

DRIVING is a bit of luxury in Singapore, and it can be a real challenge at times. It's not only expensive but also stressful due to congestion during peak hours, the sporadic aggressive motorist, (some) drivers not indicating, unbuckled kids etc. When my vehicle's air-con broke down recently, I seriously considered selling my continental car and using (cheaper) public transport modes (however, old habits die hard; after the air-con was fixed, I changed my mind and kept the car). Driving around in tropical Singapore without the air-con for a couple of days (in a convertible) inspired me to reflect on the meaning of "sheer driving pleasure" (BMW's tagline) in a "smart, senseable city" which Singapore aspires to be in order to enhance competitiveness, innovation, liveability and sustainable development.

The malfunctioning of my air-con came as a real surprise given the fact that the car is relatively new with a proper service record. Nobody alerted me, unlike the other day when two of my car's sensors came on almost simultaneously, signalling an almost empty fuel tank and a worn-out rear brake pad which was threatening my safety (and potentially that of others) and had to be replaced. "Such an air-con issue would have been preempted from happening during Singapore's F1 night race on the Marina Bay Street Circuit" – I told myself while driving to the workshop (after several air-con-less, hot and sweaty driving days) due to its superior electronic control

'Senseable S'pore'

Driving air-con-less in a 'Smart City'

unit (ECU). The ECU manages all the data transmitted live via telemetry from a smart F1 car with its more than 120 sensors, enabling engineers to predict the right time for pit stops, changing tyres etc. Can't cities be like F1 cars? Yes, they can!

Like other urban centres around the globe, Singapore is leveraging technology and innovation to turn smart city visions aimed at enhancing liveability into reality. A key driver is the iN2015 masterplan developed in 2005 under the guidance of Singapore's Infocomm Development Authority with its new Smart City Programme Office. The plan represents the blueprint for turning Singapore into an intelligent nation and a global city with a well-connected society powered by Infocomm.

Smart mobility is one of several dimensions of smart city concepts implemented here and elsewhere. It envisions that a city is always on the move without major hiccups. Emission of air pollutants, traffic jams, poorly-planned public transport systems



innovation
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and even potholes can lead to frustration and urban chaos which can be prevented by integrated mobility solutions, including controlling (and limiting as in the case of Singapore) the number of cars on the roads through electronic road pricing, alternative transport modes, sound infrastructure investments (or snapping a

picture of that pothole and patching it up as practised by a group of city dwellers in Boston called the New Urban Mechanics). The Land Transport Authority works hard to ensure that Singapore's infrastructure meets the needs of a growing population so that people can make hassle-free multi-modal journeys (potholes do not pose a problem here due to effective monitoring and continuous 24/7 efforts of road surfacing teams who keep Singapore's roads in good shape).

Like modern racing cars in F1, cities can benefit from the use of wireless sensors installed at static points such as roads or buildings or in taxis and buses to anticipate (and prevent) traffic jams or to save electricity and ener-

gy costs. MIT's SENSEable City Lab (<http://senseable.mit.edu/>) is piloting several smart and innovative infrastructure solutions such as the visual exploration of urban mobility patterns. Via the LIVE Singapore! project (a collaborative effort of SENSEable City Lab, the Singapore-MIT Alliance for Research and Technology/SMART and the National Research Foundation of Singapore), it aspires to empower people by giving them visual and tangible access to real-time information about their own city so that they can make better decisions about healthier routes to work, convenient (empty) parking lots, attractive dining options or the nearest bicycle for rent.

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