

WEIGH-IN-MOTION FORUM – ON-ROAD AND IN-VEHICLE

11 September 2017

by

Chris Koniditsiotis

**Chief Executive Officer, Transport Certification Australia and
President of International Society for Weigh-in-Motion**

Welcome to TCA's Weigh-in-Motion Forum. The forum deals with both on-road and in-vehicle Weigh-in-Motion capabilities.

I am welcoming you today in a dual capacity. Firstly, as the Chief Executive Officer of Transport Certification Australia, and, as the President of the International Society for Weigh-in-Motion. I can advise you, that we have over 60 registered participants to today's event with an excellent cross section of stakeholders.

In December of 1985, I began my career in this portfolio. As a pavement's engineer, I was informed very quickly of the role of mass as a key parameter in the design, build, management, operation and upkeep of both our transport networks and the things that use these transport networks.

I learnt that mass has many uses, engineering, economic, productivity and associated safety, and environmental consequences; but also learnt, that these uses cut across many portfolios and stakeholders, namely roads and infrastructure, ports and marine, waste management, heavy vehicle operations and associated regulations, network use and optimisation and pricing of the use of the network.

When I joined this portfolio, the integrity, accuracy, and sampling frequency of mass information delivered at best an estimate; used in research and specific projects. Routine or day to day use was limited to on-road systems and investments usually championed by individuals in road transport agencies and associated research and academic institutes.

I also learnt that it is important to not underestimate the significance in operation of mass; hence we over-estimated it in design so that we could be safe and comfortable in what we delivered and used.

WIM Forum – on-road and in-vehicle Opening Address



Back in 1985, we dreamt of the day when we would more routinely have available to us mass information with improved integrity and associated accuracy, and a frequency that provided insight and hence allowed us to address directly the policy challenges across the many uses as articulated previously.

Thus, today in September of 2017, I pose myself and the audience the following question - *have we arrived and achieved our goal of integrity, accuracy and a sampling frequency of the collection of mass information to achieve our multiple uses? Has the journey that we have travelled over the past three decades reached its destination? Has our odyssey landed us as it did Ulysses on the island of Ithaca or are we still sailing hoping to make land?* My answer is - *yes, we have arrived, however, do we really understand that we have arrived?*

With respect to on-road weigh-in-motion systems we have a myriad of commercially available technologies and commercially available acquisition models. We have both national and regional specifications. We have widespread networks of high speed weigh-in-motion systems used for a myriad of different purposes, additionally we also see specific routes, infrastructure or operations which have specific units. We have progressed from not only using high speed weigh-in-motion as an information gathering tool and filter for compliance and enforcement but to be able to achieve direct enforcement. With respect to in-vehicle technologies we witness again a commercially viable industry, and the availability of national specifications which customers can use to make acquisition and now increasingly the adoption of this by not only transport operators, but also end users to achieve their private and public policy needs.

The integrity and accuracy in the collection of mass information is now commercially available – but what are our challenges? Our challenges comprise:

1. A recognition that on-road and in-vehicle are not in competition – they both monitor mass but for difference purposes and policy uses
2. The need to operate, maintain and ensure the correct calibration of weigh-in-motion systems, be they on-road or in-vehicle
3. A recognition that they are operationally very compatible and in many regards co-dependant.

However, I want to go back to the start, to when I started in this portfolio, due to the lack of integrity, accuracy and general availability, our use of mass was by necessity, conservative, and today we need to rethink and re-evaluate our uses and take into account the improved quality of mass information that is available.

WIM Forum – on-road and in-vehicle Opening Address



We need to factor the conservative design, management, and maintenance estimates or at least as a minimum, be aware of them as this will provide a whole new set of opportunities across numerous policy areas.

As such, I want to illustrate two simple examples.

I mentioned previously, that both on-road and in-vehicle systems require calibration, to ensure that *'the scale or sensor'* is weighing properly. The traditional practice is to apply a temporal condition, we calibrate every three months, or every six months or annually. However, in practice, we all recognise that some weigh-in-motion system sites tend to be better than others and some operating environments and their weighing systems tend to last longer than others. We have an opportunity through the co-dependency of these two technologies to improve the calibration process. In doing so - for one to inform the other - so that collectively both benefit from being aware of when *'the scale or sensor'* is out of calibration and providing an evidence based approach to ensuring it is maintained.

Secondly, this conservative nature that has been built into our design, management and maintenance of our infrastructure is there for a legitimate reason. It is there to cater for the things that we don't know, it is there to cater for the occasions which exceed the expected. Today though, with this greater integrity and accuracy that mass information provides us can we absorb that safety factor that has been put into place so that rather than estimating the worst case, we recognise and give credit to the best case. The opportunity presents itself for the use of both on-road and in-vehicle weighing systems to provide greater confidence to all stakeholders and provide for increased productivity but also not compromise the safety that is expected by all.

This forum brings together experts in this space, comprising users, designers, vendors and academics. My challenge to you is the challenge that I have gone through over the past three decades, and that is that these two approaches on-road and in-vehicle can co-exist and indeed complement each other and additionally to challenge ourselves in the way that we have used mass information in the past given its conservative nature, recognising the opportunities that greater integrity, accuracy and measurement frequency provide us.

Thank you.