

Cloud, AI, and IoT: Redefining Urban Mobility – Alfredo Del Mazo Maza

HOUSTON, TX, UNITED STATES, August 27, 2025 /EINPresswire.com/ -- The race to turn cities into engines of prosperity without sacrificing quality of life has entered a decisive phase. Just five years before the world's urban population approaches 5 billion people—and barely a quarter-century before 68% of humanity lives in cities, according to the United Nations—traditional transportation, energy, and public service systems are showing signs of strain.



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Alfredo del Mazo Maza

In Mexico, the pressure is equally tangible: the [National Institute of Statistics and Geography](#) (INEGI) reported that 79% of Mexicans already lived in urban areas in 2020, a figure set to grow as the total population nears 130 million. This density carries economic and environmental costs:

traffic congestion in the country's 32 largest metropolitan areas amounts to 94 billion pesos annually and wastes 100 hours per person each year.

“Time lost in traffic is an invisible tax on productivity and health. Without digitizing traffic management, the benefits of electrification will be diluted,” warns [Alfredo Del Mazo Maza](#), public policy specialist and former governor of the State of Mexico.

Cloud + AI + Sensors: Proven Use Cases

Real-time traffic management. Cities like Buenos Aires have shown that innovative traffic light systems, fed by data from cameras, GPS, and sensors, can cut travel times by up to 20%, according to McKinsey. Similar platforms are now in operation in Singapore, Seoul, and Amsterdam, with their algorithms hosted on public cloud systems capable of processing millions of events per minute.

Efficient, electric public transport. In several countries, the adoption of zero-emission buses is advancing steadily. In 2023 alone, nearly 50,000 electric units were sold, bringing the global fleet to 635,000 and representing 3% of total bus sales, according to the International Energy Agency (IEA). Machine learning models now enable charging and route scheduling based on demand and topography, helping to reduce peak-hour energy demand.

Dynamic fleet scheduling. Data from smart cards and mobility apps can be used to adjust service

frequencies in real time. McKinsey estimates these algorithms can increase bus occupancy rates by up to 15% and reduce empty mileage.

Smart waste and lighting systems. Fill-level sensors for waste containers and connected streetlights—with potential municipal energy savings of 20% to 89%, according to Mexico's National Commission for the Efficient Use of Energy (CONUEE)—round out the vision for data-driven urban services.

"This is not just about electric vehicles, but about an ecosystem where the cloud, artificial intelligence, and the internet of things turn every traffic light, bus stop, and streetlight into a decision-making node," emphasizes Alfredo Del Mazo.

In terms of productivity and competitiveness, the Mexican Institute for Competitiveness (IMCO) estimates that eliminating just 10% of traffic jams would generate annual savings of more than 9.4 billion pesos in the country's major cities.

From a public health standpoint, technological integration would mean less congestion and, therefore, fewer fine particle (PM_{2.5}) emissions—a pollutant linked to more than 36,000 premature deaths annually in Mexico, according to the INECC and WHO.

Finally, Del Mazo Maza highlighted the role of these measures in promoting inclusion, aligning with the United Nations Sustainable Development Goals.

"A country that makes smart mobility a state policy will gain in competitiveness and public health. The technology already exists; the challenge is orchestrating the data with a long-term vision," he concluded.

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