NATIONAL FREIGHT DATA HUB OPTIONS
DISCUSSION PAPER
Introduction

The Australian Logistics Council (ALC) is the peak national body representing major companies participating in the freight logistics industry. ALC’s policy focus is on delivering enhanced supply chain efficiency and safety.

It welcomes the opportunity to comment on the National Freight Hub Options discussion paper (the discussion paper).

ALC has been leading the debate on use of technology to enhance the productivity of the freight and logistics sector since 2010.

In that year, it published the pivotal document Using Information and Communications Technology to Increase Productivity in the Australian Transport and Logistics Industry.¹

Even in 2010, it was recognised that:

*The case for investment at all levels from single sub-contractors to major corporations is clear - without it, Australia will slowly decline in international competiveness. Inevitably, the industry must collaborate on agreeing to open global standards for information gathering and dissemination, and both State and Federal Governments must play their part in avoiding regulation that would reduce the economic value of the available enhancements.*²

This is the Transport and Logistics Operating Model envisaged by ALC in 2010:

![Figure 1 – Transport and Logistics – ICT Operating Model](image)

Done well, the Freight Hub should give effect to this outcome, as well as the more modern ALC vision for technology use in the freight and supply sector set out in the 2018 paper A Common Data standard for Our Supply Chain³, set out in Attachment 1.

The current ALC vision is specifically set out on page 4 of the 2018 paper contained in Attachment 1.

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² Page 4

Giving effect to the ALC vision – the development of a single freight data standard for the national digital framework

ALC has been a consistent leader in the development of standards and guidelines for the freight and logistics industry, producing resources including the:

- Australian Freight Labelling Guideline;
- Logistics Labelling Guideline;
- XML User Guidelines; and
- Australian Freight and Logistics Glossary.

It continues this vital work with the development of a single freight data standard for the national digital framework.

As the International Standards Organisation has said:

*The ‘Supply Chain’ is a multi-level concept that covers all aspects of taking a product from raw materials to a final product including shipping to a final place of sale, use and maintenance and potentially disposal. Each of these levels covers many aspects of dealing with products, and the business process for each level is both unique and overlapping with other levels.*

GS1 ISO compliant identification standards encoded in relevant data carriers such as barcodes or Gen 2 HF/UHF RFID tags will provide the digital link between the physical object and the data associated to it.

The GS1 EPC Information Services Standard (EPCIS)\(^5\) (and the associated Core Business Directory) standard allows the sharing of information about the ‘what’, ‘where’, ‘when, and ‘why’ dimensions of the physical movement and the status of products/shipments as they travel the supply chain.

When designed correctly, relevant “Identification”, “Data Capture” and “Data Sharing” standards will facilitate effective end to end freight visibility.

The National Telematic Framework by the Transport and Infrastructure Council of COAG is aligned with ISO 15638 which establishes the Framework for Collaborative Telematics Applications for regulated Commercial Freight Vehicles which will enable data to be used for safety, compliance and planning purposes.

The possible combination of the data captured through the use of these standards would appear to have the advantage of bringing together under one regime both heavy vehicle and freight movements, which would:

1. greatly assist the collection of statistics for purposes such as the ABS transport satellite account, through the presentation of information in a uniform format;


\(^5\) [https://www.gs1.org/sites/default/files/docs/epc/EPCIS-Standard-1.2-r-2016-09-29.pdf](https://www.gs1.org/sites/default/files/docs/epc/EPCIS-Standard-1.2-r-2016-09-29.pdf). This has been endorsed by the ISO as Standard 19987:2017 – Information Technology – EPC Information Services (EPCIS) Standard - [https://www.iso.org/standard/72926.html](https://www.iso.org/standard/72926.html)
2. provide a uniform format of information for those wishing to enhance the visibility of freight in which they have an interest;

3. present information to road managers in a way that would facilitate decisions relating to access to routes by heavy vehicles;

4. facilitate compliance with legislation; and

5. facilitate planning for both industry and governments.

ALC, together with GS1 and Transport Certification Australia (TCA) has developed a Single Freight Data Standard for the National Digital Framework that brings together these two data standards.

It is set out in Attachment 2.

For the time being, the current data standard is designed to capture the movement of freight and heavy vehicles.

Other datasets may be published by other entities that may be relevant to other freight modalities. These may be incorporated as the concept is further developed.

As the document says, its purpose:

……... (i) is to provide industry with guidance to the data standards and protocols that are available to support interoperable implementations of digital capabilities in the Australian Freight & Logistics sector.

Common, agreed data standards and a framework for sharing data can reduce the cost and complexity of data exchange, and allow the adding of value to the Australian economy through improved analysis, better information about supply chains, and improved customer service.

The document then goes on to say that it draws on material, standards and guidelines already approved and in common use across Australia which align with international standards and provide a common framework for data interoperability across domestic and international supply chains.

Thus, the standards can be used by vendors to develop the data exchange languages so products can be developed that would permit the full interoperability that would facilitate the provision of information.

Use of the standards would also permit the answer of the foundation freight data enduring questions that guide the design of the hub contained on page 7 of the discussion paper as will satisfy the majority of the data priorities set out on page 12 of the paper.

**ALC recommends** that this industry supported data standard be used as the basis for capturing information provided by the Freight Hub.
In the context of the discussion paper, this would constitute a ‘medium change’.

For completeness, the issues discussed in ‘enduring question’ 4 can be answered in part through a project industry is also working with BITRE (amongst others) to develop a location registry designed to provide information on issues including:

- the effective management of trading or operating hours for peak periods;
- providing access to information about any safety constraints at a site;
- if any driver amenities are available;
- weight/height restrictions;
- details regarding dedicated truck entry points; and
- other random site requirements such as whether drivers must where hard hats.

**Industry position on the provision of data generally**

There is general support for the development of a common data standard for the Australian freight and logistics industry.

This has been made clear at Technology summits that have been conducted by ALC in the previous two years together with their last two Inland Rail conferences jointly conducted by ALC and the Australasian Railways Association.

However, unfortunately the intercession of COVID-19 has meant that ALC has not been able to conduct the gatherings of industry that it was hoping to do during 2020 to further advance the issue of how a common data standard could be used to the advantage of both government and industry.

The following matters require further discussion by industry participants:

1. Identifying the type of entity that could act as a custodian of data provided by industry and stored in a data hub;
2. the standards (including security standards) under which the stored data would be kept;
3. how to manage the various permissions granted by particular industry participants – that is, those who are prepared to allow access to more granular information stored in a freight hub because they wish to use the system for freight visibility or regulatory compliance purposes as opposed to those only prepared to permit data to be used (particularly by government) if provided in an aggregated, de-identified form for policy and planning purposes;
4. identifying who may extract information from a freight hub and why;
5. the privacy standards governing use of the freight hub;
6. whether there are any competition law issues that may arise if there is a desirability to transfer between parties non-proprietary information to encourage efficiency in the supply chain (for example, using information to identify some form of blockage at a particular piece of infrastructure and then take an action (like aggregating freight on one carrier) to avoid the blockage);
7. the instruments governing the operation of any freight hub – for instance, will it be:

(a) a set of interlocking contracts, perhaps backed by some form of code of conduct; or

(b) an Act of Parliament – the way in which the trade and commerce, census and statistics and corporations powers of the Commonwealth have been used, and approved by the High Court, would suggest that such an Act could be developed to underwrite the manner by which a freight hub would operate;\(^6\) and

8. where such information is stored and who would be the custodian.

Current industry preferences

Having said that, to the extent that industry discussions have been able to be undertaken, there appears there is a consensus about the following things:

1. Any Information provided to the Freight Hub remains at all times the property of the party providing the information.

2. The provision of information to the Data Hub will be voluntary.

3. The highest levels of privacy protection are expected. It would be anticipated that in the preparation of the business case, a privacy impact assessment of the type expected by the Office of the Australian Information Commissioner would be prepared.

4. It is for the provider of information to identify the purposes for which information provided to the Data Hub may be used. This is because there are some industry participants who would be happy to provide data that would be aggregated and deidentified for planning and other similar purposes, whilst over the long-term other participants may wish to use the Data Hub for the purposes of tracing freight.

Some of these matters are of course identified in the discussion paper. However, noting the compressed timeline the business case is working to, the following tentative views are advanced, expressed against the ‘elements’ set out on pages 11ff. of the discussion paper:

Element One: Data

As discussed earlier, the ‘enduring questions’ and the data priorities identified in the discussion paper are answered if the common data standard out in Attachment 2 is adopted, with the ultimate goal the provision of real time data.

This would also advance the goal of interoperability and to enhance the comparability of data.

\(^6\) Pl.51(i),(xi) and (xx) of the Australian Constitution
Industry take up would be enhanced if governments undertook to receive information contained in the proposed industry data standard when requesting data.

**Element two: Technology**

Given the current prevailing views set out in the 'current industry preferences' component of this submission, it would appear the utilisation of the existing technology of government and industry participants and what is described as being a 'federated architecture model' would be the way to establish the Freight Hub.

Given the compressed timeline for delivering a business case for the Hub, it may be appropriate for the Department to ensure that any specialist work undertaken to flesh out how the proposal set out above would work is properly tested with industry. ALC stands ready to assist.

**Element Three: Governance**

So industry has confidence in providing information to the Data Hub, some form of independent body should be generally charged with responsibility for administering it.

It would be presumed that only those who provide information to be shared would have access to any information contained to be contained on the Data Hub, which would give effect to the 'give info and get info' concept set out on page 8 of the Discussion Paper.

More generally, the sophistication of the governance structure is much influenced by the granularity of the information provided.

For example, referring back to the layers of logistics units graphic set out earlier, the lower the level of information to be provided (so that, for example, the Hub can be used for tracing freight) then a sophisticated governance structure may be required.

Given the compressed timeline for delivering a business case for the Hub it may be appropriate for the Department to ensure that any work undertaken to develop the optimal governance structure for a Hub that has access based on a 'give info and get info' basis and an appropriate privacy structure is properly tested with industry. ALC stands ready to assist.

**Element Four: Funding**

From discussions with government it would appear that (at least initially) the information that will be available would be aggregated, deidentified information typically drawn from existing databases, with much of the information currently available on [www.data.gov.au](http://www.data.gov.au).

As iMove has observed:

*There is a plethora of freight related datasets in Australia, collected by all levels of government in the Australian federation, as well as private firms (particularly larger firms) and industry bodies. However, we also find significant gaps in the datasets, most notably in relation to how data with common characteristics (say, by commodity or mode) is not comparable across supply-chains, regions or states because it is not standardised and concorded to the same levels of aggregation or granularity or collection frequency.*
This study also indicated several other problems with government data release. For instance, because the government doesn’t generally release the underlying raw data, it must necessarily make a call on the level of data aggregation, which will clearly not suit every data user.

Another common criticism is that data are often released with significant delay. This criticism is relatively recent and is driven by the fact that modern information and communications technology means that information in other aspects of life are released in real-time.

Comparing this to the delays in publishing ABS surveys such as SMVU and FMS, for example, which in some instances occur two years after collection (and in a highly aggregated form that prevents modelling and forecasting precision), reflects poorly on modern government approaches to data dissemination.7

If it is the case that at the commencement of the life of the Hub the information on it is largely designed to support planning purposes from information already available, then it is probably appropriate for the Hub to be fully government funded.

Over time, it would be hoped that the Data Hub could be used by participants to acquit statutory obligations or to trace the movement of goods down the freight chain.

However, for the reasons discussed above, ALC would recommend that the business case be drafted on the assumption the Hub would be government funded, until there is confidence that the data on it is close to real time and genuinely comparable.

Ultimately, much will turn on the acceptance of a standardised data standard along the lines proposed by ALC.

ALC congratulates the Department on the way it has been developing this concept and stands ready to continue its close working relationship to bring it to conclusion.

Australian Logistics Council

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ATTACHMENT 1

A Common Data standard for Our Supply Chain

ATTACHMENT 2

Single Freight Data Standard for the National Digital Framework