

Maintenance activity data

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INTRODUCTION

This overview document is intended to provide high level support and direction to better understand the criticality of maintenance activity data, and how to maintain this dataset.

Relevant industry guidance and case studies are referenced where they provide more detailed assistance. Suitable quality assurance processes are needed for recording the activity and the acceptance of the data to have confidence in its accuracy.

WHAT IS MAINTENANCE ACTIVITY DATA?

Maintenance activity data is a recorded summary of maintenance which has occurred at either a specific location, or over a specific length of road. It generally reflects the maintenance of an existing asset.

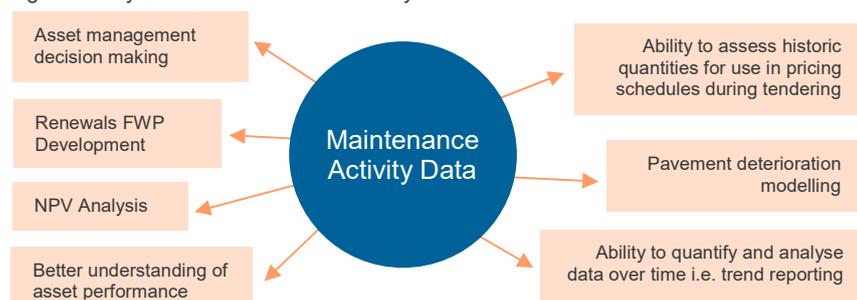
A maintenance activity is recorded against a cost group, activity type and fault code and should primarily be recorded as a quantity. Recorded costs may not reflect current costs and are not escalated.

It is best practise for Road Controlling Authorities to record maintenance activity data in the maintenance cost table in the Road Assessment and Maintenance Management (RAMM) system. This table was initially designed to capture pavement and surfacing maintenance activity only. Activity for other assets can be recorded, e.g. footpaths, drainage, etc. However, non-cyclic activity data used in informing renewals and investment decisions should be the minimum data recorded in this table.

WHY IS DATA IMPORTANT TO ME?

The accurate and timely collection and recording of reactive and programmed routine maintenance activity data is fundamental to assist Road Controlling Authorities in managing and analysing their roading assets over time. There are significant benefits associated with recording maintenance activity data. Figure 1 shows the key uses of this dataset.

Figure 1: Key uses of Maintenance Activity Data



KEY POINTS

Maintenance Activity Data:

- ✓ For pavement or surfacing maintenance; repair activity should be recorded in the RAMM maintenance cost table
- ✓ Needs to be complete, accurate and timely in terms of what was done, where, when, and why
- ✓ Primary focus is recording the quantity and location of the maintenance activity
- ✓ Completes understanding of the performance of a pavement and/or surface asset
- ✓ Is a key input into the development of a pavement and surfacing renewal forward works programme
- ✓ Is needed in an economic evaluation of treatment options (e.g. Net Present Value (NPV) analysis)
- ✓ To be maintained and updated frequently
- ✓ Is a key input into asset management decision making, long term planning and pavement deterioration modelling

Maintenance activity data completes the picture in terms of analysing asset performance and maintenance strategy effectiveness

Maintenance activity data for the pavement and surfacing cost groups are critical inputs for renewals forward work programme development, pavement deterioration modelling and Net Present Value analysis. As a minimum these activities should be recorded.

The quantity of the recorded activity is of greater value than the cost. It is the quantity which provides the indication of asset performance. Activity quantity is what should be used in informing decisions for renewal and investment decisions including the creation of any Net Present Value calculations to support these. As mentioned previously, any recorded costs may not reflect current costs and are not escalated.

The data can be summarised at various network levels and reported in conjunction with such things as One Network Road Classification (ONRC) categories, asset age, asset condition or renewal costs.

Put simply, without good maintenance activity data, you do not have all the pieces of the puzzle to achieve good asset management outcomes.

HOW TO ACHIEVE ROBUST MAINTENANCE ACTIVITY DATA

The most important steps to ensuring robust maintenance activity data is recorded. To achieve this, you can:

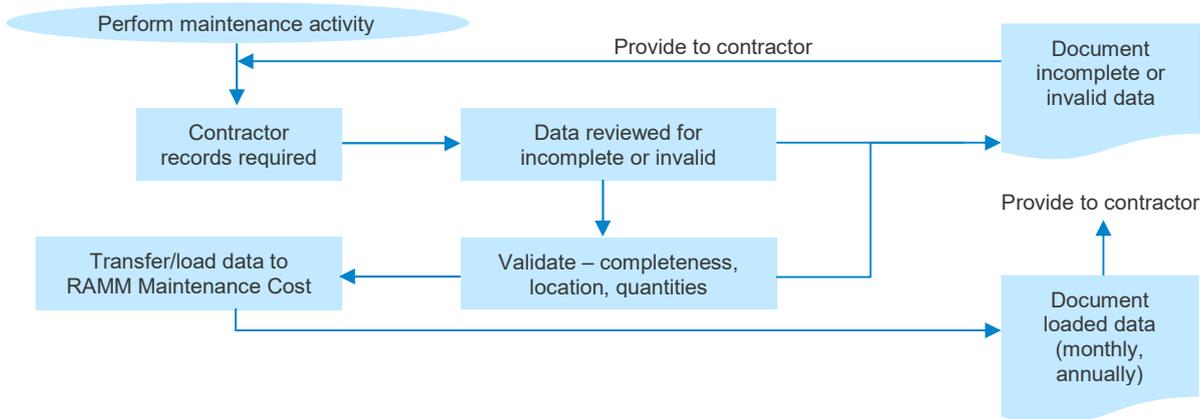
1. Do it in partnership with the maintenance contractor and have them take ownership for the recording of complete and accurate data
2. Have a Road Controlling Authority (RCA) resource which will understand the data and take ownership for its overall accuracy and completeness

Each RCA should consider the extent of the data they wish to record and agree the cost groups, activity and fault types. Each maintenance contract item is then linked to a cost group, activity type and fault code and the units in a standardised manner.

Data should be provided on a monthly basis and provided for data review and acceptance before being loaded into RAMM. The below figure 2 shows the process which the data should follow.

It is best practise to load activity into the maintenance cost data table in standardised units. This makes the data usable for asset performance analysis, forward works programme development and pavement deterioration modelling.

Figure 2: Process of data



CONCLUSION

The roles of all parties should be clear for recording maintenance activity data.

RCAs, contractors and consultants should all understand the importance complete and accurate maintenance activity data has for decision making of the asset owner.

As a minimum, contractors should be briefed on recording the data, what quality assurance is required, the frequency and delivery process of the data and the acceptance process of the data.

REFERENCES

- State Highway Database Operations Manual (SHDOM)
- RIMS Roothing Asset Maintenance Cost Guidelines
- Data Standard for Road Management and Investment in Australia and New Zealand

REG is a collaborative project between Local Government and the NZ Transport Agency.

For more information, please contact:

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