



Microsoft Cloud Subscriptions 2022 Update

Date: May 18, 2022
To: TTC Board
From: Chief Financial Officer

Summary

The purpose of this report is to obtain the Board's authorization to amend the Enterprise Subscription Agreement (ESA) contract for the Supply of Microsoft Cloud Subscriptions to Microsoft Canada (Microsoft) to increase the total contract value by \$3,576,134 to \$9,488,552, inclusive of HST. This amendment will cover anticipated expenditures to the end of the contract term, January 31, 2024.

The additional contract authority is required to upgrade existing annual Microsoft 365 subscriptions in 2023 in order to continue the planned rollout of Microsoft 365. Total spending on other subscriptions covered by the ESA remains consistent with the previous contract authority.

As indicated in the July 2021 Board report for the ESA, the TTC obtained a number of Microsoft 365 subscriptions with the intent of initiating a proof-of-concept to assess the value proposition of the Microsoft 365 platform to the TTC by understanding the business benefits, as well as the budgetary, technical and security implications of an enterprise-wide rollout. The proof-of-concept, initiated in Q3 2021, identified functionality that should be accelerated from 2023 to strengthen the TTC's cybersecurity posture with multi-factor authentication (MFA); to improve collaboration through Teams with secure communication independent of the TTC internal network; and to avoid the capital investment in SharePoint perpetual licenses. In Q4 2021, subsequent to the cybersecurity incident, the TTC accelerated and implemented these functionalities.

Microsoft 365 also serves as a cornerstone for enabling employee mobility and workspace options envisioned by ModernTO. This has been shown through the proof-of-concept, and is consistent with City of Toronto directions for employee productivity. The rich set of Microsoft 365 products includes the core Office suite (Word, PowerPoint, Excel, Outlook) along with SharePoint and Teams that are all in common use today. The report from the Chief Capital Officer entitled, *ModernTO Workplace Modernization Program Update*, also before the Board at the May 19 meeting provides additional background and information on the ModernTO initiative.

The TTC is currently developing plans for 2023 and beyond to implement more of the products and functionality included in Microsoft 365 subscriptions, such as deploying the most recent version of the Microsoft Office Suite, enhanced collaboration tools,

improved secure information sharing and deployment of needed software to staff computers for mobile connections.

Moving to a subscription model for software from the traditional perpetual licenses shifts costs from capital to operating expenditures, which is the overall direction for the software industry and Microsoft is no exception. The shift has allowed the TTC to identify capital cost savings and future capital cost avoidance totalling \$11.5 million, and additional opportunities are expected to be identified with the future rollout of Microsoft 365 functionality and products.

This contract leverages the Province's Master Business Agreement, which allows broader public-sector entities to leverage the same terms, conditions and preferred discount. The pricing in this contract offers the highest level of discount from Microsoft (Government Level D Pricing).

The ESA contract provides software subscriptions for various software products that support the TTC's customer relationship management (CRM), data analytics, and project management business activities, as well as hosting capabilities for the TTC's public web content management. The software subscriptions will provide continued use of the following specific products: Dynamics 365 CRM, Azure Cloud Services, Project Online, OneDrive for Business, Power BI and Microsoft 365 (which includes Office 365).

Prior to the expiry of this contract, the TTC will engage with Microsoft to establish a new contract beginning February 2024.

Recommendations

It is recommended that the TTC Board:

1. Authorize a contract amendment with Microsoft for the Supply of Microsoft Cloud subscriptions to increase the upset limit of the Enterprise Subscription Agreement contract by \$3,576,134, to a revised upset limit amount of \$9,488,552, inclusive of HST, to the end of the contract term on January 31, 2024.

Financial Summary

The financial implications arising from the recommended contract value increase presented below summarize the impact to the contract authority change being sought as well as operating and capital funding implications.

Contract Authority

The ESA contract amendment recommended in this report is required to provide the TTC with the authority to upgrade existing annual subscriptions in 2023 for the continued implementation of Microsoft 365. Requirements for the other subscriptions remain in line with the existing contract authority (see Appendix 1 for details).

The contract authority approved at the July 2021 Board meeting provided the TTC with the ability to secure subscription licenses for various software products, including Microsoft 365. A limited number of Microsoft 365 subscriptions were initially acquired to enable the Information Technology Services (ITS) staff to undertake a proof-of-concept assessment of the Microsoft 365 platform.

The proof-of-concept confirmed that Microsoft 365 provides business value in terms of security, mobility, productivity and collaboration. This will support both the TTC's Cybersecurity program and the ModernTO program objectives and plan.

The cybersecurity incident necessitated a decision to accelerate implementation to gain security benefits earlier. Accordingly, the TTC acquired Microsoft 365 subscriptions in Q4 2021 for all staff. These subscriptions were sufficient to allow the TTC to implement multi-factor authentication, rollout Microsoft Teams, and also to upgrade SharePoint. This accelerated rollout, coupled with a plan to upgrade the subscription level in 2023 to permit deployment of the latest version of the Microsoft Office suite, have led to this request for additional contract authority.

The current contract authority allows for a total of \$860,079 for Microsoft 365 subscriptions. The accelerated rollout in 2021 and planned upgrade in 2023 require an additional \$3,232,178 contract authority for a total of \$4,092,257, before recoverable HST, for the remaining term of the contract. Combined with all other subscriptions under the ESA and inclusive of recoverable HST, an increase in the contract authority of \$3,576,134, for an overall total contract authority of \$9,488,552, is required.

Table 1 below details the expenditures under the ESA as approved in July 2021 versus the actual/anticipated requirements.

Table 1. Contract Authority over the Contract Term

Subscription	2021 (Actual)	2022	2023	Total
Microsoft 365				
Currently Approved	270,159	286,369	303,551	860,079
Actual / Anticipated	302,037	1,705,018	2,085,203	4,092,257
Variance	\$ 31,877	\$ 1,418,649	\$ 1,781,652	\$ 3,232,178
All other Subscriptions				
Currently Approved	1,241,268	1,484,224	1,738,745	4,464,237
Actual / Anticipated	1,241,268	1,395,956	1,815,255	4,452,477
Variance	\$ 0	\$ (88,268)	\$ 76,510	\$ (11,760)
Subscriptions, including Non-recoverable HST				
Currently Approved	1,511,427	1,770,593	2,042,296	5,324,316
Actual / Anticipated	1,543,304	3,100,973	3,900,457	8,544,735
Variance	\$ 31,877	\$ 1,330,380	\$ 1,858,161	\$ 3,220,419
Recoverable HST				
Currently Approved	166,946	195,573	225,584	588,102
Actual / Anticipated	170,467	342,521	430,829	943,817
Variance	\$ 3,521	\$ 146,948	\$ 205,245	\$ 355,715

Subscription	2021 (Actual)	2022	2023	Total
Contract Authority				
Currently Approved	1,678,373	1,966,165	2,267,880	5,912,418
Actual / Anticipated	1,713,771	3,443,494	4,331,286	9,488,552
Variance	\$ 35,398	\$1,477,329	\$2,063,406	\$3,576,134

Operating Budget

The 2022 TTC Operating Budget, which was approved by the TTC Board on December 20, 2021 and by City Council on February 17, 2022, includes \$2,892,527 to fund Microsoft Cloud subscriptions. As a result of the proof-of-concept's findings to accelerate the full implementation of Microsoft 365, the actual requirement for 2022 is now \$3,100,973, resulting in a shortfall of \$208,446. This shortfall can be funded with the reallocation of underspending in other ITS operating expenditures, thereby fully funding the 2022 requirement.

**Table 2. 2022 Operating Budget
(Subscriptions, including Non-recoverable HST)**

Anticipated Requirement		\$3,100,973
Approved 2022 TTC Budget		\$2,892,527
	Shortfall	(\$208,446)
Reallocation		\$208,446
Adjusted 2022 Operating Budget		\$3,100,973

A funding requirement of \$3,900,457 for subscriptions, including non-recoverable HST, is anticipated for 2023, as shown in Table 1 above. The \$1,007,930 increase in 2023 will provide funding to sustain the accelerated purchase of subscriptions for Microsoft 365 and for planned growth associated with the rollout of expanded functionality. This was forecasted in the 2023 Budget Outlook included in the 2022 Operating Budget report to the Board in December 2021, and will be incorporated into the 2023 Operating Budget submission. Subsequent Operating Budget requests will be made based on each year's anticipated spending requirements.

Capital Budget

Prior to the planned capital upgrade of the TTC's Document Management System that utilized Microsoft SharePoint 2010, ITS staff determined that it would be more cost efficient to purchase Microsoft 365 subscriptions instead of the traditional licenses. The Microsoft 365 subscriptions include the use of SharePoint and other Microsoft 365 products, such as Microsoft Teams, as migration to this business communication platform had been already planned given Microsoft's sunsetting of Skype for Business. By leveraging the Microsoft 365 subscriptions, the TTC was able to save the capital costs required to separately upgrade SharePoint 2010, resulting in capital savings of \$1,195,200 approved for the upgrade. Additionally, investment in perpetual licenses would have been lost once the inevitable transition to Microsoft 365 was completed.

The capital savings were reinvested in 2021 to initiate a new Digital Workspace Platform project to enable worker mobility by providing network access that allows staff to communicate and collaborate from any work location, in support of the ModernTO program. Microsoft 365 is key to providing these capabilities. Additional funds for the project will be requested, if needed, once requirements are further defined.

The software industry in general is moving towards transitioning their customers to an annual subscription licensing model from the traditional software upgrade model. This transition will result in the elimination of capital software license costs, but will result in higher operating subscription costs.

Transition to the subscription model will result in future capital cost avoidance since the TTC will no longer be required to fund regular upgrade cycles. The currently identified total cost avoidance over the next 10 years is \$10,300,256, based on two planned upgrade cycles for SharePoint: Office Exchange and Office Suite of Word, Excel, PowerPoint and Outlook during the 2022 to 2031 capital planning timeframe, all of which are currently unfunded in the TTC’s 2022-2031 Capital Budget and Plan. These unfunded capital requirements will be deleted from the TTC’s Capital Investment Plan (CIP) with the CIP’s update in the 2023 Budget process. It is expected that additional cost avoidance will be identified as ITS staff examine the broader set of products that are included with Microsoft 365 subscriptions.

Table 3 below provides a summary of the capital cost savings/avoidance identified to date:

Table 3. Capital Cost Savings/Avoidance 2021-2031

Product	Savings¹	Avoidance	Total
SharePoint	\$1,195,200	\$2,579,733	\$3,774,933
Exchange		\$1,751,907	\$1,751,907
Office Suite		\$5,968,616	\$5,968,616
Total	\$1,195,200	\$10,300,256	\$11,495,456

¹ Savings realized in 2021

Equity/Accessibility Matters

A cornerstone of the TTC’s 2018-2022 Corporate Plan is accessibility, and as a proud leader in providing accessible public transit in the city of Toronto, the TTC is committed to ensuring reliable, safe and inclusive transit services for all customers. This service objective is supported through the continued work of the TTC to implement modern and accessible information technology (IT) infrastructure.

The subscriptions acquired through the ESA contract further strengthen and modernize the TTC's IT infrastructure. Microsoft 365 applications work seamlessly with screen readers on most devices, and include features for accessibility checking, accessible templates and automatically generated alt-text for images. Further, they are designed with the requirements of international accessibility standards in mind, including WCAG 2.0 AA (Web Content Accessibility Guidelines for making web content more accessible) and EN 301 549 (European standard for digital accessibility).

Decision History

The TTC entered into an Enterprise Subscription Agreement (ESA) with Microsoft Canada for the Supply of Microsoft Cloud Subscriptions under the Province's Microsoft Master Business Agreement for the term of February 1, 2021 to January 31, 2024. The initial award included only a one-year financial commitment amounting to \$1,678,373 (inclusive of HST) and included growth in anticipated spending in each year of the contract.

At its meeting on July 7, 2021, the TTC Board approved an amendment to the contract of \$4,234,045, revising the total contract amount to \$5,912,418, inclusive of HST. This amendment represented approval of amounts for the second and third years of the contract term, and included subscriptions for a proof-of-concept assessment of the Microsoft 365 (M365) platform. The report can be reference by the link below:

[Supply of Microsoft Cloud Subscriptions July 7, 2021](#)

Issue Background

The subscriptions acquired through the ESA contract: (a) strengthen and modernize the TTC's IT infrastructure; and (b) enable easier and more equitable access to business systems and information for use by TTC employees to perform their work and to meet the everchanging business needs and customer expectations.

Initially, the award for the ESA contract provided for a one-year financial commitment of \$1,678,373 to ensure that the TTC could renew existing subscriptions prior to its annual expiry at the end of January 2021. The contract value also included anticipated growth in each year of the contract term.

In July 2021, the Board approved an amendment to the contract increasing the financial commitment to \$5,912,418 in order to permit subscription purchases in the second and third years of the three-year contract. This increase included planned year over year growth. The subscription purchases included a number of Microsoft 365 subscriptions to conduct a proof-of-concept with the intent of better understanding business benefits, technical and security implications, along with the budget impact of an enterprise rollout.

The annual subscription licenses covered by this agreement include the following software products and capabilities:

- **Dynamics 365 CRM:** The TTC uses this product to manage customer complaints, compliments or other concerns.
- **Azure Cloud Services:** The TTC takes advantage of the Azure Cloud Platform to enable its enterprise data warehouse and analytics capabilities and to host the public website (TTC.ca).
- **Project Online:** The TTC uses the Project Online solution for project portfolio management to allow staff to report on portfolios, plan schedules, track projects, and view/update information on their assigned tasks.
- **Power BI:** The TTC uses this data analytics tool in conjunction with other solutions available through this control to extend reporting capabilities.
- **OneDrive for Business:** The TTC offered OneDrive to a select number of individuals for the secure sharing of files with organizations outside of the TTC. However, with the acquisition of Microsoft 365 subscriptions, OneDrive is included; there are no additional costs incurred from the expanded use of this solution.
- **Microsoft 365:** These subscriptions allow the TTC to make use of the core suite of Office products (Word, Excel, Outlook/Exchange, PowerPoint, etc.) and will displace any future capital spending for perpetual licenses for the Office Suite. In addition, the subscriptions include the use of Microsoft Teams, SharePoint and many other services.

Comments

The TTC's Enterprise Subscription Agreement (ESA) is leveraging the Province's Master Business Agreement (#U8364444) for the acquisition of Microsoft software, licenses and services. The Province's agreement allows the TTC to leverage this agreement for its use through the Broader Public Sector adoption clause, which permits the broader public sector to issue their own agreement under the same terms, conditions and discounted rates. The Province's agreement offers the highest level of discount from Microsoft (Government Level D Pricing).

In Q3 2021, the TTC initiated a proof-of-concept of Office365 products available on the Microsoft 365 platform, utilizing subscriptions approved as part of the July 2021 contract amendment. Microsoft 365 subscriptions include the use of many products and capabilities, with the Office suite, SharePoint, Teams and Outlook/Exchange being the most well known.

The purpose of the proof-of-concept was to explore these and other Microsoft 365 products in order to modernize the TTC's IT infrastructure; enable staff productivity in line with ModernTO mobility goals and the City of Toronto's standard for productivity solutions; and to determine budgetary implications of the Microsoft 365 subscription model. As a first step, the TTC undertook a staged rollout of Microsoft Teams to a subsection of TTC staff in September 2021 to assess its use, with subsequent phases planned for the following months. Microsoft Teams was planned to replace Skype for Business, which is an end-of-life Microsoft product.

During the proof-of-concept, the TTC experienced a major cybersecurity event and as a result immediately explored Microsoft 365 for opportunities to strengthen the TTC's security posture. Microsoft 365 subscriptions include multi-factor authentication (MFA) functionality, which was implemented for all users in December 2021. In addition, the rollout of Microsoft Teams was accelerated in order provide a secure business communication platform, which was also completed in December 2021.

Also included in Microsoft 365 subscriptions is OneDrive, which when fully implemented, will enable staff to securely access and share documents efficiently from wherever staff are working.

In parallel to the proof-of-concept, the TTC was preparing to upgrade its end-of-life document management system based on Microsoft SharePoint 2010, which was an approved capital project in ITS's 10-year Capital Plan. Instead, ITS staff were able to leverage Microsoft 365 subscriptions that include user entitlements for SharePoint, enabling the capital upgrade work to be cancelled and capital savings of \$1,195,200 to be realized, which had been approved to fund the new SharePoint upgrade.

The savings were reinvested in 2021 into a new Digital Workspace Platform project, which will enable employee mobility, a requirement of the TTC's ModernTO program. The scope includes ensuring network access and ability to communicate and collaborate from any work location. Additional funds for this project will be requested, if needed, as requirements are further defined.

The net result of these events was that by increasing the operating expense to \$3,100,973 in 2022, via the purchase of Microsoft 365 subscriptions, the TTC was able to:

- Strengthen its security posture;
- Upgrade its document management system;
- Self-fund a portion of the ModernTO capital program requirements through the reinvestment of capital savings; and
- Provide a new business communication platform for TTC staff.

In early 2023, the TTC intends to upgrade its existing subscriptions in order to permit deployment of the most recent version of the Microsoft Office Suite (Word, Excel, PowerPoint and Outlook) to all staff who are currently using a six-year-old version.

The TTC is also developing plans for 2023 and beyond for the implementation of additional Microsoft 365 products and features included in the subscription cost, such as:

- Further cybersecurity enhancements (e.g. information protection and data loss prevention);
- Enhanced team collaboration (file and document sharing, chats and video conferencing);
- Online white-boarding where multiple users can update a document together;
- Easier deployment of needed applications to staff laptops/desktops;
- Host and stream videos;

- Manage work by creating, assigning and editing tasks for a team and providing a plan overview; and
- Develop and deploy forms and processes.

The TTC will continue to assess the full set of Microsoft 365 products and capabilities as part of the roadmap for the future contract (2024-2026).

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Signature

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Attachments

Attachment 1 - Detailed Anticipated Expenditures under the ESA Contract

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The ESA contract amendment is primarily due to the Microsoft 365 rollout. Additional requirements for Dynamics CRM and Power BI are offset by anticipated reductions in OneDrive and Project Online.

Azure: Spending continues to track within expectations.

Dynamics CRM: Allowance is being made for additional licenses that may be required to support increased growth in customer concerns relating to maintenance issues on Line 5 (ECLRT). Discussions are ongoing to determine whether these will in fact be required.

Project Online: Anticipated reduction is due to a slower uptake of the offering by business groups.

OneDrive: Separate subscriptions are no longer required because OneDrive is included in Microsoft 365 subscriptions already purchased for the SharePoint upgrade.

Power BI: A slightly higher usage than anticipated.

Subscription	2021 (Actual)	2022	2023	Total
Azure				
Currently Approved	712,320	923,540	1,144,420	2,780,279
Actual / Anticipated	712,320	923,540	1,144,420	2,780,279
Variance From Approved	\$ -	\$ -	\$ -	\$ -
Dynamics CRM				
Currently Approved	433,540	459,552	487,125	1,380,218
Actual / Anticipated	433,540	412,616	579,555	1,425,711
Variance From Approved	\$ -	\$ (46,936)	\$ 92,429	\$ 45,493
Project Online				
Currently Approved	85,413	90,537	95,970	271,920
Actual / Anticipated	85,413	57,699	83,342	226,453
Variance From Approved	\$ -	\$ (32,839)	\$ (12,627)	\$ (45,466)
OneDrive¹				
Currently Approved	9,005	9,546	10,118	28,669
Actual / Anticipated	9,005	-	-	9,005
Variance From Approved	\$ -	\$ (9,546)	\$ (10,118)	\$ (19,664)
Power BI				
Currently Approved	990	1,049	1,112	3,151
Actual / Anticipated	990	2,101	7,938	11,029
Variance From Approved	\$ -	\$ 1,052	\$ 6,826	\$ 7,878
Microsoft 365				
Currently Approved	270,159	286,369	303,551	860,079

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Variance From Approved	\$ 35,398	\$1,477,329	\$2,063,406	\$3,576,134
Notes:				
1. OneDrive is included in Microsoft 365 subscriptions purchased in late 2021.				