PRESS RELEASE

Artificial Intelligence reaches out to transport infrastructures

- *The Tekniker technology centre is helping to speed up the digitisation of construction work for transport facilities within the scope of the INARTRANS 4.0 project*
- *The initiative, funded by the Spanish Government, will look into how AI solutions can be applied throughout all stages, from design to execution and how they can be managed and maintained*

[Eibar, October 24, 2024] – By digitising and applying new AI tools to industrial processes it will be possible to enhance production efficiency, reduce lead times and minimise costs. The construction sector and, more specifically, transport infrastructures such as railways offer a wonderful opportunity and huge margins for improvements as regards the possibility of implementing these technologies.

Faced with this scenario, the **Tekniker** technology centre, a member of the Basque Research and Technology Alliance (BRTA), is currently involved in the INARTRANS 4.0 project that kicked off earlier this year and whose main purpose is to speed up the digital transformation of the construction sector for the transport infrastructure to enhance its competitiveness by using AI solutions throughout the entire value chain.

Consequently, and within the scope of this project, AI will be applied to several key areas to develop infrastructures such as construction where the main focus is geared towards enhancing efficiency, safety, productivity and quality in all process stages, from planning to execution.

Another area will address how these technologies can be applied to the management and maintenance of infrastructures, two major operating expenses, with a view to improving efficiency, safety and sustainability.

Attention will also be paid to how AI can be used to develop an integral system that is able to analyse and manage large volumes of data originating from several sources. This system will allow for the real-time operation of infrastructures and provide efficient process automation.

An interoperability tool

Tekniker will play an outstanding role in this project when addressing these challenges thanks to its extensive experience and expertise when dealing with the technologies covered by this initiative.

One of the organisation's tasks will consist in developing a tool to guarantee interoperability when processing construction permits and managing compliance monitoring. Francisco Javier Diez, a Tekniker researcher, explains that "this solution will allow all the agents involved in the construction process, from the authorities to companies, to gain access to the same information coherently and efficiently".

Tekniker will also analyse, exploit and process critical information generated by all the construction and maintenance phases of infrastructures to improve the efficiency, safety, productivity, quality and sustainability of all the processes involved.

The researcher also states that "we will implement AI models that will allow us to optimise maintenance by continuously monitoring the progress made by an infrastructure as well as its condition to meet maintenance requirements proactively".

The INARTRANS 4.0 project that is expected to finish in December 2026 has been funded by the TransMisiones programme sponsored by CDTI and Agencia Estatal de Investigación (National research Agency). Its consortium comprises Tekniker, ACCIONA Construcción, GRUPO AZVI, INDRA Sistemas, JIG Internet Consulting, VIRTUALMECH, CTCON, INTROMAC, Alcalá University and the Polytechnic University of Madrid.

More about Tekniker

Tekniker is a technology centre that specialises in advanced manufacturing, surface & material engineering and ICTs for production. Its mission is to further growth and wellbeing via R&D&I in society as a whole by furthering the competitiveness of the industrial fabric in a sustainable manner. Tekniker is a member of the Basque Research and Technology Alliance (BRTA).

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Proyecto MIG-20232067 (proyectos I+D+i en "líneas estratégicas" – Transmisiones 2023) financiado por MICIU/AEI/ 10.13039/501100011033.