

Is carpooling the future of urban mobility?

By [Chris Megan](#)

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There would be something gratifying about guessing the future, particularly when it is patently counter-intuitive. Isn't carpooling all about that quaint 70's notion that we could all reduce our petrol costs and save the planet if only we could remember a lesson taught to all school children on their first day at school?



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School children wouldn't need to share if there were two swings available and only two school children. But who is going to design a playground with 40 swings in it, so that no child is kept waiting? Instead, they are taught, that to be fair, we must share so that every child gets a turn...

Moving this simple metaphor along, at the turn of the last century (not too long ago), road authorities across the world, realised they could not keep building roads until the headquarters of urban central - our cities - ended up with 40 lanes in each direction on highways, not yet floating in the sky but tethered to the available land mass. So, they capped it at three.

Consequently, the road network now grinds to a halt, frequently, and it would seem that once again, we all need to be taught how to 'share', to make the best use of the roads that we have at our disposal.

Urban mobility in Cape Town is a crisis on the brink of disaster that will compromise economic development and is now threatening personal well-being. I cannot put that strongly enough. Time is a luxury we can no longer afford. The question is, how could this have happened and been allowed to get to this stage?

Shocks to the system

One shock to any system rarely causes a disaster and the first shock wasn't a shock at all. Nearly every urban planner knows that populations urbanise and that people tend to gravitate to where there is work. However, being charitable, the extent of population growth in certain cities may have come as a surprise.

In Cape Town, the second shock was more nuanced. A number of buildings in the CBD were overdue for modernisation. This process allowed for more parking capacity to be accommodated by building upward. Why not rebuild your 32-storey head office with 10 storeys of parking? After all, the building will have the same footprint at ground level. At the same time, old areas of the city such as the Harbour, the Foreshore or the Silo District were repurposed as new retail or office space and again, furnished with ample parking for all the new staff and customers. Even more nuanced, developers want to develop where rents are accelerating, which leads to a switch from out of town development to excessive densification in CBDs.

We can add one last shock to this system by the name of the Passenger Rail Authority of South Africa (Prasa). If only our passenger train network had responded positively to the economic development our city enjoys, this story could have had a very different ending. Instead, we have a 400% increase in train cancellations. 15% of all trains never show up on the entire network and only 65% of trains arrive on time. Overcrowding is so dire, the space on the outside of the carriages is now full. In terms of safety, the situation is even worse and wholly untenable.

Overcoming nearly two decades of mismanagement, excessive bureaucracy and institutionalised corruption, Prasa has a 20-year plan to replace its 50-year-old infrastructure and rolling stock - costing a whopping R170bn - but the likelihood is that the situation will get worse for a good few years before it gets any better.

Any one of these shocks might have accelerated the City of Cape Town from crisis to disaster. The combined effects of the three will undoubtedly lead to a fourth, namely the collapse of the road network into chronic congestion and daily gridlock (nothing like you are currently experiencing, much, much worse, no matter how many video-camera-wearing traffic officers there are enforcing basic road manners, although this is something).

Despite this real and dire situation, the solution to traffic congestion is actually very simple.

Put more people into fewer cars!

Once again, we will have to be taught how to share, because there aren't too many other plans available. The faster we admit this, the sooner we might begin to avert the disaster.



A new mobility business model for sustainable auto innovation

25 Jul 2016



Advances in driverless technology

Meanwhile, autonomous (driverless) vehicles are already with us... well, they are currently in Singapore but will be making an appearance here sooner than we think. The advances in driverless technology are unstoppable and will likely replace existing private vehicles in all cities across the world in the next 15 – 20 years. These cars (or pods) will have electric motors, rather than combustion engines, reducing their complexity from more than 200 parts to less than 15. They will be very cheap to manufacture and significantly cheaper to maintain. They will also run on battery technology charged by wind, solar or other renewable sources - far cheaper than fossil fuels and much better for the environment.

Ironically, these pods do not need to be parked in over densified areas, so cities could repurpose all that parking space as housing, closer to places of work, reducing the burden on over congested transportation still further, and contributing to solving the housing crisis.

This type of vehicle could operate for less than R1/km and carry four or five passengers from their doorstep to their place of work, reliably and safely, every day for less than the price of a bus ticket.

Revolutionising public transport and urban planning

This technology will not only challenge the concept of private car ownership but will revolutionise all other forms of public transport and urban planning. Transport oriented development if ever there was.

Interesting, therefore, that the quaint 70's notion of carpooling and sharing scarce resources, will not only provide a solution to congestion for the next five to ten years but will also emerge as the transport option of choice in the future of urban mobility.

The government has asked for radical economic transformation, but the point is, we can have as many ideas and set up as many businesses as we like, if the people who need to run it and work it, cannot get there, we will not move forward. So, what is impeding the government (local and national) from rubber stamping a framework around carpooling to get South Africa moving?

ABOUT THE AUTHOR

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