakeholder demonstration platform that combines and analyses heterogeneous big data collected from both clinical repositories and from 1000+ patients' everyday treatment.

The usability and the impact of the EVOTION platform may be extended by integration of app and web interfaces, which will allow relevant actors, including patients, health professionals and health policy makers, to interact and integrate their user requirements with the platform.



## Outcome

The EVOTION platform will help health care professionals and health policy makers to identify, simulate, select and monitor the effectiveness of current and new hearing loss interventions.



Data provided by self-management of hearing aids offer different actors different perspectives from the same data:

- For the patients, the self-management data enables personalisation of their hearing aid settings without the need to formulate the needs verbally.
- For hearing health care professionals, the same data provide insights allowing them to monitor and improve the benefit of treatments.

