

Transport Month: Why SA's transport sector needs to dive into digital to deliver value

Rapid population growth and increased urbanisation will have a significant impact on South Africa's transport infrastructure as freight and passenger transport demand rises.

The transport sector's only option to keep up is through digitalisation, Tshepo Kgobe, Gautrain Management Agency (GMA) COO, told delegates attending the Huawei Connect 2021 Transportation Summit held in the midst of Transport Month in South Africa.



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A GMA study conducted in 2019 found that by 2025 Gauteng's roads would be so congested that traffic on the freeway would slow down to 10 kilometres an hour. This means that it will take four hours to travel from Pretoria to the city centre in Johannesburg.

Fueling transformation

"The transport sector needs to heed the call for digitalisation within the next five years in order to deliver value to the customer and make sure that transport is a catalyst for economic growth through smart infrastructure, integration and technology," he said. "The challenge is to use technology to connect the infrastructure we already have."

An engineer with more than 22 years of experience in infrastructure, energy and mining – predominantly in the railway environment – Kgobe remarked that establishing partnerships with the private sector and the proper government entities will enable smart mobility, allowing for an easier and quicker commute and enabling the sector to extract the most out of the freight economy.

Thomas Snyman, Huawei senior account representative, added that facilitating smart mobility would require an integrated transport system connected across all transport modes, not only for commuters but also freight.

"Enabling interoperability through smart ICT will fuel the transformation of railway, air and road transport as well as South Africa's ports. A fully connected rail, road, air, and port system achieved through unified data sharing using smart technologies like cloud computing, big data and IoT will improve on efficiencies, ensure greater safety and security, and provide a better customer experience at a lower cost," said Snyman.

Integrated systems

"For example, we are currently sitting with a situation where traffic management cannot monitor road conditions, drivers are unaware of road conditions ahead and traffic lights cannot flexibly adjust to road conditions, while current technologies to identify traffic violations can often be thwarted by fog, strong lights or low-resolution cameras paired with high-speed drivers," he observed.

"By introducing advanced technologies connected over fast networks managed by smart algorithms we could reduce congestion, identify areas that need maintenance, and improve road safety in real time."

Snyman added that 5G networks would be a core component in enabling an integrated transport system as its greater speeds, lower latency and scalability would allow for better communication across all transport modes. Recently, Huawei signed a cooperation agreement with Vodafone and Hungary's East-West Intermodal Logistics Services to build Europe's first smart railway hub using a 5G private network for internal communication and technical equipment networking management.

Huawei ICT senior specialist, Rose Moyo, said: "To ensure work mobility, you need to be looking at providing internet access and connectivity at any time and not be trapped within a fixed domain so that even when people are working remotely operations can continue."

She noted that significant investments in ICT would accelerate substantial upward momentum in South Africa's GDP, but noted that digital transformation in industry was not isolated and must be led by the national digital transformation strategy. Meanwhile, Snyman added that as an experienced provider of transport solutions in more than 40 countries and regions across 5 continents, Huawei would continue to lend its expertise and services to support the transformation of South Africa's transport sector.