



Action Required

Date: July 10, 2018
To: TTC Board
From: TTC Audit & Risk Management Committee
Subject: Internal Audit Quarterly Update: Q2 2018

The subject report, reviewed at the TTC Audit and Risk Management Committee on July 10, 2018, is forwarded to the TTC Board for information.

Original signed by Kevin Lee

Head of Commission Services

Attachment: Internal Audit Quarterly Update: Q2 2018



Internal Audit Quarterly Update: Q2 2018

Date: July 10, 2018
To: Audit and Risk Management Committee
From: Head of Internal Audit (Acting)

Summary

This report provides an update on TTC Internal Audit activities. It includes formal Management Action Plans (MAPs) prepared in response to four internal audit reports previously presented to the Audit and Risk Management Committee (ARMC), and one prepared proactively this quarter as recommended by Internal Audit.

Management Action Plans outline key steps management is committed to taking, or has taken at time of reporting, to address noted audit concerns and improve risk mitigation strategies. While Internal Audit supports management in the development and presentation of their corrective action plans to the ARMC, implementation of risk mitigation activities and monitoring of progress remains the responsibility of applicable management.

Recommendations

It is recommended that the TTC Audit and Risk Management Committee:

1. Receive the Q2 2018 Internal Audit Quarterly Update with attachments for information.
2. Forward a copy of Q2 2018 Internal Audit Quarterly Update with attachments to the TTC Board for information.

Financial Summary

The recommendations in this Report have no additional funding implications beyond the costs of the Internal Audit Department that were included in the 2018 Operating Budget and approved by the TTC Board on November 28, 2017.

Equity/Accessibility Matters

There are no accessibility or equity impacts associated with this report.

Decision History

This report provides an update on the status of the Department's 2018 Flexible Audit Work Plan, approved by the Audit and Risk Management Committee on February 15, 2018.

[http://www.ttc.ca/About the TTC/Commission reports and information/Commission meetings/2018/February 15/Reports/6 TTC Internal Audit 2018 Flexible Audit Work Plan.pdf](http://www.ttc.ca/About%20the%20TTC/Commission%20reports%20and%20information/Commission%20meetings/2018/February%2015/Reports/6%20TTC%20Internal%20Audit%202018%20Flexible%20Audit%20Work%20Plan.pdf)

Issue Background

The Internal Audit Department is required to provide regular updates regarding the status of planned assurance projects (see Attachment 1 - Status of 2018 Flexible Audit Work Plan as at July 10, 2018) and other activities.

Comments

Completed Projects

Emergency Management and Business Continuity Program: It is fundamental that the TTC has in place a comprehensive Emergency Management and Business Continuity (EM&BC) Program should a major incident or emergency occur. Based on preliminary work, Internal Audit has concluded that conducting an audit of TTC's emergency management planning, response and recovery framework would be of greater value following completion of an internal comprehensive gap analysis and integration of existing plans, etc.

A key underlying premise is that resilience is achieved by integrating emergency preparedness and business continuity principles across four broad areas of concentration: People, Plans, Processes and Protective Measures. So in keeping with best practice of ensuring TTC is a resilient organization, it is recommended that TTC's current state of emergency readiness be critically examined, and then a strategy for closing gaps to achieve a more resilient end state over time developed.

Support to Special Operations Group: Internal Audit completed audit work as requested in support of the TTC's Special Operations Group. Results have been communicated as deemed appropriate by the Group in regular updates to the CEO.

Management Action Plans

Management Action Plans outline key steps management is committed to taking, or has taken at time of reporting, to address noted audit concerns and improve risk mitigation strategies. While Internal Audit supports management in the development and presentation of their corrective action plans to the ARMC, implementation of risk mitigation activities and monitoring of progress remains the responsibility of applicable management.

Management Action Plans (MAPs) prepared in response to four internal audit reports previously presented to the ARMC, and one prepared proactively this quarter are being submitted to the ARMC for review and comment. Submission of MAPs to the ARMC facilitates greater understanding and fulfilment of their oversight responsibilities. Details of each MAP are provided in Attachment 2 as follows:

	Internal Audit Report	ARMC Date	MAP
1	Surface Collisions and On-Board Incidents	May 29/18	A*
2	Subway Track and Tunnel Work	May 29/18	B
3	Use of Video Surveillance	Dec 13/17	C
4	Tools Management	Dec 13/17	D
5	Emergency Management and Business Continuity Program	July 10/18	E

*Management presentation available

In-Progress Projects

In accordance with Internal Audit's 2018 Flexible Audit Work Plan, Internal Audit has initiated work for the following audit projects:

Fare Inspection/Fare Enforcement: Preliminary audit planning work is underway to gain a better understanding of current fare inspection processes and fare enforcement model.

Passenger Boarding Count Processes: Preliminary audit planning work is underway to gain a better understanding of customer "boarding" count processes and adherence to crowding standard monitoring methods.

Capital Contract Reviews: Audit work to assure compliance with key contract terms and conditions for a number of select capital contracts has begun. Criteria for selection of contracts include the dollar value and nature of expenditures incurred to date.

Contact

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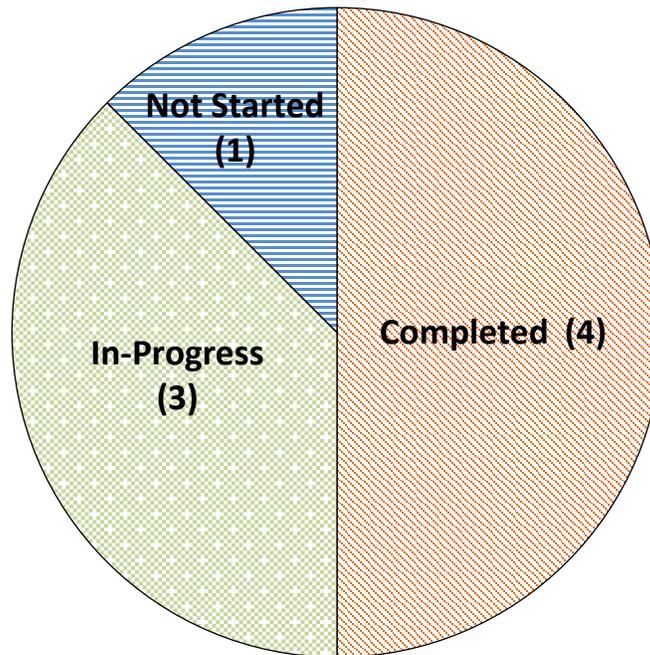


Christine M. Leach, CPA, CA, MAcc, CISA
Head of Internal Audit (Acting)

Attachments

Attachment 1 - Status of 2018 Flexible Audit Work Plan (Assurance Projects) - Q2 2018
Attachment 2 - Management Action Plans (A, B, C, D, E)

Status of 2018 Flexible Audit Work Plan (Assurance Projects) as at July 10, 2018



Completed (4)	In-Progress (3)	Not Started (1)
Surface Collisions & On-Board Incidents	Fare Inspection/Fare Enforcement	Subway Infrastructure Asset Management
Subway Track & Tunnel Work	Passenger Boarding Count Processes	
Support: Special Operations Group	Capital Contract Reviews (Select Contracts)	
Emergency Management (Survey Phase Only)		

Management Action Plan (MAP) – Surface Collisions and On-Board Incidents

Accountability – Chief Service Officer

Internal Audit Observations

http://www.ttc.ca/About_the_TTC/Commission_reports_and_information/Committee_meetings/Audit_Risk_Management/2018/May_29/Reports/7_Internal_%20Audit_%20Quarterly_%20Update_Q1_2018.pdf

1. **Engineered Controls and Technology:** A roadmap that clearly outlines task responsibilities, interdependencies and timeframes for evaluating and implementing technology based solutions and engineered controls through safety initiatives will improve accountability and transparency of progress being made.
2. **Infrastructure:** Corrective actions and root causes of surface incident ‘hot spots’ that require coordination with external parties (e.g., City of Toronto) would benefit from strategic corporate support and improved tracking.
3. **Training and Recertification:** Evaluating the effectiveness of formal training and post-training programs, and analyzing the impact of divisional management training actions will support decisions to revise and improve.
4. **Operator Management:** Measuring the impact of operator risk assessment, performance monitoring and deterrent programs will aid in identifying where further safety messaging is required and value added activities may be pursued to reinforce good safety behaviours.
5. **Data Collection and Analytics:** Leveraging technology to capture source incident/investigation data in a timely and consistent manner could improve data analytics and enhance efficiency in the data gathering process.

Management Action Plan	
1	<p><u>Engineered Controls and Technology Solutions – Ongoing Study and Evaluation</u></p> <p>(a) <i>KPMG Study:</i> Results of the KPMG Autonomous Vehicle Technology study and of the feasibility of procuring existing audio/visual pedestrian/operator warning/alarm and/or fatigue management technology are to be evaluated and presented to the TTC Safety Committee (SX). Focus is to be given to opportunities to implement engineered controls and technology based solutions to eliminate/reduce surface safety risks. Recommendations will be put forth to Executive Management as deemed appropriate and a Roadmap will be developed for approved items to achieve the optimal end state.</p> <p>(b) Evaluations of upgraded and emerging technologies aimed to eliminate/reduce safety risks via engineered controls and technology solutions will be conducted annually and results presented to the SX on an ongoing basis. Recommendations will be put forth to the Executive Management as deemed appropriate and a Roadmap will be developed for approved items to achieve the optimal end state.</p> <p>(c) A status summary of key decisions/safety risk mitigation strategies that rely on the use of engineered controls and technology, and progress of approved pursuits, with holistic evaluations and project interdependencies highlighted, will be presented annually to Executive Management (e.g., electric door operators).</p> <p><i>Responsibility: Service Delivery Group (Led by Bem Case, Head of Vehicle Programs)</i> <i>Target Completion Date: Initial Report(s) – December 2018; On-going thereafter</i></p>

Management Action Plan (MAP) – Surface Collisions and On-Board Incidents

Accountability – Chief Service Officer

Management Action Plan	
2	<p><u>Exterior Cameras on TTC Surface Vehicles</u></p> <p>(a) <i>UPDATE (June 13/18):</i> Legal presented to TTC's SX a comprehensive update on the status of TTC's business case submitted in April 2018 for use of external facing cameras on surface vehicles to the Information Privacy Commissioner (IPC) and response received from the IPC in May 2018. The preferred legal strategy of working collaboratively with IPC was explained. Areas of IPC inquiry, TTC's tentative response and potential gaps identified by Legal include:</p> <ul style="list-style-type: none"> • Retention period – proposed to be consistent with that of interior cameras; technology does not allow for different retention periods • Prevention of over-collection of information – camera angles to be reviewed to minimize “over-collection” of personal information (e.g., people's homes and property) • Audio recordings – TTC to clarify no audio recordings from camera system • Policy updates and changes – policy changes on how Toronto Police Services (TPS) access information being considered; propose TPS be required to obtain a warrant for non-TTC related matters/incidents, save and except in extraordinary circumstances • Storage of information – information currently stored on vehicle hard drives and downloaded to DVDs; TTC moving towards downloading and storing with a cloud based solution (stored in Canada) • Real time access logging and auditing – anticipate same as current TTC policy covering use of video recordings in public areas • Process to access personal information – anticipate same as current TTC policy covering use of video recordings in public areas • Public notification – improvements requested by IPC through the use of campaigns in local media, social media and TTC website; and general notice posted on TTC website regarding exterior camera video recording • Public consultation – increased public consultation requested by IPC <p>(b) <i>NEXT STEPS:</i> Legal continuing to work with IPC to address expressed concerns on a good faith basis; success necessitates selection of a champion to provide leadership and oversight of TTC's use of Video Surveillance and Camera Master Plan (see MAP C – Use of Video Surveillance).</p> <p><i>Responsibility: Mike Atlas (Associate General Counsel) – to work in conjunction with designated Surface Vehicle Video Surveillance Project (Service Delivery Group – led by Robert Smith).</i></p> <p><i>Target Completion Date: IPC Response to Recommendations – July 2018</i></p>
3	<p><u>City of Toronto “Vision Zero” Road Safety Program – TTC Representation</u></p> <p>TTC Representation on the City of Toronto's Vision Zero Team was actively pursued; Team is comprised of members from City Transportation Division, TPS, school boards, and other community based organizations; TTC received and accepted official invitation in June 2018 to join the Team; specific action item assignments with timelines and other relevant information is recorded and tracked in monthly meeting minutes.</p> <p>TTC Representatives (Service Delivery Safety Consultant & Service Planning) will aim to bring greater visibility and awareness of TTC concerns, results of 'hot spot' incident analysis, and garner support for infrastructure solutions to this City led initiative.</p> <p>TTC Representatives will provide regular updates to the TTC's Safety Committee.</p>

Management Action Plan (MAP) – Surface Collisions and On-Board Incidents

Accountability – Chief Service Officer

Management Action Plan	
	<p><i>Responsibility: Service Delivery Group (participants - Jim Sasseville, Manager – Service Delivery Safety & Pranav Dave, Chief Engineer – Operations Planning)</i> <i>Target Completion Date: Initial SX Update – December 2018; Ongoing thereafter</i></p>
<p>4</p> <p>(a)</p> <p>(b)</p> <ul style="list-style-type: none"> • 1 day refresher Assessment for Defensive Driving (ADD) – delivered by Divisional trainers • 3 day Safety Driving course – delivered by Training & Development trainers • Ride along and coaching sessions • Targeted and tailored covert Rules Compliance, GPS and LiDAR speed tests 	<p><u>Supplementary Training Program(s)</u></p> <p>Operator re-certification training cycle of 5yrs is deemed appropriate in light of initiatives listed below.</p> <p>Criteria and processes for monitoring the effectiveness of supplementary training designed specifically to support less experienced operators (rookies) and/or other “high risk” operators to be established. Elements to consider may include the expanded and/or differentiated use of:</p> <p><i>Responsibility: Service Delivery Group (Led by Robert Smith – Head of Bus Transportation & Lenord Oliver – Head of Streetcar Transportation) with support from Training & Development</i> <i>Target Completion Date: Initial SX Update – December 2018; Ongoing thereafter</i></p>
<p>5</p> <p>(a)</p> <p>(b)</p> <p>(c)</p> <p>(d)</p>	<p><u>Operator Management</u></p> <p>The Corporate Safety organizational structure is being reviewed to ensure effective support is given to Surface Transportation (and other) Groups.</p> <p>An increase of supervisory presence in the field is being considered.</p> <p>Dashboards are being developed to give greater visibility and break-down of Bus/Streetcar Rules Compliance Program results; corrective actions to be triggered by varying levels of non-compliance are being defined; and expectations around corrective actions for offending operators and positive recognition for those operators in compliance are being outlined.</p> <p>Rules Compliance Program (RCP) parameters will be reviewed and refined on an ongoing basis; RCP and other program effectiveness measures will be developed; and results will be regularly reported to SX.</p> <p><i>Responsibility: Service Delivery Group (Led by Robert Smith – Head of Bus Transportation & Lenord Oliver – Head of Streetcar Transportation)</i> <i>Target Completion Date: Initial SX Update – December 2018; Ongoing thereafter</i></p>

Management Action Plan (MAP) – Surface Collisions and On-Board Incidents
Accountability – Chief Service Officer

Management Action Plan	
6	<p><u>Data Driven Safety Management</u></p> <p>(a) In anticipation of VISION and the ability to monitor operator activity in real-time, as well as, to measure adherence to rules of the road collectively, a Gap Analysis of existing TTC Bus and Streetcar data driven safety performance initiatives and related data sources needs to be conducted and benchmarked against other transit agencies/best-practices; and a Roadmap for achieving an optimal end state Data Driven Safety Management Program developed. This will involve:</p> <ul style="list-style-type: none"> • Comparing and contrasting existing sources of collision/incident safety related data and methodologies for collecting, analyzing, and reporting results that drive decision making • Identifying safety performance priorities and links to definitive operator performance data/events (NOTE: links will be dependent upon defined parameters and available technology solutions, including the use of interior/exterior video cameras) • Establishing operator performance metrics and links to coaching and other improvement programs • Assessing resource requirements and developing processes, procedures, policies and plans to support continuous surface safety management improvement and reduction of collisions/incidents <p><i>Responsibility: Service Delivery Group (Led by Dwayne Geddes, Manager of Operations Control Centre) with support from Corporate Safety</i> <i>Target Completion Date: Gap Analysis – September 2019</i></p>

Management Action Plan (MAP) – Subway Track & Tunnel Work

Accountability – Chief Operating Officer*

*Pending Appointment of Chief Infrastructure Officer

Internal Audit Observations

[http://www.ttc.ca/About the TTC/Commission reports and information/Committee meetings/Audit Risk Management/2018/May 29/Reports/7 Internal %20Audit %20Quarterly %20Update Q1 2018.pdf](http://www.ttc.ca/About%20the%20TTC/Commission%20reports%20and%20information/Committee%20meetings/Audit%20Risk%20Management/2018/May%2029/Reports/7%20Internal%20Audit%20Quarterly%20Update%20Q1%202018.pdf)

1. **Track Level Safety:** Effective monitoring and performance of independent safety checks that ensure track level workers are completing work in accordance with TTC safety rules and guidelines is required to establish a robust track level safety culture.
2. **Portable Gas Monitors:** More rigorous enforcement of portable gas monitor usage and scrutiny of high alarm incidents are required to ensure track level worker exposure to hazardous gases is minimized. Corporate and departmental procedures associated with the utilization and monitoring of gas monitors used at track level need to be reviewed, updated and expanded as deemed appropriate.
3. **Track Level Maintenance Window:** TTC’s revenue subway service hours limit the nightly maintenance window, which impacts the efficiency and effectiveness of track level work and exposes subway infrastructure to accelerated deterioration. Conducting an in-depth study to quantify ridership/revenue associated with TTC’s late-night subway service (after midnight runs) to ensure current intensity of service and impact on subway infrastructure and vehicle asset maintenance costs (and other subway service operational costs) are warranted is recommended.
4. **Subway Track Access Request System:** Continued ITS support and expanded functionality of the Subway Track Access Request System (STARS) is required to improve scheduling efficiencies, monitor scheduling deviations and enhance safety of track level workers.

Management Action Plan	
1	<p><u>Improve Safety</u></p> <p>Prompted by the audit, Management:</p> <p>(a) Centralized Subway Operations Safety Consultants under one Senior Manager Subway Operations Safety who reports directly to the COO to: provide senior level oversight; align safety efforts across all subway operations departments; ensure consistency in safety practices; and share resources (Completed – November 27/17).</p> <p>(b) Conducted a “safety stand-down” with Track Maintenance leadership to ensure clear understanding of: roles and responsibilities; the Occupational Health and Safety Act; the Job Safety Briefing process; and other related topics (Completed – March 22/18).</p> <p>(c) Reset departmental Safety Talks, with input from Training and Development, to provide an open forum to: discuss safety concerns; provide information on hazards to track level workers; and to reaffirm management’s commitment to worker safety (Ongoing – initiated March 27/18).</p>

Management Action Plan (MAP) – Subway Track & Tunnel Work

Accountability – Chief Operating Officer*

*Pending Appointment of Chief Infrastructure Officer

Management Action Plan	
(d)	Moved Safety Consultants to off-shifts, specifically night shift, to ensure: focus is on workers at greatest risk; and provide support to front-line workers to promote a safety culture (Completed – March 30/18). This move was possible only through a request for volunteers from the Safety Consultant group. Safety Consultants will be advised of a change to their Job Descriptions which will indicate the requirement to work all shifts and participate in the On Call Schedule. (Implementation timeline to be determined with assistance from HR). Safety & Environment Department advised that Corporate Program implementation will require more support and assistance from the SH&E Strategy Group, as the current team of Safety Consultants are assigned to various shifts and the investigation and closing out of corrective actions. (TBD once shift change and On Call participation has been implemented).
(e)	Established expectation for increased frequency to complete work-zone audits during the night-shift using a standardized form; on-going nightly audits commenced May 1/18 via the Track Access Controllers (TACs) and results tracked and analyzed for discussions amongst department head and managers where deficiencies are discovered (Ongoing – initiated March 30/18).
(f)	Removed track level rules requiring notification in advance of spot-check work-zone audits to enhance the integrity and value of the safety and rules compliance checks (Ongoing – initiated April 14/18).
(g)	Moved a Supervisor onto the night shift permanently to provide greater support and accountability for Assistant Forepersons and Forepersons (Completed – April 16/18); all positions temporary at the moment and further planning required to develop and recruit permanent employees into positions.
(h)	<p>Further work required to develop procedural details and documentation requirements. For example, need to:</p> <ul style="list-style-type: none"> • Review/clarify corporate and departmental portable gas monitor SOPs; and incorporate enforcement expectations into safety and rules compliance checks. • Establish disciplinary protocols and/or coaching programs for track level workers observed to be non-compliant with any safety rules; and bestow positive feedback to those workers observed to be completing work in a safe manner to reinforce corporate safety messaging and preferred behaviours. • Define documentation and reporting requirements for all safety and rules compliance checks; and develop/monitor relevant performance KPIs. <p><i>Responsibility: Subway Infrastructure (Led by Fort Monaco, Acting Head – Subway Infrastructure)</i> <i>Target Completion Date: December 2018</i></p>
2	<p><u>Improve Management Processes</u></p> <p>(a) Changes made in Subway Infrastructure management team and at senior level within the Operations Group (Completed – April 30/18); many key positions either Acting or Temporary, and therefore a longer term recruitment strategy is required.</p> <p>(b) Reviewed overtime practices within Track Maintenance group and established a going forward expectation that all overtime work must be for a defined job at the time of posting.</p> <p>(c) Reviewed usage of non-revenue fleet vehicles (NRVs); confirmed/provided (where necessary) appropriate training to all workers operating NRV's; improved process for signing out NRV's and enforcement thereof; and intend to implement a GPS tracking system onto Track Maintenance NRV's.</p>

Management Action Plan (MAP) – Subway Track & Tunnel Work

Accountability – Chief Operating Officer*

*Pending Appointment of Chief Infrastructure Officer

Management Action Plan	
(d) (e)	<p>Evaluating/benchmarking track level work planning and scheduling (including STARS) processes against other transit agencies to establish a best practices approach. Third party consultant anticipated to conduct this evaluation.</p> <p>Establish a subway closure planning and execution standard to better promote timely planning and clear, concise safety protocols to implement for all participants in any Subway Infrastructure (SI) subway closure, commencing with the June 2/18 SRT closure. (Complete)</p> <p><i>Responsibility: Subway Infrastructure (Led by Fortunato Monaco, Acting Head – Subway Infrastructure)</i> <i>Target Completion Date: December 2018</i></p>
3	<p><u>Improve Staff Accountability</u></p> <p>(a) Instituted a roll call process at the start and end of the night shift to verify on-time attendance and completion of shift by track maintenance workers.</p> <p>(b) Holding Forepersons accountable for non-compliance of crew members with respect to PPE, work-zone set-up, adherence to work methods, and other safety rules, etc.</p> <p>(c) Introduce a staff orientation program for all new staff entering the SI workforce. Initially this will involve distribution of a staff binder and scheduled orientations with various safety consultants and members of SI management team. Orientation will also include a 2 hour health and safety training package including a review of the Internal Responsibility System. The first staff orientation will occur on Monday June 25/18. Establishment is planned to be iterative and will evolve over the course of several months.</p> <p><i>Responsibility: Subway Infrastructure (Led by Fortunato Monaco, Acting Head – Subway Infrastructure)</i> <i>Target Completion Date: December 2018</i></p>
4	<p><u>Third Party Infrastructure Asset Condition Assessment</u></p> <p>(a) Initial Scope of Work – 20% of Track; draft report to be issued/reviewed (July 2018) and recommendations acted upon as deemed appropriate.</p> <p>(b) Expanded Scope Being Considered: to assess People (training, competencies, roles and responsibilities); Process (work planning and scheduling, SOPs, standards); and Safety Risks (gap analysis, staff accountability, audit compliance).</p> <p>(c) Preparing comprehensive risk assessment of track maintenance activities; results to be presented to ARMC/Board.</p> <p><i>Responsibility: Subway Operations (Led by Jim Ross, Acting Chief Operating Officer)</i> <i>Target Completion Date: December 2018</i></p>

Management Action Plan (MAP) – Subway Track & Tunnel Work

Accountability – Chief Operating Officer*

**Pending Appointment of Chief Infrastructure Officer*

Management Action Plan	
5	<u>Maintenance Window Study</u>
(a)	Consideration being given to third party study and benchmarking of TTC maintenance window; options for improving productivity of night time work being explored (e.g., rotating/staggering closures of portions of track). <i>Responsibility: Subway Operations (Led by Jim Ross, Acting Chief Operating Officer)</i> <i>Target Completion Date: December 2018</i>

Management Action Plan (MAP) – Use of Video Surveillance

Accountability – Chief Service Officer

Internal Audit Observations

http://www.ttc.ca/About_the_TTC/Commission_reports_and_information/Committee_meetings/Audit_Risk_Management/2017/December_13/Reports/5_%20Internal_Audit_Activities_Quarterly_Update_Q3_2017.pdf

1. **Governance and Oversight of Video Surveillance:** Action is required to establish clear governance, risk management and controls over TTC's use of cameras and video surveillance, and to effectively embed a comprehensive Video Surveillance Program as part of a robust security posture that operates in accordance with legislative and organizational requirements.
2. **Functionality, Maintenance and Performance of Video Surveillance Systems:** A reactive approach to monitoring video images and technological limitations impacts the functionality, maintenance and performance efficiency of TTC's video surveillance systems.
3. **Video Image Downloading and Storage:** Expectations of exponential growth in video download requests makes achieving greater efficiencies within the Video Services Unit (VSU) paramount. Efforts to improve the efficiency of the systems and processes for ensuring video images are secured for evidentiary purposes in a timely manner and in accordance with privacy legislation continue, but technological challenges and cost implications thereof persist.

Management Action Plan

1 Camera Strategy

Draft Camera Strategy prepared (May 4/18) based on input from a number of departments which are directly/indirectly impacted by the use, maintenance and performance of cameras.

- Requires further review/benchmarking to ensure it reflects a comprehensive, system-wide corporate posture to guide stakeholder decision making and priority setting as part of a broader safety, security and investigation program.
- Gap Analysis to be conducted and final Camera Strategy Master Plan necessary to achieve desired Video Surveillance Program end state to be presented to Executive Management.

Responsibility: Service Delivery (Led by Marg Verbreek, Emergency Planning Officer)

Target Completion Date: Gap Analysis & Camera Strategy Roadmap - December 2018

2 Strategic Direction & Accountability – Champion Required

Executive management to explore options for elevating responsibility to establish the strategic direction, monitor implementation and oversee all administrative elements of a comprehensive, integrated Video Surveillance Program and Camera Master Plan to ensure desired optimal state is achieved. Responsibilities may include:

- Governance and oversight of corporate camera strategy and holistic video surveillance program
- Review and development of integrated operational plans and administrative policies, procedures and protective measures (including use of video in public and non-public places; video image management)

Management Action Plan (MAP) – Use of Video Surveillance

Accountability – Chief Service Officer

Management Action Plan	
	<ul style="list-style-type: none">• Stakeholder management and public communications – to work in consultation with Legal to satisfy Information Privacy Commissioner (IPC) requests• Conducting technology assessments, working with Operations maintenance groups and establishing equipment standards (functionality, performance and maintenance; real-time/download monitoring; Wi-Fi capabilities) <p><i>Responsibility: Executive Management (Led by Collie Greenwood, Acting Chief Service Officer)</i> <i>Target Completion Date: Camera Strategy Roadmap Assignment - December 2018</i></p>

Management Action Plan (MAP) – Tools Management

Accountability – Chief Service Officer & Chief Operations Officer*

*Also Chief Infrastructure Officer upon appointment

Internal Audit Observations

[http://www.ttc.ca/About the TTC/Commission reports and information/Committee meetings/Audit Risk Management/2017/December 13/Reports/5 %20Internal Audit Activities Quaterly Update Q3 2017.pdf](http://www.ttc.ca/About%20the%20TTC/Commission%20reports%20and%20information/Committee%20meetings/Audit%20Risk%20Management/2017/December%2013/Reports/5%20Internal%20Audit%20Activities%20Quarterly%20Update%20Q3%202017.pdf)

1. **Culture of Entitlement:** The root causes and contributing factors to poor control over small hand and cutting tools, hand power tools and other consumable accessories persist. This hinders management's ability to hold employees responsible for occurrences of negligence or to investigate questionable employee tool request patterns.
2. **System Contracts and Data Analytic Reports:** Continued efforts are required to develop sustainable data analytic reports to facilitate the identification and investigation, if necessary, of questionable tool purchases and tool purchasing trends by Operations Maintenance User Groups.
3. **Tool Allowances:** Tool and Tool Allowance provisions within Collective Bargaining Agreements contribute to TTC's culture of entitlement and exposure to misappropriation of TTC assets.

Management Action Plan	
1	<p><u>“Tone at the Top” Messaging</u></p> <p>Clear message that tool theft is unacceptable communicated by Acting CEO collectively to all Operations Maintenance Group department heads. Expectation established for Tools Management audit results to be reviewed with front-line Supervisors, and emphasis to be placed on their accountability to control the issuance of all tools to workers reiterated (Completed – Feb/18).</p>
2	<p><u>Operations Maintenance Groups – Corrective Actions</u></p> <p>Ongoing tool management discussions held amongst all Operations Maintenance Groups with Materials & Procurement (M&P) staff to identify areas of concern and corrective actions to be pursued. Discussions coordinated, and progress of each Operations Maintenance Group captured and reported out by Risk Management Office (RMO) staff (Mohamed Ismail). Specifically:</p> <p>(a) <i>Consumables & Small Hand Held Cutting Tools</i> - Audit results to be reviewed with front line supervisors; message of their accountability reiterated (all Groups by end of July/18).</p> <p>(b) <i>Small Hand Power Tools:</i></p> <ul style="list-style-type: none"> • Tool Inventories to be updated (all Groups by end of July/18) • SOPs to be created/revised to manage and control tool requisition/replacement, and for ongoing monitoring of performance and adherence to tools management expectations (all Groups by end of Dec/18) • Opportunities to implement staffed tool cribs and/or other means for restricting uncontrolled access to tools to be investigated/evaluated (e.g., computerized locker boxes) (all Groups by end of Dec/18) • Where above is not feasible – the use of technology and processes to serialize/track/control tools valued at greater than \$100 to be investigated/evaluated (e.g., RFID chips, use of security cameras) (all Groups by end of Mar/19).

Management Action Plan (MAP) – Tools Management

Accountability – Chief Service Officer & Chief Operations Officer*

*Also Chief Infrastructure Officer upon appointment

Management Action Plan	
(c)	<p><i>System Contracts</i> - Implement new controls/segregation of duties over system contract purchases (all Groups by end of Dec/18). Specifically:</p> <ul style="list-style-type: none"> • Foreperson – Requestor • Supervisor – Approver • Manager – Auditor (to monitor the nature/timing/rationale for purchases, noted trends, and follow-up of questionable items)
(d)	<p><i>TTC vs Employee Owned Tools</i> – Establish/implement processes and document (all Groups by end of Dec/18):</p> <ul style="list-style-type: none"> • Annual tools audits of TTC owned tools • Annual tool box audits/inspections of employee owned tools (i.e., annual tool allowance issued to eligible employees to maintain specified tool kit) • Identification of non-specialty tools provided to employees; special attention for tools provided to employees required to maintain their own
(e)	<p><i>Random “Gate Checks”</i> – Consideration being given to instituting a random security “gate check” inspection process at facility access points to serve as visible deterrence to inappropriate employee removal of TTC property; to be conducted by TTC Security staff and/or contracted Security guards.</p> <p><i>Responsibility: Service Delivery Group (Led by Collie Greenwood, Acting Chief Service Officer) & Operations Group (Led by James Ross, Acting Chief Operations Officer)</i></p> <p><i>Target Completed Date: Implementation of Controls (all by end of March 2019)</i></p>
3	<p><u>Data Analytic Reports</u></p> <p>Ongoing review/refinement of monthly exception reports for system contracts by M&P staff in cooperation with Operations Maintenance Groups.</p> <p>Emphasis being placed on giving visibility to purchasing cost trends/spikes, questionable and/or large single item transactions (e.g., off-basket items).</p> <p>Expenditure reports for tool and other system contracts broken down by cost centre distributed monthly to all Department Heads; M&P staff has noted inquiries by user departments requesting detailed information related to noted expenditures has increased; and questionable purchases prompting M&P to initiate follow-up has decreased – thereby suggesting more concentrated efforts are being made by Department Heads to monitor the appropriateness of tool purchases.</p> <p><i>Responsibility: Ted Zlotnik (Head – Materials & Procurement)</i></p> <p><i>Target Completed Date: Initial Analytic Reports – Completed; Refinement/Additional Reports - Ongoing</i></p>
4	<p><u>Tool Allowance Provisions</u></p> <p>Department Heads put forth recommendations to Employee Relations for CBA negotiations. Options to convert cash/cheque tool allowances paid to eligible employees include:</p> <ul style="list-style-type: none"> • P-card linked to tool purchases only in lieu of providing cash/cheques • Non-transferable vouchers, possibly with select tool vendors, for non-returnable items <ul style="list-style-type: none"> ○ P-card/vouchers to expire at end of year if not used ○ Tool vendor to provide monthly reports of employee purchases; reports to assist front-line management with tool box audits <p><i>UPDATE: Per Employee Relations – no changes in existing CBA rules; therefore reliance must be placed on other operational/administrative controls.</i></p>

Management Action Plan (MAP) – Emergency Management

Accountability – Chief Service Officer

Internal Audit Observation

- 1. Emergency Management and Business Continuity Program Gap Analysis:** The Audit and Risk Management Committee has oversight responsibility for TTC emergency planning, disaster recovery and business continuity plans per its Terms of Reference. To ensure TTC is a resilient organization, it is recommended that TTC’s current state of enterprise-wide emergency readiness be critically assessed, and a comprehensive strategy for reaching an optimal end state Emergency Management and Business Continuity Program devised and implemented.

Management Action Plan	
1	<p><u>Emergency Management and Business Continuity Program Gap Analysis</u></p> <p>A comprehensive Gap Analysis of TTC’s existing emergency plans, security protocols, response and recovery procedures, etc., is being conducted to proactively identify and undertake the needed steps for instituting a best-practice comprehensive Emergency Management and Business Continuity Program.</p> <p>Resilience will be achieved by integrating emergency preparedness and business continuity principles across four broad areas of concentration: People, Plans, Processes and Protective Measures.</p> <p>The Gap Analysis will involve looking at each of these areas as they currently exist at the TTC, determining where we need to be to achieve optimal resilience, and then mapping a strategy to close the identified Gaps.</p> <p>Results of the Gap Analysis will be reported back to the Audit and Risk Management Committee along with a Roadmap for addressing gaps and achieving optimal end state over time.</p> <p><i>Responsibility: Service Delivery Group (Led by Marg Verbeek, Emergency Planning Officer-Security) - with support from Corporate Safety and other various Departments</i></p> <p><i>Target Completion Date: Gap Analysis & Roadmap: December 2018</i></p>