

Saudi Arabia Deploys AI-Powered Road Fleet to Safeguard Pilgrims as Hajj Begins

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Mecca

In preparation for this year's Hajj season, the Saudi Roads General Authority (RGA) has deployed the world's largest and most advanced AI-powered road inspection fleet. Comprising 18 high-tech units across five cutting-edge technologies, the fleet is designed to boost road safety, enhance quality, and ensure an optimal pilgrim experience.

The fleet includes specialized equipment for scanning surface damage, measuring the International Roughness Index (IRI), assessing pavement layer thickness, evaluating structural deflection, and testing skid resistance. Among the highlights are seven surface damage scanners equipped with high-resolution cameras, laser units, GPS, and data storage systems for precise analysis and immediate maintenance decisions, especially critical on routes to the holy sites.

Four IRI units evaluate road smoothness and driving comfort using laser sensors. Another three use multi-frequency radar to check pavement layer thickness, while another three measure road deflection under traffic loads using advanced sensor systems. A single skid resistance unit simulates rainy conditions to test friction levels and ensure safety in adverse weather.

The fleet is completed by a mobile digital imaging scanner that inspects unpaved elements such as road signs and safety barriers, identifying potential risks and optimising maintenance planning.

The Roads General Authority, the national regulator of Saudi Arabia's Road sector, aims to elevate the quality of roads to rank sixth globally by 2030 and reduce road fatalities to fewer than five per 100,000 people. Saudi Arabia currently boasts the world's leading intercity road connectivity, with a total network exceeding 73,000 kilometres. For further inquiries, please contact: Media@rga.gov.sa

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