For Information

REPORT TITLE: **IT Application Portfolio Sustainment**

FROM: Sean Baird, Commissioner of Digital and Information Services

OBJECTIVE

To inform the Audit and Risk Committee of the IT applications portfolio sustainment work underway to address the technology and security risks associated with existing outdated systems.

REPORT HIGHLIGHTS
- There is increasing risk to the Region of business disruption in the event of technical failure of outmoded and unsupported applications in need of upgrade or replacement.
- The IT Application Portfolio Sustainability Program will enable the Region to substantially reduce these risks and stay current in a sustainable fashion going forward.
- The IT Application Portfolio Sustainability Program will contribute to addressing the technology security risks identified as part of the third party vulnerability assessment that was conducted in 2019; and described in a report to the September 17, 2020 Audit and Risk Committee meeting titled "Information Technology Security Assessment".

DISCUSSION

1. Background

The Region of Peel, with technical leadership from Digital and Information Services, supports key technology solutions in support of the evolving complex information and technology requirements for all departments to deliver resident-facing services. As the technology industry continues to evolve rapidly, there is increased urgency to ensure continued system security and reliability, as well as a user-friendly experience for staff and residents utilizing technology solutions.

Industry studies have shown that as technologies mature and evolve, organizations are required to establish and implement programs to pro-actively manage the risk of business disruption resulting from the use of outmoded and unsupported applications. The Region has embarked on an approach to retire outdated, legacy technologies in a timely fashion, when necessary; and remain current in a sustainable manner going forward.

As described in a report to the September 17, 2020 Audit and Risk Committee meeting titled "Information Technology Security Assessment", the results from the security assessment validated that protecting the Region's technology environment is never complete – there is always a need for continuous improvement. In the report, issues related to missing patches,

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lack of system build and hardening standards, legacy operating systems and applications, as well as outdated software components were highlighted as potential vulnerabilities.

To further support the actions that have been initiated to date to address the potential issues above, the implementation of a program for the sustainability of the IT Application Portfolio has been proposed.

2. Methodology and Work Completed to Date

a) Methodology

In 2015, the Region established an overall methodology, based on industry standards, for the management of technical obsolescence. The key components of this model include the establishment of a technical platform strategy, assessment of the application portfolio, the prioritized reduction of obsolete technologies, and a preventative model to remain current. The proposed application sustainability program aligns with the "Improve Service, Maintain Confidence" Term of Council priority. It does so by remediating technical obsolescence and risk, thereby reducing the risk of service disruptions. Applications are ranked and categorized based on a review of their functional and technical health. The necessary remediations (upgrades or replacements) are prioritized and then actioned per the standard Digital and Information Services Intake process.

b) Work Completed to Date

A third-party assessment of the application portfolio was completed in 2018 to identify and prioritize those requiring remediation or upgrade.

An initial total of 44 applications were identified from the total application inventory for priority remediation using the above methodology. Regional staff have continued to evaluate the remaining portfolio on an ongoing basis and this total was increased to 67 assessed applications. To date, 12 of these remediations (upgrades or replacements) have been completed, and an additional 13 remediations are currently in progress.

c) Implications

Despite progress in the completion of identified remediations and the work to date in defining the current methodology and approach, additional resources are required to address the remaining applications in need of upgrade or replacement. This applies to both:
- Technology applications (on-premises and cloud-based) being used on a daily basis by staff and residents in the delivery of key regional services
- Underlying technology platforms that enable these business-critical applications (for example, operating systems, databases, and related critical technology infrastructure)

The 67 applications that have been fully assessed so far for sustainability represent the majority of the Region's critical IT systems, but also comprise a relatively smaller portion of the approximately 1,700 production applications being used to support Regional services to residents. The additional applications and databases have not been fully assessed and prioritized, and any remediations of their technical risk have been performed on an as-needed basis.

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A comprehensive methodology to identify all out of date and unsupported applications will be implemented as part of the actions to remediate technology security risks.

Additional implications of these findings are described under Risk Considerations below.

3. Proposed Direction

Based on the information described above, the program for the sustainability of the IT Application Portfolio will be focused as follows:

a) **2021: Ongoing remediations of smaller-scale applications with existing staff**.

b) **2021-2023: $10M Capital Work to Address Current Needs**. Proposed Funding Allocation:

- Establish the Program - $0.5M
- Remediation of on-premises applications - $6M
- Remediation of cloud-based applications - $3M
- Remediation of standalone applications - $0.5M

c) **2023 (Steady State): Annual renewal aligned with the existing Corporate Asset Management program** overseen by the Region's Corporate Asset Management team within Finance.

RISK CONSIDERATIONS

In order to identify and mitigate future risks related to technical obsolescence, it is recommended to proceed with the proposed program for application portfolio sustainability.

The risks to the Region of continuing to operate with outmoded applications include:

- More frequent or severe disruption of business services due to potential systems failures.
- Opportunities for process efficiencies are not determined.
- Integrations are more complex, or may not be possible.
- Increased reliance on expensive external contractors.
- Skillsets of Regional staff required to support the older technology solutions will become steadily harder to retain and recruit.

FINANCIAL IMPLICATIONS

The 2021 Proposed Budget will include for Council's consideration a capital request for the implementation of the Sustainability program for IT applications.

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CONCLUSION

Substantial progress has been made, but additional remediation efforts are still required to achieve full reduction of the risk of technical obsolescence.

It is anticipated that the IT Application Portfolio Sustainability program will contribute significantly to the ongoing remediation of this risk.

For further information regarding this report, please contact Peter Parsan, Director IT Solutions at peter.parsan@peelregion.ca.
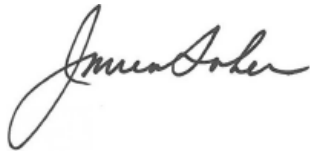
Authored By:
David Freudenstein, Manager, IT Solutions Delivery & Support

Reviewed and/or approved in workflow by:

Department Commissioner, Division Director and Financial Support Unit.

Final approval is by the Chief Administrative Officer.

J. Baker, Chief Administrative Officer