Welcome to the second newsletter of HERON

Dear Readers,

The Institute of Communications and Computer Systems (ICCS) and project's consortium are pleased to welcome you to the second newsletter of ***HERON – Improved Robotic Platform to perform Maintenance and Upgrading Roadworks.***

As we conclude the first year of HERON's implementation, we would like to take this opportunity to reflect upon some of our achievements since the start of the project and share them with you.

In its first year HERON achieved several goals and objectives as per project planning. The end-user needs and requirements were identified and the work on technical work packages was launched.

HERON also used this initial year to reinforce its communications and dissemination activities. Communication channels (in the form of Project Website, social media accounts and YouTube channel) were established and collaboration with sister projects such as OMICRON, INFRAROB and PANOPTIS was solidified.

Below you will find a detailed description of several activities that were implemented in HERON. In the coming years HERON will continue its work and research to help achieve the important objectives of improved road safety, environmental protection and advancement of sciences.

On behalf of the HERON consortium, we wish you a pleasant read.

HERON Coordinator
ICCS

About HERON

Robotics, Artificial Intelligence and Augmented Reality are creating new opportunities and benefits for society. They can prove immensely useful for road transport infrastructure. On one hand, they can improve occupational safety, create a healthy working environment for road workers and reduce fatalities due to accidents and toxic fumes. On the other hand, they can also reduce traffic disruptions due to maintenance works and decrease repair costs.

In this context HERON aims to develop an integrated automated system to perform maintenance and upgrading roadworks, such as sealing cracks, patching potholes, rejuvenating asphalt, autonomously replacing CUD elements and painting markings. HERON also intends to support the pre/post-intervention phases by facilitating visual inspections and helping dispense/remove traffic cones in an automated and controlled manner.

READ MORE

HERON USER NEEDS ASSESSMENT

In the first year of HERON's implementation, the core focus of the project was to define user requirements, in order to develop the overall system architecture. The specifications of the system architecture will define the tools that will now be developed in the technical work packages of the project to meet the user needs. To this end continued discussions were held with ACCIONA and OLYMPIA ODOS, the two end-user organizations involved in the project. You can read more about user-needs assessment through the end-user needs and KPI report.

READ MORE

HERON LAUNCH OF TECHNICAL WORK PACKAGES

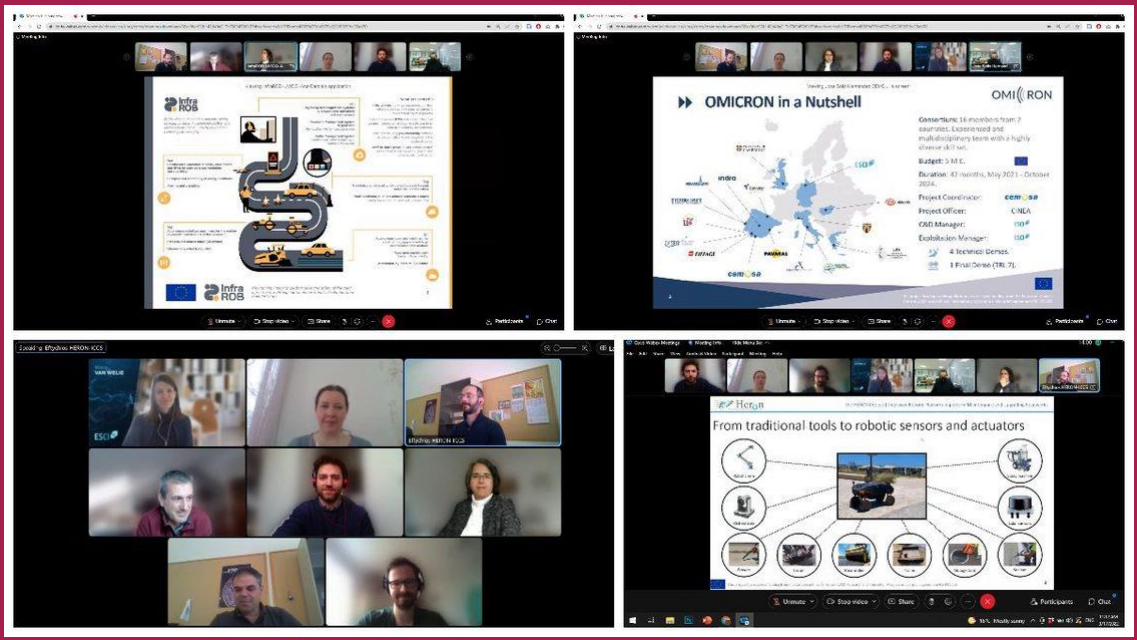
In parallel to the definition of user-needs, HERON has also launched the technical work packages of the project, which will focus on the development of AI-based Algorithms and Tools as well as Motion and High-Level Planner for HERON Automated System. The work on HERON Robotic Platform as well as Communication and Networking solutions will also be launched soon.

READ MORE

HERON JOINT MEETING WITH OMICRON AND INFRAROB PROJECTS

CORTE, leader of HERON's communication and dissemination work package, took the lead to organize the first joint meeting of HERON with sister projects INFRAROB and OMICRON. The

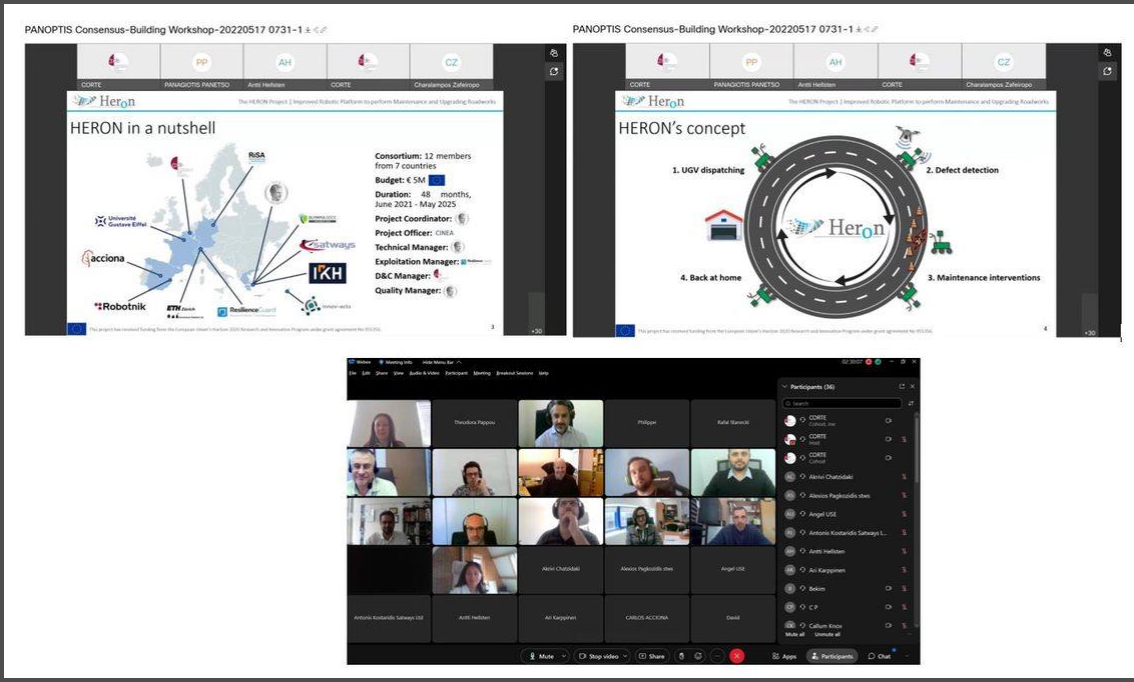
meeting was a first step towards identifying synergies between the projects and clustering activities both at research and communication levels.



READ MORE

HERON PRESENTED AT PANOPTIS FINAL EVENT

HERON was invited to participate in the PANOPTIS project's final consensus-building workshop. PANOPTIS is a Horizon 2020 EU-funded project that has developed a range of tools to improve road maintenance and increase the resilience of road transport infrastructure against extreme conditions (such as weather and natural calamities). The workshop saw the presentation of PANOPTIS results and provided an occasion for HERON to appreciate how these results could be leveraged by HERON.



READ MORE

HERON RESEARCH PRESENTED AT EGU GENERAL ASSEMBLY 2022

Mezgeen Rasol from Université Gustave Eiffel, as a researcher within the framework of HERON project, presented the work from HERON during the European Geo-science Union (EGU) General Assembly, held in Vienna (Austria) between 23-27 May 2022. The presentation was made during a special session chaired by Mezgeen Rasol, Franziska Schmidt and Silvia Lentile on Road Transport Infrastructure Monitoring and focused on Road surface friction measurement based on intelligent road sensor and machine learning approaches. The research under HERON will take forward the work done on this topic in the project PANOPTIS.

READ MORE

Around Europe and beyond

Lithuania to use drones and AI for road inspection

- The UAVs will replace specialist road vehicles for most tasks.

  READ MORE

Artificial Intelligence in Proactive Road Infrastructure Safety Management

- This report examines the most relevant cases for AI use in a transport planning context for crash prevention on an entire road network.

  READ MORE

Here's How Artificial Intelligence Will Make Roads in India Safer to Drive

- 'Intelligent Solutions for Road Safety through Technology and Engineering' (iRASTE), will identify potential accident-causing scenarios.

  READ MORE

PROJECT IN SPOTLIGHT - PANOPTIS

The purpose of the PANOPTIS project is to improve the resiliency (ability to adapt) of the road infrastructures and ensuring reliable network availability under unfavourable conditions, such as extreme weather, landslides, and earthquakes. The project's main goal is to combine down-scale climate change scenarios (applied to road infrastructure) with structural and geotechnical simulation tools, and with actual data from sensors (terrestrial and airborne) so as to provide the operators with an integrated tool able to support more effective management of their infrastructures at planning, maintenance and operation level.

PANOPTiS

Upcoming Events

- HERON will participate in the Transport Research Arena (TRA) Conference to be held in Portugal, in collaboration with project INFRAROB and OMICRON. READ MORE

Follow Us!

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 955356.