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Welcome to the first edition of the **SPATRA Project Newsletter.** We are sharing updates on our progress, use cases, and project partners as we work to improve transport systems across Europe using space-based technologies.

# About the SPATRA Project

The SPATRA Project (Space-Based Applications for Transport Monitoring and Management) leverages **European Global Navigation Satellite Systems** (EGNSS) and **Copernicus Earth observation satellites to improve road and rail transport.** Our focus is on reducing congestion, supporting infrastructure monitoring, and fostering environmentally friendly transport solutions.



# **Use Cases**



Use Case 1: Road Transport Optimization

The SPATRA project uses **satellite technology to optimize road transport by reducing congestion at border crossings and improving parking management for freight vehicles.** Through data from EGNSS and Copernicus, we enhance traffic flow, decrease waiting times, and minimize environmental impacts associated with long vehicle idling.





Use Case 2: Rail Infrastructure Monitoring

To ensure safe and reliable rail transport, **SPATRA uses Copernicus satellite** data to monitor rail track temperatures and predict potential issues caused by temperature fluctuations. Early detection of track deformations allows for timely maintenance, reducing service disruptions and enhancing rail safety.

# **Our Partners**



We collaborate with a network of leading industry experts and research institutions, including:

- **OHB Digital Services** An IT service and software company with over 30 years of experience, specializing in developing cloud-based solutions, including 24/7 commercial applications with maintenance contracts.
- <u>University of Nis (UNI) Department: Faculty of Mechanical Engineering</u>

   Engaged in research and technical expertise, contributing to the development and implementation of innovative solutions in mechanical engineering.
- <u>Zentrix Lab</u> An SME with departments in Research & Innovation and web3 development, focusing on the application of Distributed Ledger Technology (DLT), Internet of Things (IoT), and Artificial Intelligence (AI) in various fields.
- <u>Nelt</u> Founded in 1992, Nelt Group is one of t business systems in the Adriatic region in the field of logistics and distribution, employing over 5,500 people in 18 companies across 12 markets in Europe and Africa.
- **<u>Twist Robotics</u>** Specializing in robotics and buting to the advancement of robotic technologies and their applications.
- <u>Democritus University of Thrace (DUTh)</u> Through its Laboratory of Robotics and Automation (LRA), DUTh focuses on advanced research in robotics, automation, and Industry 4.0 technologies, including drone technology for applications like autonomous navigation and aerial monitoring.

# Latest News



What If We Could Transform Transportation with SPATRA?

Imagine a future where transport systems are smarter, more efficient, and environmentally sustainable. The SPATRA project is turning this vision into reality by integrating space-based technologies into Europe's transport infrastructure. By harnessing satellite data and advanced analytics, SPATRA is redefining how we manage and optimize transport systems across roads and railways.





Workshop: Advanced Satellite-Based Technology in Land Transport As part of Railcon '24, SPATRA organized a workshop on advanced satellite-based technology in land transport. Industry leaders, researchers, and project partners gathered to share insights on the practical applications of satellite technologies in improving transport infrastructure. The event highlighted SPATRA's innovative approach to integrating satellite-based monitoring and management into Europe's transport ecosystem.



## Learn more

## through space-based technology.

**SPATRA Kicks Off with a Strong Start in Prague** The official SPATRA project launch took place in Prague, where partners gathered to align on project goals and share their expertise. This collaborative meeting laid a solid foundation for advancing our mission of modernizing European transport



## Learn more

**Transport with Advanced Space Technologies** The SPATRA project has officially launched, aiming to reshape European transport using advanced space-based technologies. By integrating satellite data from EGNSS and Copernicus, the project seeks to enhance transport monitoring and management while supporting sustainable logistics. This ambitious initiative underscores SPATRA's commitment to driving innovation in the transport sector.

Press Release: SPATRA Project Embarks on Transforming European



Learn more

through innovative technologies.



SPATRA participated in Railcon '24, presenting our satellite-based transport

solutions to industry professionals. This engagement helped us gather valuable feedback and showcase our commitment to improving transport monitoring

SPATRA Showcases Innovations at Railcon '24

## SPATRA Project Website Launch

The SPATRA project website is now live, serving as a central hub for all projectrelated updates, events, and detailed information about our goals and achievements. Visitors can explore sections dedicated to our use cases, partner profiles, and the latest news. The site also provides insights into our workshops and conferences.



#### Season's Greetings from the SPATRA Project Team!

As the year comes to a close, we would like to extend our heartfelt gratitude to all our partners, collaborators, and supporters who have contributed to the success of the SPATRA project.

May this holiday season bring joy, peace, and prosperity to you and your loved ones. We look forward to continuing our journey together in the coming year, driving innovation and making great strides toward achieving our shared goals.

### Wishing you a Merry Christmas and a Happy New Year!

