



TTC Peer Review Project

Asset & Maintenance Management

Audit & Risk Management Committee Presentation

22 September 2025 | Online



Findings & Recommendations

Key Insights from the peer review report



KEY STRENGTHS & OPPORTUNITIES

The peer review highlighted several strong existing practices, along with opportunities to build on this foundation:

- Establishment of a hands-on training center to strengthen maintenance staff competencies.
- Strong practice of keeping maintenance activities in-house, ensuring expertise and ownership.
- Effective collaboration and information sharing through well-organized meetings and site visits.
- Further potential in digitalization for management, inspections, and monitoring.
- Significant potential to further mature capital investment plan for modernizing fleet, infrastructure and systems presenting opportunity for strategic growth.

FINDINGS/RECOMMENDATIONS

Operational speed for the streetcar is 30 percent lower compared to the global average.

- Streetcar Priority is one of the solutions to increase operational speed.
- Advanced traffic management systems should be considered.
- Automation of switches (motorized) will eliminate stop-look-go and increase operational speed.

FINDINGS/RECOMMENDATIONS

Harmonize the expertise within the TTC.

- Subway and Streetcar management would benefit from further closer coordination.
- Standardizing maintenance related KPIs using Maximo requires further development for streetcar and subway to support identification of problems and create effective actions.

FINDINGS/RECOMMENDATIONS

Maintenance management should continue to evolve to enhance reliability and efficiency.

- Condition based maintenance and predictive maintenance strategies could be further developed.
- Reliability requirements of products should be defined at line replaceable unit (LRU), equipment level to minimize failure rates.

FINDINGS/RECOMMENDATIONS

Maintenance window enhancing reliability and safety

- The TTC could benefit from longer maintenance windows, which would enhance safety and reliability.
- For heavy maintenance, multi-day closures could be considered, with single-line operation as a possible alternative where appropriate.

FINDINGS/RECOMMENDATIONS

The competency framework and training programs could be further strengthened.

- Assess the knowledge and experience requirements for subway staff roles with regular refresher training and technical audits and harmonize.
- Review the effectiveness of subway driver training program to ensure continuous improvement.

FINDINGS/RECOMMENDATIONS

Investment Planning

- There needs to be better coordination of projects so vehicle procurement is aligned with the construction / extension of lines.
- Spares provision should be tied to reliability and maintenance periods recommended by the supplier.

FINDINGS/RECOMMENDATIONS

Asset Management

- Strengthen alignment between the 5-year Service Plan and Asset Management Plan by linking KPIs to asset performance and reviewing annually.
- Maximo should be single source of truth on all information of assets.
- Further managing the risks of assets within Asset Management System (AMS) is crucial for ensuring reliability, safety, and cost-effectiveness.

FINDINGS/RECOMMENDATIONS

Signalling

- An in-depth analysis of future ATC systems that are suitable for TTC operations needs to be conducted before any new systems are purchased.
- Adhesion problems might be reduced by using advanced detection systems.
- Fully automated driverless metro technology might be one of the options for greenfield metro projects.
- A detailed cost-benefit analysis should be conducted for brownfield metro projects.



Open Discussion

Q/A – 15 min





Thank you.

