

City of Mississauga Corporate Report



Date: June 24, 2020

To: Mayor and Members of General Committee

From: Gary Kent, CPA, CGA, ICD.D, Commissioner of
Corporate Services and Chief Financial Officer

Originator's files:

Meeting date:
September 9, 2020

Subject

Internet Voting Information Update

Recommendation

That the Corporate Report dated June 24, 2020 from the Commissioner of Corporate Services and Chief Financial Officer, titled Internet Voting Information Update be received.

Report Highlights

- Internet voting may provide additional accessibility for voters with internet access, making it more convenient for voters to vote online
- The secrecy of voting online cannot be controlled or monitored as well as it can be in a polling location staffed with election workers
- IT staff have identified security and performance considerations related to the technology and the authentication of voters
- The ability to recount physical ballots for votes cast online is not available

Background

At the November 4, 2019 Governance Committee meeting it was requested that staff report back to the committee on the subject of internet voting.

Internet voting can occur in a supervised (controlled) environment via a kiosk or in an unsupervised (uncontrolled) environment via any personal computer or mobile device. The latter is the method most commonly understood as remote internet voting. Generally, in Ontario, an elector is required to register for remote internet voting and then they are provided with a unique personal identification number (PIN) by mail to use along with personal information (e.g. date of birth) for validation to access the online.

Comments

Benefits and Drawbacks

The benefits to using internet voting include:

- Convenience as voters' do not have to go to a voting location
- The ability for voters to cast their vote 24 hours a day during the internet voting period
- Accessibility for voters' who cannot go to a voting location and do not want to appoint a proxy to vote on their behalf
- Given the current COVID19 outbreak it may present as a benefit for physical distancing, for those with compromised immune systems and provides an option for those in the community who may not feel safe to participate in the election process
- Provides some relief for traffic congestion and parking congestion at polling locations as well as some benefit to reducing vehicle related carbon emissions

The drawbacks to internet voting may include:

- Alienating those voters who do not have internet access or accessibility devices to access these services online; in these cases voters may be able to go to a designated public location such as a library or community center to cast their vote, however this eliminates the benefit to those who find it difficult to physically attend a voting location
- The method of remote internet voting provides little or no opportunity for election staff to ensure the integrity of the voter vetting process when the voter logs in to vote
- Staff cannot prevent coercion when the elector goes to vote
- Staff cannot ensure that voter privacy is maintained
- Staff cannot ensure that legislated requirements related to identification and access are not compromised
- Scrutineers are unable to fully observe the ballot issuing process to help ensure the integrity of the process
- Staff does not have the ability to manually verify the integrity of the information transmitted
- Without paper ballots the ability to conduct a manual recount is not an option
- It is difficult to determine whether or not internet voting has a significant impact on voter turnout if any. Academic sources have reported that implementing Internet Voting has no major effect on voter turnout in the majority of municipalities nor does Internet Voting seem to significantly impact youth interest in voting
- Technology Cyber risks and impacts could result in a loss of internet voting service during scheduled polling times and in the worst case scenario could result in a privacy breach and/or invalidation of casted internet votes

If internet voting is approved and implemented, staff recommends the use of paper ballot voting simultaneously. This would mean added costs to the overall election budget, but would be necessary to accommodate voters who do not have access to internet or who, for security reasons, would prefer to vote in person. Should there be a desire to use internet voting it is recommended that this be piloted for Advance Polls only.

Electors Skills, Knowledge and Security Awareness

Individuals with more experience and confidence in using technology are more likely to be able to vote online. Because of this, developing and implementing a change management and communication program would play a large part in improving digital literacy of the electors in regards to internet voting.

For example, election administrators are not able to control the security of the internet devices used by electors to vote remotely. An elector must be made aware of the risks and take measures to secure their own devices. This is because an elector may unknowingly be using a device that has been compromised with illicit software that could direct them to a fraudulent election site, duplicate their personal information and/or change their vote. Ultimately, elections staff have no control over the environment or devices that electors use and therefore rely on individuals to ensure the security of their devices.

I.T. Security and Audit

Information Technology and election administration staff has identified security concerns surrounding internet voting. It is important to note that security breaches, while unlikely, can only be mitigated rather than eliminated. Security attacks could occur via breached personal computers, mobile devices or attacks on the internet voting system itself. A hacker could block access, corrupt voting information and gain access to the voter registration website and in effect, compromise the privacy and integrity of the election process.

As previously mentioned, these risks can be mitigated but not eliminated entirely. Mitigation measures include:

- Conducting independent security tests of the vendor's systems
- Ensuring that industry standards and procedures regarding privacy and security are in place

Presently, no national technical standards exist for certifying online voting systems, auditing or verifying the results produced. As far as staff are aware none of the current internet voting systems produces an accompanying physical trail and provides little or no online equivalent for a risk limiting audit.

Another point of concern for staff is that there is no mechanism for a manual recount because there are no paper ballots to verify the vote. Unlike with the use of paper ballots, there is no mechanism that allows the voter or election official to confirm that the votes are legitimate. Even if a breach is detected, the risk exists that we may not be able to determine with complete certainty which ballots are valid.

Additionally, unlike with paper ballots and vote tabulators, a physical audit of the results cannot be conducted. Following each election, staff conducts an audit to ensure that results were not compromised during transmission. It is the use of paper ballots and vote counting machines that allow for this process. With Internet Voting, both in a controlled and uncontrolled environment, this is not possible.

Secrecy and Identification

In a remote internet voting scenario, ensuring the secrecy and privacy of the vote during the voting process poses challenges. In a paper ballot election, election workers monitor voting areas to ensure that electors have the ability to mark their ballots in complete secrecy. However, with remote internet voting, the voting environment is unsupervised. Directions, rules and possible penalties for non-compliance would be provided to electors, who are voting from remote locations, but ultimately they are voting in an unmonitored environment. Electors would have to provide for their own secrecy and privacy. Additionally, there is concern that there may be more opportunity for situations to arise where undue influence or coercion can be placed on voters.

In a paper ballot election, election workers use a prescribed list of identification from the Ministry of Municipal Affairs and Housing to vet voters before giving them a ballot. This process is not as seamless with remote internet voting. To reduce the risk of identity fraud, and people voting on the behalf of others, a combination of a personal identification number (PIN) and personal information, such as birthdate, are typically used to verify identity. However, this does not eliminate the risk. An individual who has intimate knowledge of the elector and/or a part of the household may have access to the elector Voter Notification Card and hence their PIN and could potentially vote on behalf of others.

Financial Impact

The financial impact of implementing Internet Voting is dependent on a variety of factors including:

- Additional staffing costs required to provide I.T. and administrative support
- Technology costs related to Internet Voting
- Additional mailing costs to issue a PIN to electors
- Communications and education initiatives

Online Voting Project costs		Cost
Staffing	Project Coordinator	\$141,000
	Business Analyst – Technical	\$165,000
	Elections Officer	\$80,000
	2 Technicians – Call centre	\$95,000
Software	e-Voting licence	\$428,000
	Election Night Results	\$13,000
Validation	Security and Performance Test	\$95,000
Mailing	Voter cards for PINs and instructions	\$90,000
	Secrecy envelopes (PIN)	\$72,000
	Postage cost (PIN)	\$419,000
Communications	Increase in communications support	\$65,000
	Additional resources on election day	\$10,000
TOTAL		\$1,673,000

These costs are estimates. Vendors may include additional costs which will be identified through the procurement process.

Currently there is no budget to fund this cost. If approved, we will require the full amount of this cost to be added as part of the total Election budget for 2022.

Conclusion

Although internet voting is an option for the 2022 Municipal Election, a dual process of a paper ballot election and internet would be recommended which would increase the cost of the election significantly. The convenience of internet voting must be considered along with the cost, security and administrative constraints concerns raised in this report. Staff will continue to monitor the opportunity for internet voting for future elections beyond the 2022 municipal election.



Gary Kent, CPA, CGA, ICD.D, Commissioner of Corporate Services and Chief Financial Officer

Prepared by: Gus Mangos, Elections Officer