Cindicium Pty Ltd

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Submission to Draft Freight and Ports Plan

This submission seeks to raise awareness of technology that has the potential to contribute to the delivery of Priority Action Area 4 – Facilitate the introduction of technologies that reduce freight costs and impacts, and Priority Action 6 – Ensure safe, efficient and sustainable access to places.

Peter Kosmina, Chief Executive Officer

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Executive Summary

A key element in ensuring the safe transport of containers both at sea and on the road network is the accurate verification of container weights.

Cindicium Pty Ltd has developed a product that allows truck operators to quickly and easily weigh both empty and loaded containers on the back of a truck in less than 10 minutes, a significant time and cost saving compared to alternative methods. However, the real value of the product lies in its complementary application program interface that facilitates transmission of container and truck data to outside parties.

There are enormous safety and productivity benefits of this product and technology. It facilitates compliance with regulatory requirements, provides a monitoring solution for vehicles not currently required to have on-board mass management systems and reduces the impact on the road network of overloaded containers.

Cindicium supports the direction in the Draft NSW Freight and Ports Plan for greater collaboration between Industry and Government to improve the safety and productivity of the freight task. We would like to meet with Transport for NSW to discuss in detail the current gaps in mass management of the port task and demonstrate our solution.

About Cindicium Pty Ltd

Cindicium Pty Ltd.'s aim is to improve safety on the roads and at sea. We are focussed on improving safety practices, operational efficiency and regulatory compliance via the development of innovative products and services. These products and services can improve supply chain efficiency and as a consequence provide benefits to the community and asset owners.

Cindicium welcomes the opportunity to make a submission on the NSW Draft Freight and Ports Plan **(Plan).** The priority action areas identified in the plan correctly identify where there is a need for greater focus and specific actions to safely and efficiently meet the challenges of a growing freight task. Our submission is specifically concerned with Priority Action Area 4 – *facilitate the introduction of technologies that reduce freight costs and impacts and Priority Action Area 6 – ensure safe, efficient and sustainable freight access to places.*

The Plan states the Government recognises that *new technologies will need to be trialled and investments made that deliver improved efficiencies and lower costs*. *Partnerships between government and industry are becoming increasingly important to ensure new technologies deliver system integration across modes and logistics chains.* Cindicium is willing to be one of the partners with the NSW Government to improve the safe movement of containers by all vehicles.

Our capacity to act as such a partner is a combination of our understanding of recent changes to the regulatory framework and current mass management practices. These matters are outlined below.

Regulatory framework

There have been a number of welcome recent developments that have increased the regulatory compliance obligations of supply chain participants to support the safe transport of containers.

The first of these was the introduction of the International Maritime Organisation (IMO) International Convention for the Safety of Life at Sea (SOLAS) Verified Gross Mass (VGM) requirement on 1 July 2016. The purpose of the VGM is to ensure the correct stowage and stacking of containers to avoid the collapse of stacks, supporting the prevention of injury and safety of life. The VGM is mandatory for all cargoes to be loaded onto a ship. The shipper, legally defined as the legal entity or person named on the bill of lading is responsible for providing the VGM.

Whilst there had always been a requirement in SOLAS to declare the gross mass of cargo and containers, the new requirement was in response to incidents such as the *MSC Napoli* running aground in 2007 and seeks to ensure mass is accurately captured in a verifiable manner.

The SOLAS regulations allow for two methods to verify the gross mass of packed containers:

- Method 1 – weighing the packed container using calibrated and certified equipment.
- Method 2 – weighing all packages and cargo items, including the mass of pallets, dunnage and other securing material to be packed into the container, and adding the tare mass of the container to the sum of the single masses using a certified method approved by the competent authority of the state where the packing was completed.

At Port Botany, 1-Stop Connections receives the VGM declaration as made. There is no requirement for the data to be automated and linked to the certifying equipment and as a consequence the data is manually entered into the VGM declaration.

The second development is the new Chain of Responsibility laws that come into effect in July 2018**.** For the first time, any party in the chain who has influence over the transport activity is responsible for safety on the road. This has implications for all parties in the supply chain who consign, pack, load or receive goods as part of business.

Mass Management at Port Botany

Operators are required to verify that the legal mass of their vehicles is controlled for both axle and gross. The options to meet this requirement include use of a weighbridge, on-board scales, estimating the weight from the volume of the load or a combination of these methods.

Within the industry, it is acknowledged that many operators use very manual type systems, including hand marking on trucks, to assess the weight of the container to estimate axle and gross mass

As verified by NSW Ports in their Master-plan, semi-trailers perform 70% of the container port task. Semi-trailers have general access across the road network and

are not required to have on-board mass systems. Therefore, no data on mass is being recorded as occurs for vehicles, which have been granted increased access under the Intelligent Access Program (IAP). *This is an obvious gap that should be rectified.*

The weigh-in-motion (WIM) scales installed at the Port in mid-2012 are designed to ensure compliance with mass management requirements. The process established in 2012 to manage breaches was that vehicles with minor (<= 5%) and substantial (>5% - <=20%) breaches were to be directed to proceed to a Container Freight Station (CFS) for rehandling.

There are two issues with the WIM's. The first is that truck operators who, after receiving an alert are "recircling" and positioning their vehicles in a different location to obtain a second compliant reading therefor manipulating the result from the WIM's. Secondly, it is known in the Industry that neither NSW Ports nor RMS/CMCC is monitoring compliance with these directions. Industry feedback is that there have been issues with some CFS's not accepting vehicles that do not belong to their own company's fleet or operators are just ignoring the instruction and proceeding directly to their destination. This is likely to be resulting in certain operators running hot. There are significant safety implications for all road users and the road assets as a result of such practices.

What is the opportunity?

Like speeding or fatigue, poor mass management practices leading to the transport of overweight containers poses a significant safety risk to all users of the road network and contributes to earlier deterioration of the road asset.

Whilst the regulatory requirements prescribed by the SOLAS VGM and Chain of Responsibility are a positive initiative in driving improvements in mass management, they are not supported by the requirement for data to be linked to the certifying equipment, which would provide an audit trail and an additional level of surety to deliver better safety outcomes. *It is also a missed opportunity to capture data on the freight task.*

The synergies between the SOLAS VGM and the Chain of Responsibility laws should provide the impetus for greater collaboration and coordination across the supply chain and drive integrated and seamless data exchange. This will in turn facilitate improved safety outcomes both on the road and at sea.

The actions outlined in Priority Action Area 4 provide the opportunity to drive this coordination by Government facilitating the introduction of new technology. Similarly, the safety objectives of Priority Action Area 6 can also be facilitated by the increased use of advanced technology.

The Cindicium Technology Offering

In response to demand from Industry arising from the SOLAS VGM requirements and the impending Chain of Responsibility laws, Cindicium have developed a product that allows truck operators to quickly and easily weigh a loaded container on the back of a truck. It also allows operators to accurately weigh the empty container and

any package/dunnage material so that the exact tare weight is known before loading.

After loading, the weight can be rechecked to ensure that the maximum payload has not been exceeded. This process takes less than 10 minutes and is compliant with the Method 1 SOLAS VGM requirements. Weighing after loading at the packing premises should ensure that vehicles are not overladen before entering the road network.

However, the real value of this product is the application program interface that facilitates the transmission of gross weight and other container and truck data to an organisations' enterprise system and to other outside parties.

The key benefits for operators are the:

- Avoidance of overloading
- Elimination of delays and diversions associated with weighbridges
- Avoidance of re-loading and re-weighing
- Improved revenue for every container
- Reduction in shipping costs by shipping less containers due to load optimization

This technology also supports improved business intelligence, by access to data that:

- Tracks who, when and where a container was weighed
- Can provide information on landside origin and destination of containers
- Can track routes between landside origins and destinations
- Monitors trends to inform future planning

The product is a low-cost product based on the user-pays principle, similar to e-Tag and OPAL cards. There is no capital cost to the operator associated with the product.

Cindicium is already receiving positive feedback from various participants in the supply chain, including stevedores, who believe that improved, efficient and automated weighing technology provides the most effective method to ensure compliance with regulatory requirements.

The capacity to provide data to other sources means that information can be provided, for example, to 1-Stop Connections, who already manage the vehicle booking system for two of the stevedores at Port Botany.

How our technology can support delivery of Priority Action Areas 4 and 6

In addition to the significant growth in the container task at Port Botany going forward, there is likely to be increased use of containers to transport bulk products to the ports of Newcastle and Port Kembla.

Whilst Industry is responsible for mass management compliance, a greater role by Government in partnering with Industry in promoting the increased use of integrated technology is a necessary cultural change that would lead to safer and more efficient outcomes.

In addition to the benefits to participants in the supply chain, the Cindicium technology provides broader network benefits by:

- Providing a technology/data that is interoperable across supply chains, thus creating efficiencies
- Enabling simultaneous compliance with SOLAS VGM and Chain of Responsibility requirements
- Providing an advanced technological solution that it more accurate than the current WIM's; reducing the risk of operators running hot.
- Capturing data for vehicles that are not currently required to have on-board mass systems
- Capturing data for vehicles not covered by the HVNL
- Potential to provide (de-identified) data on the fleet used for the container task
- Potential to provide (de-identified) data on origin and destination of movements

These network benefits would be derived at minimal cost to Industry and at no cost to Government.

Conclusion

The importance of technology as a driver for safer management of the growing freight task is recognised not only in the Draft Freight and Ports Plan, but in the Australian Infrastructure Plan and is a key focus area of the Australian Logistics Council.

Efficient mass management practices across the entire Industry are essential if the freight task is to be managed safely and more productively.

Ideally there should be a single source of truth across the entire supply chain. The SOLAS VGM and Chain of Responsibility laws can provide the catalyst for this. Additionally, the opportunity exists to leverage the data to improve freight planning and support heavy vehicle road reform through innovative charging regimes.

Cindicium would like to meet with Transport for NSW to discuss our submission and if possible, provide a demonstration of our technology.

Peter Kosmina

Chief Executive Officer

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