

# UP using AI & Swiss tech for building quality e-ways

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**Lucknow:** UP govt is using artificial intelligence and Swiss sensor technology to ensure the quality, safety and long-term durability of expressway projects in the state.

A state govt spokesperson said that the partnership between the UP Expressways Industrial Development Authority (UPEIDA) and Switzerland's ETH Zurich and RTDT Laboratories AG is part of this broader strategy aimed at making road construction data-driven and based on real-time monitoring. The technology was also used in the Ganga expressway recently inaugurated by PM Narendra Modi.

Until now, the quality assessment of roads was generally conducted after the completion of construction, often increasing both the time and cost involved in rectifying defects.

The spokesperson said that through sensor-based modules, continuous monitoring of road quality is being carried out during construction itself, enabling any shortcomings, which are then corrected immediately.

The most significant



File photo

A view of the newly inaugurated Ganga Expressway

aspect of this technology is a specially equipped vehicle fitted with seven accelerometer sensors. This vehicle travels across every lane of the expressway, collecting data on surface uniformity, elevation variations and vibrations.

The data provides a scientific assessment of the actual condition of the road, which is considered far more accurate than traditional visual inspections.

The data obtained from the sensors is processed through AI software, which categorises road quality as 'excellent,' 'good,' and 'poor.' "This not only enables objective quality evaluation but

also ensures accountability of the construction agencies," the spokesperson said. A key feature of this AI-based system is its ability to detect even the smallest defects in the road, allowing timely corrective measures.

The UP govt's focus is not limited to construction alone. AI is also being extensively used during the operational phase of expressways. AI-enabled cameras will automatically identify traffic violations such as over-speeding and wrong-lane driving. This will not only strengthen enforcement but also help reduce road accidents, the spokesperson said.