

ENTERPRISE WORK MANAGEMENT SOLUTION (EWMS)

Audit Committee

December 1, 2023

Purpose

Enterprise Work Management Solution (EWMS)

- To provide context and benefits of implementing EWMS in the City
- To share updates on the EWMS Program

Agenda

1. Context
2. Business Transformation through EWMS
3. EWMS – Overall Program Scope & Impact
4. Our Implementation Journey
5. Phase 1 Implementation Areas
6. EWMS Program Budget
7. Continuous Learning & Improvements
8. Next Steps



Context

City divisions have been using various work management systems. These legacy systems mostly operate separately from each other and are difficult to upgrade.

In 2007, recommendations from the Auditor General to Toronto Water pointed to the need to consider the rationalization of Work Management Systems (WMS) in the City. This recommendation recurred in several audit reports to other City divisions as well.

In 2013, Community of Practice initiated and established the Enterprise Work Management System (EWMS) Program.

EWMS is a foundational technology enabling many services delivered by the City.

APPENDIX 1

TORONTO WATER DIVISION
REVIEW OF WASTEWATER TREATMENT PROGRAM – PHASE ONE

Jul

TORONTO Auditor General's Report

**AUDITOR GENERAL'S REPORT
ACTION REQUIRED**

Implementation of Recommendations in Audit Report
"311 Toronto – Full Potential For Improving Customer Services Has Yet To Be Realized"

Date:	June 10, 2013
To:	Audit Committee
From:	Auditor General
Wards:	All
Reference Number:	

SUMMARY

The implementation of recommendations from the Auditor General's report "311 Toronto – Full Potential For Improving Customer Services Has Yet To Be Realized" was assessed in early 2013. The purpose of this report is to provide an independent assessment of the implementation status of recommendations from the 2011 audit report.

The 2011 audit report contained 12 recommendations. Of these, nine recommendations have been fully implemented, two have been partially implemented, and one remains unimplemented.


Since our 2011 audit, 311 Toronto has resulted in more calls being answered within 30 seconds has increased from 3 per cent of callers waited longer than 30 seconds to 10 per cent of callers waited longer than 30 seconds. The unplanned absent days decreased from an average of 22.9 days to 18.9 days.

RECOMMENDATION

The Auditor General recommends:

1. City Council receive this report 6

Jeffrey Gri
Aud
City




**Review of Urban Forestry
Ensuring Value for Money for Tr**

April 26, 2019

Beverly Romo-Beehler, CPA, CMA, B.B.A., JD, ICD.D., C
Auditor General

**AUDITOR GENERAL
TORONTO**

AU6.2 Attachment 1



**Audit of Winter Road Maintenance Program –
Phase One: Leveraging Technology and Improving
Design and Management of Contracts to Achieve
Service Level Outcomes**

Transportation Services Division
October 14, 2020

Beverly Romo-Beehler, CPA, CMA, CFP, ICD.D., JD, B.B.A.
Auditor General

**AUDITOR GENERAL
TORONTO**



Related Audit Recommendations and Council Directives

TW: Review of Wastewater Treatment Program

July 2007

#13 The General Manager, Toronto Water Division, require that an evaluation of the use of the work management system be conducted following implementation of the system at each plant location. In addition, timely action should be taken to correct problems that are identified during the evaluation process.

311: 311 Toronto – Full Potential for Improving Customer Services has yet to be Realized

Nov 2011

#3 City Council request the Director, 311 Toronto Division, in consultation with the General Managers/Executive Director of Solid Waste Management, Transportation Services, Toronto Water, Municipal Licensing and Standards, and Parks, Forestry and Recreation, to improve the service request status information such that customers are provided with accurate and clear status information on-line.

PFR: Review of Urban - Forestry Permit Issuance and Tree By-law Enforcement Require Significant Improvement

2017

#1 City Council request the General Manager, Parks, Forestry and Recreation to ensure that the new Urban Forestry information system consists of all key permit issuance functions to enable adequate system controls over permit issuance and the collection of fees, payments, and deposits.

PFR: Getting to the Root of the Issues: A Follow-Up to the 2019 Tree Maintenance Services Audit

2021

#6 City Council request the General Manager, Parks, Forestry and Recreation Division, to improve crew management at the operations yards to reduce daily yard time & increase efficiency on tree maintenance work. Urban Forestry management should monitor whether there is any improvement to operational efficiency when taking this action.

#14 City Council request the General Manager, Parks, Forestry and Recreation Division, to compare performance measures and outcomes achieved by City & contracted tree maintenance crews and use this information to determine the appropriate type & volume of work to allocate to City crews & outsourced service providers.

TS: Winter Road Maintenance Program - Phase 2 Analysis: Deploying Resources

July 2021

#2 City Council request the General Manager, Transportation Services Division, to: (a) identify and remediate data entry errors and omissions in the TMMS Database for its winter maintenance program as part of an ongoing quality control process, and (b) implement system-based controls such as data edit controls to validate data entry and protect key fields in the TMMS Database.

#3 City Council request the General Manager, Transportation Services Division, to use the data from its TMMS Database to measure and monitor contractor performance, analyze operational trends, and inform decision making.

311: Request for First Year Review of Winter Maintenance Contracts and Addressing Obstructed Sidewalks with Snow and Ice

Mar 2023

#2 Direct the Executive Director, Customer Experience, to review the scope of winter maintenance complaints received in the 2022-2023 winter season and the efficacy of the existing reporting system and report back to the September 20, 2023, Infrastructure and Environment Committee as part of the Extreme Winter Weather Plan update.



Business Transformation Through EWMS

Our business landscape is evolving, paralleled by growing public demands in a broad range of service areas. The Enterprise Work Management Solution (EWMS) is enabling the City to keep up with this business transformation.

EWMS is a technology designed to integrate multiple legacy systems in the City.

Expected outcomes:

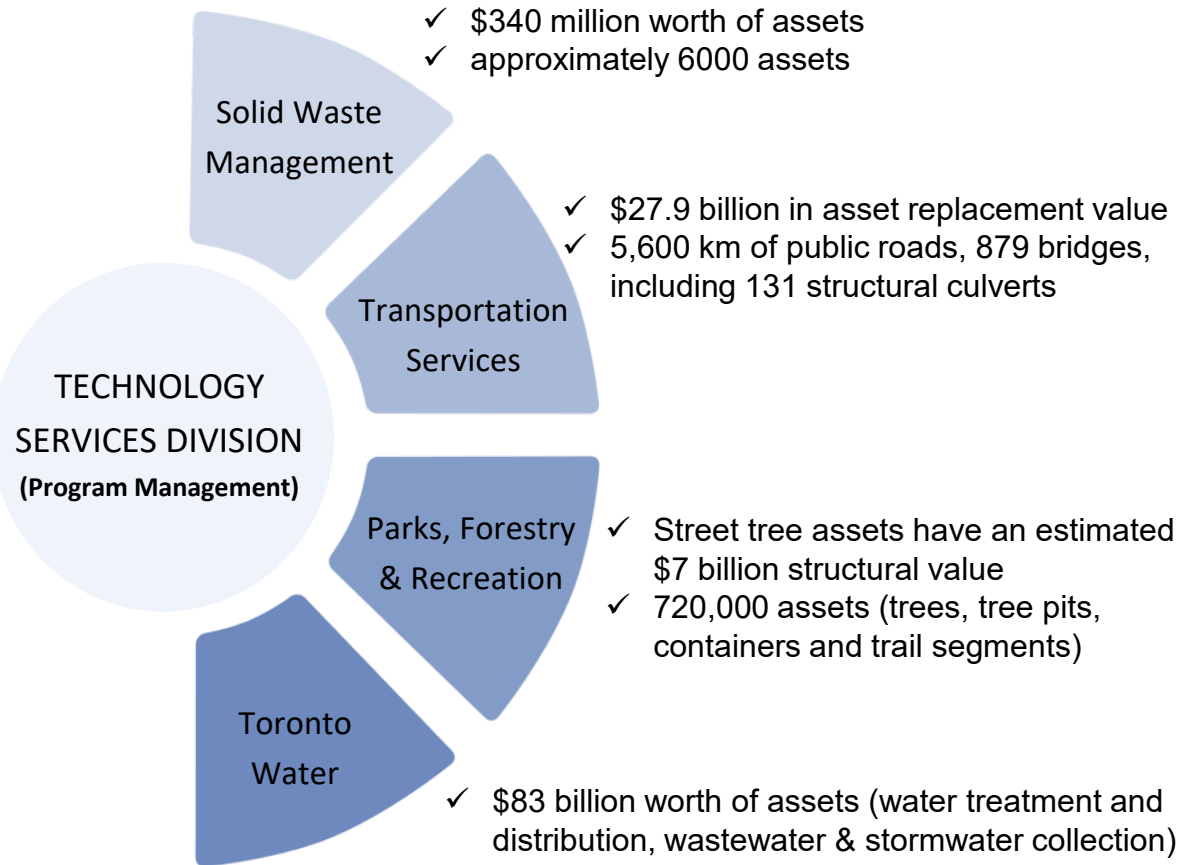
- Improved customer service & response time with better integration to other systems (e.g., 311 and SAP)
- More cost-effective delivery of services to residents and businesses
- Improved planning, scheduling, and implementation of work orders
- Better information and data collection for asset management and reporting



EWMS automates multiple business processes to deliver more seamless services to the Public.



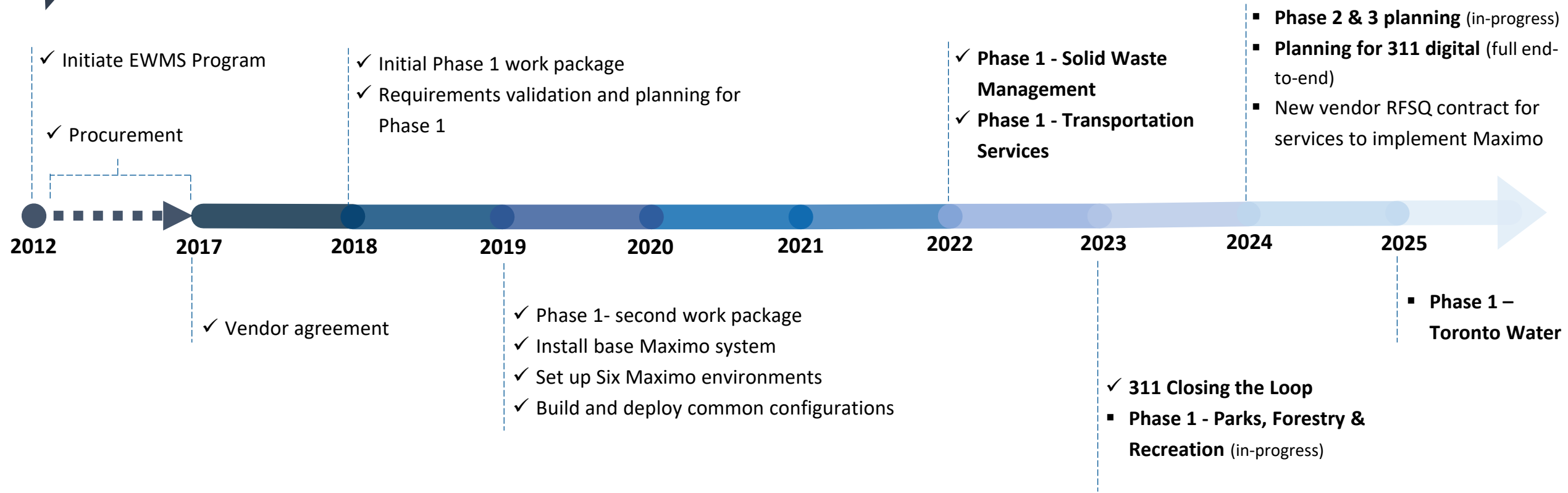
EWMS – Overall Program Scope & Impact



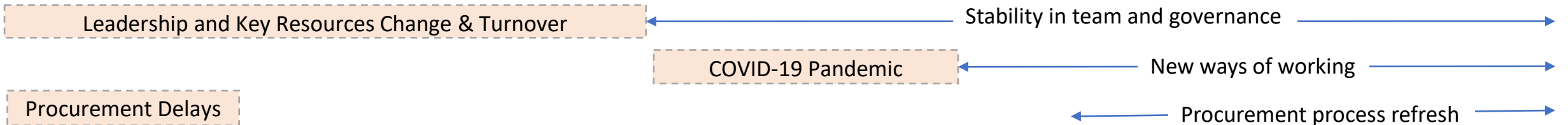
- EWMS is a large and complex IT project that is being implemented across multiple City divisions, impacting 4,000+ City staff and contractors.
- Work and system implementation occurs over three phases involving a common approach to defining requirements, design, and implementation.
- System integration partners include 311, SAP, and Purchasing and Materials Management Division.

EWMS enables management of large asset portfolios for 4 Divisions with TSD playing program management role.

➤ Our Implementation Journey



MACRO CHALLENGES:



Phase 1 Implementation Areas

SOLID WASTE MANAGEMENT



TRANSPORTATION SERVICES



PARKS, FORESTRY & RECREATION



TORONTO WATER



SCOPE

- Facilities & Equipment Maintenance (F&EM)
- 55 staff impacted

DONE

- Operations & Maintenance (including asset & work management on winter maintenance)

DONE

- Urban Forestry

IN PROGRESS

- Distribution & Collection
- Customer & Technical Support
- Water Infrastructure Management

IN PROGRESS

BUSINESS IMPACT

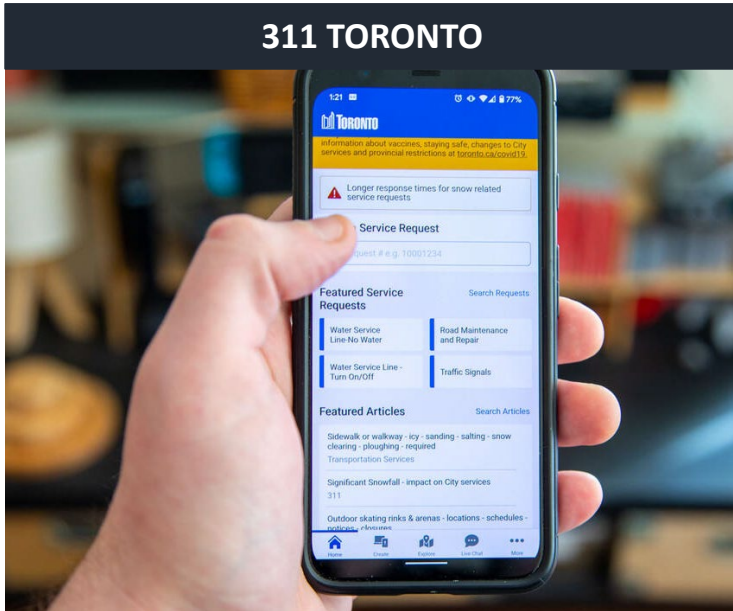
- Increased compliance for pre-trip vehicle inspections
- Enhanced mobile capability:
 - no waiting time for computers to record work
 - voice-to-text for quick information capture in the field
 - real-time access to information in the field
- Improved administrative functions in F&EM

- Enhanced customer service and accountability processes
- Improved planning and scheduling of work activities on infrastructure in the public right-of-way
- Improved tracking of asset maintenance and service delivery operations costs

- Branch-wide implementation
- Contract and city crew access and record work progress using mobile devices
- Plan, assign and record work electronically in real time
- Reporting automation

- Improve customer service through better decision making and data quality.
- Reduce information entered across multiple systems and integration with source systems
- Reduce operating costs through efficiencies gained by reducing the footprint of unsupported technologies and legacy systems.

➤ 311 Implementation Area



CLOSE THE LOOP PROJECT OUTCOMES

- Better alignment of the end-to-end process for customers
 - Service request and related work order generated are now linked
 - Customers have options on mode of communication/ feedback regarding service requests submitted
- Improved customer access to status update on service requests for *Transportation – Operations and Maintenance*
 - Fewer reasons to call 311 back
- More efficient workflow on service requests re-assignment for Transportation Services

UPCOMING IMPROVEMENTS

- Self-serve option for customers on service requests and work order information status through web and mobile
- PF&R and Toronto Water



EWMS Program Budget

PHASE 1

Phase 1 spend to date is \$51.8 M

- ✓ Established Program and system foundation
- ✓ Completed initial implementation for SW, TS and PF&R (in progress)
- Previous forecast of \$52.3 M will be updated to reflect an additional ~ \$7 M:
 - Phase 1 - Toronto Water
 - Enhancements to support winter services and 311 Close the Loop
 - Training & delivery

PHASE 2 & 3

Phase 2 and Phase 3 initial cost estimate of \$33.1 M to complete overall program scope and retire legacy systems

- Currently in planning stage
- New vendor contract will be established in 2024
- Estimate will be updated when more accurate vendor costing is available

Next budget update to be provided in Q2 2024

➤ Continuous Learning in Progress

The EWMS Program has proactively been doing improvements that lead to a more effective. The Technology Services Division leverages on the EWMS journey and the audit report to apply learnings across other technology projects.



- i. Strengthening project planning processes
- ii. Strengthening project governance
- iii. Enhancing controls to improve project execution
- iv. Strengthening project risk management and controls



Leading to improvement in EWMS program management

Project Planning

Completed:

- Streamlined and updated required project management templates as part of the end-to-end project gating review

Planned:

- Roll-out of enhanced project charter & templates (Q4 2023)
- Develop framework to identify roles and responsibilities in large programs (2024)

Project Governance

Completed:

- Established the Project Review Committee for technology projects and the Strategic Technology Initiative Executive Committee for new technology business cases

Planned:

- Augment steering committee structure (Q1 2024)
- Introduce agile project management (2024)

Project Execution

Completed:

- Implemented Project Status Dashboard
- Alignment with external partners to increase knowledge sharing

Planned:

- Standardize status traffic light indicator criteria—total health, scope, schedule & budget (Q4 2023)
- Flexible vendor and licensing models (2024)

Project Risk Management

Completed

- Developed a Project Management Framework including risk management, monthly status reporting and alignment to quarterly capital variance reporting

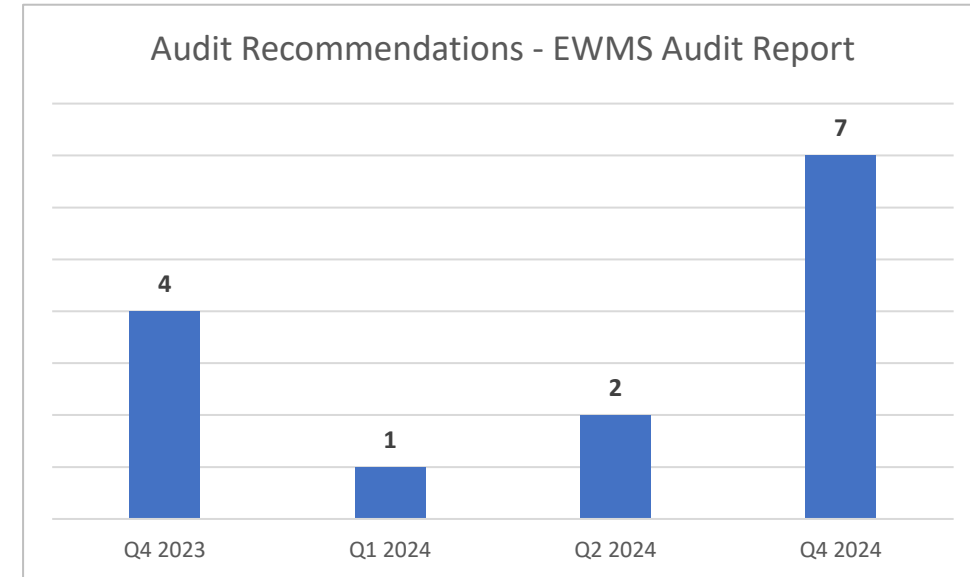
Planned:

- Standardize approach for reporting on benefits / outcomes for technology projects (Q2 2024)



Implementation of Audit Recommendations

- Through the EWMS audit report, the Auditor General provides 14 recommendations addressed to the Technology Services Division.
- Remediation actions are underway with target date of completion to some audit recommendations as early as December 2023, including:
 - Revised program status package (with scope, schedule, & risk)
 - Updates to the overall TSD Project Management Framework and EWMS program governance structure
 - Improvements in program reporting



Improvement on program and project management is underway and is a focus area for TSD.



Next Steps

1. Complete implementation of audit recommendations for remaining EWMS program scope
2. Rollout audit recommendations to other large technology programs
3. Report back to Audit Committee in Q2 2024 on the status of EWMS program (progress, budget, benefit assessment)

Thank you!

