## Theo Marshall

5 Mar 2019

I first had to download your report and make some notes.

With over 50 years in frontline hands on transport related matters from being responsible for a major road construction project for which I jointly opened it back in late 1997, to road safety, and being closely associated with sustainable transport technology, riding all types of bikes, electric freeway speed scooters, mopeds, self balancing wheels and now this Stigobike and see the live interview below, along with importing and selling these technologies, I am qualified as any to make an extremely informed opinion.

I've also driven half a million kms in heavy duty trucks and are an extremely experienced long distance driver and fatigue driver management and I can only say transport related matters are part of my DNA.

I recently applied to be a speaker at the AITPM National Conference on the subject of "Understanding Sustainable Technology in a Sustainable Transport System".

I submitted an email to the House Of Representatives Standing Committee on Innovation, Science and Resources on my observations on driverless car technology and questioning it's significance and they asked could they use my email as a submission and publish it on their website.

I am also closely associated with some other technology, being one of two Australian Representatives of the Commuter Car Corporation and the Commuter Car is also known as Narrow Vehicle technology, electric of course which is 990mm wide or about the same width as my electric scooter and significantly, can fit two Commuter cars to a single road lane just like motorbikes and scooters and this Commuter car has two inline seats, that is, one seat behind the other and built around a racing car standard frame with 360 driver protection and would probably come with an 8 star safety rating that nothing else could match.

I have also imported my freeway speed electric scooter, my self balancing wheel and now my Stigobike 200 (200W) so I am familiar with the rigors of the vehicle import system and have many observations to make on it.

That is my background and my interest and I would like to be much more involved in transport related decision making.

I also have a company Sustainable Transport Company for many years.

Now I would like to make some observations on the subject "Barriers to the safe use of innovative vehicles and motorised mobility devices".

I am the Australian Distributer of Stigobikes, specifically the Stigo200, max speed of 20kms/hr which is less than half the speed of conventional bikes which is underpowered but I was prevented from importing the slightly more powerful Stigo250, identical in every way except 50 watt more powerful and 5kms faster so have had limited sales but sales to a very wide range of the market from an amputee wanting to get around a little easier, to a young man after brain surgery and complications leaving him with limited sight which damaged his optic nerve and with limited breathing capacity but otherwise a lovely young person who loves his sister and the Stigo is his castle, his independence, combined with taking his Stigo on public transport, mainly the train, he can now go just about anywhere.

I feel good about helping both those people.

The Stigobike is a whole new concept with very wide application and called "last mile", "door to door" commuting, almost instant fold, one of the smallest, most compact forms of powered commuting, so small, it is little more than an extension of a persons body, very high quality Estonian engineered, less than half the weight of a conventional bike so can be taken on the train even in peak hour so doesn't require any parking space as it simply stays with its owner and of course is the wheels to both get to the train and also the wheels to get from the train so, in time, should encourage more people to use the train for commuting as there is no more long walks and time wasted.

The Stigo is extremely compact and when taken on the train with standing room only, hugs the persons body in the standing position and fits between a persons legs in the sitting position with nothing sticking out so another person can sit in complete comfort right alongside you.

The Stigo has mark proof tyres so is designed to go indoors to indoors and there are very few places I haven't taken it.

The Stigo has no cogs or chains with very controllable speed with your feet always close to the ground with a wide seat you can sit on all day so you never get tired riding it so it is very pedestrian and people friendly, one size fits all, very high quality specifications with front and rear lights, a good quality rear vision instant fold mirror, a loud electric horn and of course, very good and quality brakes and quality tyres.

The Stigo is also steel proof as the bikes always stays with its owner and no pedals for someone to ride it away and can only be started using its electronic key and nobody can get either a key or battery charger without being the registered owner with me.

The Stigo has been called a "Congestion Buster" by a member of the media and with a gridlocked freeway just metres away from a hardly used train system running at a 70% loss, the Stigo is the simple solution and connecting link and there is simply no reason why we should continue to have both traffic and parking congestion problems nor many other problems some of which are highlighted in your Issues Paper such as being discarded all over the place creating litter problems because they are high quality and cost enough \$2100 to \$2500, they are too valuable to throw away.

What other issues are there with the Stigobike?

The Stigo is a slow speed extremely pedestrian friendly form of powered movement and is not designed to go fast, as mentioned, less than half the speed of most bikes. It is also half the weight and a much lower profile than a rider on a bike so the Stigo is meant to be ridden on shared footpaths and is quite at home mixing with heavy pedestrian traffic, Can be folded in an instant and pulled behind the rider with its extendable carry wheels if necessary.

With is high specification lights, brakes, rear vision mirror, loud electric horn that anyone can hear, the Stigo can also be taken on slow moving and congested roads and quiet low speed suburban streets.

Never on fast moving roads and as I tell people, never in front of a bus. In other words, use your head where you ride your Stigo.

Whenever I either sell a Stigo or loan one out to trial, I always give a copy of my rider Stigo Recommendations which also includes the pedestrians and for that matter, just about anyone else, have the "right of way" on shared footpaths. Common sense and respect for others should be the rules.

Even though the Stigo200 speed is 20kms/hr or if it was the Stigo250 and 25kms/hr, I estimate my average speed is nearer 15kms/hr and caution regulating unrealistic regulations as you simply ride to the prevailing conditions.

On shared bike and pedestrian paths, the Stigo200 is simply too slow and less than half the speed of some bikes so I tell Stigo riders to properly adjust their very good rear vision mirrors to see fast moving bike riders coming up behind you, maybe just as you are going around a walker and again, common sense and a respect for others should be the rules and not a whole lot more of rules and regulations.

I caution regulators and government trying to regulate every breath of air we breathe and people need to be made more responsible for their actions. Recommendations rather than Regulations.

The big question. Barriers to the safe use of innovative vehicles and motorised mobility devices? le with a great many more of various configurations.

Answer. I believe they will find their own level dictated by each's application and I caution too much government intervention.

From my own considerable experiences, governments have tried to over regulate which can have negative effects instead of positive advantages, take the Stigo200/Stigo250 as an example.

200W of power is nothing as too, is 20kms/hr. A person can generate up to 400W of power and runners can go over 30kms/hr.

Sometimes slow is more dangerous than fast if you are seriously inconveniencing other users or creating too restrictive conditions for the user such as with the Stigo200 which struggle to get up any sort of a hill and mopeds being restricted to 50kms/hr and seriously holding up other traffic and potentially creating dangerous road conditions.

I believe it is all about being compatible with others whoever they may be.

Sedgeways have their use but they also have their limitations and seem to of found their level both with their high price and lack of compatibility with other users.

A lot of technology have shortfalls which naturally limits their uptake or acceptance by the public so their should be no concerns of these technologies ever creating problems for other users.

Existing technology creates as many problems for their own users and for others such as conventional bikes with the high speeds they go not helped by not having standard features such as has the Stigo with lights on all the time, a built in horn and a good quality rear vision mirror, nor it seems they are instructed to care about others.

I consider the moped is a dangerous concept simply because it goes too slow and the moped shouldn't be restricted to 50kms/hr but maybe increased to 70kms/hr.

Motorbike riders have lots of accidents mainly because of the nature of the beast. There is very little protection on them and the nature of the freedom of riding them, encourages riders to want to go fast on them, some at reckless speeds but that is the sort of person who likes to ride them and there is only so much you can do to protect riders.

Figures coming out of the US show a big increase in accidents from electric scooter riders but that probably is not because they are electric but more because electric scooters are becoming more popular and there are more electric scooter manufacturers and therefore more choice.

I personally have ridden approx. 20000kms in city riding so I do have a good understanding of the technology.

I caution applying European regulations as some of their conditions are quite different to those in Australia and as a generalisation, there are far too many regulations and with fast moving technology, regulations can never keep up and in the case of determining imports as concerned problems importing the Stigo200/250, both European and Australian certification systems were used in direct conflict with each other creating huge stresses for myself.

I believe there have been some changes since and some simple common sense prevails as well.

I would like to see more co-operation with stakeholders and importers allowed to trial a limited number with full import approval after satisfactory trialling including the regulators trialling the technology which should be a big help in better understanding particular technologies.

I believe there should only be one National Department of Transport Rules, Regulations and Recommendations to have more consistency as there is too much inconsistency with State Dept of Transports..

With my exceptional wide experience in innovative technology, I would be more than happy to advise on innovative technologies.

I caution trying to define perimeters for determining innovative technologies as the particular technologies have been engineered for a particular reason and that alone largely determines the particular technologies specifications.

Trying to change that is not a practical option and as an example, restricting the Stigo to 200 Watts, seriously limits the application of this very fine technology to carry out its required applications.

Regulations governing innovative technology is not going to prove anything more than the unrestricted application of conventional and power assisted bikes and no matter what the regulations are, it still gets back to responsible riding or driving by the owner.

There is almost no restrictions on what bikes can do and even if there was, it wouldn't automatically solve any problems.

What defines an innovative vehicle?.

Innovation is moving so fast that what is defined today has changed almost by tomorrow and there are some very clever people out there and who knows what they are going to come up with next, something that flies, hovers, air propelled? And because it is not defined, we are told we can't use it despite it being a revolution in powered movement.

I think rather than set guidelines, we need an Advisory Board to help determine what is Innovative Technology and as already suggested, it be very easy to get provisional approval to trial a limited number and full approval after satisfactory trials.

I congratulate you on your discussion paper and I would like the opportunity to discuss points raised in more detail more than the very limited time I have had available so far and very mindful I'm already over time.

I do however hope my observations help in some way to contributing to your discussion paper.

Kind regards.

Theo Marshall