



MARKOPOLO

Noise and/or ultrafine particulate matter induced cerebral and cardiovascular damage: novel insights from experimental and epidemiological brain-heart axis biomarkers and computational models

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Deliverable 17.2

Publication of Project Website

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Dissemination Level		
PU	Public — fully open (automatically posted online)	X
SEN	Sensitive — limited under the conditions of the Grant Agreement	

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SUMMARY

This document provides a comprehensive overview of the fully developed, GDPR-conform MARKOPOLO project website. It outlines the site's structure, key content areas, and user experience features designed to effectively communicate the project's objectives, progress, and outcomes. The summary highlights the integration of visual elements, interactive components, and accessibility features to ensure broad stakeholder engagement. Overall, the document serves as a reference point for evaluating the website's functionality, design, and alignment with EU project visibility standards.

Link to website: <https://markersofpollution-markopolo.eu/>

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1 EXECUTIVE SUMMARY

On 28 April 2025, the fully functional project website of MARKOPOLO (<https://markersofpollution-markopolo.eu/>), part of work package 17, went online. This website replaces the interim one-page website, which went online on 01 January 2025.

The now fully operational website offers much more detailed information about the project. It includes key features for consortium members and interested researchers, as well as interactive sections tailored for patients, the general public, healthcare professionals, decision-makers, and politicians.

Pages dedicated to disseminating the project's results include the publications page, project news, the download section, the public deliverables page, and a newsletter sign-up feature. In addition, two pages have been created to support the training of scientists and healthcare professionals, providing access to training materials, courses, and masterclass videos throughout the project's duration.

The website's language is targeted at an educated but non-scientific general public, and its content will be updated with project news, new team members, new downloads, the web-version of the project's info-brochure, key results, new publications, meetings for scientists and events for patients, videos and training materials on a regular basis as the project progresses.



Figure 1: The full MARKOPOLO project website on a screen.

2 DELIVERABLE REPORT

2.1 Purpose and scope

The fully developed website offers detailed information about the project, key tools for consortium members and researchers, and accessible content for patients, the public, healthcare professionals, decision-makers, policymakers and politicians. It features dedicated pages for publications, news, press coverage, downloads, and training resources for scientists and clinicians, including courses and masterclass videos. Aimed at an educated general audience, the site is regularly updated with project news, team updates, key results, publications, events, and new training materials.

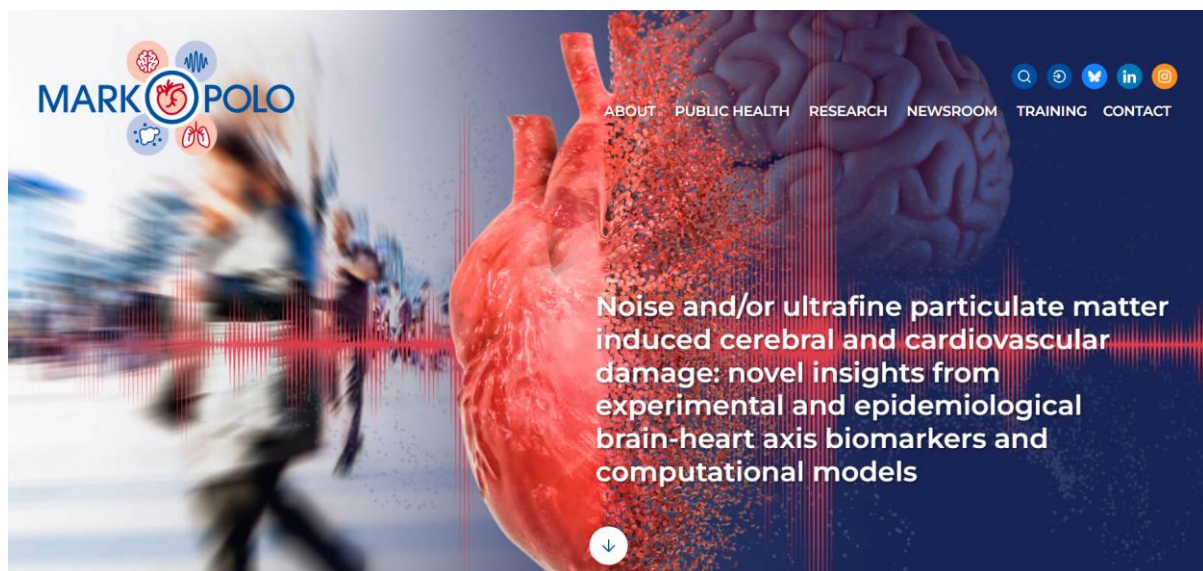


Figure 2: The landing page of the MARKOPOLO website.

2.2 Tour of the fully-fledged project website

The new website was developed by concentris, and its content checked, edited and verified by the project's coordinator, Prof. Dr. Andreas Daiber from UMC-Mainz. In comparison to the initial one-page website, it consists of the following new pages and features:

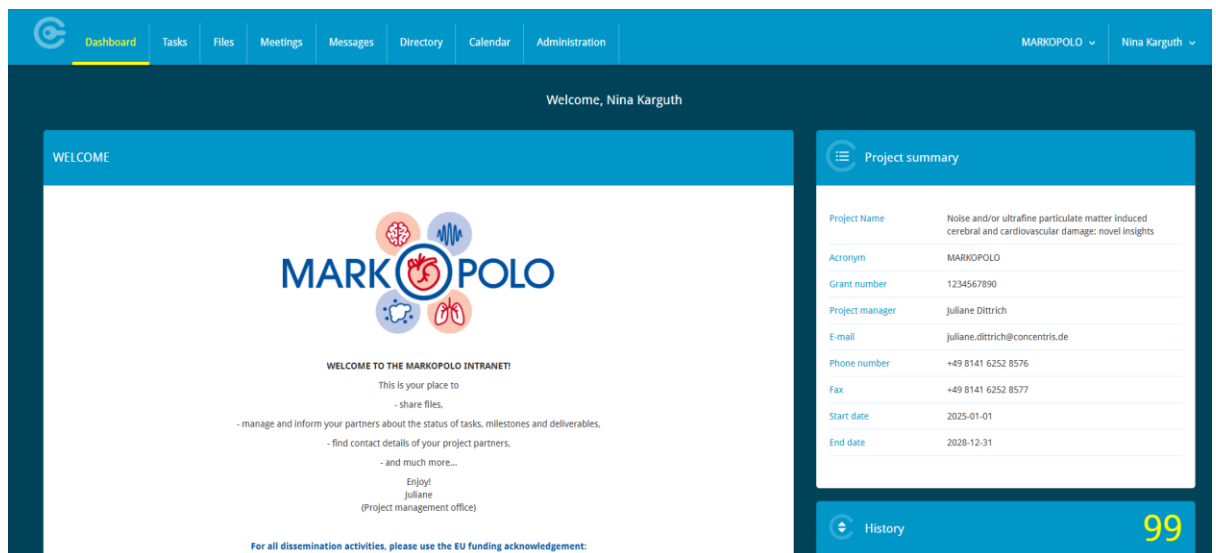
- A fully developed navigation menu with five first-level items (About, For patients & public, Research, News & events, Contact) and several second-level items:



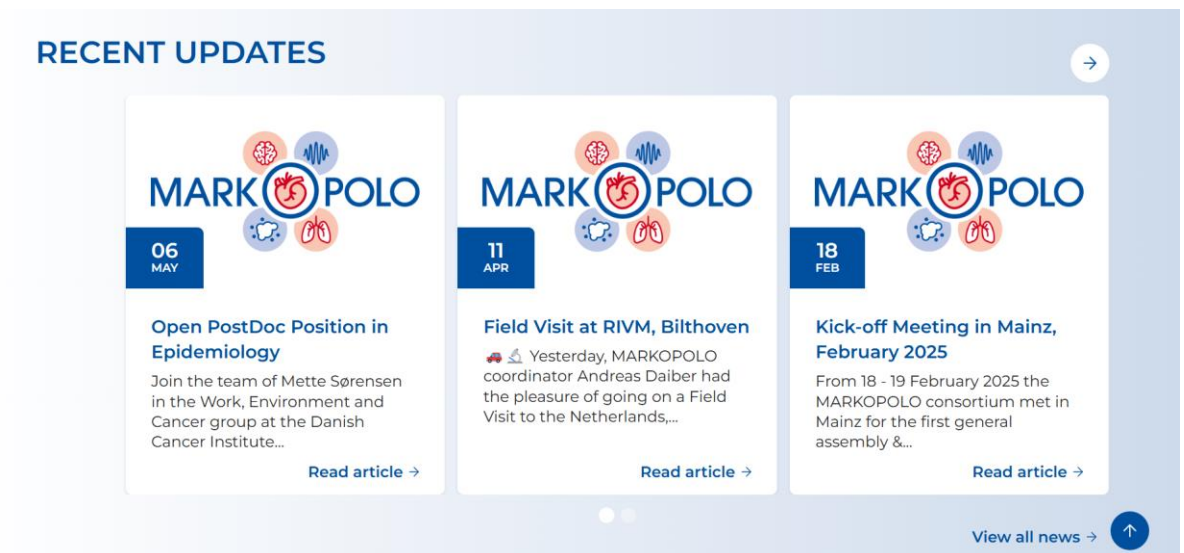
- Search function, password protected member login to the project intranet, as well as links to MARKOPOLO's social media channels are placed prominently at the top-right corner:



- The password protected internal area (intranet) is available to all MARKOPOLO partners. It serves as a central storage for MARKOPOLO reference documents where confidential files can be exchanged safely. Moreover, it includes a progress monitoring tool with a reminder and notification function. The MARKOPOLO intranet also contains a registration tool for project meetings as well as directory of all MARKOPOLO partners to facilitate easy communication across the project. The MARKOPOLO intranet went online on 12 March 2025. Individual logins including a manual were sent to all MARKOPOLO partners.



- An introductory landing page featuring the most recent events and news:



- A page dedicated to MARKOPOLO publications:



- Further down, the landing page touches on "About" and "Our Vision & Objectives" content:

ABOUT MARKOPOLO

Traffic noise and air pollution, especially particulate matter (PM) and ultrafine particles (UFP), are closely linked environmental risk factors that contribute significantly to the development of diseases such as diabetes, hypertension and atherosclerosis.



MARKOPOLO aims to investigate the impact of traffic noise and air pollution, especially fine and ultrafine particulate matter, on human health through an innovative translational approach. Experimental and computational models are used in clinical, interventional and epidemiological studies.

One of the main objectives is to identify disease-relevant biomarkers and to understand the molecular mechanisms involved in diseases of the brain, lung and cardiovascular system. The "from bench-to-bedside" approach uses extensive knowledge of the brain-heart connection and applies modern methods to better understand the causes of disease.

- At the bottom of the landing page, visitors are invited to subscribe to the MARKOPOLO newsletter:

Would you like to receive our newsletter?

- 20 subpages with detailed information about the project, its vision, all consortium partner institutions, external committees, why it matters, useful links, downloads, the different work packages, publications, news, press coverage, relevant scientific conferences or project meetings and training opportunities.
- The project partners are presented collectively in form of an EU-map on the homepage, and individually on separate pages in form of profile pictures, contact information and a brief textual presentation of the respective institute.

15 partners, 10 countries – one goal

University Medical Center of the Johannes Gutenberg University Mainz (UMC-MAINZ)	Mainz, Germany
UMC-Mainz Neuropathology (INSTITUTE OF NEUROPATHOLOGY)	Mainz, Germany
Università degli Studi di Padova (UNIPD)	Padova, Italy
Medical University of South Carolina (MUSC)	Charleston, US
Vytautas Magnus University (VMU)	Kaunas regione Lithuania
Faculty of Medicine, University of Belgrade (MFUB)	Belgrade, Serbia
Associated Entity	Belgrade, Serbia

Next member

University Medical Center of the Johannes Gutenberg University Mainz

Team Leader



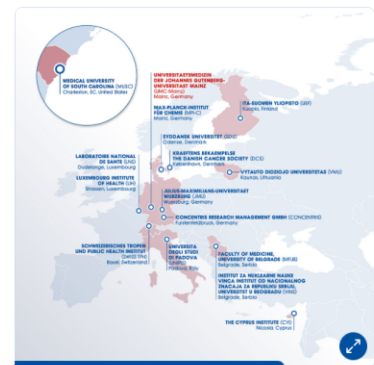
Andreas Daiber
Univ.-Prof., Head of Laboratory of Molecular Cardiology
Scientific Coordinator of MARKOPOLO

About UMC-Mainz

The University Medical Center Mainz (UMC-Mainz) engages approx. 8,500 employees, making it one of the largest employing entities of the state of Rhineland-Palatinate. It encompasses more than 60 clinics, institutes and departments, and houses two central health care centres, a pharmacy, and a transfusion centre. The hospital more than 1,600 beds and treats around 62,000 patients every year. Approximately 240,000 additional patients are treated every year on an outpatient basis. All of the clinics and institutes work together on an interdisciplinary basis to ensure that patients receive the highest quality care and that the students and researchers are augmenting scientific and educational development. The Center for Cardiology 1 at UMC-Mainz conducts high impact research on environmental exposures and adverse health effects, both at the clinical and preclinical level.

The exposures and cardiovascular research will be performed in the Laboratory of Molecular Cardiology, Department of Cardiology 1, University Medical Center of the Johannes Gutenberg University, Mainz Germany. Importantly, we have successfully applied for an exposure system for noise and/or particulate matter (TSE Systems, Bad Homburg, Germany). The TSE exposure chamber is equipped with a nebulizer for commercial particle delivery, a soot generator DNP digital 3000 for nanoparticle generation (Palas) and loud speakers for studies on the effects of combined noise and PM exposures. The in-house methodologies are further enriched by access to 3D-light-sheet microscopy, echocardiography, intra-vital microscopy, IVIS whole body fluorescence/chemiluminescence imager, PET-CT and MRT for advanced imaging.

The neurobiological research will be performed at the Institute of Anatomy in the



Location overview of MARKOPOLO partners (click the map to enlarge)

UNIVERSITÄTSMEDIZIN.
Zentrum für Kardiologie
Kardiologie I

CONTACT

University Medical Center of the Johannes Gutenberg University Mainz
UMC-Mainz
Cardiology I
Langenbeckstr. 1
55131 Mainz
Germany

Visit website ↗



CONTACT

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Department of Neuroanatomy
Johann-Joachim-Becher-Weg 13
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Germany

QUICK TAKE

- [Vision & Objectives](#) →
- [Consortium partners](#) →
- [Work packages](#) →
- [Publications](#) →
- [Downloads](#) →
- [Contact](#) →

- In addition to links to the imprint and the privacy policy, the website footer contains the mandatory funding and liability acknowledgement, quick links to the project's social media channels, as well as a link to the member login and contact form:



- Under the menu item “News & events” → “Events”, there is the event registration function: MARKOPOLO members can easily register for upcoming meetings.

3 CONCLUSION

In conclusion, we are confident that the project website will serve as a central go-to platform for the general public, as well as patients, the consortium members and the scientific community when seeking key information about the project or wishing to contact a member of the consortium.

A Google Analytics account is monitoring the website's traffic since it went live in April 2025.

ACKNOWLEDGEMENT

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