

Report to / Rapport au:

**OTTAWA POLICE SERVICES BOARD
LA COMMISSION DE SERVICES POLICIERS D'OTTAWA**

29 April 2019 / 29 avril 2019

Submitted by / Soumis par:

Chief of Police, Ottawa Police Service / Chef de police, Service de police d'Ottawa

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SUBJECT: MODERNIZATION ROADMAP UPDATE AND BUNDLE 3 REQUEST

**OBJET: MISE EN ŒUVRE DE LA FEUILLE DE ROUTE DE LA
MODERNISATION - REGROUPEMENT 3**

REPORT RECOMMENDATIONS

That the Ottawa Police Services Board:

- 1. Receive the Modernization Roadmap update for information;**
- 2. Approve the work plan for Bundle 3 as set out in the report;**
- 3. Approve the delegation of authority to the Chief of Police to execute and administer Bundle 3 in accordance with the Master Contract Agreement, to a maximum of \$12.4 M.**

RECOMMANDATIONS DU RAPPORT

Que la Commission de services policiers d'Ottawa:

- 1. Reçoive, à titre d'information, la mise à jour sur la Feuille de route de la modernisation;**
- 2. Approuve le plan de travail du Regroupement 3, tel qu'énoncé au sein du rapport;**

3. Approuve la délégation de pouvoir au chef de police pour la mise en œuvre et l'administration du Regroupement 3 conformément au contrat-cadre, à concurrence de 12,4 M\$.

BACKGROUND

In April 2016, the Ottawa Police Services Board (the Board) approved the Information Management/Information Technology Roadmap (the IM/IT Roadmap) for the Ottawa Police Service (OPS). The IM/IT Roadmap, was renamed as the Modernization Roadmap Program (MR), and set out a path for the OPS to boost productivity and leverage technical advances readily available in the marketplace, with the goal of equipping the OPS with leading edge operational capabilities. This investment will better equip OPS to maintain service to the community (e.g. enhanced frontline mobility), respond to changing demands (e.g. cannabis) and enhance service through modernization (e.g. digital evidence management).

On April 25, 2016, the Board also approved Gartner Consulting to provide program support for the duration of the MR to help ensure the product being delivered meets expectations. Gartner is an independent information technology research and advisory company with proven experience in supporting the delivery of complex IM/IT projects. The contract with Gartner is for \$4.5 million excluding taxes and runs until May 31, 2022.

In February 2017, the Board awarded the contract for the MR program to PricewaterhouseCoopers (PwC) accompanied by a Master Contract. PwC began work immediately and a first key deliverable was the work plan for Bundle 1 activities, set out as a 12 to 18 month initiative with five streams and a cost of \$14.7 million. The Board approved the Bundle 1 Work Plan in June 2017 and delegated authority of \$14.7 million to the Chief of Police to ensure an agile approach to implementation. In June of 2018, the Board approved the Bundle 2 Work Plan and delegated authority of \$9.9 million to the Chief of Police.

The purpose of this report is to provide the Board with an update on Bundle 1 and 2 activities and accomplishments, and request approval for delegated authority to proceed with Bundle 3. This bundle focuses on implementation of key capabilities and starts to deliver the benefits outlined in previous reports.

DISCUSSION

The Modernization Roadmap Program is well underway with positive changes to the organization and progress in all streams being realized.

The purpose of this report is to update the Board on the overall program, outline the work plans moving forward and seek approval for the delegation of authority to the Chief for Bundle 3.

The Modernization Roadmap Program (MR) is progressing and is now approaching its third year. As specified in the June 2018 Report to the Board, the MR combines seven critical streams of work.

The streams of work are:

1. Frontline Mobility (FLM)
2. Information Management (IM)
3. Innovation
4. Foundation and Security
5. Collaboration
6. Member Information System (MIS)
7. Enterprise Asset Management (EAM)

The focus of the first 2 years of the Program has been on design and implementation planning. In Bundle 0, completed in July 2017, four roadmaps were developed: Information Management (IM), Enterprise Security Architecture (ESA), Enterprise Architecture (EA) and an overall Modernization Roadmap. The overall MR laid out a path forward addressing OPS' needs and set out the IM, ESA and EA roadmaps and other business imperatives identified through direct consultation with OPS.

Bundle 1 began the foundational and design/planning work set out in the MR. Over twenty-five (25) individual projects were undertaken to achieve Bundle 1 goals. Of the \$14.7 million allocation, the program has expended \$14.4 million as of the writing on this report. This bundle is almost complete.

Bundle 2, with a \$9.9 million allocation, is focusing on the implementation of plans for all operational streams with the exception of MIS and EAM. The MR executive steering committee, in discussions with the Ottawa Police Services Board, decided that further activities in these streams are to align with the City of Ottawa's Roadmap planning. MIS and EAM will rely primarily on the City's SAP system as their backbone.

In September 2018, a 'pivot' session was held to re-assess the progress and priorities of the MR. The session, attended by senior members of OPS, Gartner and PwC, committed to a common set of behaviours needed to ensure success of the MR and the need to focus efforts on providing Frontline Operations with tools to improve officer effectiveness and

safety. Work on the Frontline Mobility projects was accelerated. The deployment of smartphones to all Frontline officers, the replacement of the in car computers including addressing ergonomic issues and the identification and deployment of new frontline tools were the first priorities and the first rollout of these changes occurred in the FLM projects completed in December 2018.

By the end of the MR, an estimated \$ 5.69 million will be expended on capabilities and hardware provided to Frontline Operations through the FLM stream. When added to the Frontline capabilities provided through the IM, Innovation, Collaboration, MIS and EAM streams, it is clear that the focus has been on improving policing operations.

Work in the area of change management, having been recognized as key, is addressing OPS' ability to sustain the change and new capabilities. This transition from project to operations ensures that the MR benefits can be realized over the long term. A robust transition strategy has been developed and is supported by the MR executive steering committee. The strategy addresses the end-to-end implementation needs of streams such as Frontline Mobility and Collaboration that have been designed with a larger OPS involvement. Streams such as MIS and EAM include full implementation services bringing OPS to a completely transitioned steady state.

In March of 2019, OPS undertook a comprehensive MR review. The review served to align the program with OPS' capacity to ensure the program's success and the sustainability of benefits. As a result of the review, Bundle 3 will focus on implementation activities such as:

- continuing the up fitting of new in car computers throughout the fleet,
- adding capabilities such a reporting and dispatch functions for Frontline officers on their smartphones,
- extending the deployment and capabilities of MS Office 365 to support Frontline Operations such as an improved means of compliance tracking for OPS policies,
- extending the dashboards, alerts and notifications from the new enterprise data hub to Frontline Operations,
- implementing solutions from the Innovation stream - facial recognition and the 'push to talk' feature for smartphones,
- planning and designing a digital evidence management system,
- implementing an enterprise asset management solution focused on the tracking and management of operational assets supporting Frontline Operations,

- lastly, in alignment with the City of Ottawa's SAP Roadmap, implementing the Member Information System.

A more detailed summary of the in progress and/or completed work to date is further outlined in upcoming sections of this document.

Program Design Principles

A set of three principles continue to guide the MR Program ensuring that team members and decision makers have clear reference points on how they are expected to carry out this work. They are: 1) Cop Centric, 2) Partner First and 3) Continuous Optimization. Together these principles will ensure that the MR Program places police operations at the forefront, maximizes opportunities with the City and continually works to improve service to all clients.

- Cop Centric - refers to the full integration of sworn members into the selection and implementation of the new solutions to ensure an operational focus
- Partner First - means working with the City of Ottawa to maximize alignment by sharing common resources, solutions and services to deliver benefits to OPS, the City and Ottawa taxpayers
- Continuous Optimization - means working to improve OPS functions that are not in the Roadmap to deliver better service to clients

Cloud

Cloud computing remains a key technology for the success of the MR. As one of several public safety organizations in North America to adopt cloud computing, the OPS will continue to implement this technology and explore how to further leverage the use of the Cloud environment to the benefit of the program.

Critical 'Sweet Spot'

As stated in the previous report to the Board, dated June 4, 2018, three areas of work continue to be critical to the success of the Program and its support of police operations:

1. having accurate, real time information on their personnel,
2. knowing the fleet and equipment (assets) that are available to assign to their personnel for each shift and
3. having all relevant information available on a mobile device so that it can be accessed and shared, bringing mobility to all aspects of police operations.

MR Benefits

The MR is expected to generate two types of benefits: financial benefits that can be used to help offset costs and budget pressures enabling OPS to meet its budget reduction commitment, and non-financial benefits that can be used to help reduce the impact of sworn and civilian service resource deficits, service gaps, service complexity and pressures.

Financial benefits primarily arise from the introduction of new ways of doing work in civilian areas of the OPS which are very manual, transactional and labour intensive resulting in fewer positions. The MR is expected to yield \$4.4 million reduction in OPS operating expenses thus meeting its budget target.

The sources of financial benefits are: cost reductions through retiring legacy systems; overtime reductions resulting from improved staff scheduling and management; acquisition and maintenance cost savings from improved asset management; and a reduction in MR consulting services. The estimated savings from these areas is \$2.2 million. In addition, the MR program will yield between \$2.0 million to \$4.0 million of salary savings through the reduction of civilian positions (between 17 to 33 FTEs).

The MR will also deliver non-financial benefits of between 317,000 and 609,000 hours of sworn time savings and 59,000 to 106,000 hours of civilian time savings, which can be channelled into new or better service offerings. (These savings are the equivalent of between 166 to 320 FTEs on the sworn side and between 31 and 56 FTEs on the civilian). At this level the time savings estimate will exceed the MR benefits targets agreed upon at the outset of the program.

It is recognized that these time savings are an enabler to achieve true benefits for OPS, that is to say, 'how' these hours are reinvested will generate true and meaningful benefits such as improved ways of delivering service, improved crime solvency rates, reduced risk to the public, OPS and its officers. For instance, between January 2018 and April 2019, a total of 2,500 (or 53%) of demand for service requests from the community were unable to be met due to resource constraints and other operational imperatives. As the realized time savings are achieved through the implementation of Bundle 3, the opportunity is created to service more requests.

To ensure that benefits are realized, measured, effectively managed and reported on, the OPS enterprise Benefits Management framework is under development. This includes developing a benefits management culture amongst leaders, tracking results and reporting back on them to stakeholders.

Bundles 1 and 2 Update

The move towards a strategic posture in dealing with technology adoption and adherence as evidenced by the September 2018 'pivot' session and other planned review and prioritization sessions. These sessions are evidence that OPS is engaged in the MR, and as changes are needed, the OPS is prepared to expend the time and effort to keep the MR relevant and valuable.

The MR operates with an overarching framework consisting of cultural change, strong governance and an effective change management practice. A governance structure, overseen by a partnership of Director General Frazer, Deputy Chief Bell and Deputy Chief Jaswal, has been established that engages and holds accountable all levels of the organization. Supporting this, efforts have been made to encourage a 'one team' collaborative approach among members of OPS and PwC. An effective change practice has been working with the MR at all levels to ensure success. A benefits realization program continues to be refined and updated reflecting changes to the project prioritization and timetables. For example, the MIS benefits were expected to be realized within Bundle 1; however, the decision to align the project with the City of Ottawa has delayed realization of these expected benefits.

Consistent with the results of the 'pivot' session, the focus of the MR must deliver new capabilities to Frontline Operations. To ensure solutions are right, Frontline officers have been engaged in:

- the Frontline Mobility projects evaluating and deploying smart phones in combination with upgrading the technology and ergonomics of computers used in police vehicles
- serving as the key driving force behind the Innovation Council, which identifies and pilots new capabilities
- participating in the design, execution and assessment of innovation projects piloting facial recognition, social sentiment, push-to-talk and other technologies
- serving as members of innovation project teams piloting a mental health solution
- participating in requirements gathering and design workshops of the MIS and EAM projects
- defining advanced analytics use cases as part of the information management stream

Through Bundle 1, the initial FLM project pilot stage was completed which rolled out over 200 smart phones to Frontline members, up-fitted 6 police vehicles with new mobile computers (CF33s) through a pilot and test process. Additional capabilities were identified and are now being prepared for mobile deployment as part of the program, including adding police reporting capabilities in the vehicle (webRMS), replicating in-car mobile workstation capabilities on the smartphone (VMobile), and forwarding voicemail left in the station as an email (NotifyMe). All of these new functions work together to enable Frontline officers to spend more time on the road.

Bundle 2 of the MR Program called for \$9.9 million of funding and was designed to further the key foundational work with focus on:

- cloud readiness to address organization, infrastructure, security and networking requirements,
- development of the enterprise data hub and creation of new dashboards and reports to support police operations and management,
- key security projects addressing identity, access, data loss and security incidents and events.

This work is the foundation enabling future capabilities and projects to be implemented in the most efficient manner within OPS.

In addition, the innovation stream continues to pilot solutions such as Radio Frequency Identification (RFID) technology. RFID is the wireless non-contact use of radio-frequency electronic tags capable of automatically identifying, tracking and transmitting information of objects such as radios, traffic enforcement radars, long barrel weapons and defibrillators. This pilot project was launched in February 2018 at the Huntmar Station.

Bundle 3 Request

In order to continue the transformative projects outlined above and further detailed later in this report, the MR is requesting \$12.4 million for Bundle 3 which sees the implementation of the 5 streams of work which are critical to OPS operations, along with the collaboration with the City on the MIS and EAM streams of work. Bundle 3 activities are expected to occur over an 18-month window. Approval is being sought now to ensure that the lead time needed for the assembly of internal and external project personnel can occur in an orderly way.

A request for Bundle 4 funding will be submitted at a later date. It is currently estimated at \$4.35 million and will be the final submission for funding approval under this program envelope.

Modernization Roadmap Streams and Bundles

Table 1 below outlines the Actuals for Bundle 1, Bundle 2A, the funding being sought for Bundle 3 and the estimate for Bundle 4. Consistent with the focus on Frontline Operations, allocations for the Frontline Mobility and Information Management streams have increased, with offsetting reductions occurring in other streams.

(Note - In the June 2018 Report to the Board, the funding requirements for MIS and EAM were identified and were to be requested in a subsequent Bundle 2B request. This request was not submitted, and the MIS and EAM funding request has since been moved to Bundle 3 to better align with the City's implementation schedule.)

Table 1

MR Funding Requirements by Bundle

(\$ millions)

Stream	Bundle 1	Bundle 2	Bundle 3	Bundle 4	Total
Frontline (FLM)	1.61	1.13	1.55	1.40	5.69
Information Management (IM)	1.66	1.92	1.35	1.00	5.93
Innovation	0.39	0.26	0.00	0.00	0.65
Foundation and Security	5.49	4.16	3.00	0.63	13.28
Collaboration	0.84	0.44	1.35	0.30	2.93
Member Information System (MIS)	1.91	0.00	1.59	0.00	3.50
Enterprise Asset Management (EAM)	1.08	0.00	1.50	0.00	2.58
Program Expenses	1.72	1.76	1.54	0.60	5.64
Contingency	0.00	0.19	0.31	0.35	0.83
Taxes	0.00	0.00	0.21	0.07	0.28
Total	14.70	9.86	12.40	4.35	41.30

Bundle 1 and 2 Results and Bundle 3 Work Plan

The work achieved in Bundle 1 and 2, the planned work for Bundle 3 and Bundle 4 with the cost for each stream of work is summarized below.

Project	Bundle Work Planned and Completed	Actual / Expected Costs (millions)
Frontline Mobility (FLM)		
Bundle 1 Work completed & Planned	<p>The mobile workstation replacement report recommended:</p> <ul style="list-style-type: none"> the replacement of existing 'in car' mobile workstations with current generation devices, conducting a 'in car' pilot addressing ergonomic issues of the control layout and the use of the new mobile workstations the issuance of smart phones to all frontline officers the investigation of additional capabilities to improve sworn member efficiency and improve member safety <p>The Bundle 1 recommendations are being implemented. In detail:</p> <ul style="list-style-type: none"> a pilot of 6 mobile workstations was completed. The new mobile workstations have improved mounting and ergonomics 400+ smartphones have been deployed to Frontline officers enhancing communications and enabling future enhancements. An additional 250 will be deployed by the second quarter of 2019 Additional capabilities have been identified and are now being prepared for mobile deployment as part of MR, including adding RMS capabilities in the vehicle (webRMS), replicating MWS capabilities on smart phone (VMobile), and forwarding voicemail left in the station as an email (NotifyMe). The completion of the rollout of the new mobile workstations and smartphones for Frontline will continue as this work is transitioned to OPS and supported by PwC until full implementation is managed by OPS. 	1.61
Bundle 2 Complete	The work originally scheduled to be performed in Bundle 2A was accelerated and performed in Bundle 1.	1.13
Bundle 3 Proposed	The upcoming work in FLM includes: 1) the continued delivery of efficiency improvements and officer safety improvements, 2) investigation into additional capabilities to be provided to Frontline Operations and 3) continued fit up and retro-fit of the new and existing fleet with new in-car computers and an improved ergonomic set up.	1.55
Bundle 4	Work continues with additional capabilities being identified and deployed to Frontline Operations. Additionally, \$0.8 million is allocated to continue the upfit of the fleet with the new mobile workstation configuration.	1.4
	Total FLM Cost	5.69
Information Management		

Bundle 1 Work completed & Planned	<p>A modern enterprise 'data hub' accompanied by analytics & visualization tools has been developed providing the ability to manage traditional structured data and unstructured data such as video, sound and pictures, and new tools to create reports, dashboards and visualization.</p> <p>The project addressed several key technical challenges such as obtaining near real time information from OPS data sources such as the records management system and computer aided dispatch system and addressing OPS' technical readiness to migrate to cloud computing.</p>	1.66
Bundle 2 In progress	<p>Building on the work in Bundle 1, these projects advanced OPS' transformation into an information-driven organization.</p> <p>The following new capabilities have been made available:</p> <ul style="list-style-type: none"> • an expandable cloud based enterprise data hub containing near real time data from OPS' records management system, computer aided dispatch, local data mart and time/attendance systems • six digital dashboards and four reports covering key operational areas have been created replacing a large number of traditional reports • a new reporting and visualization tool to support OPS' crime reporting and crime analysis • a revised mapping function has been implemented replacing a manual monthly exercise with the ability to convert mapping coordinates to useful geographic locations in real time • the OPS' organizational readiness to sustain and support the new capabilities is being addressed <p>In addition, projects to enhance efficiencies and effectiveness through the deployment of analytics, and leading solutions for evidence-based decision-making continue to be identified.</p>	1.92
Bundle 3 Proposed	The planning and designing of a digital evidence management solution and the implementation of a facial recognition system will be undertaken.	1.35
Bundle 4	Complete the implementation of the digital evidence management system. In addition, based on the input of Frontline Operations, additional advanced use cases employing the data hub will be delivered.	1.00
	Total Information Management Cost	5.93
Innovation		
Bundle 1 Work completed & Planned	<p>A widely supported Innovation Council was operationalized - over 90 Frontline Operations members volunteered. Initially, three projects were identified and completed. These projects are related to: 1) the selection of applications for the new smartphones, 2) a system to help Frontline officers with the rapid assessment of persons with mental health issues, and 3) a tool to help analyse public social sentiment being expressed on social media.</p>	0.39
Bundle 2	The Innovation Council continued to identify and select innovative initiatives for trialing. Frontline Operations driven innovation, tested	0.26

In progress	<p>through pilots, will be recommended for deployment into the live environments, making real impact on the ability of officers to complete their roles.</p> <p>Two pilots garnered excellent results and feedback and will now be evaluated for potential implementation projects, these include Facial Recognition and Push-to-Talk type capabilities on the smartphone.</p> <p>Three additional pilot projects were approved by the Innovation Council. These include RFID for asset tracking, a tool to assist with helping Front Line Officers access current procedures (e.g. new cannabis legislation access), and robotic process automation to explore how to reduce manual repetitive processes such as forms completion.</p>	
Bundle 3	No funds specific to Innovation to be provided.	0.00
Proposed		
	Total Innovation	0.65
Foundation and Security		
Bundle 1 Work completed & Planned	<p>Bundle 1 - PwC supplied program execution and management, change management, vendor management, enterprise and security architecture capabilities to the MR. A core set of people and skills ensured an efficient and uninterrupted flow for the MR aiding OPS complete over 20 projects.</p> <p>The Security and Privacy Roadmap (from Bundle 0) documented OPS' current cyber security posture and a comprehensive list of areas for improvement. To follow up, the work in Bundle 1 addressed the needs for:</p> <ul style="list-style-type: none"> • a dedicated enterprise security architect service to oversee and ensure that cyber security remains a key consideration in all MR projects • proper security policies and standards – 25 policies, 7 standards now exist • an accurate and secure list of OPS users, adequate safeguards against data loss, identity and access controls have been planned and a threat and vulnerability management program has been implemented • in response to the issues identified in the initial threat and vulnerability assessment, PwC is providing a resource to help address these issues. 	5.49
Bundle 2 In progress	<p>Bundle 2 - PwC continues to provide program execution and management, change management, vendor management, enterprise and security architecture support for the MR.</p> <p>In following up with the security work begun in Bundle 1, the following design, build and implementation projects were</p>	4.16

	<p>undertaken:</p> <ul style="list-style-type: none"> • a dedicated enterprise security architecture remains in place • a Data Loss Prevention [DLP] tool was selected and implementation of this solution is underway • tools were also selected for identity and access management [IAM] and for privileged access management [PAM]. Implementation of these solutions is currently underway • two additional threat and vulnerability assessments are scheduled to measure the effectiveness of the remediation efforts and identify new threats • the planned implementation of a security incident and event management service providing full time comprehensive monitoring of possible issues or attacks. 	
Bundle 3 Proposed	<p>The work going forward will continue to provide program execution and management, change management, enterprise and security architecture support. However, OPS will need to begin planning for transition to operations regarding vendor management, enterprise and security architecture roles and the technical lead role.</p> <p>Security projects will continue which will strengthen OPS' cyber security posture. These include the extension of the IAM, PAM and DLP solutions.</p>	3.00
Bundle 4	<p>The OPS will begin the transition to its own operations of program management services, enterprise architecture, security architecture, vendor management and change management services (other than supplied as part of a project).</p> <p>The security incident and event management will continue to operate. Its cost is covered in the BIS operating budget.</p>	0.63
	Total Foundation and Security Cost	13.28
Collaboration		
Bundle 1 Work completed & Planned	Bundle 1 – The first phase of the Collaboration stream completed the planning of the implementation of a modern digital work environment based on the Microsoft Office 365 platform. Members will be able to share, store, search and work together on documents, spreadsheets and presentations. In addition, new communication tools - instant messaging and video conferencing - are soon to be deployed in a pilot implementation. The lessons learned in the pilot will be used to design and facilitate the organization-wide deployment.	0.84
Bundle 2 Planned	Bundle 2 – Work on the Office 365 pilot will continue.	0.44
Bundle 3	Bundle 3 – Collaboration work that will be the focus of Bundle 3 will be support of OPS during the full implementation of	1.35

Proposed	Office 365.	
Bundle 4	Bundle 4 - Work on Demand for Service and Policy Automation.	0.30
Planned		
	Total Collaboration Cost	2.93
Member Information Services (MIS)		
Bundle 1	The following activities were completed: <ul style="list-style-type: none"> requirements gathering workshops selection of a human resources information system (SAP SuccessFactors and Sodales for some elements of Health and Safety) several solution demonstrations were presented to explore a technology fit an implementation plan was developed an interim service delivery model and organization structure was developed for People Management services the decision was made to align the MIS/EAM projects with the City of Ottawa's SAP Roadmap where it made sense to do so. 	1.91
Work completed & Planned		
Bundle 2	Funding originally proposed in Bundle 2B was deferred to Bundle 3 to align the MIS project with the City of Ottawa's SAP Roadmap due to be released March 2019.	0.00
Not applicable		
Bundle 3	The planned work related to MIS will include the full implementation of the service delivery model, organization structure and tools/technology. The project timeline is dependent upon the City of Ottawa's SAP Roadmap implementation timelines.	1.59
Proposed		
	Total MIS Cost	3.50
Enterprise Asset Management (EAM)		
Bundle 1	The following activities were completed: <ul style="list-style-type: none"> documentation of the current and required future state of EAM identification of improvement opportunities an EAM Operating Model and Roadmap was completed focused on processes, expected outcomes, user experience, technology, and types of assets an initial change impact assessment was completed along with a technology evaluation and recommendation, implementation and resource plan operational technology options were explored with recommendations provided to OPS the decision was made to align the EAM project with the City of Ottawa's SAP Roadmap. 	1.08
Work completed & Planned		
Bundle 2	Funding originally proposed in Bundle 2B was deferred to Bundle 3 to align the EAM project with the City of Ottawa's SAP Roadmap due to be released March 2019.	0.00
Not applicable		
Bundle 3	The EAM planned work will include the implementation of operational technology that is approved by OPS (for example RFID), and the alignment of asset tracking within the City of	1.50
Proposed		

	Ottawa's SAP platform.	
	Total EAM Cost	2.58
Program and OPS Project Costs		
Bundle 1 Work completed & Planned	Travel and accommodation expenses for out-of-town PwC professionals	1.72
Bundle 2A In progress	Travel and accommodation expenses for out-of-town PwC professionals. Backfilling costs for OPS personnel assigned to the project. Rental costs for office space for the project team,	1.76
Bundle 3 Proposed	Travel and accommodation expenses for out-of-town PwC professionals. Backfilling costs for OPS personnel assigned to the project. Rental costs for office space for the project team,	1.54
Bundle 4	Travel and accommodation expenses for out-of-town PwC professionals. Backfilling costs for OPS personnel assigned to the project. Rental costs for office space for the project team,	0.60
	Total Other Project Related Expenses	5.64

Quality Assurance and Risk Management of the MR

Gartner Consulting continues to provide program support to OPS ensuring adherence to the MR, acquisition of products and services for the best value, achievement of expected benefits, program monitoring and quality assurance, organizational change management and program risk management.

Each quarter Gartner assesses the MR against a risk framework of 28 quality standards. It considers program management controls and performance against industry standards and best practices with the objective of providing the Board and OPS with a holistic, comprehensive risk profile for the program.

As of December 31, 2018, the Modernization Roadmap was rated at “medium risk” which is unchanged from the previous two quarters.

As of December 31, 2018 Gartner identified 5 risks and provided advice on how to mitigate these risks. They are as follows:

1. Plan and execute implementation and the transition to a sustainable steady state,
2. Plan for succession in 2019,
3. Improve benefits realization and budget management,

4. Maximize efficiency of Program delivery,
5. Obtain alignment with the City of Ottawa to establish clear direction.

The MR team developed risk mitigation plans to address the risks identified by Gartner. They are set out below and are intended to ensure the MR Program stabilizes or lowers its risk position. It's important to understand that a Program will always have risks ranging from Green to Red. The Program Team monitors these at least monthly, and takes contingency action where warranted to mitigate risks from becoming issues. Sometimes a risk may be deemed acceptable, and the Program Team will mitigate according to the circumstance presented.

Program Risks, Key Recommendations and Risk Mitigation

Risk and Key Recommendations	Program Activities in Progress to Mitigate Risk
Risk 1 - Plan and Execute Implementation and the Transition to a Sustainable Steady-State	
Establish budget and plan work required to complete work stream projects so that technology is fully adopted and are transitioned to a sustainable steady-state within OPS. Each individual whom will have operational authority of the work stream outputs should have the “pen” and be actively involved in developing implementation plans.	Project planning and scheduling will now incorporate ‘Build – Transition – Run’ activities with resource owners (PwC or OPS) assigned to these tasks in the MS project schedule. The identification of these tasks will allow for early detection of transition to steady state items that OPS will need to adopt to move new processes and technology into its operations. The identification of this ownership will allow for cost, resource, benefit and operational planning. This will also assist OPS as it begins to intake new processes, software etc. into its steady state operations.
Identify which parties are responsible for the build, run, and transition components for project work streams, and align funding and resource allocation accordingly.	As noted above.
Plan changes and activities required to achieve benefits and ensure alignment with the implementation of each work stream. Plan out exactly what needs to be completed to achieve the target benefits and ensure that these activities are coordinated and synchronized with the implementation. This should be completed in parallel rather than post-implementation.	Benefit realization planning has been identified as a key program activity moving forward and there is a current review of long-term benefits to align with new MR budget. Benefit potential is being further defined and updated per stream for review with business owners and the Program level executives.
Evaluate and leverage “implementer” options that reduce risk, optimize use of MR funds, and maximize probability of achieving tangible benefits within desired timeframes. Fully leverage resources with implementation experience – this could be achieved by several means including (a) subcontracted work under PwC (as was originally planned), (b) contracted work from OPS to implementation vendors, and (c) in-sourcing. In pursuing any of these options, risk factors should	Potential solutions have been discussed with the Project Management Office teams (OPS and PwC) with options presented to the MR Executive Steering Committee in January 2019 to manage projects from a ‘Build – Transition – Run’ perspective that will allow for proper intake and management of changes and benefits into OPS. Further activities to mitigate risk have been to

be evaluated including (a) cost/budget (b) vendor implementation experience, (c) continuity across MR work streams, and (d) OPS vendor management capability and capacity.	develop an integrated timeline document that displays the program level view by year, with projected timelines for all initiatives anticipated for delivery. This timeline aligns to the MR budget and both will be maintained as progress continues on the MR projects. Monthly financial review meetings with the MR leadership team are also now in place.
Risk 2 – Plan for Succession in 2019	
Brief the new Board on the Modernization Roadmap, and seek approval for remaining bundle funding as required.	Covered through the submission of this document and request for Bundle 3 funding.
Develop a formal succession plan for key impacted MR roles that documents accountabilities and decision rights during the transition to ensure continuity and momentum of the program	Gartner has conducted review sessions with DG Frazer on her transition from the Program.
Map out activities critical to MR that are currently performed by resources that are leaving, and identify who can assume those responsibilities at least 1-2 months prior to departure. It is recommended that departing roles oversee the transition of responsibilities and coach those individuals whom are adopting them.	Responsibilities for DG Frazer's Program Level role are being divided between DC Bell, DC Jaswal and A/DG Letourneau.
Pre-plan and establish any changes to the approval rights and responsibilities for MR SoWs, deliverables, change requests, and finances.	MR SoWs, CRs and finances are now managed at the MR Program level and all work flows through the PMO so that the same common look and feel, approval process, and finance submissions and tracked are filtered through a small team allowing for consistency and better accuracy. Any changes to templates, process, roles and/or responsibilities are communicated through the team to the PMs and Leads on the MR projects.
Assign a resource for 2019 to coordinate approvals and drive the approval process to completion by working with each approver, providing any context required, particularly for individuals in new roles.	All SoWs must be reviewed and approved by OPS PMs and Business Owners prior to being submitted to the PMO for approval submission. An approval email from the Business Owner is provided, along with the agreed upon SoW and WO (amongst OPS and PwC teams) to the PMO for final review and approval, prior to submission to OPS. A new walk and sign process has been instituted whereby the OPS team manages the flow of the approval and signatory process of the SoWs within OPS and the City to expedite the process.
Maintain a bi-weekly touchpoint meeting (currently MRESC) that includes approvals and decisions.	MRESC meetings continue bi-weekly with pre-planning meetings occurring with a smaller subset of steering committee members on the off cycle weeks.
Risk 3 - Improve Benefits Realization and Budget Management	
Finalize a benefits realization plan that outlines benefits to be achieved in 2019 and beyond. The benefits realization plan should follow the sequence of prioritized projects (i.e. FLM in Q4	Benefit realization planning has been identified as a key program activity moving forward and there is a current review of long term benefits to align with new MR budget. Updated benefit potential is being

2018 / Q1 2019, etc.)	further defined and updated per stream for review with business owners and the Program level executives.
Report and discuss MR budget and benefits on a monthly basis at MRESC.	The MR budget update is a standing item on the MRESC agenda.
Ensure total cost of MR program (direct and indirect, capital and operating) has been accounted for across Modernization Roadmap and OPS budgets.	Completed in December 2018.
Develop SoWs that reflect end-to-end work streams (with benefits as outcomes vs. midpoints), and include all cost and benefit quantitative information required for executive to make sound cost vs. benefit decisions.	Noted in sections above.
Review SoW scope to ensure that requested work does not exceed OPS need, and utilize mechanisms built-into the SoW approval process to seek alternative vendor options if pricing is not competitive.	These reviews are conducted on a case by case basis with their respective Business Owners.
Risk 4 - Maximize Efficiency of Program Delivery	
Optimize resource utilization for MR Program Management.	As per Gartner – done.
OPS organization to better leverage the enterprise PMO to support MR, and prioritize across transformation programs for OPS.	The enterprise PMO is working on a model for the OPS and the MR program provides input to the model design.
Build-up Project Manager capacity to deliver on MR.	A Business Analyst position has been converted to a Project Management position to add more internal capacity on the OPS side.
Develop and demonstrate an on-going capability to identify and manage top risks that affect delivery of tangible outcomes within planned budgets.	The Program Office has created a resource capacity spreadsheet of existing projects. While it is recognized this is a snapshot in time, the Program Office will continue to evolve the resource capacity model as new initiatives are proposed by PwC.
Identify opportunities to align decision authority with roles of accountability (according to RACI), and identify and reduce bottleneck risks by delegating authority where required.	As per Gartner – done
Risk 5 - Obtain Alignment with the City of Ottawa to Establish Clear Direction	
Establish clear accountabilities and follow a top-down approach for the City of Ottawa partnership.	As per Gartner – done
Identify and evaluate partnership opportunities and how both parties and the citizens of Ottawa will benefit.	OPS leaders will work collaboratively with their City of Ottawa counterparts to jointly plan where teams can work together on common solutions for a range of corporate services such as IT, Fleet, HR, Finance, etc. OPS will use the City's SAP solutions for MIS and EAM streams. Payroll services will remain with the City of Ottawa.
Evaluate technical feasibility and establish roadmap.	The implementation dates for the City Roadmap are scheduled for release in March
Translate the opportunities into MR program plans.	The City implementation schedules will be synchronized with the OPS MR program once they are known.

Manage the ongoing relationship, execution, and communications with the City of Ottawa.	A standing Steering Committee has been established and it has been meeting Quarterly.
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Legal Implications

This process follows the Master Contract Agreement with PwC and adheres to the Board's Financial Accountability Procedures (FAP) Manual.

FINANCIAL IMPLICATIONS

Bundle 3 is estimated to cost \$12.4 million. Funding is on hand to cover these costs as shown below.

The plan to fund the Roadmap is in its fifth year. Beginning in the 2015 budget the Board started making pay-as-you-go contributions for the MR and re-directed existing IT capital project funding. As a result, the Board has accumulated \$37.5 million of funding over this 5 year span. Bundle 1 and 2 for the Modernization Roadmap required a combined envelope of \$24.6 million. The required funding of \$12.4 million for Bundle 3 is within the existing budget envelope.

Table 2

Capital Funding by Bundle

(\$ millions)

Capital Project Number	907924 (2015)	908263 (2016)	908689 (2017)	909144 (2018)	909553 (2019)	Total
Project Budget	\$4.425	\$8.715	\$6.830	\$9.485	\$8.000	\$37.455
Bundle 1 Request	\$4.425	\$8.715	\$1.560	\$0	\$0	\$14.700
Available Budget	\$0	\$0	\$5.270	\$9.485	\$8.000	\$22.755
Bundle 2 Request	\$0	\$0	\$5.270	\$4.590	\$0	\$9.860
Available Budget	\$0	\$0	\$0	\$4.895	\$8.000	\$12.895
Bundle 3 Request	\$0	\$0	\$0	\$4.895	\$7.505	\$12.400
Remaining Budget	\$0	\$0	\$0	\$0	\$0.495	\$0.495

Approval is being sought for the Chief to proceed with the implementation activities for Bundle 3 under delegated authority from the Board. This approach was adopted for Bundles 1 and 2 and has proven to align with the way in which a complex program of this type unfolds. This approach ensures that solutions can be acquired in an agile and timely way. A competitive process for procurement of applications and solutions has been agreed to in the Master Contract approved by the Board in April 2016 and staff will be reporting

regularly to the Finance and Audit Committee (FAC) and the Board on the use of the delegated authority.

CONCLUSION

The Modernization Roadmap Program is well underway with positive changes to the organization and progress in all streams being realized. It is through these transformation efforts, touching upon people, process and technology, that OPS will begin to realize its desired tangible and intangible benefits.

Organizationally, efforts continue to instill and strengthen a culture supportive of improving the OPS through modernization. The focus is now on providing new capabilities to Frontline Operations and implementation – getting things done.

Governance has been strengthened with the appointment of the Deputy Chiefs and Director General as Executive Sponsors for each stream ensuring high level engagement. Supporting the Executive Sponsors are business owners selected primarily from Frontline Operations responsible for ensuring benefits and business value is derived from MR projects.

A robust transition strategy has been developed and is supported by the MR executive steering committee. The transition strategy addresses the end-to-end implementation needs of streams such as Frontline Mobility and Collaboration that have been designed with a larger OPS involvement.

The design and planning phases of the MIS, EAM, Frontline Mobility, Information Management and the MS Office 365 project within the Collaboration stream have been completed. Implementation of the Frontline Mobility, Information Management and Office 365 solutions are underway. The Innovation stream, having succeeded in establishing committed Frontline officer engagement, has piloted over seven technologies and is recommending the deployment of two technologies that have demonstrated significant benefits to Frontline Operations. The foundational projects supplying OPS with oversight and program management capabilities continue to provide support to the MR. Enterprise architecture services are fully engaged and have focused on modernizing the OPS' technical infrastructure to meet the demands of the MR and to capitalize on new technologies. Cyber security continues to be an important aspect of the MR by providing the cyber protection required to support the MR. Security architecture services are engaged in Business Information Solutions operations and input into all MR projects. Security projects implementing identity management, access and data protection solutions are being implemented in 2019 strengthening OPS' cyber security posture.

Approval of Bundle 3 and the associated delegated authority will enable OPS to move to and continue the implementation and expansion efforts for all streams of work. Staff will report to the Finance and Audit Committee on the use of the delegated authority and the results achieved by the MR.