

Data Quality Sector Survey Results

You told us

INTRODUCTION

The Road Efficiency Group (REG) is working hard to help the sector improve the quality of New Zealand's roading related data to support evidenced based decision making. It is focused on the data that underpins the One Network Road Classification, related performance measures, road asset management and decision support systems. It is essential that data is consistently of a good standard to get value and meaning to help our investment decision making.

BACKGROUND

REG developed a survey for the sector to gain a greater understanding of the root causes for inconsistent data quality to support the development of a sector-wide improvement programme.

The survey explored factors affecting data quality:

- in terms of its timeliness,
- asset inventory data in terms of its accuracy and completeness,
- traffic, condition and maintenance activity in general.

A total of 130 survey responses were received between 20 March and 9 April. The adjacent chart shows the distribution of respondents by organisation.

The survey results have been analysed and considered by REG. This brief report summarises the findings and REG's conclusions. The complete survey results by question and REG's analysis is attached to this summary report and is available on the REG website:

www.nzta.govt.nz/reg-data-quality

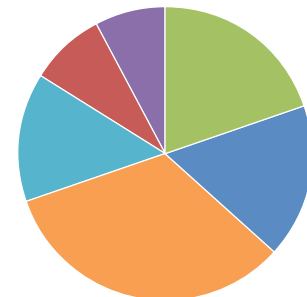
FINDINGS

The following common themes affecting data quality were identified:

- There is a general opinion there is a lack of understanding of the impacts of poor quality data
- There is a lack of resources and competency across the sector
- There is a lack of sector guidance on what to collect, to what level, why and how to do it
- Data is currently not valued or considered a priority



RESPONSES BY ORGANISATION



- Territorial local authority **21%**
- NZ Transport Agency **18%**
- Consultant **35%**
- Contractor **15%**
- Comp. service provider **9%**
- Other **2%**

The below table summarises what respondents see as being the most significant factors affecting data quality in each survey category. These are the most significant ordered from top to bottom.

| Timeliness Obstacles to achieving and/or improving data quality in terms of its timeliness | Asset inventory Factors affecting the accuracy and completeness of asset inventory data | Traffic activity Factors affecting the quality of traffic activity (count and estimate) data across the sector | Condition Factors to for poor or inconsistent condition data quality | Maintenance activity Factors to for poor quality data in the RAMM maintenance cost table |
|--|---|--|--|--|
| Data is not valued as an asset | Lack of understanding of the impacts of poor quality data | Lack of understanding of the impact of poor data | Lack of understanding around an expected minimum standard/level | Lack of competency across the sector |
| Lack of data management competency across the sector | Lack of competency within the sector | Lack of resources to maintain this dataset | Lack of budget to collect what we need | Lack of understanding of this table |
| Lack of consequences for suppliers not delivering | Lack of understanding of what level of information is required for each asset type | Not considered a priority | Lack of available guidance on the impact of poor condition data on asset management or decision making processes | Lack of resources to maintain the data |
| Lack of available resources across the sector | Lack of budget to regularly validate the accuracy and completeness of the asset register | The existing systems are too complex to use | Lack of guidance on what to collect and how | There's no guidance on the why and how to populate this table |
| No agreed data quality standard | Lack of an Asset Data Quality/ Standard Manual | The current documentation is too hard to understand | Lack of resources to maintain this data | It is not correctly defined within the contract specification on how this table is to be populated |

CONCLUSION

The survey responses provide a consistent message around what is considered by the sector to be impacting the quality of the data we use for our asset management and decision-making. There are varied approaches across the sector. This is potentially linked to a lack of sector level guidance and/or the value placed on and understanding the need for good, consistent quality data.

The survey has confirmed the opportunity exists to improve data quality across the sector. Through this improvement we should realise better outcomes from the decisions we make and we will be able to make better, more informed decisions based on more reliable data inputs.

NEXT STEPS

REG are using the survey results, as well as the results of the asset management and decision support systems data quality reports to develop a sector-wide improvement programme. This programme will be aimed at addressing some of the causes of poor quality data to help the sector achieve the expected standard of roading data quality across New Zealand.

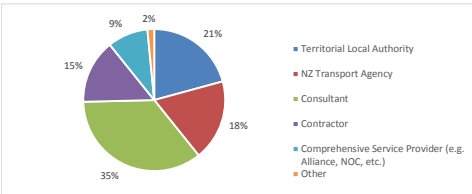
Feedback will be sought from the sector on the proposed sector-wide improvement programme via the REGional workshops, around July/August this year.

Overall Conclusion for Section:

A reasonable response level was achieved for the survey, along with a good spread across the various organisations in the sector. Of those that responded, the highest use of the data is related to forward works programming activities, including the two key inputs, and reporting. The reported use of the Treatment Selection Algorithm is low. Could this be a result of the current tool being out of date, or the specific role and responsibilities of the individual respondents?

Q1: What type of authority/organisation do you work for?

Answered: 129
Skipped: 1



Observations/Comments:

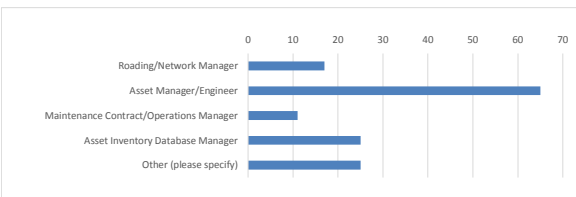
A total of 130 responses to the survey were received. This is encouraging as is the spread of respondents by organisation

Conclusion:

This level of response and distribution across the different organisations should provide a reasonable view of the sector.

Q2: What is your role? Please select all that apply:

Answered: 128
Skipped: 2



Observations/Comments:

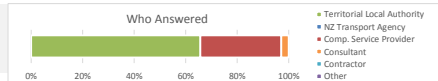
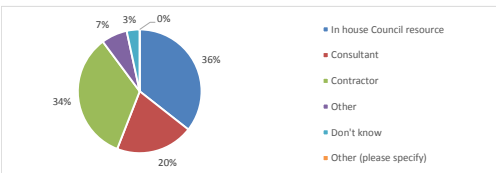
Asset technician/engineer role not included. Of those that provided details of the 'Other' only two asset information officer (or similar), and a further two asset systems analyst.

Conclusion:

A good spread of different roles responded. This should provide a variety of perspectives.

Q4: Who is primarily responsible for collecting, collating and recording data ready to be entered into the Asset Management Information System? Please select all that are relevant:

Answered: 36
Skipped: 94



Observations/Comments:

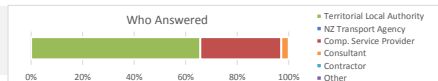
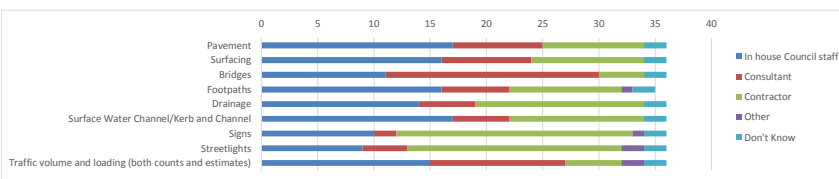
TLA in house resource and contractors are the organisations with the greatest primary responsibility for collecting, collating and recording data to be entered into the asset information system.

Conclusion:

The focus of any improvement plan/communication needs to equally target both in house TLA resource and Contractors, plus consultants to a lesser extent.

Q5: For the following asset types who primarily adds, updates and deletes data within your asset information system/database? Select all that apply:

Answered: 36
Skipped: 94



Observations/Comments:

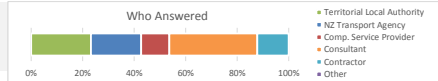
There is a mixture of organisation responsible for maintaining the asset inventory database. This varies by asset type with a greater level of consultants for bridges, and contractors for signs and streetlights.

Conclusion:

No real surprises here. There is a mixed emphasis by asset type. There is a larger portion of consultants maintaining bridge inventory data, and a larger portion of contractors maintaining sign and streetlight data.

Q28: In which of the following, and to what level, do you use asset inventory, condition and traffic data?

Answered: 83
Skipped: 47



All Respondents

| | Not at all | A little | A lot | No. Answered | Answer Distribution (All) |
|--|------------|----------|-------|--------------|---------------------------|
| Running the Treatment Selection Algorithm (TSA) | 40 | 20 | 21 | 81 | |
| Pavement deterioration modelling (dTIMS or similar) | 15 | 22 | 45 | 82 | |
| Asset valuations (calculation of replacement cost, depreciated replacement cost and annual depreciation) | 15 | 26 | 40 | 81 | |
| Renewals FWP development | 7 | 11 | 64 | 82 | |
| Tensioning the current renewals programme (e.g. RAPT) | 19 | 18 | 43 | 80 | |
| Detailed analysis to monitor asset performance | 16 | 25 | 38 | 79 | |
| Used to research trends and issues | 20 | 27 | 33 | 80 | |
| Supplier performance assessment and reviews | 35 | 25 | 19 | 79 | |
| Researching customer feedback and complaints | 33 | 28 | 18 | 79 | |
| To develop Levels of Service | 26 | 32 | 22 | 80 | |
| To inform the assessment and management of risk | 28 | 30 | 21 | 79 | |
| Customer responses | 29 | 34 | 16 | 79 | |
| Reporting to Council, funders, etc. | 11 | 30 | 38 | 79 | |

TLAs and Comp. Service Providers only

| | Not at all | A little | A lot | No. Answered | Answer Distribution (All) |
|--|------------|----------|-------|--------------|---------------------------|
| Running the Treatment Selection Algorithm (TSA) | 10 | 8 | 9 | 27 | |
| Pavement deterioration modelling (dTIMS or similar) | 3 | 8 | 16 | 27 | |
| Asset valuations (calculation of replacement cost, depreciated replacement cost and annual depreciation) | 3 | 6 | 18 | 27 | |
| Renewals FWP development | 3 | 2 | 22 | 27 | |
| Tensioning the current renewals programme (e.g. RAPT) | 7 | 7 | 12 | 26 | |
| Detailed analysis to monitor asset performance | 5 | 11 | 10 | 26 | |
| Used to research trends and issues | 6 | 13 | 8 | 27 | |
| Supplier performance assessment and reviews | 13 | 6 | 8 | 27 | |
| Researching customer feedback and complaints | 8 | 11 | 8 | 27 | |
| To develop Levels of Service | 4 | 16 | 8 | 28 | |
| To inform the assessment and management of risk | 7 | 13 | 7 | 27 | |
| Customer responses | 7 | 12 | 8 | 27 | |
| Reporting to Council, funders, etc. | 2 | 8 | 17 | 27 | |

Observations/Comments:

The results show the greatest data use of the respondents is around the development of FWPs and reporting. Of the 40 that answered not at all for TSA, 4 are TLAs and 6 are Comprehensive Service Providers.

Conclusion:

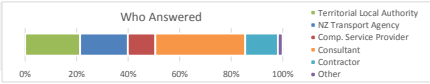
There is a heavy data use around forward works programme activities and reporting for those that responded. However, these results will be influenced by the specific role and responsibilities of the individual respondents.

Overall Conclusion for Section

The most significant causes of poor data quality in terms of timeliness are the lack of value placed on the data, lack of sector competency and resources, and lack of consequences for poor delivery. Primary responsibility of this data predominantly sits with in house Local Authority resource or the contractor, with consultants to a lesser extent.

Q3: The following are potential obstacles to achieving and/or improving data quality in terms of its timeliness. Rate the significance of each based on your experience:

Answered: 106
Skipped: 24



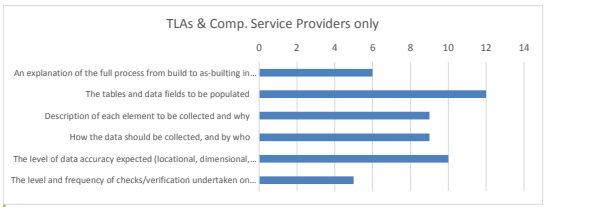
| Factor | Not at all significant (1) | Slightly significant (2) | Significant (3) | Fairly significant (4) | Very significant (5) | No. Answered | Weighted Average (All) | Rank (All) | Answer Distribution (All) | Weighted Average (3), (4) & (5) | Rank (3), (4) & (5) |
|---|----------------------------|--------------------------|-----------------|------------------------|----------------------|--------------|------------------------|------------|---------------------------|---------------------------------|---------------------|
| Data is not valued as an asset | 5 | 13 | 27 | 28 | 31 | 104 | 3.64 | 1 | | 4.05 | 2 |
| Lack of data management competency across the sector | 3 | 15 | 31 | 39 | 18 | 106 | 3.51 | 2 | | 3.85 | 6 |
| Lack of consequences for suppliers not delivering | 9 | 17 | 26 | 23 | 30 | 105 | 3.46 | 3 | | 4.05 | 1 |
| Lack of available resources across the sector | 2 | 25 | 25 | 31 | 21 | 104 | 3.42 | 4 | | 3.95 | 3 |
| No agreed data quality standard | 13 | 24 | 25 | 26 | 16 | 104 | 3.08 | 5 | | 3.87 | 5 |
| Lack of contract documentation to bind suppliers to delivery | 13 | 29 | 22 | 26 | 15 | 105 | 3.01 | 6 | | 3.89 | 4 |
| Lack of accessible, relevant sector guidance | 10 | 25 | 37 | 23 | 10 | 105 | 2.98 | 7 | | 3.61 | 10 |
| The person who pays for it is not willing to allocate sufficient budget | 17 | 24 | 28 | 21 | 15 | 105 | 2.93 | 8 | | 3.80 | 7 |
| Expectation is set that suppliers are failing to deliver | 14 | 33 | 33 | 15 | 10 | 105 | 2.75 | 9 | | 3.60 | 11 |
| There's no money available for this | 23 | 28 | 24 | 19 | 10 | 104 | 2.66 | 10 | | 3.74 | 8 |
| The database system is too difficult to use, update, etc. | 18 | 39 | 24 | 14 | 10 | 105 | 2.61 | 11 | | 3.71 | 9 |
| Too much time spent recording data of little value | 22 | 39 | 28 | 12 | 5 | 106 | 2.42 | 12 | | 3.49 | 12 |

Observations/Comments:

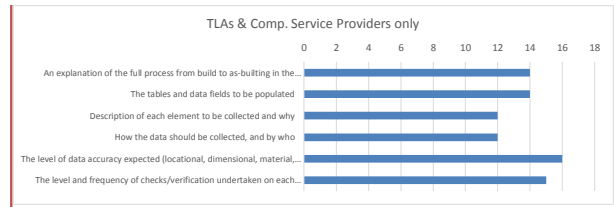
Data not valued, lack of sector competency and lack of consequence of poor delivery are of highest significance. The complexity of the database, financial resources and spending too much time collecting data of little value are not considered significant.

Conclusion:

The greatest causes of poor quality data in terms of timeliness are the lack of value placed on the data, the level of competency and resources in the sector, and lack of consequences for poor delivery. The database system and the level of data recorded are not considered to be significant.

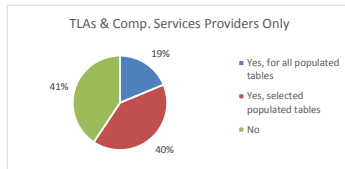
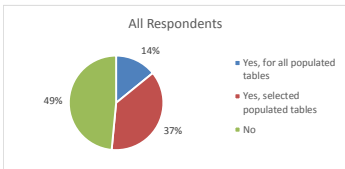


Observations/Comments:
Education in this space would be beneficial. Existing ones may not be complete?



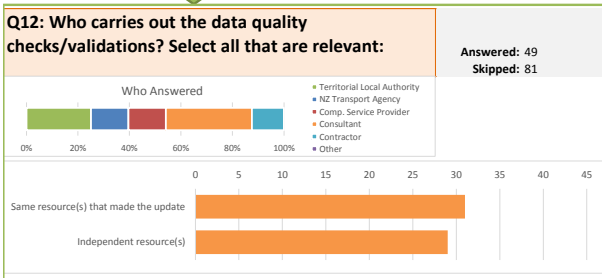
Conclusion:
There's an interesting difference between the results of Q9, Q10 for a similar number of respondents. Those that don't have one consider there should be greater detail than what is contained in those that exist. Does the sector have a consistent view on what one should contain.

Q11: In a 12 month period do you actively carry out quality checks/validation of at least 10% of the data updates in your asset information system/database?

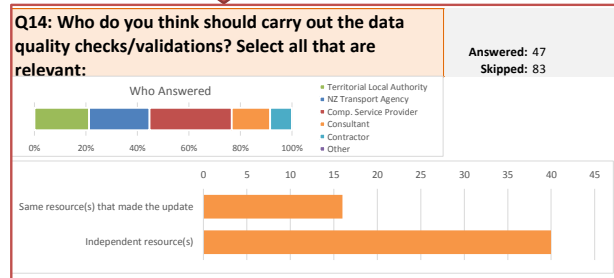


Observations/Comments:
Only half regularly audit/validated data being loaded to the asset database. Slightly better results looking at TLA and Comprehensive Service Providers only.

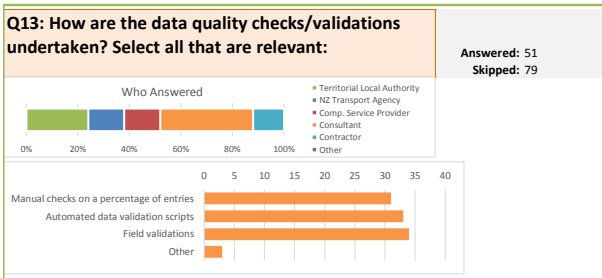
Conclusion:
This is a real concern if it represents the sector. The levels of quality control/auditing of data being added to/updated in the asset inventory is low.



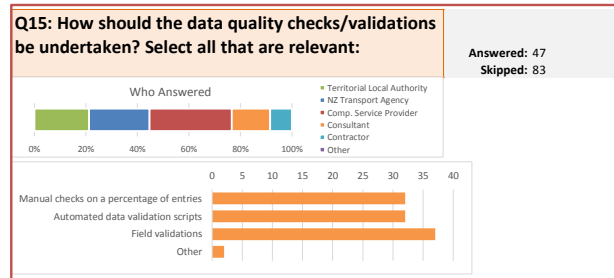
Observations/Comments:
Pretty much a 50/50 split between checks being carried out by the same or an independent resources



Conclusion:
There's an interesting difference between the results of Q12 and Q14. Those that don't audit the data feel this should be done by an independent resource. Whereas those that current audit have a relatively even split between the same and an independent resource.

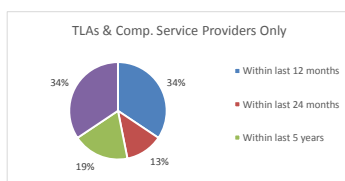
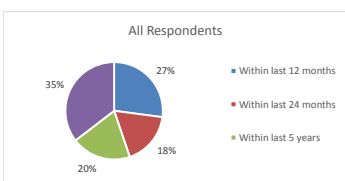


Observations/Comments:
Should be included in any standards manual education/guidance. Include some scripts for users to run and test data. Field validation is seen as important.



Conclusion:
Both Q13 and A15 results are similar. A combination of various approaches is needed to truly test accuracy. This includes the field check component which is needed to confirm the record reflects the physical asset/activity/condition on the network.

Q16: When did you last review and update the default surface lives in RAMM?

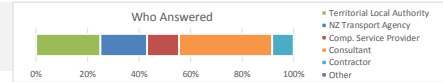


Observations/Comments:
Break down by Territorial Local Authority shows a similar distribution which is a concern. Communication on why do this, what the impact/consequence are and best practise on how.

Conclusion:
This is of concern. Is there a lack of understanding of the impact of these default surface lives not reflecting what is being achieved on the network?

Q17: To what level is your bridge asset inventory recorded?

Answered: 73
Skipped: 57



| | Critical/High value bridges | Other bridges | Major culverts | Total | Weighted Average |
|--|-----------------------------|---------------|----------------|-------|------------------|
| Network – the route or corridor section the asset is located on | 15 | 8 | 34 | 57 | 2.33 |
| Bridge – individual bridges are defined as an entity | 25 | 11 | 33 | 69 | 2.12 |
| Element – details on the bridge elements such as deck, beams or bearings | 25 | 19 | 9 | 53 | 1.7 |
| Component – specific details such as each individual beam or bearing | 21 | 13 | 9 | 43 | 1.72 |

Observations/Comments:

Issues with the question set-up.
Does show that bridge inventory is held at a component and element level.

Conclusion:

An issue with how this question was set up in the survey has reduced the confidence in the message given. The results do show that there is a reasonable amount of bridge data recorded to a element and component level.

Q8: Do you have a Data Quality/Standards Manual? If no, what would help you develop one?

Responses

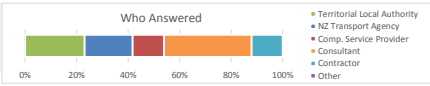
- I think???
- The sector complete the job that was started and deliver a single (RAMM orientated) data standard and manual for the NZ Roading industry.
- This needs to be a national standard - especially with ONRC.
- A sector standard template identifying the minimum standards
- We have access to an operational manual but not a quality manual. We have a consultant currently assembling a manual for us.
- Agreed sector standards to benchmark our own data quality and standards processes
- We do not have a single document. We have a NOC specific Data Quality Plan that address certain elements of the data process. Standards are from the NZTA SM050 manual (SHDOM), which is now out of date. Answers to Q9 are with reference to our DQP.
- having access to other Local Authorities databases and contacts so one can see what others are doing so you don't reinvent the wheel
- Shared reference as a template to help. Meta data standard!
- Part way through developing one
- Not kept at this office. SHDOM and Quality plans in other Main Office
- The \$\$\$ and a good consultant
- SHDOM is a fantastic basis, however one for LA needs to be developed. This could be on a national level and then customized to each LA as required.
- an industry standard
- Knowing what everyone else does. Knowing what should be done.
- We do have a Quality Management plan that does include Data Quality
- Funding and resource availability as we currently have none for this
- Guidance on what is best practise and nationwide standard of best practise.
- Resource
- Yes
- NZTA actually being pro-active and providing timely responses to queries, and NZTA also not just making it the contractors problem all the time!! after all they own majority of assets
- SHDOM
- Industry Guidance
- Need for National SHDOM type manual for LA's
- Time. Partial implementation of Contractor based system already in place.
- ITS is not listed as an asset in the options provided, currently this is maintained in RAMM. ITS assets are identified in SHDOM however are not well understood by the industry and thus the entry in SHDOM is still in draft and is fundamentally a minimum viable product and is used for a very coarse economic valuation at best. The official data currently collected does not reflect the needs of the asset manager to understand the asset and use the data for informed decision making.
- unsure
- Organisations typically don't have a good handle of what is involved in managing data, from creating an inventory to maintaining it and why it is important to have one. The first step needs to be changing the mentality around data through education.
- An industry standard set of guidelines
- Austrroads has developed a Data Standard, intended for implementation by all road management authorities across Australia and New Zealand. V2 is not yet published. V2 forms an excellent base line for industry harmonization.
- None of these really relate to my input. Process and analysis data in GIS after its collected. Could provide some solutions to data capture though but with any work we need to work closely with the engineers to better understand what they need.
- Consultant - so we help develop
- Clearer national standards on what is required and why, and auditable examples from NZTA on how this data is used to fund need in maintenance rather than work from a fixed budget
- Better guidance as to the expectations; note I work only in the area of pavements and surfacing; I am not aware of the requirements in the other areas listed as N/A
- We are using the draft Austrroads one. We need better data quality standards & error trapping on data entry
- Unsure
- Time and experience

Overall Conclusion for Section:

The most significant causes affecting the quality of traffic data are a lack of understanding of the consequence of poor data, a lack of sector competency and it is not considered a priority. The first issue is a shock, and possibly an interpretation as those doing advanced asset management (i.e. modelling) have rated this very significant. It is encouraging that most Territorial Local Authorities and Comprehensive Service Providers have a traffic count strategy.

Q18: The follow factors are affecting the quality of traffic activity (count and estimate) data across the sector. Rate the significance of each based on your experience:

Answered: 93
Skipped: 37



| Factor | Not at all significant (1) | Slightly significant (2) | Significant (3) | Fairly significant (4) | Very significant (5) | No. Answered | Weighted Average (All) | Rank (All) | Answer Distribution (All) | Weighted Average (3), (4) & (5) | Rank (3), (4) & (5) |
|---|----------------------------|--------------------------|-----------------|------------------------|----------------------|--------------|------------------------|------------|---------------------------|---------------------------------|---------------------|
| Lack of understanding of the impact of poor data | 13 | 15 | 19 | 26 | 19 | 92 | 3.25 | 1 | | 4.00 | 1 |
| Lack of resources to maintain this dataset | 9 | 21 | 31 | 19 | 12 | 92 | 3.04 | 2 | | 3.69 | 3 |
| Not considered a priority | 20 | 14 | 24 | 19 | 11 | 88 | 2.85 | 3 | | 3.76 | 2 |
| The existing systems are too complex to use | 17 | 31 | 21 | 14 | 7 | 90 | 2.59 | 4 | | 3.67 | 4 |
| The current documentation is too hard to understand | 19 | 29 | 25 | 9 | 5 | 87 | 2.45 | 5 | | 3.49 | 7 |
| I don't know how to set up a count programme | 36 | 20 | 17 | 10 | 5 | 88 | 2.18 | 6 | | 3.63 | 5 |
| I don't know what I should be doing | 37 | 20 | 19 | 7 | 5 | 88 | 2.13 | 7 | | 3.55 | 6 |

Observations/Comments:

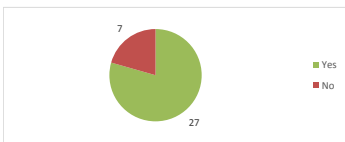
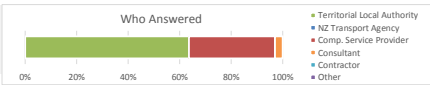
Possibly need to filter out the TLAs and Comp Service providers. Lack of understanding and resources are seen as significant, how to do it not. Rapid download session also highlighted that resources and not a priority are issues

Conclusion:

The most significant causes affecting the quality of traffic data are a lack of understanding of the consequence of poor data, a lack of sector competency and it is not considered a priority. Knowing how to develop a count programme is not considered a significant problem.

Q19: Do you have a traffic count strategy that is currently being implemented?

Answered: 34
Skipped: 96



Comments:

Not applicable - managed outside of the NOC
currently under development
Not involved in traffic count data
Consultancy staff fail to see the value in the traffic count programme and regularly fail to deliver on the prescribed outcomes
Needs updating
We have a sound strategy but only partially implemented as our traffic counting resources need to be upgraded or replaced. However the idea of buying new counters is seen as a cost and not an investment.
Traffic estimation module is not usable.

Observations/Comments:

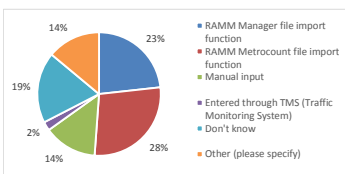
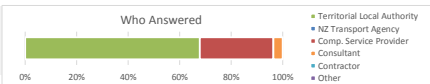
Almost 80% of respondents have an active traffic count programme

Conclusion:

Most respondents have a traffic count strategy. This is encouraging.

Q20: How do you load your traffic count data? Select all that apply:

Answered: 34
Skipped: 96



Comments:

Not applicable - managed outside of the NOC
Done for me
Loaded by Consultant
Consultant enters it
NA
do this for us

Observations/Comments:

There's a distribution of approaches to load count data currently. The proportion loading this manually is higher than expected.

Conclusion:

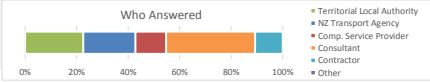
Traffic count data is loaded primarily through automated functionality within RAMM. For the 14% that manually enter this data it would be interesting to understand why this is considered an appropriate methodology.

Overall Conclusion for Section:

The most significant cause affecting good quality condition data is related to understanding what data to collect, to what level and how, a lack of available budget and a lack of guidance on the impact of poor data. HSD surveys need to be looked at, particularly why they are seen as cost prohibitive or not considered to add value. This includes the following systems and processes that use this data are in place. Is there a generational problem here that Asset Managers new to the industry don't know where to go to find this information/guidance? Are we taking too much for granted, and not providing the correct channels for finding this?

Q21: The following are major contributing factors to poor or inconsistent condition data quality. Rate the significance of each based on your experience:

Answered: 86
Skipped: 45



| Factor | Not at all significant (1) | Slightly significant (2) | Significant (3) | Fairly significant (4) | Very significant (5) | No. Answered | Weighted Average (All) | Rank (All) | Answer Distribution (All) | Weighted Average (3), (4) & (5) | Rank (3), (4) & (5) |
|--|----------------------------|--------------------------|-----------------|------------------------|----------------------|--------------|------------------------|------------|---------------------------|---------------------------------|---------------------|
| Lack of understanding around an expected minimum standard/level | 7 | 13 | 30 | 18 | 16 | 84 | 3.27 | 1 | | 3.78 | 2 |
| Lack of budget to collect what we need | 8 | 19 | 31 | 11 | 16 | 85 | 3.09 | 2 | | 3.74 | 3 |
| Lack of available guidance on the impact of poor condition data on asset management or decision making | 9 | 16 | 28 | 24 | 8 | 85 | 3.07 | 3 | | 3.67 | 6 |
| Lack of guidance on what to collect and how | 10 | 18 | 26 | 21 | 10 | 85 | 3.04 | 4 | | 3.72 | 4 |
| Lack of resources to maintain this data | 11 | 16 | 27 | 20 | 10 | 84 | 3.02 | 5 | | 3.70 | 5 |
| We don't fully understand it, but we've always done it this way | 16 | 21 | 19 | 18 | 10 | 84 | 2.82 | 6 | | 3.81 | 1 |
| Lack of guidance on how to specify and procure these surveys | 19 | 24 | 24 | 12 | 5 | 84 | 2.52 | 7 | | 3.54 | 7 |
| The existing system is too hard | 34 | 26 | 15 | 6 | 3 | 84 | 2.02 | 8 | | 3.50 | 8 |

Observations/Comments:

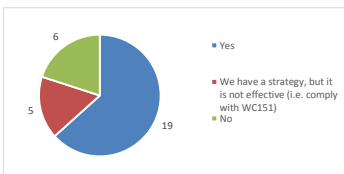
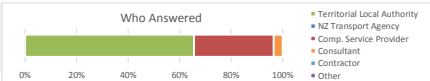
Possible overlap of the expected minimum standard and what to collect and how. System not seen as onerous. Primary focus should be on what we should collect, why and how. Data not valued?

Conclusion:

The most significant cause affecting good quality condition data is related to understanding what data to collect, to what level and how, a lack of available budget and a lack of guidance on the impact of poor data. The existing asset database system is not considered a significant issue.

Q22: Do you have an effective condition data collection strategy that is currently being implemented?

Answered: 30
Skipped: 100



If no, what would help you develop one?

- Issues with senior management accepting current best practice guidance and enabling survey procurement
- Strategy not fully documented, but is in place
- National guidelines. A forum where you can get help.
- Funding and resource availability
- Resource
- Not a written strategy, but we do have condition data which is regularly collected.
- Industry Guidance - or Examples
- An industry guidance document on minimum requirements and best practice

Observations/Comments:

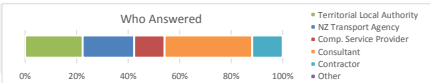
Most respondents have a strategy, and about two thirds consider they have an effective one.

Conclusion:

It is encouraging that most respondents have a strategy, and most are considered effective. For those that don't some form of industry guidance, or examples was considered a useful resource to help develop one

Q23: The following are possible factors to why high speed rutting data is not widely collected. Rate the significance of each based on your experience:

Answered: 86
Skipped: 44



| Factor | Not at all significant (1) | Slightly significant (2) | Significant (3) | Fairly significant (4) | Very significant (5) | No. Answered | Weighted Average (All) | Rank (All) | Answer Distribution (All) | Weighted Average (3), (4) & (5) | Rank (3), (4) & (5) |
|--|----------------------------|--------------------------|-----------------|------------------------|----------------------|--------------|------------------------|------------|---------------------------|---------------------------------|---------------------|
| Cost prohibitive | 18 | 11 | 11 | 14 | 13 | 67 | 2.9 | 1 | | 4.05 | 2 |
| Not applicable/we collect it currently | 30 | 12 | 13 | 5 | 22 | 82 | 2.72 | 2 | | 4.23 | 1 |
| Done through manual road rating | 27 | 11 | 14 | 10 | 7 | 69 | 2.41 | 3 | | 3.77 | 4 |
| Not sure how this data would add value | 32 | 10 | 11 | 8 | 7 | 68 | 2.24 | 4 | | 3.85 | 3 |
| We would if we could collaborate with other/neighbouring authorities | 29 | 11 | 15 | 5 | 6 | 66 | 2.21 | 5 | | 3.65 | 8 |
| Doesn't feed into our decision making processes | 29 | 18 | 9 | 6 | 4 | 66 | 2.06 | 6 | | 3.74 | 5 |
| Never thought of it/haven't previously collected it | 40 | 5 | 11 | 6 | 4 | 66 | 1.92 | 7 | | 3.67 | 7 |
| Its too hard to set up a condition collection contract | 33 | 19 | 7 | 5 | 3 | 67 | 1.9 | 8 | | 3.73 | 6 |

Observations/Comments:

Effectiveness and efficiency of high speed surveys needs to be looked at

Conclusion:

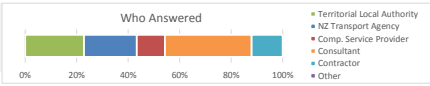
Of those that don't currently collect this data cost, cost vs. value add and the fact it is done through road rating are the most significant factors. Are high speed surveys efficient and effective?

Overall Conclusion for Section:

A lack of sector competency, understanding of the table and a lack of resources are seen as the most significant causes of poor quality maintenance activity data. The use of the maintenance cost table has grown to be far greater than its original design and intent. Many are using this table to record data other than pavement and surfacing maintenance activity data to support pavement and surfacing renewal programme development and justification.

Q24: The following are major contributing factors to poor quality data in the RAMM maintenance cost table. Rate in order of significance based on your experience.

Answered: 84
Skipped: 46



| Factor | Not at all significant (1) | Slightly significant (2) | Significant (3) | Fairly significant (4) | Very significant (5) | No. Answered | Weighted Average (All) | Rank (All) | Answer Distribution (All) | Weighted Average (3), (4) & (5) | Rank (3), (4) & (5) |
|--|----------------------------|--------------------------|-----------------|------------------------|----------------------|--------------|------------------------|------------|---------------------------|---------------------------------|---------------------|
| Lack of competency across the sector | 6 | 10 | 18 | 28 | 21 | 83 | 3.58 | 1 | [Bar Chart] | 4.04 | 2 |
| Lack of understanding of this table | 15 | 11 | 13 | 27 | 17 | 83 | 3.24 | 2 | [Bar Chart] | 4.07 | 1 |
| Lack of resources to maintain the data | 10 | 17 | 19 | 22 | 15 | 83 | 3.18 | 3 | [Bar Chart] | 3.93 | 6 |
| There's no guidance on the why and how to populate this table | 17 | 18 | 17 | 20 | 11 | 83 | 2.88 | 4 | [Bar Chart] | 3.88 | 7 |
| It is not correctly defined within the contract specification on how this table is to be populated | 22 | 12 | 21 | 18 | 11 | 84 | 2.81 | 5 | [Bar Chart] | 3.80 | 9 |
| We don't carry out any quality checks on the data added to this table | 24 | 15 | 14 | 16 | 13 | 82 | 2.74 | 6 | [Bar Chart] | 3.98 | 4 |
| The existing system is too hard to get from an automatic download to accurate data | 18 | 27 | 13 | 14 | 11 | 83 | 2.67 | 7 | [Bar Chart] | 3.95 | 5 |
| Its not a contractual requirement | 32 | 15 | 19 | 11 | 6 | 83 | 2.33 | 8 | [Bar Chart] | 3.64 | 10 |
| I don't have the information | 34 | 17 | 11 | 10 | 7 | 79 | 2.23 | 9 | [Bar Chart] | 3.86 | 8 |
| I don't know where and/or how this data is used | 40 | 13 | 8 | 12 | 8 | 81 | 2.2 | 10 | [Bar Chart] | 4.00 | 3 |

Observations/Comments:

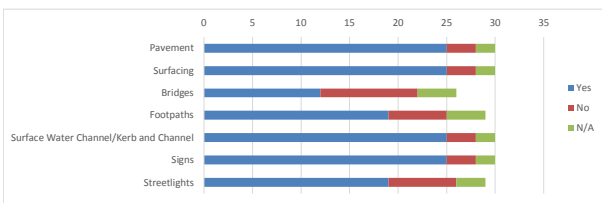
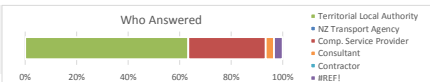
Competency, understanding and resources seen as significant. Not having the data or understanding where it is used are not.

Conclusion:

A lack of sector competency is seen as the most significant cause of poor maintenance activity data. A lack of understanding of the table and a lack of resources are also considered significant causes.

Q25: For which of the following asset types is RAMM Contractor specified in your maintenance contracts?

Answered: 30
Skipped: 100



Observations/Comments:

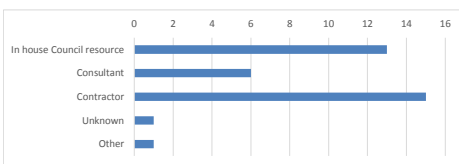
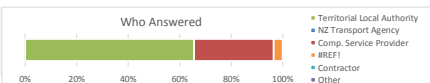
Does this relate to what asset system is used for these asset types.

Conclusion:

No great surprises here. There is a relationship between the asset types where RAMM is used as the primary inventory register, and where RAMM contractor is used.

Q26: Who populates your maintenance cost data table in RAMM? Select all that apply:

Answered: 30
Skipped: 100



Observations/Comments:

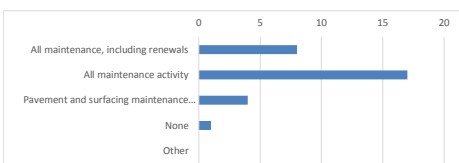
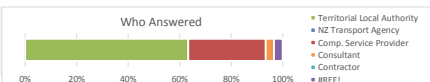
In house and contractor are the target audience here.

Conclusion:

The maintenance cost table in RAMM is almost equally populated by in house Territorial Local Authority resources and contractors. This audience needs to be considered with any improvement plan.

Q27: What activity do you record in the RAMM maintenance cost table?

Answered: 30
Skipped: 100



Observations/Comments:

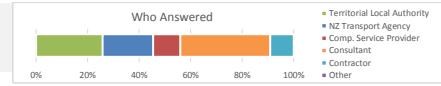
The use of the table is greater than its intent/design. There's mixed use of this table.

Conclusion:

There is a real mixed use of the maintenance cost table in RAMM. What is clear is this is far greater than the original table design and intent.

Q29: What do you think is the biggest challenge to achieving good consistent data quality?

Answered: 67
Skipped: 63



Comments

- Not regularly checking data
- People that know what they are doing
- The flow of data across / between different processes is not well understood and virtually not designed at all. For example, Traditionally Dispatch Management and the supply of maintenance cost records would have been seen as siloed processes. [redacted] does not require the maintenance contractors to provide Maintenance Cost Records. This is because they control the 'design' and use of the Dispatches and because this is standardised they then use standard SQL scripts to analyse and create the Maintenance Cost Records. In other words the contractor used the dispatch in the very act of doing their job and then through good information design they didn't even need to know that the client was creating highly accurate maintenance history from their dispatches.
- Lack of resources and national standards (enforceable via NZTA funding requirements)
- Not enough time is given to considering what data to collect, and to what detail to record it. This is potentially leading to a lack of understanding of the value of data (i.e. what is valuable and what is not)
- Not having a quality manual, particularly as Councils are completing more in-house database management
- Resource to support full implementation and accuracy of the asset data
- Lack of good data ownership across the client-contractor spectrum.
- Minimum national standard for relevant assets and implementation of the standards. Cost implications and competency of data collectors. Buy in of all stakeholders
- Capability
- changing contract management to seeing the value of data and hence enforcement and auditing; withholding payment until data is added
- Data standards and agreeing what the mean.
- Lack of current system to easily implement data quality standards.
- NZTA no longer collect the relevant information for us to be able to carry out modelling to inform our forward works programme. TSD is being touted as the way forward but all I here is that when validated on site it cannot be used.
- Understanding of the data required and detail needed at ground level i.e. those inputting the data into the maintenance cost table or collecting inventory etc.
- Fully understanding Data requirements. Some data does not appear to have any value to us
- Having those who collect and input the data understand the value of the data and the many ways it is used.
- The existence of a fit for purpose data management plan
- Reducing the number of data fields for each asset. Clearly communicating the importance and use of each asset dataset
- Changing the culture to value data as an asset (same as a bridge or plant is valued) and proactively manage it, rather than always reactively dealing with data quality issues (like always hoping the bridge won't collapse and only doing something about it once it does)
- Motivation and consistent standards.
- People and process
- Changes made to the As-Built on site were not recorded.
- understanding it's use and how it adds value
- Setting and validating the quality standard
- Assign it higher priority.
- Seeing the value in the data and how it is used
- 1) Selling the business case for good data and information. 2) Ensuring the information produced from the data is validated by reality in the field and the asset's field performance.
- Lack of support for small councils that are understaffed.
- A lack of dedicated and experienced resources to manage this. We have had people leading this, over the past couple of years, who have no idea of how the data is used, so have reduced the resource allocation.
- There is a need to impress on the suppliers the importance of quality data. To this end there possibly needs to be consequences for poor delivery that currently aren't there
- No dedicated resources to carry out the tasks. No dedicated training
- Suppliers taking the time to update the data in a timely manner and checking more carefully the inputs before they simply apply them to the database (TIME)
- Lack of dedicated resource
- Understanding the need for good data to drive good decisions
- Using the data and having a continuous improvement plan in place to remedy quality concerns identified.
- A holistic framework for data collection which is clear on why data is collected, and what it can tell us.
- Lack of understanding the value of the data and what it is used for. No consistency throughout the country.
- Nationwide differences in collecting and standards of data
- Lack of understanding of why the data is collected or what impacts poor data have
- Metadata standards Limitations of RAMM Training of collection staff inability to operate on a live database
- Differing rules between contracts
- Contractors Not understanding Data Requirements and or Not upskilling personnel to achieve the Data quality requirements
- The flow of data, there is often a tension with contractors who often don't see the value in having to provide data. Sorry to put two items but there is also a lack of guidance in best practice for non sealed road assets.
- Skilled RAMM Practitioners Lack of understanding between Task Management (RAMM Contractor) vs Asset Management
- People taking time, taking care and not making assumptions
- Understanding what the value of the data is
- Finding experienced staff is a struggle, especially in a small region. We're better to train people from scratch but that leaves a lag where standards can slip. Also funds are limited so improvements need to be targeted over time rather than immediately.
- Cost and available resource
- Lack of approval to release funds to update current incorrect or missing data. The value in backfilling and correcting data gaps is not appreciated by many asset owners / network managers.
- People need to understand why it is important to have quality data. The Contractors are very variable in approach, some very good and some very poor. Data education is very variable
- The people who are building or upgrading assets understand the data best and should be able to enter this data direct to RAMM. Not having live access to RAMM for these people causes delays and poor data quality.
- Lack of dedicated resource and understanding of the importance
- Inconsistency across the sector - lots of local variations and no common understanding of terms or the linkage between data fields and decision processes. There is a focus on detail rather than value.
- Spatially calibrated centralines. People stuck in their ways and not so keen to embrace more modern and efficient means of carrying out a task. Not looking beyond the data capture and admin for assets - i.e. how might the data be used and what are the needs for those uses.
- Lack of adequate resources and funding
- Consistent data can only be gained from a stable workforce. Constant people change means lack of skilled practitioners
- Data collection teams who have an interest in what they are collecting and who understand the importance of collecting correct data
- good data quality starts with the guys in the field. guys in the field need to understand why we do it and see that this is not just another piece of paperwork.
- need to use experienced team which is trained to produce consistent assessments
- Engaging the right people to collect it and understand the value of accuracy.
- historical fixes needed, more training for field use.
- Lack of a clearly communicated national standard
- Lack of focus, attention, scrutiny.
- Understanding and capable people
- Knowing what the right thing to do is. Too many conflicting options on what to collect.
- Rigour in the data collection process so it is repeatable

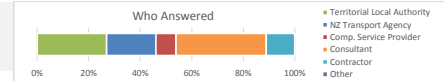
Observations/Comments:

Conclusion:

There's some good responses in here. A lack of understanding and knowing what data to collect and to what level, a robust auditing process and competent available resources are common themes.

Q30: If there was one initiative you could implement to improve data quality what would that be?

Answered: 64
Skipped: 66



Comments

Data collection strategy
Ensure that we get what we have specified we require

The more that our data is encouraged to be used by a wider group (not just the few asset managers) then the interest and demand for the data to be more accurate will dramatically increase. For example if project teams were to use RAMM data to start their CAD drawings, instead of sending out a survey team to capture existing assets, then the demand for increased spatial accuracy would be meaningful and eventually our industry would save millions of dollars in reduced surveying of existing assets.

National standard
Develop a data quality standard manual sector for the sector identifying minimum requirements on what is to be collected, how to collect it and quality assurance processes.
Currently developing a quality manual
More validation surveys in the field of assets (30% sample, or above)
Greater ownership of the data by the client and contractor contract managers. They have a major role in shaping a good data culture.
establishment of minimum national standard for the relevant assets
training
as above
Training on what is the best practice for data
Tighter data quality controls on current database and use the AM system to implement metadata standards

NZTA let a national contract to do annual 100% crack condition rating. Sanity checks on the data received. This years SCRIM being a prime example where there was clear evidence that either contamination/spillage/bleeding had affected testing yet this has been allowed to become a record of fact which will skew future trend analysis. It also wasted a load of time and money at network level trying to separate fact from fiction.
A consistent standard and methodology across the sector so the data can be more comparable
Improve methods to record data in field. To many variables or confusing fields that everyone interprets differently
Those assigned to collect the data do not use the data, therefore the robustness of the collection is compromised. Since the NZTA made the Contractor responsible for using some of the data to develop and verify programmes their attitude to the collection and verification of the data has improved 10 fold. - Those collecting/inputting must understand how it is used in decisions.
template for a data management plan

Data capture and provision by trained people mandatory in all contracts
Have a dedicated team of data analysts for each supplier managing the data collection from start to end of the business process, and sharing best practice with each other.
Reinstatement measurement of cracking for the SH network. Automated measurement was not validated before measurement manually ceased. It is one of the most important measurements for triggering a reseal and now we do not have the data.

Responsibility/ownership
More data site validation/audits.
Pay more / hire adequate staff.
A more effective easy to use field device for collection purposes
1) Selling the business case for good data and information.
A way to support councils that are having quality issues. The issues have to be identified but more importantly a way of helping them to improve over the long term is essential.
A team in NZTA who are responsible for each system and dataset, who know how important it is and support improvements.
Use of AMA tool for RAMM validation

Improve the collection and quality assurance processes in-house and with supplier
Automated auditing
Easier systems for data collection and timely validation
Consistent data standards - feeding into the data collection contract specifications consistently across the country. NZ wide HSD collection.
Connect the data we collect to meaningful decision making on the interventions we do - e.g. roughness - people ask why collect it when it doesn't mean anything for a treatment and is only a network level indicator....
Data Manual, similar to SHDOM.

Consistency
Practical step by step in field guides to how to assess data for collection
Training staff on how the data is used and therefore the importance on collecting it and validating it
Set Data Standards
Contract Documents and Schedules Written to match the RAMM Maintenance Codes and Requirements - Not Linkages between Schedule Items and Maintenance Cost Lines
National data standards with a clear data dictionary saying what each field should be used for.
Clients Not willing to Fund adequate resources to collect the data, causing the industry to take short cuts or do the bare minimum - i.e. Clients not valuing the data
Training for people working on the group
Digital Engineering for Transport (DEFT) also linkage to customer outcomes
Standardisation of data quality standards & minimum requirements across the industry, seems to be mixed messages coming through.

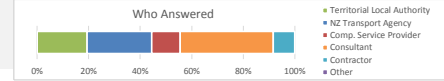
Quite a few councils are no longer doing condition rating at all & depending on who you talk to TSA is rather outdated and irrelevant
Correct historic data issues
Update RAMM to a more user comprehensible system. Ramm Training
RAMM should have more validation built in to ensure better quality at the time of data entry. More money should be spent on field validation after data is entered.
NZ Wide Standard RAMM Data Collection Manual
Local authority version of SHDOM.
Involve more GIS. E.g. could have the data hosted in the cloud via Portal for ArcGIS or ArcGIS online which field staff could update content online or offline using Collector for ArcGIS or Survey123 (saving any double handling and updating content immediately). Others with a access to the cloud environment would see the changes almost immediately.
Upgrade to a spatial (GIS) based database
Get rid of RAMM and use a better system. RAMM is not fit for purpose
Focus on the data that is important and cut back on the amount we collect which never gets used. Value for money in data is important.
Provide more training
enduring guys in the field have appropriate tools for data collection and a culture which ensures data is collected.
10% reviews
Put in the right incentives, rewards, recognition for good data collection.
finance available to undertake data reviews, fix historical issues and work with partners to interpret and understand data.
a clearly communicated national standard. A local Authorities database operations manual
Incentive for good data
structured practicable improvement plans. improvement reviews.
A bible
Clear documented processes Analyse of data to prioritise and manage criticality

Observations/Comments:

Conclusion:
Similar to the previous question having access to a common sector data standard, robust auditing processes and clearly defined responsibility/ownership are common themes.

Q32: Is there any other comments or feedback you would like to make?

Answered: 36
Skipped: 94



Comments

No

The last question regarding bridges isn't working properly. [redacted]

To fairly and confidently provide comparative data analysis, everyone needs to be playing by the same rules.

REG's approach to tackling this at a sector level is really positive. If left to individual TLAs there would be those that do, and those that don't.

RAMM has become really useful since the new GIS tool was introduced a few years ago. I'm not sure that people are fully aware of what RAMM can do. Maybe more promotion is needed?

Resolving a 'standard' to enable networks to populate realistic Original Cost and accurate Valuation data is a critical part of achieving consistent comparisons across the ONRC

There is often a flat view of the data that treats all asset types alike. However, some asset types are more critical. Recognition of relative importance would assist with developing awareness with those capturing the data. Also, it may help a critical evaluation of what details are captured and whether some of these details actually add any value to the sector.

The questions in the survey were not clear.

Data quality is an ongoing issue whose management is often poorly planned, prioritized and resourced - if suppliers truly followed their data quality management plans we wouldn't have any issues. There is a capacity issue with finding people of the right capability and enticing them to stay long term, and with the transfer of knowledge. I think the perception is that anyone who can use a computer can manage the roading asset data, which is odd as you wouldn't let anyone who could use a drafting table manage the design of a bridge. We really need to focus on continuous improvement and the creation of a highly capable workforce of asset data professionals. This will save heaps of money in the long term - imagine if you could pin-point every failing asset with accuracy and intervene at the optimal time, instead of the current guesswork that goes on because of poor quality data.

The survey question for traffic data was not well targeted. Difficult to see what intelligence was being sought. The Bridge question was difficult to answer because of no resemblance to reality.

Some companies are treating the maintenance data/costs as commercial sensitive information and reluctant to share it with others including principals.

some questions didn't relate to significance rating

Grammar & spelling need improvement.

The financial implications of decisions based on information from poor quality data needs to be demonstrated.

I was not sure how to answer many questions in this questionnaire as the significance answers weren't logical. Also was I supposed to answer from a personal perspective or a sector perspective or a council perspective? When a traffic count question says "I don't understand such in such", then personally no I don't but the Traffic Count guy does 'cos that's his job. Is it significant?

A couple of the question structures didn't make sense. e.g. the bridge component level area.

Delivery dates for data should match payment dates, i.e., data needs to be entered earlier so that payment of claims is based on delivered data

No

In my limited experience in the industry there is a knowledge gap forming in many organisations (council, consultant and contractor) regarding the value of data and its use.

Need changes to be made to improve RAMM and they need to happen quickly

NZTA is too slow to act on issues that are raised with them, who is in charge? Who can make a call on changes? Why do they not hold regular contractor meetings for hot topics?

Clients not valuing the data, not prepared to pay for it. they say they value it, but not prepared to fund it or invest in collecting it.

I think REG has been doing some really good stuff in this area. Some further guidance on some of the measures particularly around gravel roads would be great.

Question 14 ambiguous

Value RAMM data

Ensure decision makers are aware of the critical data to improve key decisions

I think the group working on this project could benefit from a few different perspectives. [redacted]

[redacted]

The amount of poor quality or missing data is becoming very difficult to deal with. Considerable time is spent just checking data is OK to use. The lean nature of the contracts does not value data management or quality, with NOC focusing on compliance not quality. LA's are often lacking skills and resources to maintain RAMM, and ensure the contracts for collection are fulfilled and QA is there.

[redacted]

NZTA needs to illustrate how the data is used, and set correct funding levels based upon the data. If we don't trust NZTA to do this what is the data for?

We will struggle with determining the cause of failure when we don't record primary information (such as thickness, data of work, seal application rates etc. Often when investigating I find the issues relate to the data collection forms and the tables being out of date with modern practice.

Good data is extremely useful for effective management and providing advice

Consistency of data provision would assist, plus (small) funding to fix what we know is wrong. and feedback being listened to!

No

no

Observations/Comments:

[Redacted text box for observations/comments]

Conclusion:

A large amount of feedback was around the survey question clarity. Valuing data and better understanding the varying importance and criticality by asset types/datasets are common themes.

Overall Conclusion for Section:

A lack of understanding is a common theme across these questions. This is a concern. The other main themes are lack of resources and available industry standards/guidance.

Common Themes:

| | | | |
|-----------------------|------------------------------|---------------------|-------------------------|
| Lack of resources | Data not valued | Lack of competency | System is too difficult |
| Lack of understanding | Lack of standard or guidance | Budget availability | |

Ranked by Weighted Average (All):

| Q3: The following are potential obstacles to achieving and/or improving data quality in terms of its timeliness. Rate the significance of each based on your experience: | Q6: The following contributing factors are affecting the accuracy and completeness of asset inventory data. Rate the significance of each based on your experience: | Q18: The follow factors are affecting the quality of traffic activity (count and estimate) data across the sector. Rate the significance of each based on your experience: | Q21: The following are major contributing factors to poor or inconsistent condition data quality. Rate the significance of each based on your experience: | Q24: The following are major contributing factors to poor quality data in the RAMM maintenance cost table. Rate in order of significance based on your experience. |
|--|---|--|---|--|
| Data is not valued as an asset | Lack of understanding of the impacts of poor quality data | Lack of understanding of the impact of poor data | Lack of understanding around an expected minimum standard/level | Lack of competency across the sector |
| Lack of data management competency across the sector | Lack of competency within the sector | Lack of resources to maintain this dataset | Lack of budget to collect what we need | Lack of understanding of this table |
| Lack of consequences for suppliers not delivering | Lack of understanding of what level of information is required for each asset type | Not considered a priority | Lack of available guidance on the impact of poor condition data on asset management or decision making processes | Lack of resources to maintain the data |
| Lack of available resources across the sector | Lack of budget to regularly validate the accuracy and completeness of the asset register | The existing systems are too complex to use | Lack of guidance on what to collect and how | There's no guidance on the why and how to populate this table |
| No agreed data quality standard | Lack of an Asset Data Quality/Standard Manual | The current documentation is too hard to understand | Lack of resources to maintain this data | It is not correctly defined within the contract specification on how this table is to be populated |
| Lack of contract documentation to bind suppliers to delivery | Lack of resources to maintain the tables | I don't know how to set up a count programme | We don't fully understand it, but we've always done it this way | We don't carry out any quality checks on the data added to this table |
| Lack of accessible, relevant sector guidance | The focus is on the collection of data and not necessarily the quality of what is collected | I don't know what I should be doing | Lack of guidance on how to specify and procure these surveys | The existing system is too hard to get from an automatic download to accurate data |
| The person who pays for it is not willing to allocate sufficient budget | Too much time spent collecting data of little value | | The existing system is too hard | Its not a contractual requirement |
| Expectation is set that suppliers are failing to deliver | | | | I don't have the information |
| There's no money available for this | | | | I don't know where and/or how this data is used |
| The database system is too difficult to use, update, etc. | | | | |
| Too much time spent recording data of little value | | | | |

Ranked by Weighted Average (3), (4) & (5):

| Q3: The following are potential obstacles to achieving and/or improving data quality in terms of its timeliness. Rate the significance of each based on your experience: | Q6: The following contributing factors are affecting the accuracy and completeness of asset inventory data. Rate the significance of each based on your experience: | Q18: The follow factors are affecting the quality of traffic activity (count and estimate) data across the sector. Rate the significance of each based on your experience: | Q21: The following are major contributing factors to poor or inconsistent condition data quality. Rate the significance of each based on your experience: | Q24: The following are major contributing factors to poor quality data in the RAMM maintenance cost table. Rate in order of significance based on your experience. |
|--|---|--|---|--|
| Lack of consequences for suppliers not delivering | Lack of understanding of the impacts of poor quality data | Lack of understanding of the impact of poor data | We don't fully understand it, but we've always done it this way | Lack of understanding of this table |
| Data is not valued as an asset | Lack of budget to regularly validate the accuracy and completeness of the asset register | Not considered a priority | Lack of understanding around an expected minimum standard/level | Lack of competency across the sector |
| Lack of available resources across the sector | Lack of an Asset Data Quality/Standard Manual | Lack of resources to maintain this dataset | Lack of budget to collect what we need | I don't know where and/or how this data is used |
| Lack of contract documentation to bind suppliers to delivery | Lack of understanding of what level of information is required for each asset type | The existing systems are too complex to use | Lack of guidance on what to collect and how | We don't carry out any quality checks on the data added to this table |
| No agreed data quality standard | The focus is on the collection of data and not necessarily the quality of what is collected | I don't know how to set up a count programme | Lack of resources to maintain this data | The existing system is too hard to get from an automatic download to accurate data |
| Lack of data management competency across the sector | Lack of competency within the sector | I don't know what I should be doing | Lack of available guidance on the impact of poor condition data on asset management or decision making processes | Lack of resources to maintain the data |
| The person who pays for it is not willing to allocate sufficient budget | Lack of resources to maintain the tables | The current documentation is too hard to understand | Lack of guidance on how to specify and procure these surveys | There's no guidance on the why and how to populate this table |
| There's no money available for this | Too much time spent collecting data of little value | | The existing system is too hard | I don't have the information |
| The database system is too difficult to use, update, etc. | | | | It is not correctly defined within the contract specification on how this table is to be populated |
| Lack of accessible, relevant sector guidance | | | | Its not a contractual requirement |
| Expectation is set that suppliers are failing to deliver | | | | |
| Too much time spent recording data of little value | | | | |