

## **Combatting traffic**

*Technology may be the loophole that South African infrastructure needs to get itself on the road to recovery*

South Africa's transport infrastructure isn't geared for growth, and the people are feeling it.

Congestion, lack of planning, last minute installations that negatively impact legacy infrastructure, dangerous driving, road rage – these aren't the maybe of the South African day, they're the norm. There's a dire need to change the way communities and government engage with transport challenges to create a safer and more efficient environment.

"There is an increasing awareness for further investment into key infrastructure and technology," says Thomas Snyman, Intelligent Transport System (ITS) Solutions Director at Huawei Enterprise Business Unit. "Just take a look at Allandale road – that intersection is handling between 70-80 thousand vehicles a day. The problem is that we can't keep on widening the roads so we need to travel smarter and use technology to change how people perceive and engage with travel."

When the roads get congested people get anxious and when they get anxious, they start to think outside the rules. This is where transport goes Wild West as drivers head down the yellow lane and block routes for emergency vehicles and cause the accidents they're trying to avoid. Cities need to look to solutions that embed Mobility-as-a-Service (MaaS) or Transport-as-a-Service (TaaS) and which allow for residents to adopt transport alternatives.

"Technology should provide more informative ways of travelling," says Snyman. "One example is the existing freeway management system. If we can deploy more variable message sign boards we can inform the public of congestion before the point of no return. Give them options – get off the highway, find a new route, mitigate the impact of congestion around the incident."

Snyman also believes that this can be embedded down to the micro level. Not just government using technology to revolutionise infrastructure, but individuals adopting applications that can allow them to make informed driving decisions. Applications such as Waze, TomTom, i-Traffic or Google Maps Traffic can indicate areas of low flow and smoothly direct traffic along less popular routes.

"This can be further enhanced by co-operation within the private sector," adds Snyman. "Where the public can use applications to determine times when traffic is at a lower flow, organisations can allow for employees to adopt flexible working hours so they can run their lives around the traffic, not the other way around. Reducing the impact of peak traffic is reliant on planning."

For Huawei, smart road solutions are the key to solving the transportation conundrum. Solutions that can monitor traffic to show where vehicles are moving at their heaviest, redirect volumes using variable message sign boards and building intelligent platforms that can inform all stakeholders. The solution from Huawei is designed to monitor the traffic, identify transgressions, contact the relevant services such as police or ambulance, through a centralised command centre. A hub that manages all the data and input to ensure that services, traffic, communities and infrastructure are seamlessly connected and controlled.

“This blend of technology and existing infrastructure allows for the road agencies, services and systems to co-exist and collaborate effectively,” concludes Snyman.

“The data flows and integrates across various intelligent transportation systems through the core backbone that connects it all to create “Big Data”. This is where we sit, and this is how we can transform South Africa’s traffic from unbelievable to usable.”