INTRODUCTION

This report provides a summary of national data quality for TLAs as at the end of the 2022/23 financial year. The Data Quality Framework (DQF) developed by Te Ringa Maimoa Transport Excellence Partnership has been used as the basis for the analysis. The results have been analysed in terms of the reported financial year and trends since 2019/20.

A summary of the annual RCA results is available on the Te Ringa Maimoa website and individual RCA metric results can be access by the RCA via Transport Insights.

THE 2022/23 DATA QUALITY FRAMEWORK

The 2022/23 data quality assessment is based on 71 asset management metrics for TLAs (inc. DOC) across three data quality dimensions, three importance levels and six data categories. Results for the state highway are excluded from this report.

Changes have been made to the DQF in 2022/23 to further enhance the framework and also in response to feedback from the sector. These are detailed on the Data Quality web pages and the online Metric Library.

Data quality has been analysed against the DQF through a primary quality dimension, level of importance and data category lens. Potential areas of improvement have been identified based on the proportion of metric results at the expected standard, and the level of improvement in recent years. The current suite of metrics for 2022/23 are the basis for the reported results. This includes previous year's results.

RESULTS

The table below shows the annual data quality results for all TLAs. The values reported are the percentage of metrics achieving the expected standard by year based on the current 2022/23 suite of metrics.

	2019/20	2020/21	2021/22	2022/23	Last year change
All dimensions	62	66	67	71	4
Accuracy	62	65	67	72	5
Completeness	72	78	80	82	2
Timeliness	55	58	57	60	3

There has been a continued overall improvement in the sector's data quality over the reported period. The last 12 months has seen a notable improvement in the metric results across the accuracy, completeness, and timeliness quality dimensions.

Despite the improvement in last 12 months, the timeliness dimension has the lowest percentage at the expected standard. There continues to be a significant opportunity for improvement in the metrics testing this quality dimension.

KEY POINTS

Annual Results 2022/23:

✓ Overall, the sector's data quality has shown steady improvement over the last four years.

✓ In the last 12 months there has been improvement across the accuracy, completeness, and timeliness quality dimensions.

✓ There is significant opportunity to further improve data quality nationally, particularly for the timeliness quality dimension.

✓ There has been continued improvement in the average score however there has been no improvement for the average and bottom 10% of RCAs this year.

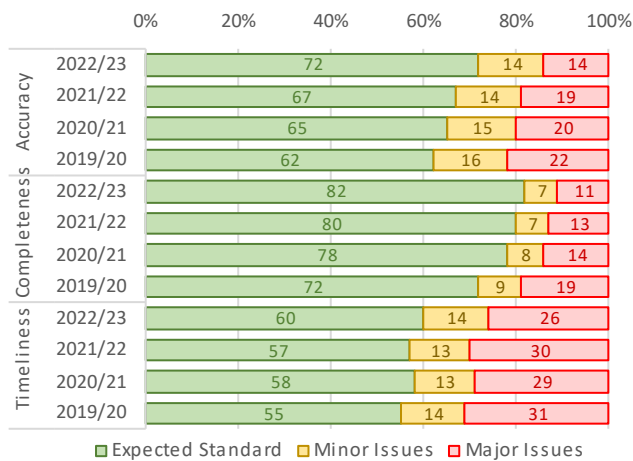**2022/23 Asset Management**
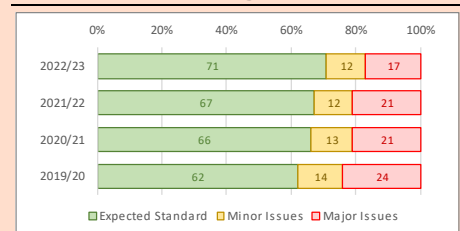
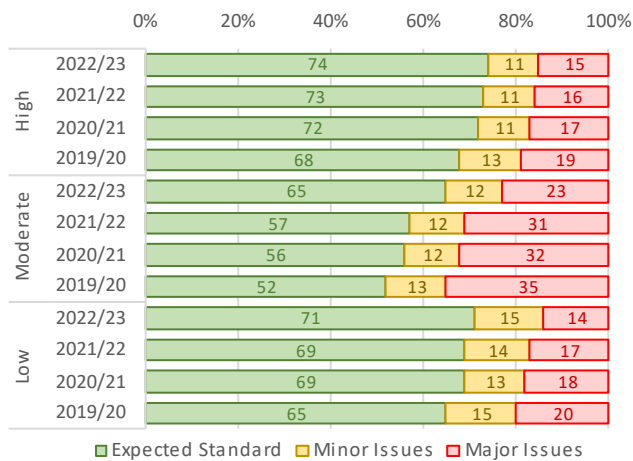**Asset Management "Score"**
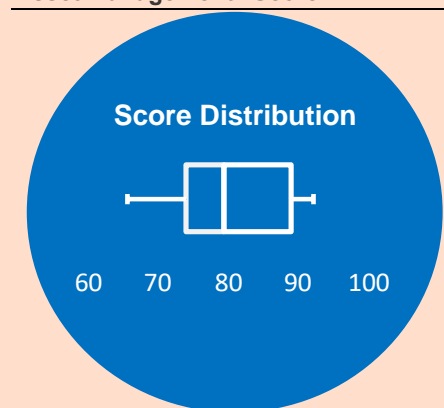
The overall TLA RCA data quality has improved considerably over the last 12 months. However this improvement has been due to cluster of RCAs and several RCAs have not improved at all.
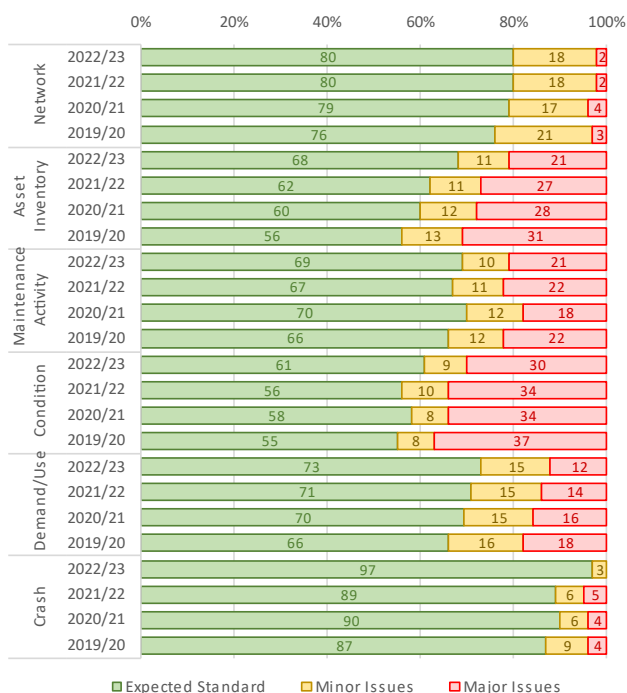
Asset Management Results

By quality dimension:

		Expected Standard	Minor Issues	Major Issues
Accuracy	2022/23	72	14	14
	2021/22	67	14	19
	2020/21	65	15	20
	2019/20	62	16	22
Completeness	2022/23	82	7	11
	2021/22	80	7	13
	2020/21	78	8	14
	2019/20	72	9	19
Timeliness	2022/23	60	14	26
	2021/22	57	13	30
	2020/21	58	13	29
	2019/20	55	14	31

By importance:

		Expected Standard	Minor Issues	Major Issues
High	2022/23	74	11	15
	2021/22	73	11	16
	2020/21	72	11	17
	2019/20	68	13	19
Moderate	2022/23	65	12	23
	2021/22	57	12	31
	2020/21	56	12	32
	2019/20	52	13	35
Low	2022/23	71	15	14
	2021/22	69	14	17
	2020/21	69	13	18
	2019/20	65	15	20

By data category:

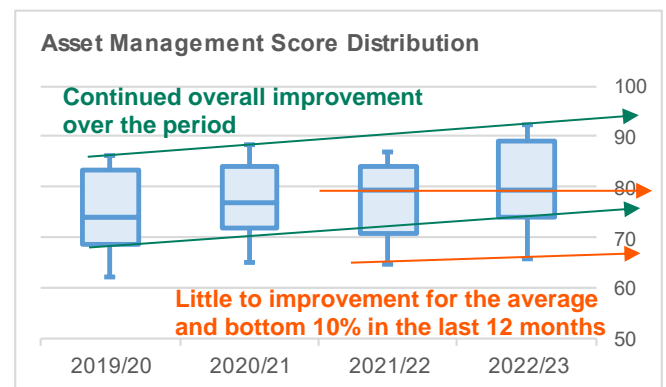|		Expected Standard	Minor Issues	Major Issues
Network	2022/23	80	18	2
	2021/22	80	18	2
	2020/21	79	17	4
	2019/20	76	21	3
Asset Inventory	2022/23	68	11	21
	2021/22	62	11	27
	2020/21	60	12	28
	2019/20	56	13	31
Maintenance Activity	2022/23	69	10	21
	2021/22	67	11	22
	2020/21	70	12	18
	2019/20	66	12	22
Condition	2022/23	61	9	30
	2021/22	56	10	34
	2020/21	58	8	34
	2019/20	55	8	37
Demand/Use	2022/23	73	15	12
	2021/22	71	15	14
	2020/21	70	15	16
	2019/20	66	16	18
Crash	2022/23	97		3
	2021/22	89	6	5
	2020/21	90	6	4
	2019/20	87	9	4

OBSERVATIONS

Overall, there has been a continued improving trend of metric results at the expected standard. Looking at the results through a quality dimension lens shows continued improvement across the accuracy and completeness dimensions. The improvement is largely through a reduction of metrics with potential major issues. Timeliness has seen improvement over the four-year period but with some fluctuations year to year. This dimension continues to have the lowest proportion of metric results at the expected standard, and greatest proportion with potential major issues.
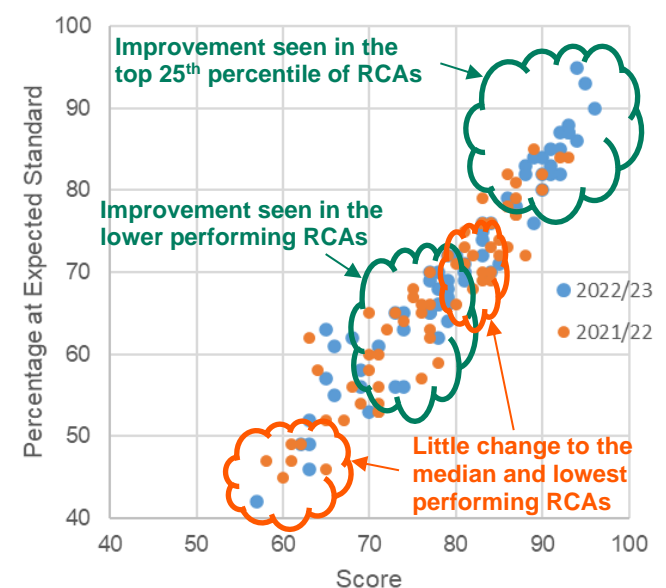
The results reported by level of importance show similar levels of improvement across the high and low levels. The moderate importance level metrics have seen the greatest improvement with a notable increase in results at the expected standard over the last 12 months. In all cases, the improvement in results corresponds to a decrease in results with potential major issues.

The results by data category are discussed in more detail on the next page along with intended improvement areas.

The below two charts show a notable improvement in the results for the higher and lower performing RCAs in the last 12 months. However, there is little to no change for the median and lowest 10% of RCAs in the same period.

Asset Management Score Distribution

Continued overall improvement over the period

Little to improvement for the average and bottom 10% in the last 12 months

Score vs Expected Standard Percentage

Improvement seen in the top 25th percentile of RCAs

Improvement seen in the lower performing RCAs

Little change to the median and lowest performing RCAs

AREAS FOR IMPROVEMENT

The below table summarised the 2022/23 results by data category. The overall results for each category have been assessed and assigned a traffic light based on a combination of the proportion of metric results at the expected standard, and the level of improvement in recent years. The improvement areas are based on an initial assessment of the results at a metric level and will be taken forward to inform the improvement programme for 2023/24.

Data Category	Overall Status	2022/23 Achievements	Improvement Areas
Network	🟢	Overall results steady from 2021/22, and very little change for the last three years. The ONF metric has identified potential quality issues with this data currently.	No improvement action considered necessary.
Asset Inventory	🟡	Notable improvement in the 2022/23 results with a 6% increase at the expected standard. Potential major data issues have decreased over the last four years. With 68% of the metric results at the expected standard there is opportunity for improvement in this data category.	Determine the cause(s) for differences between annual achievement reporting in TIO and as-built quantities in RAMM. Review the Asset Inventory metrics against the AMDS project to maintain relevance.
Maintenance Activity	🔴	Slight improvement in results in 2022/23, however, only 69% are at the expected standard. Results have fluctuated year on year for the last four years. MAINT1 and MAINT2 have a notable percentage of results with major issues. Major issues with MAINT2 indicates an incomplete dataset which impacts confidence with the results of the other metrics in this data category.	Additional guidance is needed around recording of maintenance activity data to support asset performance analysis and asset management decision-making processes.
Condition	🔴	Improvement seen in the 2022/23 results. Annual variations in the RATING metrics indicates mixed compliance with current minimum requirements is driving the annual fluctuations in results.	Metrics to be reviewed and updated as we transition to the data collected through the Consistent Condition Data Collection (CCDC) programme.
Demand/Use	🟡	A small improvement in results in 2022/23. A large proportion of RCAs have minor or major issues with the coverage of their count programmes.	Monitor the impact of the traffic estimation tool on the Traffic Estimate metric results.
Crash	🟢	Results show a large proportion (97%) at the expected standard. This is a significant increase on the 2021/22 result.	No improvement action considered necessary.

CONCLUSION

The 2022/23 data quality results show the sector has achieved a continued improvement with an increase in metrics at the expected standard overall and an improvement in the distribution of Scores. Improvement is evident across all quality dimensions, importance levels and data categories.

However, the extent of improvement across RCAs is highly variable. There is a notable improvement in the results for the higher and lower performing RCAs, but little to no change for the median and lowest 10% of RCAs.

There is still opportunity for improvement, particularly in the metrics testing the Timeliness quality dimension, and Asset Inventory, Maintenance Activity, Condition and Demand data categories.

REFERENCES

Data Quality Project website

Data Quality Framework Overview

Understanding the Data Quality Results Overview

Online Data Quality Metric Library

Te Ringa Maimoa is a collaborative initiative between Local Government NZ, Waka Kotahi NZ Transport Agency and all road controlling authorities.

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