

CREATING WIN-WIN SOLUTIONS FOR THE NETWORK AND BEST PRACTICE OPERATORS



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Abstract

NZTA has a goal of a safe, productive and efficient network. A key constraint is in their confidence in operators to comply with access restrictions. This paper addresses how fleets can demonstrate best practice without publishing detailed operational statistics – and how this can be used to benefit the economy, network productivity and the industry. Using examples to show how fleets can demonstrate compliance with a performance standard, it is possible for a fleet to earn the right to greater flexibility which enhances network efficiency and productivity whilst providing an economic benefit to the operator and a safer environment for the community.

Keywords:

- Network efficiency
- Best practice
- Rewarding achievement
- Economic benefit
- Performance Based Standards
- Operator Rating System
- Telematics
- Environmental

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1. Introduction

The NZ Transport Agency (NZTA), as the controlling authority of the road network, has a goal of a safe, productive and efficient network. Operators desire the flexibility to design a vehicle configuration that maximises load, handling, manoeuvrability and safety. This presentation is borne out of observing our industry. Of working with the good to great operators, who engage with us willingly, and the under - performers who have been asked to work with us by one of their business partners. There is a world of difference between these two type of fleets, but no recognized standard to demonstrate it. The Operator Rating System (ORS) is limited to what the NZTA knows about a fleet, but is only a snapshot of behaviour and some operators have higher exposure to these checks than others, by the nature and geography of their work.

There are a number of precedents, both locally and internationally which demonstrate that regulatory authorities, commercial partners and private companies are shifting away from lag indicators in favour of lead indicators now that such data is readily available and accessible.

Whilst there is natural hesitancy from operators to share operational data, the creation of an accredited, transparent, voluntary disclosure process will allow those best practice operators to differentiate themselves and to reap the competitive advantage earned through their existing investment into their internal control systems.

2. The Benefits of a Proven Best Practice / Network Reward Model

Existing road transport regulations exist to protect the safety of road users. One trade off of some of these regulations is in the stifling of productivity of the heavy transport industry.

ORS has provided a mechanism for NZTA to measure compliance of heavy transport fleets. Those with good compliance records can take advantage of some regulatory flexibility which unlocks productivity benefits. NZTA needs to have confidence that such benefits are not exploited leading to a negative road safety outcome.

Less trust is afforded to those operators who have not met basic compliance standards. To achieve a consistently high ORS score, a fleet is assumed to have good operational controls in place and this in turn build NZTA confidence.

Regulatory benefits currently available include HPMV and 50 MAX permits, and variable Certificate of Fitness (COF) frequency. Additional benefits are expected to be added to this list in future, such as the ability for enforcement officers to select trucks for roadside inspection (instead of the current “all trucks stop” notice) and a waiving of peak period premiums on road tolls.

These regulatory benefits compound the commercial savings (lower fuel and tyre consumption, improved driver retention, lower repairs and maintenance costs and lower insurance premiums) already being experienced by these operators. Taken as a whole, the combined benefits available to best practice operators should create a significant competitive advantage.

However, as operators have come to understand what is required to achieve a high score in ORS, 87% of operators are now scored 4/5 or 5/5. With such a high proportion of operators in this upper range there is no point of difference between a best practice fleet and a compliant fleet.

ORS is limited to what the NZTA knows. It is predicated on not finding an operator doing something wrong through routine inspection (COF) and random roadside checks. These compliance checkpoints are only a snapshot of operational behaviour, and by their nature, some operators have a higher exposure to such checkpoints than others.

Telemetry and other data provides an opportunity for operators to voluntarily disclose their performance across their entire operation to demonstrate their best practice status.

3. Voluntary Demonstration of Standards – Proving Best Practice Without Full Transparency

Heavy transport fleet operators are naturally cautious about sharing granular telemetry data with authorities as the penalties are high for any non-compliant activities simultaneously disclosed in that data. However, when occasional, or minor, non-compliance is demonstrated to be the exception in the context of overall best practice, the network benefits.

A standard reporting scale can be implemented where a data set can be filtered and reported according to that scale. Where the operator's data meets or exceeds a pre-determined level of performance on that scale, the fleet becomes eligible for benefits related to that performance metric. Because the reporting scale is transparent, the fleet is always aware of whether they are meeting the required standard to be able to apply for the desired benefit. If they meet the standard, they can submit their application supported by their data score. If not, they can focus their efforts in house on improvement in that area.

Currently, data available to fleets include speed compliance data and some GForce data. Additional switch inputs to telemetry systems can be used to monitor seat belt compliance by drivers. As electronic applications are further embraced, log book and pre trip check data can be included in this data set.

The NZTA particularly wants to see compliance data relating to weight management and route compliance. Further work in permit route geocoding and on-truck weigh system integration is required to achieve this, but the technology is developing to support this in the near future. Existing datasets can be used to build a prototype reporting model to which such additional datasets can be added when they are further developed and proven.

Aligning granular operational telemetry data with an agreed standard performance scale provides confidence to NZTA regarding best practice level of compliance. Because this data represents 24/7 monitoring of all operations, it is more representative than roadside inspections.

In this future scenario, roadside inspections will continue to be undertaken, as random audit is critical to ensure the integrity of any system, however any issues found at roadside will be able to be taken in context of the whole of fleet lead indicators.

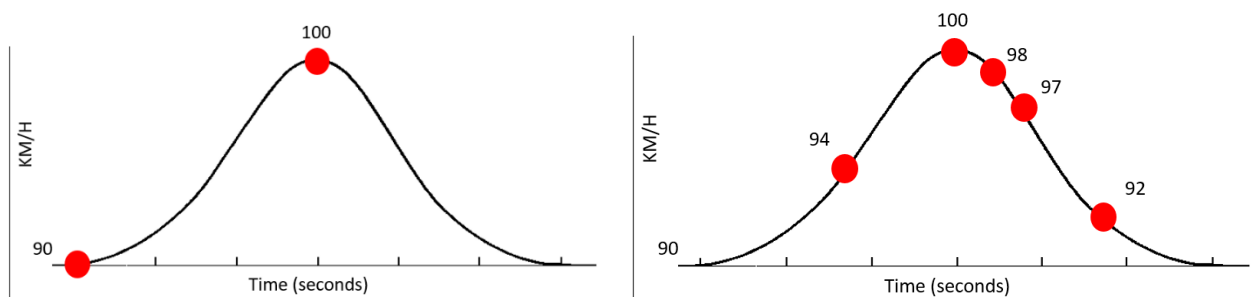
4. Managing a National Standard Across Multiple Data Systems

A private prototype system has been trialled with small sections of the industry with positive feedback. However, a national standard demands rigorous accreditation to ensure a level playing field which accurately represents the eligibility of each participating fleet for the associated benefits.

Every telemetry system in use in NZ has proprietary reporting intervals and thresholds. Using speed reporting as an example, these include:

- System records a speed limit breach (only)
- System records a speed limit breach and maximum speed reached following breach
- System polls the truck at regular intervals and reports speed at time of poll
- System polls the truck at regular intervals and reports speed at time of poll, other telemetry events may increase the poll rate of the system at any time
- System applies a standard, or user defined tolerance before an event is recorded.

Fig 1: Illustration of how different systems treat speed events:



The standardisation of how a reportable event is treated in each accredited system is critical.

There are local precedents for data system accreditation.

- eRUC: the purchasing of Road User Charges (RUC) electronically, using in vehicle monitoring to validate the distance travelled on each license.
- Off Road RUC claims: The recording and reporting of distance travelled off road to allow the reclaim of RUC
- Electronic log books: the accreditation of applications for drivers to use electronic devices to record their work time compliance.
- Intelligent Access Programme in Australia accredits telematics providers to supply road access compliance data.

5. Prototypes Already Exist as Quality, Safety and The Chain of Responsibility Drive Standards Higher

The suggested process of voluntary disclosure of data in return for operational benefit is not new.

5.1 Legislative Example

In the UK, the Driver and Vehicle Standards Agency (DVSA) has indicated the establishment of an “earned recognition” scheme in early 2017. This will involve the expansion of an existing approach to also include drivers’ hours KPIs, an annual test pass-rate of over 95% and no regulatory action taken in the past two years. Operators wanting to take part will have to undertake a third-party audit of their compliance systems and allow the DVSA remote access to their telematics.

Reference: <http://www.commercialmotor.com/news/dvsa-plans-commence-earned-recognition-scheme-early-2017>

5.2 Commercial Example

In both NZ (Tower; Smart Driver app) and UK (multiple providers including InsuretheBox) insurance companies are embracing a “Pay How You Drive” model where participants authorise driving data to be collected via a specified telemetry system and premium discounts are available for proven low risk driving habits.

5.3 Private Industry Example

NZ purchasers of transport services are, in some cases, requiring demonstrable lead indicators of safe driving practices, to replace previous lag indicators such as a proven clean Health and Safety record.

The Health and Safety at Work Act 2015 has also led some principal contractors to require full access to the telemetry systems of their subcontractors to enable to monitoring of these trucks for compliance at the same level as their own vehicles.

6. Conclusion

Whilst the ORS is highlighting the underperforming fleets, this is a blunt tool to identify where further enforcement activity needs to be targeted. A high score in ORS is not perceived to be of exceptional value, as this status is held by 87% of operators. Instead, it is seen as a minimum viable standard of operating.

We now need to embrace this technology as an affordable and equitable method to demonstrate best practice. Through the development of an accreditation process and performance reporting standard for telemetry and other data, operators will have a mechanism by which they can demonstrate that they are beyond compliant – that they are responsible and trustworthy operators.

With confidence in such a system, which allows best practice operators to differentiate themselves, regulatory benefits can be offered to those operators with confidence. The net effect of reducing compliance restrictions and controls for safe, high performance operators is improved road safety, operating standards and improved national productivity.

The creation of a performance based standard for best practice operators creates a significant competitive advantage to these fleets and promotes a higher standard of performance across the industry. Operators who have yet to meet the standard required to apply for these benefits will either work hard to do so, or be relegated to a minority who are increasingly unable to compete.