Austroads Road Asset Data Standard
June 2017 Webinar – Questions and Answers

This document address questions regarding the Austroads Road Data Standard raised during a webinar broadcast in June 2017. The recording of the webinar can be accessed on the Austroads website.

How will scalability be managed to benefit very small local government units?

The Austroads Data Standard has been developed to accommodate road manager organisations with different scales and complexities of road asset management tasks. The Data Standard has three levels of sophistication structured within the document such that road managers are given guidance about which data fields are most likely to be relevant.

In developing priority subsets of data for initial implementation small local government needs are being considered. However, it is possible that very small local government units will not have a need to collect all the nominated data sets – and would be able to harmonise only to those data sets relevant to their network. The implementation approach being considered by Austroads is not one of mandating action for local government. Further a core principle for harmonisation is that road managers seek to harmonise existing data sets, not collect new data.

Do you have any representation by standards authorities?

Austroads is maintain a close contact with international IFC developments including ISO TC 59 / SC 13 / WG 8. IPWEA has also been involved in the project, including representation on the project Steering Committee.

Our Council is recently amalgamated and will need to combine/refine whole asset registers over the coming years. Would this be a good time to try and align to this standard as the data migration occurs?

Austroads is investigating implementation models that can limit the impact on asset registers and systems for local government. However, it is desirable that organisations consider opportunities, such as amalgamations, shared service arrangements and system replacements and upgrades, to align to the standard where appropriate. Austroads would be happy to provide advice about the details of any such consideration.

Is it possible to have ONRC Classification in Australia too??

The Austroads Data Standard utilises the New Zealand ONRC Classification structure. However, there remains much need for development and consultation on this structure for application in Australia. Road Classification in Australia has significant diversity within Australia, both across the States and Territories and from council to council. This represents a significant barrier to the full achievement of potential net benefits from maintenance activities from the Data Standard. Network condition, performance and expenditure data is more informative when compared to that of other agencies for roads of a similar purpose, and therefore classification. Austroads and its member agencies are considering how to make further progress in this aspect of harmonisation. Experience in New Zealand is that a common classification system is beneficial, and that Agencies are continuing to use local classification systems for other purposes.

Has there been done a concrete study showing some return in funding money in standardised the data versus current practise? If this new methodology gives only 1% of money investment in medium term (5 years) do we really need to go to this route?

The economic analysis supporting this project has measured benefits against the current practice. The benefit cost ratio is strong but requires a judicial approach to harmonisation such that the benefits are accrued without causing high costs to government. This philosophy underpins the approach to incrementally sponsor harmonisation of subsets of data which are likely to yield the highest benefits if harmonised. Early anecdotal information from New Zealand (noting that there are distinct differences between Australia and New Zealand and comparisons are made with caution) where there already is a fair degree of harmonisation because of the nationwide funding model is that comparative statistics are usefully informing improved proposals for investment that are currently being developed for the 2018/21 period and that the degree of impact can be significant in some cases. For example, some peer organisations have twice the costs of the norm of their peer group for maintaining roads.

Have you included reviews of existing standards such as the standard for rural and Urban Addressing (AS/NZS 4819:2011) where you may be able to re-use elements and code lists (e.g. road types)? Also, the ISO/IEC 19160 Address standard would also give similar elements/formats that may inform this standard and help with interoperability.

AS/NZS 4819:2011 primarily relates to addresses of properties alongside a road (or similar). The Data Standard has a data item called ‘road name’. Instead of ‘road type’ we have an array of data items such as the Classification items, and the data items relating to specific elements of a road (pavement, surfacing, lanes etc) and the Network data items. The project will consider a review the two standards suggested to look for opportunities to align code lists.

How will maintenance data be linked to the common asset database presented just earlier?

Austroads is not contemplating building a common asset database. It is, though considering options to utilise shared analytical platforms where they exist, or assist in framing their requirements in other cases. Austroads is investigating processes to assist local government analysing maintenance data through shared analytical tools.

Have you considered Austroads' National ITS Architecture & Framework for the Information Architecture, as this will enhance the alignment and efficiency of our efforts?

The Austroads National ITS Architecture and Framework has been considered in the Information Architecture proposals, noting that these will be further developed in consultation with stakeholders. In particular the architecture focuses on, leveraging existing investment, driving innovation and supporting the development of a competitive, innovative and open market.

This proposal seems to be for Australia and New Zealand. Has any comparison or investigation been made about international integration (e.g. subsets of the standard that integrate with SE Asia / Europe / US etc)

Yes, work investigating international integration is ongoing.

Are we also taking service providers on board to ensure the road asset data collection technology they use can actually in future provide information output of same standard?

Yes, Austroads is in dialogue with service provides and vendors about utilisation of the Data Standards.

How do you incorporate data sets captured by equipment developed using new technologies (i.e. Retro reflectivity measurements or drone captured topographical data)?

It would be hoped that data collected using new technologies would be collected in the data standard format. Where this isn't possible and the Data Standard doesn't accommodate the new data being collected, it would be an opportunity to update the standard. There is an existing governance model in place to allow for long term as well as fast paced reviews of the Data Standard.

As the latest version is still called 'draft', is there a timeline planned for moving to 'final' so we can start adopting? Not sure if the organisation will want to move this way while it is still labelled draft.

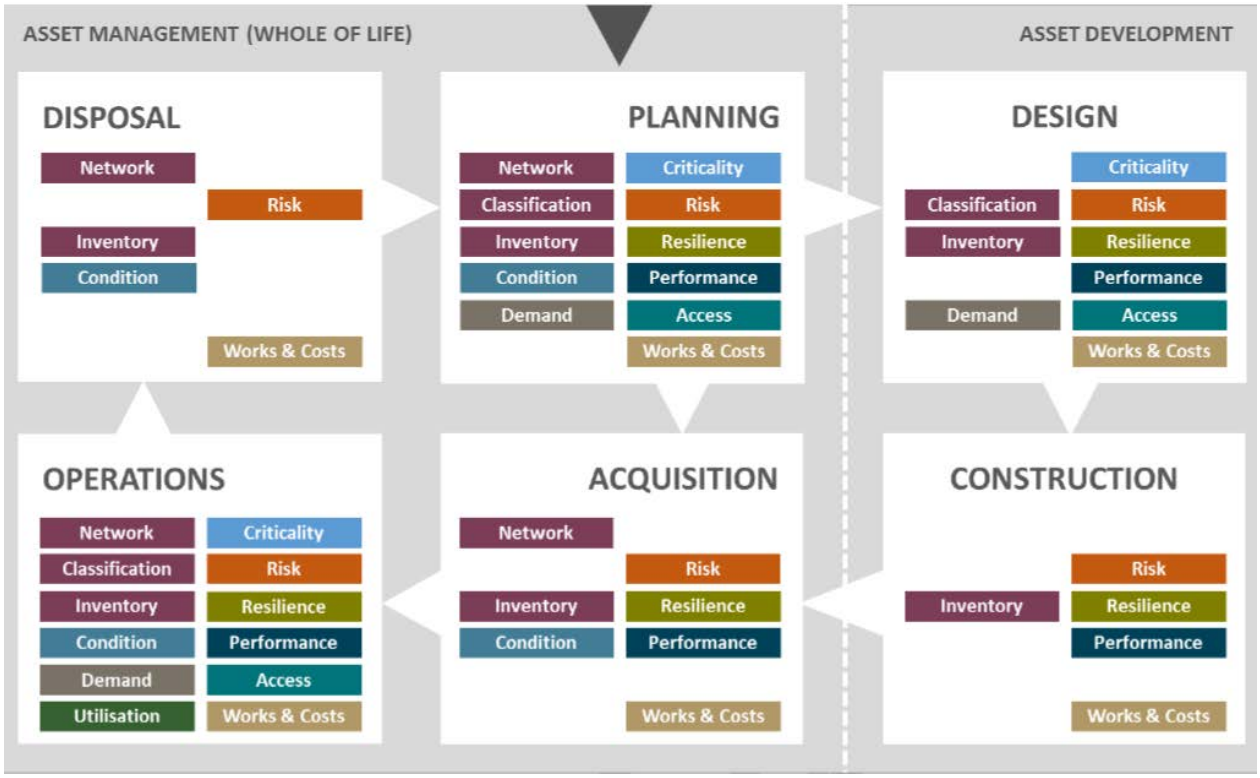
Version 1 of the Data Standard was published in November 2016, Version 2 is now being finalised and is likely to be published in July 2017.

Where do you see the scope of technical specifications for design, construction and maintenance of road assets in the data standard?

The scope of the data items included in the Standard are confined to those required for effective road management and investment. The data items have been categorised against fourteen function groups, which has determined the structure of this Standard. Function groups include:

- Network (the road network and its links)
- Classification (the hierarchy and purpose for the links)
- Inventory (the asset register)
- Condition (the condition of the assets)
- Demand (the current road user profiles and vehicle volumes)
- Utilisation (the usage of the assets)
- Criticality (the importance of the assets)
- Risk (the risks associated with the assets)
- Resilience (the ability to restore asset service following an event)
- Performance - asset (the technical performance of the assets)
- Performance – finance (the costs of asset ownership)
- Performance – service (the customer service performance of the assets)
- Access (any road user access restrictions)
- Works and Costs (the physical works plan/achievements and related estimated/actual costs)

The following diagram, from the Data Standard, shows how these functional groups of data can be used in the various stages of asset management, including design and maintenance.



Can an agency configure Metaconnect to include agency specific schema elements to use as a common tool with dealing with its internal and external parties?

Yes, it may be good to note the following: Using a standard means that “specific schema elements” should be defined on top of the standard (not instead of the standard) or at least in a way that allows mapping on the standard. The tool allows identification of these as “jurisdictional additions”.

The diagram "How it all works" starts with the Austroads data standard. However, we have large data sets of existing asset data that needs to be aligned to the data standard. Where does this process sit with respect to Metaconnect?

As with all changes there will be some work required initially, however how you align to the standard is up to you. You can either align fully to the standard or alternatively you can use FME or other data manipulation tools to map/transform your data to the standard when required.

Has RAMM been involved in this standard in some way and in particular with the Metaconnect product?

We will use Austroads data standard as the base and if the RAMM data structure has similarities they will be merged; any differences will be loaded in under the New Zealand Jurisdiction.

Will Metaconnect be a completely independent new database or run alongside existing databases? also will it include GIS tools?

Metaconnect is a tool for storing data standards only, how you implement it in your systems is up to you. Metaconnect does not contain any GIS tools, just defines the geometry type for each class.

Is Metaconnect 11179 compliant?

We have not looked into IEC11179 compliance as of yet.

Will the Metaconnect tool be an open source development?

The data standards in Metaconnect will be available as per the Austroads (copyright) agreement. The tool itself is the IP of the vendor.

Data is an asset itself and it needs to be maintained; hence it has cost of collections, maintenance and disposal. So far there is no mention from data standard about this aspect. The data maintenance itself can matter especially at end of life of the asset, when the asset becomes redundant. It this sense it's difficult to believe a BCR =4, considering this fact. Can you please comment on this?

This is an important question. One of the principles for implementation has been that road managers need not seek to collect new data because of this initiative (unless they have other reasons to do so). However, it is hoped that over time, and for key data items initially data sets are harmonised to the meet the Standard specifications. Austroads worked with several road agencies and several local governments to build a representative view of the likely costs related to amending some processes and systems (where required) to accommodate the data standard for these limited sets of data. Data maintenance costs have been considered, but as described above this project is not primarily about increasing the amount of data being collected, but rather being more efficient with the analysis of the data and allowing more local and shared insights to be built from the data. The Data Standard itself will of course need maintenance, but the costs associated with this activity are not expected to large when compared to the scale of national road related data activities and benefits.

Austroads | Level 9, 287 Elizabeth Street, Sydney NSW 2000 | www.austroads.com.au | austroads@austroads.com.au | +61 2 8265 3300