# National Highways explores robotics for safer inspections



National Highways is exploring the integration of robotics in its inspection processes to enhance safety for its engineers. This initiative comes as the organisation seeks innovative methods to conduct inspections along busy motorways, particularly in scenarios where engineers must navigate precarious conditions, such as slippery slopes and proximity to large structures like signage gantries.

On 20 September 2023, National Highways hosted an 'Industry Day' workshop in collaboration with Jacobs and the University of Manchester. This event, identified as the first Industry Engagement Activity (IdEA) by the CRADLE team, was designed to address the challenges faced by the highway inspection sector. The morning session involved discussions among representatives from National Highways, Jacobs, and the University of Manchester, focusing on the various difficulties encountered during road inspections. In the afternoon, participants prioritised these challenges based on their urgency and potential impact.

The workshop facilitated constructive dialogue about the use of robotics and remote operations, a concept that has arisen from prior interactions between National Highways and Jacobs. The organisations aim to enhance the safety of inspection processes, thereby reducing the time personnel spend in hazardous environments.

Following the workshop, the CRADLE team introduced several technological solutions that leverage robotics capabilities tailored for the highway inspection sector. These new implementations demonstrate the potential of automation to transform traditional business practices in a critical public safety domain, marking a significant advancement in the relationship between technology and infrastructure maintenance.

The discussions and proposals from the workshop indicate a forward-looking approach by National Highways towards utilising emerging technologies, as the industry contemplates future trends in AI and automation that could reshape its operational landscape.

Source: [Noah Wire Services](https://www.noahwire.com)

## Bibliography

1. <https://cradlerobotics.co.uk/cradle-industry-day-national-highways/> - Corroborates the hosting of the 'Industry Day' workshop by National Highways in collaboration with Jacobs and the University of Manchester to discuss highway inspection challenges and the use of robotics and remote operations.
2. <https://cradlerobotics.co.uk/cradle-industry-day-national-highways/> - Details the morning and afternoon sessions of the workshop, including discussions and prioritization of challenges faced by the highway inspection sector.
3. <https://cradlerobotics.co.uk/cradle-industry-day-national-highways/> - Explains the aim to enhance safety through robotics and remote operations, reducing the time personnel spend in hazardous environments.
4. <https://nationalhighways.co.uk/national-highways-trials-a-spot-of-innovation-with-robotic-dog-surveys-in-south-west/> - Supports the use of robotics in inspection processes, specifically the trial of a robotic dog for survey work to enhance safety and efficiency.
5. <https://nationalhighways.co.uk/national-highways-trials-a-spot-of-innovation-with-robotic-dog-surveys-in-south-west/> - Describes the collaboration between National Highways, AECOM, and BAM Ritchies in using robotic technology for geotechnical inspections.
6. <https://highways.dot.gov/public-roads/winter-1995/robotics-highway-construction-and-maintenance> - Provides context on the broader use of robotics in highway construction and maintenance to enhance safety, quality, and productivity.
7. <https://highways.dot.gov/public-roads/winter-1995/robotics-highway-construction-and-maintenance> - Details a study by NIST and FHWA on the application of robotics in highway projects, which aligns with National Highways' innovative approaches.
8. <https://cradlerobotics.co.uk/cradle-industry-day-national-highways/> - Mentions the CRADLE team's assessment of potential robotic inspection scenarios and the development of solutions following the workshop.
9. <https://nationalhighways.co.uk/national-highways-trials-a-spot-of-innovation-with-robotic-dog-surveys-in-south-west/> - Highlights the testing of the robotic dog's capabilities in various terrains and environments to determine its effectiveness in highway inspections.
10. <https://cradlerobotics.co.uk/cradle-industry-day-national-highways/> - Indicates the forward-looking approach by National Highways towards utilizing emerging technologies like AI and automation in infrastructure maintenance.
11. <https://nationalhighways.co.uk/suppliers/events/> - Supports the ongoing engagement and collaboration by National Highways with various stakeholders through workshops and events to address sector challenges.
12. <https://news.google.com/rss/articles/CBMinwFBVV95cUxPU29CczhpOFVFc29LN2RLakdFQUxSOHZNbm5PdnhZMmU5M1JkckxoajUzYXpuSGJKVGFLSHNKeFVZNm9KaUVVc0JrbWRSaU15S0xQX3JoeU9XazFmZWFyVEVIdGZ3bG16R2o4WTdUVWt0alpuRkppUXZpZkhWdHNINkNDZlUtb2xoeDRMeFpLWjdsV0ZkYUl6R3RKOGV2cTg?oc=5&hl=en-US&gl=US&ceid=US:en> - Please view link - unable to able to access data