Alternative voting methods

Below is a description and risk assessment of the alternatives for consideration, as outlined in the staff report. The following alternative voting methods, while not recommended by staff, are options that Council may consider as a complementary channel in the 2022 municipal election.

Online voting

Online voting may provide convenience and accessibility to voters. It is designed to encourage participation from those who may be less inclined to visit a physical voting location to vote. It also may provide additional voting opportunities for those voters who are away during the voting period (students, vacationers, etc.).

Ontario municipalities have adopted network models and standards for online voting in municipal elections, however, currently no Canadian standards exist and there are no requirements or Regulations that speak to online voting in the *MEA*. In the absence of legislative direction, should this method be offered, the City must develop the tools and framework to ensure the process is secure, valid, and transparent. While this method can often be less costly than traditional methods, when offering internet voting as a complementary channel, cost increases can be quite significant, as well as necessary administrative resources to support initial use and staff resources.

In 2018, some Ontario municipalities chose to offer internet voting until the close of polls on election day. Many of those municipalities (51) experienced technical difficulties, slow traffic which resulted in an approximate 90-minute slowdown. The diminished quality of the bandwidth caused a varying number of voters to experience slow response time, and system timeouts. Effected municipalities chose to extend their voting period for several hours, with some extending the close of the alternative voting polls until the next day.

The online voting process is explained in this City of Markham voter information video: https://youtu.be/fWgzzueJXjl.

Possible benefits Possible challenges Security, denial of service Convenience Highly vulnerable to cyber-attack and Accessibility fraud Additional voting opportunities for those outside of the municipality or those less Inaccuracies of the voters' list inclined to physically attend a voting Ability for others to influence how an location elector votes Ability to qualify voter intent through Verification of voter identity use of automatic controls. Elimination Socio-economic divisions within the of unintentional spoiled ballots municipality Lack of audit abilities Increased costs

Telephone voting

Telephone voting is most commonly employed as part of a multi-channel voting solution in conjunction with online voting. It is a well-known method that has been employed by many municipalities in Ontario and across Canada for decades. This voting method allows voters to cast their ballot from anywhere they have access to a phone line at any time within the defined voting period. When offered in addition to online voting, it addresses the 'digital divide' concerns as it relates to the uneven distribution in the access to and use of computers and the internet.

As is the case with online voting, a telephone-based system is able to fully qualify voter intent through use of automatic controls (i.e. the system could be programmed to disallow a voter from proceeding to the next office, if their current selection resulted in an over-vote). This all but eliminates unintentional spoiled ballots, a control which can also be engaged on vote scanners/tabulators. As with most technology solutions, the overall cost of telephone voting can fluctuate based on the scale and composition of the system. Often, the largest contributor to cost in this regard relates to the capacity of the system to be able to support high volumes of traffic and its ability to provide for an adequate backup system.

Possible benefits	Possible challenges
Convenience	 Inaccuracies of the voters' list
 Accessibility 	Ability for others to influence how an
 Additional voting opportunities for 	elector votes
those outside of the municipality or	 Verification of voter identity
those less inclined to physically	 Concerns with navigating an audio
attend a voting location	ballot, pronunciation of candidate
 Ability to qualify voter intent through 	names
use of automatic controls.	 Lack of audit abilities
Elimination of unintentional spoiled	Increased costs
hallots	

Risk Assessment: Alternative Voting Methods Identify → Categorize → Evaluate → Respond

The purpose of this document is to list risks considered or assumptions made and ensure enterprise risk management, being a continuous, proactive and systematic process to identify, understand, manage and communicate risks from an organization wide perspective.

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Risk	Risk Description	Risk Categorization	Risk Evaluation	Risk Options	Risk Response
1.	Risk Description: A loss of transparency in traditional sense with reduced oversight of some components of the voting process by candidates and scrutineers (unsupervised voting)	Technical Financial Political Legal Service	Likelihood L M H IMPACT L M H H	☐ Mitigate ☐ Avoid ☑ Accept ☐ Transfer	Mitigation: • Education and outreach • Use of Voter Information Centres (VICs)
2.	Risk Description: Accuracy of voters' list, particularly relating to tenant information. Ineligible voters receiving credentials to vote Eligible voters may not be included thereby reducing opportunity to vote (principle of enfranchisement)	 ☐ Technical ☐ Financial ☐ Political ☐ Legal ☐ Service 	Likelihood L M H IMPACT L M H H	Mitigate Avoid Accept Transfer	 Mitigation: Require registration to mitigate the risks associated with the inaccuracies of the list (accuracy of list is necessary when implementing these options) Two-step verification process (to ensure the voter casting the vote is eligible) Clerk review & cleanse MPAC data within legislative parameters

Risk	Risk	Risk	Risk	Risk	Risk
	Description	Categorization	Evaluation	Options	Response
3.	Risk Description: Voter authentication	☐ Technical☐ Financial☐ Political☐ Legal☐ Service	Likelihood L M M H IMPACT L M M M H	Mitigate Avoid Accept Transfer	 Mitigation: Require registration to mitigate the risks associated with the inaccuracies of the list (accuracy of list is necessary when implementing these options) Two-step verification process (to ensure the voter casting the vote is eligible)
4.	Risk Description: Court challenges to the validity of results	☐ Technical ☐ Financial ☐ Political ☐ Legal ☐ Service	Likelihood L H M H IMPACT L M H H	✓ Mitigate✓ Avoid✓ Accept✓ Transfer	 Mitigation: Implement and apply lessons learned from court challenges Strong and defensible policies and procedures in place

Appendix A

Risks a	Risks applicable only to internet voting							
Risk	Risk	Risk	Risk	Risk	Risk			
	Description	Categorization	Evaluation	Options	Response			
1.	Risk Description: Cyber-attack, hacking, data compromised	Technical Financial Political Legal Service	Likelihood Likelihood H IMPACT M H H	Mitigate Avoid Accept Transfer	 Mitigation: IT Security controls including dual authentication processes when entering City's portal, password management, updated firewalls and security of personally identifiable data for voting; Pre-testing of any system or process prior to implementation; Education and training of staff managing and coordinating this process; City cyber liability insurance Third party testing and auditing (third party must carry the appropriate types and 			
					 amounts of insurance including cyber insurance) Offer internet voting during the advance period only, paper ballots for voting day 			

Risks a	Risks applicable only to internet voting								
Risk	Risk	Risk	Risk	Risk	Risk				
	Description	Categorization	Evaluation	Options	Response				
2.	Risk Description: Fraud	☐ Financial ☐ Political ☐ Legal ☐ Service	Likelihood L L M H IMPACT L M H	Mitigate Avoid Accept Transfer	 Mitigation: IT Security controls including dual authentication processes when entering City's portal, password management, updated firewalls and security of personally identifiable data for voting; Pre-testing of any system or process prior to implementation; Education and training of staff managing and coordinating this process; City cyber liability insurance Third party testing and auditing (third party must carry the appropriate types and amounts of insurance including cyber insurance) Offer internet voting during the advance period only, paper ballots for voting day 				
3.	Risk Description: Internet voting 3 rd party security testing reveals high risk that cannot be corrected	☐ Technical☐ Financial☐ Political☐ Legal☐ Service	Likelihood L H H IMPACT M H H	Mitigate Avoid Accept Transfer	 Contingency: Communications strategy for internet voting problems Mitigation: Plan security testing to precede issuance of voter notification cards 				

Risks a	Risks applicable only to internet voting							
Risk	Risk Description	Risk Categorization	Risk Evaluation	Risk Options	Risk Response			
4.	Risk Description: Internet voting not available online Risk Triggers: URL not working for voters Internet voting application down Network congestion	 ☐ Technical ☐ Financial ☐ Political ☐ Legal ☐ Service 	Likelihood L M H IMPACT L M H	Mitigate Avoid Accept Transfer	 Mitigation: Offer internet voting during the advance period only, paper ballots for voting day Establish in communication plan ways to advise voters of service interruption/delay Establish service levels from vendor to resolve issue Establish process to receive system notifications from vendor 			
5.	Risk Description: Public perception of security concerns and process vulnerabilities	☐ Technical ☐ Financial ☐ Political ☐ Legal ☐ Service	Likelihood L M H IMPACT M H H	Mitigate Avoid Accept Transfer	Contingency:			

Appendix A

Risks a	Risks applicable only to internet voting							
Risk	Risk Description	Risk Categorization	Risk Evaluation	Risk Options	Risk Response			
6.	Risk Description: Lack of access to the internet for voters	☐ Technical ☐ Financial ☐ Political ☐ Legal ☐ Service	Likelihood L H IMPACT M H H H H	Mitigate Avoid Accept Transfer	Contingency: Identify concerns from the broadband Survey, resident experience with internet connectivity within Hamilton (this survey will help us determine accessibility to the internet within city) Offer as a complementary to paper ballot and telephone voting. Mitigation: Offer voter information centres (centres where a voter can come and cast a ballot online) Offer this method as a complement to paper ballot Communication about proxy voting options			

Appendix A

Risks ap	Risks applicable only to telephone voting							
Risk	Risk Description	Risk Categorization	Risk Evaluation	Risk Options	Risk Response			
1.	Risk Description: Network congestion	☐ Technical☐ Financial☐ Political☐ Legal☐ Service	Likelihood L H IMPACT L M H	Mitigate Avoid Accept Transfer	 Mitigation: Stress test of system Offer as a complementary to paper ballot and internet voting. 			
2.	Risk Description: Call quality (on either end) compromised. Clear pronunciation of candidate names can be a challenge if call quality on either end is compromised.	☐ Technical ☐ Financial ☐ Political ☐ Legal ☑ Service	Likelihood L L M H IMPACT M H H	Mitigate Avoid Accept Transfer	 Mitigation: Phonetic spelling of names, third party assistance Offer as a complementary to paper ballot and internet voting. 			

Risk Impact Scales

	Risk Impact Scales							
Impact	Very low	Low	Medium	High	Very high			
	1	2	3	4	5			
Reputation	Little or no impact on level of trust in City (council and staff) Public reaction minimal - no effect on City's profile	 Adverse/negative view of City (council and staff) is limited to a small area/community group. Public reaction contained – City's profile raised within local boundaries 	Adverse/negative view of City (council and staff) is held by neighbourhoods/ multiple community groups. Public reaction considerable - City's profile raised within GTA boundaries	 Adverse/negative view of City (council and staff) spans ward boundaries/ majority of community groups Public reaction major - City's profile raised within provincial boundaries 	Adverse/negative view of City (council and staff) is community-wide Public reaction severe - City's profile raised within national boundaries			
Operations	Little or no impact on operations/delivery of all services Minor adjustments required No material service interruption	 Public reaction contained – City's profile raised within local boundaries Minor changes necessary to deliver all services but manageable within complement/ operations. Short term temporary interruption – backlog cleared < 1 day 	Changes necessary to deliver core services require few additional resources Workarounds to deliver service manageable Medium term temporary interruption – backlog cleared by additional resources	 Major changes necessary to deliver core services require some additional resources and time to complete. Workarounds to deliver services complex Prolonged interruption of services – additional resources; performance affected 	Significant changes necessary to deliver core services require numerous additional resources and extended period of time to complete. No alternatives or workarounds to deliver services exist Indeterminate prolonged interruption of services – non-performance			
People (staff & citizens)	Little or no impact on staff's performance/ morale No injury; scare only	 Isolated performance/ morale issues Minor non-immobilizing injury or trauma not requiring hospital treatment 	Performance/ morale issues found within a department Non-immobilizing injury or trauma but requiring hospital treatment	 Performance/ morale issues found across departments Immobilizing injury or trauma requiring hospital treatment 	Wide-spread degradation in performance/ morale Work to rule/strike Severe injury or trauma requiring urgent hospital treatment – may be life threatening or fatal			
Service	- Few or no complaints from citizens/community groups	 Intermittent complaints on inefficiencies/level of service from citizens/community groups 	Steady level of complaints on inefficiencies/level of service from citizens/community groups	Volume of complaints on inefficiencies/level of service exceeds ability to respond	Public outrage at inefficiencies/level of service demonstrated outside of City facilities			
Financial	- Little or no impact on budget	Able to accommodate within department budget	Able to accommodate within corporate budget	Able to accommodate within existing budget but only with service cuts and/or reserve funds	Unable to accommodate within budget			
Non- compliance	- Letter received, no impact	- Letter received – increased monitoring	Suspension or administrative monetary penalty	 Moratorium Suspension and administrative monetary penalty 	LitigationProsecutionCriminal chargesProvincial intervention			

Risk Likelihood Scales

Risk	Risk Likelihood Scales							
Likelihood	Low/Remote							
Factors	1	2	3	4	5			
Controls	 Best in class/industry Seen as industry leader in best practices Controls cover all aspects of the risk Excellent performance of/compliance with controls 	 Key best practices adopted and working Very effective controls Very good performance of/ compliance with controls 	Few best practices adopted Somewhat effective controls Good performance of/ compliance with controls	 No best practices adopted Significant aspects of the risk are not covered by the controls Poor performance of/ compliance with controls 	Below industry standards Not aware of best practices Ineffective controls Controls not performed			
Past experience	- Happened once or twice in corporate history	Happened once or twice in past five to ten years	- Happened within last two years	- Happens frequently/multiple times in the last year	- Happens daily/weekly			
Judgement	- Rare	- Unlikely	- Possibly	- Likely	- Almost certain/sure			