# STAFF REPORT

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| TO | Governance Committee |
| SERVICE AREA | Corporate and Human Resources |
| DATE | July 16, 2013 |
| **SUBJECT** | **2014 Municipal Election: Methods of Voting** |
| REPORT NUMBER | CHR-2013-30 |


## EXECUTIVE SUMMARY

### PURPOSE OF REPORT
To provide information with respect to available methods of voting and to recommend proposed methods for the 2014 Municipal Election.

### KEY FINDINGS
- Unsupervised methods of voting which are now more frequently being used by municipalities can increase risk but also provide effective opportunities to enhance the voting process by making it more accessible to electors.
- Internet voting provides for the least amount of risk when compared to other alternative voting methods and the greatest potential benefit for voters.
- There are security and process related controls available to mitigate risks associated with the use of remote Internet voting.
- To maximize accessibility, remote Internet voting is best used as an optional voting method to complement the use of paper ballots and voting places.
- Internet voting provides an additional option to voters who may be unable or unwilling to vote at a physical voting place.
- Remote Internet voting provides the only opportunity for some voters with disabilities to completely mark a ballot, in private, without assistance.
- The use of Internet voting as a complementary voting channel strengthens a principle tenant of the *Municipal Elections Act* by making an election accessible to more electors.
- Internet voting meets the principles of the City's Open Government Framework specifically in relation to embracing innovation and leveraging technology to further enhance civic participation.

### FINANCIAL IMPLICATIONS
The rental cost of vote scanners/tabulators for an election period are approximated to be $700 to $1,200 per tabulator. The projected costs to implement Internet voting as a complementary voting channel might range anywhere from $50,000 to $90,000. All costs will be funded by the existing election reserve - no additional funds will be required.

### ACTION REQUIRED
To approve By-laws to support the use of vote-counting equipment and Internet voting as an alternative voting method for the 2014 Municipal Election.

# STAFF REPORT

## RECOMMENDATION

1. That a By-law be approved to support the use of vote scanners/tabulators in the 2014 Municipal Election.

2. That a By-law be approved to support the use of Internet voting in the 2014 Municipal Election as a complementary voting channel for the advance voting period.

## BACKGROUND

The City first began using optical scan vote-counting equipment in the 1994 election by implementing a central-count system. This expanded in 2006 when precinct-based optical scanners/tabulators were deployed to all voting places. The practice of transitioning from manually counting paper ballots to using a fully electronic automated system of tabulation has grown rapidly within municipal elections in Ontario over the past decade. The level of maturity with respect to products now available within the marketplace give jurisdictions a plethora of options with which to implement a reliable system making voting more efficient for the voter and administrators alike. This level of product maturity is now also being demonstrated through the availability and use of alternative electronic voting methods such as telephone and Internet voting.

Although not explicitly found within the *Municipal Elections Act*, 1996 (the "Act"), Municipal Clerks, or Returning Officers, must ensure that an election is consistent with the following principles:

- the secrecy and confidentiality of the voting process is paramount;
- the election shall be fair and non-biased;
- the election shall be accessible to the voters;
- the integrity of the process shall be maintained throughout the election;
- there is to be certainty that the results of the election reflect the votes cast;
- voters and candidates shall be treated fairly and consistently; and
- the proper majority vote governs by ensuring that valid votes be counted and invalid votes be rejected so far as reasonably possible

The Returning Officer is responsible for administering an election on behalf of a respective jurisdiction. The above noted principles, in addition to other regulations within the Act, serve to support decision-making in this regard. Pursuant to the Act, Council has the authority to approve by-laws to modify voting hours for special voting places (ex. long-term care facilities), permit the use of vote-counting equipment and/or approve the use of alternative voting methods. Vote-counting equipment most commonly refers to either the use of optical scan tabulators or Direct-Recording Electronic (DRE) machines such as touch screen systems. An alternative voting method refers to a means of voting that differs from traditional paper-based, in person voting, namely; vote-by-mail, telephone voting, remote Internet voting, or other types of digital or SMS voting. Aside from the modification of voting times for special voting places, there is no requirement for Council to approve any aspect of a voting system based on a method of manually counting paper ballots.

Notwithstanding the debate between unsupervised and supervised voting methods (ATT-1), local municipalities within Ontario and Nova Scotia have begun to lead the way with respect to the use of alternative voting methods in the name of enhancing voter accessibility and convenience. The impetus behind implementation is also focused on creating environmental conditions which may help to reverse the trending decline of voter turnout. The average participation rate has variably decreased in the City of Guelph by nearly 11% since the 2000 Municipal Election.

## REPORT

### Proposed Voting Methods for the 2014 Election:

#### 1. Vote Scanners/Tabulators

The City's historical use of vote scanners/tabulators has significantly increased the efficiency of election administration. It has also enhanced the verification of voter intent as well as elevated the accuracy and security associated with ballot tabulation. For these reasons, vote scanners/tabulators are now commonly used to support Municipal Elections in Ontario. Due to enhancements made to hardware between election periods, most municipalities choose to rent or lease vote scanners/tabulators. Similar to 2006 and 2010, it is recommended that vote scanners/tabulators be deployed to all voting places[1] in the City of Guelph for the purposes of scanning and counting votes.

#### 2. Internet Voting

Based on a detailed review and evaluation of alternative voting methods (ATT-1), it is also recommended that Internet voting be used as a complementary voting channel during the advance voting period only. This use of online voting will present voters with an option to either cast an electronic ballot online from their personal computer, tablet or smart phone OR a paper ballot at one of several voting places during the advance voting period. Similar to past practice, the only voting option for electors on voting day will be to manually mark a paper ballot at their prescribed voting place.

### Alternative Methods of Voting

In order to encourage greater voter participation and to make voting easier and more convenient for Guelph electors, consideration was given to three alternative voting methods for the 2014 Municipal Election. The review considered such voting channels as complementary to the use of paper ballots and physical voting locations which will also be used in 2014. The methods reviewed were vote-by-mail, telephone, and remote Internet voting. Consideration of these channels was based on the risks and advantages each had to offer. A detailed synopsis of this assessment along with further considerations regarding Internet voting can be found attached to this report as ATT-1. The conclusion of this review identified Internet voting as being the alternative voting method which provided the least amount of risk and the greatest potential benefit to voters when compared to the other alternative methods. As noted in more detail in the attached review, there are several advantages and challenges linked to use of Internet voting, such as:

[1] Alternate vote counting and/or ballot collection practices may be considered for special voting places

**Advantages of Internet Voting**

- Designed to encourage participation from those who may be less inclined to visit a physical voting place in order to vote
- Provides an additional voting opportunities for students and vacationers who are unable to visit a voting place (ie. more convenient than voting proxies)
- Enhances accessibility and privacy for voters with disabilities
- Generates faster, more accurate results due to electronically automating tabulation
- Presents a "green" option for voting due to the reduced need to travel to and from a voting place and due to the potential decrease in printed ballots and materials

**Challenges of Internet Voting**

- Perception of security concerns and process vulnerabilities
- Voter authentication
- A loss of transparency in the traditional sense with reduced oversight of some components of the voting process by candidates and scrutineers
- Internet proliferation (ie. the availability of internet access in the community)
- Administrative work necessary to support initial use
- Costs to administer as a complementary channel (it can often be less costly than traditional methods when employed as a single voting channel)

**Research**

Of the municipalities who responded to a 2010 survey by the Association of Municipal Managers, Clerks and Treasurers of Ontario (AMCTO), 30 noted use of the Internet as a complementary voting channel in the 2010 Municipal Election. Of those respondents, 70% noted they were extremely satisfied, 26% were very satisfied and 4% were satisfied. None of the municipalities noted an unsatisfactory experience with any Internet voting product currently available.

There are several municipalities who have already confirmed that they will be using Internet voting for the first time in 2014 including Cambridge, Sudbury, Ajax and Parry Sound. Other municipalities such as Mississauga, Waterloo, Kingston, Thunder Bay and East Gwillimbury are also investigating potential use. Elections Canada and Elections Ontario have also been considering implementation of online voting in a future election. More than one third of the Council approved comparator municipalities are either using Internet voting in 2014 or are considering use.

On behalf of the City, a telephone survey of Guelph electors was conducted in May 2013 in an effort to measure voter awareness, voting method preferences and barriers to participation. As a result of this research, 56% of the respondents indicated that they would be more likely to vote if remote Internet voting were an option in 2014. Moreover, if online voting were offered as a complimentary channel, respondents indicated that they would be more likely to vote online than in person at a voting place. A detailed analysis of the Guelph survey can be found attached to this report as ATT-2. Further review and analysis of this survey data will serve to support election planning efforts and directly inform the development of a comprehensive Election Communications plan for 2014.

## FINANCIAL IMPLICATIONS

Upon Council approval, the City will issue request for proposals to source the most competitive bid for vote scanners/tabulators and Internet voting. The costs of vote scanners/tabulators is unknown currently as the voting places for 2014 have not yet been confirmed. Based on market approximations and past contracts, the cost to rent tabulators for an election period can range anywhere from $700 to $1,200 per tabulator. Based on the number of eligible electors from 2010, the cost to support the use of Internet voting as a complementary channel can be anywhere from $50,000 to $90,000. All related costs will be funded through the existing election reserve - no additional funding will required to support implementation of Internet voting. The final budgetary impact may be offset by efficiency savings found elsewhere in the election budget.

## CORPORATE STRATEGIC PLAN

**Innovation in Local Government**
2.2 Deliver Public Service better
2.3 Ensure accountability, transparency and engagement

**City Building**
3.3 Strengthen citizen and stakeholder engagement and communications

## DEPARTMENTAL CONSULTATION

Various departments were consulted in relation to this report.

## COMMUNICATIONS

Formal communications planning efforts are being led by Corporate Communications. Tactics include media relations efforts, online resources, targeted communications to stakeholders, traditional advertising, and social media promotion. A broad-based and robust election communications plan will be developed to support the 2014 Municipal Election.

## ATTACHMENTS

- ATT-1 An Analysis of Alternative Voting Methods
- ATT-2 Guelph Report on Remote Electronic Voting Options
- ATT-3 By-law to authorize use of vote scanners/tabulators for 2014
- ATT-4 By-law to authorize use of Internet voting in 2014
- http://guelph.ca/city-hall/internet-voting can be accessed for more info

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**ATT-1**

# AN ANALYSIS OF ALTERNATIVE VOTING METHODS

**July 16, 2013**

**Blair Labelle, City Clerk**


CITY OF Guelph
Making a Difference

## Preamble

There are several voting models available with respect to conducting municipal elections. The most common model is based on the use of decentralized voting places designed to process ballots for a particular subset of the electorate. That said, the use of alternative voting methods is now on the rise. Vote-by-mail, telephone and Internet voting have all been used by municipalities for various reasons. These "unsupervised" voting methods have traditionally been employed by jurisdictions in Ontario which are predominantly rural in nature and where the electorate is geographically detached. Municipalities such as these tend to favour alternative methods in lieu of physical voting places because these jurisdictions can experience challenges locating facilities which are both accessible to the electorate and feasible for processing voters. Within the global context, this trend seems to be changing somewhat as now more urbanized municipalities are implementing alternative methods as complementary voting channels in elections.[1]

In theory, unsupervised voting enhances voter accessibility at the expense of relinquishing some oversight with respect to the verification of voter identity and behaviour. It has been argued that some of the principles of the Act cannot be fully upheld by a voting method whereby direct supervision of electors does not occur. It is important to note, however, that Section 89 of the Act clearly bestows certain responsibilities on the voter such as ensuring that one is entitled to vote prior to doing so as well as ensuring that one does not vote more times than allowable. To some, unsupervised voting facilitates the potentiality of these offences, but to others it simply highlights the fact that pursuant to the Act the overall accountability of voting rests with each individual voter. Voter impersonation, coercion and fraud are concerns which are mitigated through the design of any voting system, regardless of whether it is a supervised or unsupervised model.

In order to encourage greater voter participation and to make voting easier and more convenient for Guelph electors, consideration was given to three alternative voting methods for the 2014 Municipal Election. The review considered such voting channels as complementary to the use of paper ballots and physical voting locations. The methods reviewed were vote-by-mail, telephone, and remote Internet voting. Consideration of these channels was based on the risks and advantages each had to offer.

## Vote-by-Mail

A vote-by-mail solution[2] has the ability to enhance the convenience of voting for both resident and non-resident electors. It can also eliminate or reduce the cost of voting places and temporary election officials depending on whether it is employed as a primary channel or as part of a multi-channel approach along with physical voting places. As paper ballots are used, it also most closely resembles a traditional

[1] In a report published by the Association of Municipal Managers, Clerks and Treasurers of Ontario (AMCTO) in response to a voluntary survey of Returning Officers, roughly 20% of municipalities in Ontario used some form of alternative voting method in 2010 and approximately 10% implemented a multi-channel approach using more than one method. This use represents an 18% increase in the use of alternative voting methods from 2006 to 2010.

[2] A non-electronic based alternative voting method which retains use of a paper ballot. The voting method has been in use for many years, most commonly by rural and/or sparsely-populated jurisdictions with larger geographic areas (ex. cottage communities). The voting process within such a scenario begins with a package being mailed to every qualified elector on the voters' list containing instructions, a ballot and a voter declaration form. Within the defined voting period, voters are asked to return mail their completed ballot and declaration form to the municipality each within a separate prepaid postage envelope. The declaration forms are reviewed in an independent manner in order to cross voters off the voters' list. At the end of the day on voting day, a Returning Office will then either hand count the returned ballots or tabulate them using a central count scanner/tabulator (they can be scanned prior to election day, just not tabulated). Results are then transferred to an election reporting system or declared by some other means.

precinct-based model which provides for a good audit trail. The majority of jurisdictions who used a vote-by-mail solution implemented it as the sole method of voting. In some municipalities, there is an option extended to the electorate to either vote-by-mail or attend one of the few voting places set up to process ballots, however, in many cases only "Town Hall" is equipped to do this.

Some concerns with vote-by-mail solutions have been expressed with respect to errors that can occur as a result of the mail distribution process. Inexact voters' list data can lead to challenges further exacerbated by vote-by-mail since there is a prospect for electors to not only mistakenly receive voter packages intended for other individuals, but also ballots as well. There is also room for error in relation to method of returning voters packages to the Returning Office. There are documented examples within vote-by-mail elections where voters have returned their ballots improperly marked and/or inadvertently disclosed their identity by returning their declaration form and ballot in the same envelope. Furthermore, unlike electronic solutions, there can be no automatic controls established in order to prevent a spoiled ballot (ex. by over-voting). Although a central count scanner/tabulator can assist in deciphering voter intent as part of a vote-by-mail solution, it would still be required to automatically spoil votes for an office that is improperly marked as the voter would not be present at the time of tabulation. Depending on the size of the electorate, there can be significant postage costs related to supporting a vote-by-mail solution. Some also argue that a full reliance on the postal system to not only disseminate blank ballots but also process completed ballots exposes the overall voting system to considerable risk.

Based on a general evaluation of the overall costs to implement and the elevated exposure to risk, a vote-by-mail method is not seen to be a good compliment to a physical voting place-based election system and is not recommended.

**Telephone Voting**

Telephone voting[3] is most commonly employed as part of a multi-channel voting solution in conjunction with remote Internet voting. To the best of staff's knowledge, the largest municipality to use telephone voting in Canada is the Regional Municipality of Halifax which used a combination of remote Internet and telephone voting. Telephone voting provides for an enhanced level of convenience as it allows voters to cast their ballot remotely from anywhere they have access to a phone line at any time within a defined voting period. A telephone-based system is also better able to fully qualify voter intent through use of automatic controls. In other words, 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. Certain voting systems allow for a voter to complete their ballot interchangeably by using the Internet as well as the telephone.

[3] Telephone voting is an alternative voting method which allows voters to complete a ballot using any point-to-point telephone connection. Qualified electors on the voters' list receive a voter information package containing instructions on how to dial in to access the system as well as how to navigate the audio ballot. Most interactive telephone voting systems rely on the voter to interact with the audio ballot by way of dialling on the key pad in relation to response requests, however, the potential exists to use voice activated responses to navigate and complete an audio ballot. After voting selections have been made for each office, the voter is prompted to review their decisions and continue on. Once the ballot is completely "marked" by the voter, he/she is then asked to review their selections prior to submission. Once submitted, the respective data is transferred to a secure server which effectively separates the voters' identity data (name, phone number etc.) from their ballot data. The former serves as the master voters' list identifying, in real-time, those electors who have voted and the latter represents pending results which are not tabulated until the end of voting day.

One of the most commonly cited concerns regarding telephone voting has been that it can take a significant amount of time to navigate through and complete an audio ballot. A ballot for a local municipality in Ontario can consist of a multitude of offices with which to vote including municipal candidates, school board candidates and referenda questions. Depending on the number and sequencing of selections and the review options engaged, a lengthy audio ballot can even serve to disengage and confuse voters. Furthermore, the clear pronunciation of candidate names can be a challenge if call quality on either end is compromised. Other documented issues relate to network congestion as the host telecommunications system must be able to support call volumes that are often difficult to predict. 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.

Arguably, telephone voting involves less risk and is more cost effective than a vote-by-mail solution (due to only involving one postal mail-out). It is also seen to be a better complement to a physical voting place based-model. That said, there are some operational concerns from the user's perspective with respect to the time in which it takes to complete an audio ballot. As a result, telephone voting may not be the most ideal method for every voter and perhaps not the best value for money.

**Internet Voting**

There are various forms of Internet voting, some of which allow a voter to submit an electronic ballot over the internet within a physical voting place supervised by Election Officials. The most commonly referenced model, however, is remote Internet voting, which allows an elector to cast an electronic ballot from their personal computer, tablet or smartphone anywhere there is an internet connection. Internet voting has been used by various jurisdictions in order to enhance the convenience of voting, to accommodate changing lifestyles and demanding work schedules, and to enhance accessibility for persons who may not be available or able to vote in person. For rural areas, Internet voting offers a means with which to reach electors who are geographically disconnected. For others, it offers a potential means to further engage those who may be more inclined to vote from the comfort of their own home or office rather than travelling to a physical voting place. It also presents a viable method to replace voting by way of proxy for those electors who may be out of the City either on vacation or at school, during election time. Some claim that online voting is more environmentally sustainable as it may result in decreased paper production and an overall lower carbon footprint when compared to the resource requirements of a traditional election.

There are several Internet voting products currently available to jurisdictions, most of which can be customized to support various process requirements[4]. In a remote Internet voting election, voters can access their online ballot during the voting period from any computer, provided it is connected to the internet and the internet

[4] A jurisdiction will transmit security credentials to electors on the voters' list by way of the voter notification card.

**Within a one-step process:** the voter uses the credentials to access a ballot during the voting period. Prior to accessing the ballot, however, the voter is normally asked to authenticate his or her identity by answering a question based on information contained in the voters' list.

**Within a two-step process:** the voter notification card credentials are used by the elector to complete an online registration process. At the time of registration, an elector may also be asked to answer additional questions to establish a personalized access code in order to help authenticate their identity prior to accessing the online ballot. Following registration, additional credentials are forwarded to the elector either by a secondary postal mail out or by way of email. The voter would then use both sets of credentials along with their personalized access code in order to validate their identity and access the online ballot during the voting period.

browser meets the minimum technical security requirements. Most products also allow voters to access ballots from their tablets or smart phones. Online ballots commonly mirror that of traditional paper ballots and must subscribe to legislated requirements with respect to formatting and appearance. Internet voting can be designed to fully verify voter intent by disallowing unintentional spoiled ballots and, if so desired, providing warning prompts in relation to offices which may be under-voted or left blank. Completion of an online ballot is similar to marking a hard copy ballot, voters simply click on the check box next to the candidate or selection of their choosing and navigate to vote for each office appearing on the ballot. Upon completion, the voter has an opportunity to review his/her selections and make changes. When the ballot has been submitted, the voting data is stored in a secure database and is not tabulated until the end of voting day. This database is designed to encrypt the voting data in order to ensure there is no way to link a voter with his/her ballot after the electronic ballot has been submitted. It can also be managed to restrict access to designated Election Officials.

**Internet Voting Research**

In 2003, the Town of Markham was the first major municipality (i.e. electorate of 50,000+) in North America to use remote Internet voting. Markham offered it again in 2006 along with 19 other municipalities. In 2010, the number of municipalities in Ontario to use Internet voting more than doubled (44), although there were several variations with respect to the way the method was made accessible to electors. Some municipalities such as Markham and Peterborough provided Internet voting as a complementary voting channel during the advance voting period. Others such as Burlington, Belleville, Brockton, and Prince Edward County provided Internet voting as a complementary channel during both the advance voting period and on voting day. The majority of municipalities that used Internet voting in 2010 employed the method of voting along with telephone voting. These municipalities were either geographically dispersed, had transient populations and/or consisted of an electorate of less than 20,000. Commonly, remote Internet voting is offered as a replacement to a vote-by-mail model due to decreased risks and increased efficiency for both voters and administrators.

Several major municipalities in Ontario have confirmed they will be using remote Internet voting in 2014. The City of Cambridge (population of 132,000) and the City of Sudbury (160,000) will be using Internet voting for the first-time as a complementary method to their paper-based, physical voting location model. The Town of Ajax (110,000) and the City of Parry Sound (60,000) will also be using Internet voting for the first time in 2014, however, their implementation fully replaces paper ballots with electronic ballots. Similar to the model employed by the City of Stratford in 2010, Parry Sound will only offer remote Internet voting. Ajax will offer a combination of remote Internet voting as well as electronic ballots which can be submitted at one of several physical voting places throughout the Town. More than 100 other municipalities in Ontario including Mississauga, Waterloo, Kingston, Thunder Bay and East Gwillimbury are also investigating the potential use of Internet voting in the upcoming election. Both Elections Canada and Elections Ontario have been actively exploring the prospect of implementing an online voting channel for a number of years and have since allocated resources to undertake a detailed investigation and feasibility review of doing so.

Of the municipalities who responded to a 2010 AMCTO survey, 30 noted use of the Internet as a complementary voting channel in the 2010 Municipal Election. Of

those respondents, 70% noted they were extremely satisfied, 26% were very satisfied and 4% were satisfied. None of the municipalities noted an unsatisfactory experience with any Internet voting product. To date, City staff have consulted with a number of these municipalities to discuss their experiences. These conversations support many of the documented advantages of Internet voting. The potential risks and limitations were also discussed. The following provides a high level description of both the advantages and the challenges associated with Internet voting:

**Advantages of Internet Voting**

- Designed to encourage participation from those who may be less inclined to visit a physical voting location in order to vote
- Provides an additional voting opportunities for students and vacationers who are unable to visit a voting place (ie. more convenient than voting proxies)
- Enhances accessibility and privacy for voters with disabilities
- Generates faster, more accurate results due to electronically automating tabulation
- Presents a "green" option for voting due to the reduced need to travel to and from a voting place and due to the potential decrease in printed ballots and materials

**Challenges of Internet Voting**

- Perception of security concerns and process vulnerabilities
- Voter authentication
- A loss of transparency in the traditional sense with reduced oversight of some components of the voting process by candidates and scrutineers
- Internet proliferation (ie. the availability of internet access in the community)
- Administrative work necessary to support initial use
- Costs to administer as a complementary channel (it can often be less costly than traditional methods when employed as a single voting channel)

**Security of Internet Voting**

Several concerns have been expressed with respect to the security of Internet voting vis-à-vis fraudulent activity. Distributed Denial of service (DDoS) attacks, trojan horses, viruses and website spoofing have all been identified as potential threats. Internet voting procedures established by municipalities address potential risks by employing both technical and process related security measures designed to support system administration and control user access. Technical protective measures such as firewalling, user authentication techniques, failover connectivity and server redundancy all decrease the likelihood and effectiveness of these threats. Proper testing and auditing throughout the various implementation phases also serves to protect the voting system from external threats. Internet voting platforms utilize the same stringent access methodologies and encryption principles which protect internet banking sites and Electronic Medical Records (EMR) systems. Although there have been documented cases of malicious attempts designed to comprise an online voting system, there are no known controverted elections resulting from the use of an Internet voting channel.

Some have also expressed concerns with respect whether online voting is the best model to protect voter privacy. Although unsubstantiated to date, allegations that Internet voting will increase instances of voter coercion have led jurisdictions like

Estonia[5] to modify their Internet voting system to allow an elector to cast several online ballots with their final submission being tabulated as their only vote. The intent of this model is to address concerns regarding one family member exercising illegitimate and unlawful authority over another by compelling them to mark their ballot in a certain way. Conversely, agencies representing voters with disabilities allege that Internet voting is the only channel which allows for some voters with disabilities to completely mark a ballot, in private, without the assistance of a designated friend or Election Official.

Validating the identification of voters is another concern often noted. As a result, voter authentication practices commonly exist as part of any online voting system and can be customized to include use of personalized security questions, CHAPTCHA challenges, and/or unique identification codes (eg. "vote-TANs"). There are also procedural controls in place to authenticate potential electors. For example, only electors on the voters' list receive credentials which can be used to register to vote and/or vote online. An individual may be added to the voters' list but first must validate their identity by submitting an acceptable form of personal identification to a designated Election Official. Notwithstanding the process to validate the voters' list and the various techniques[6] noted above, it will always be more difficult to validate voters using an unsupervised voting method. That is not to say that supervised voting methods are infallible in this regard, only to suggest that the prospect for abuse is greater in relation to an unsupervised voting channel. That said, Section 89 of the Act is applicable in that the legal responsibility of upholding the integrity of the voting process rests with the voters themselves.

Internet voting products have continued to develop in response to common concerns expressed about the technology or the associated processes. For example, some products have the capability to create ballot images representative of the online ballots which are submitted. These images are marked accordingly from a database consisting of thousands of hand-written "X's" rendering the ballot image indistinguishable from any hand marked ballot. If a manual recount is ordered, these images can then be physically produced and run through tabulators along with manually marked ballots. Some products also have the capacity to provide encrypted receipts to voters verifying that their online ballot was registered. Within such systems, voters receive a text string when submitting their online ballot which they can use to reconcile against a master list (usually posted to the jurisdiction's official website) to verify that the system had accepted and tallied their vote.

Prior to the 2006 election, the City of Markham retained Dr. Henry Kim, York University Associate Professor of Information Systems and Management Science, to complete a risk analysis of remote Internet voting in order to address the key technical and process related challenges. The results demonstrate that a traditional voting place based method of election involves less risk than an Internet voting method, however, the overall risk score associated with the latter is not considerably higher than the former. The results also demonstrated that the assumed risks of Internet voting were substantially lower than vote-by-mail, a method which has been more commonly used by municipalities in Ontario.

[5] Has used Internet voting since 2005 at all levels of government as a complementary channel to traditional methods of voting. Estonia is also a reference model for 'anywhere voting' (voters can vote at the voting place of their choice) and the use of a government issued ID card which is used for voter identification.

[6] Biometric authentication measures are also currently under development.

Regardless of the voting channel(s) used in an election, risk cannot be completely eliminated - it must be managed.

**Voter Participation**

Voter turnout in the City of Guelph over the last decade has been underwhelming. The average participation rate has variably decreased by nearly 11% from 2000 resulting in a 33.91% turnout in 2010. This is well below the AMCTO documented average of 46.7%. The average for Ontario municipalities in 2006 (38.6%[7]) was much closer aligned to Guelph's average (39.76%), however, the 2000 and 2003 elections demonstrate greater discrepancies with the provincial municipal average. This variable decline in the City's voter participation seems a stark contrast to what has often been referred to as a community with an active citizenry.

In an effort to better understand this issue a telephone survey was conducted in May, 2013. The survey was designed by staff with support from Oracle Poll Research and by Nicole Goodman, PhD a political scientist research consultant. The intent was to collect data from Guelph electors in order to measure voter awareness, determine voting method preferences and assess barriers to participation among the electorate. A preliminary report was provided by Oracle Poll and a detailed analysis was completed by Dr. Goodman. When asked why they did not vote in the 2010 Guelph Municipal Election, nearly 60% of the respondents noted one of the following reasons:

1. *I didn't support any of the candidates (16%)*
2. *I didn't know the candidates platforms/policies (16%)*
3. *Didn't know it was happening (13%)*
4. *I don't care about / dislike politics (13%)*

In addition to those noted within the Guelph survey, there are a myriad of specific and sometimes interrelated factors[8] that impact voter participation. One could arguably conclude, however, that the majority of reasons cited by Guelph electors relate to a lack of information made available in 2010. Clearly, some of this will need to be addressed by candidates in 2014 through their political campaigns, however, the City can also take a more active role in enhancing voter awareness through communications and outreach. To assist in this regard, a robust communications plan designed to support the 2014 Municipal Election will be developed. Although the details are still yet to be determined, the plan will focus on new and innovative ways to better inform the electorate at large as well engage underrepresented groups such as students and new residents.

Aside from a more active approach to voter engagement and communications, remote Internet voting has often been suggested to be a potential solution to address declining voter participation rates. Internet voting ultimately results in a question of trade-offs between risk and enhanced voting opportunity. Although there are inherent challenges in adopting unsupervised voting channels, there is also the potential to enhance voter accessibility beyond the status quo and create an environment with which voter participation may be increased. A pertinent and timely report entitled *A Comparative Assessment of Electronic Voting* written for

[7] A weighted average sourced from the 2006 AMCTO Post-Election Survey

[8] Including voter apathy, voter fatigue, education, socioeconomic conditions, demographics, electorate population and geography, the profile of civic issues during an election year, the activity rate of candidate campaigns (often tied to the comprehension of candidate platforms), the level of competition between candidates, voting system accessibility, trust in elections as well as the government at large, the weather etc. etc.

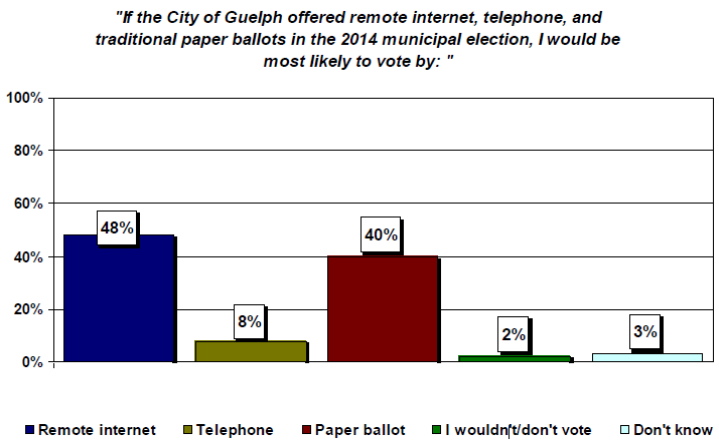
Elections Canada by the Strategic Knowledge Cluster Canada-Europe Transatlantic Dialogue, adeptly represents the balance between risk and opportunity:

> *Careful examination of the literature on Internet voting as well as the pilot experiences of many jurisdictions suggests that both the extremely optimistic and pessimistic positions about the effects of Internet voting are overstated. Internet voting will not act as a panacea for the social causes responsible for electoral disengagement, nor will it remedy negative attitudes toward political entities. It will, however, increase voting opportunities for electors and make casting a vote more accessible. On the other side, Internet voting will not erode democracy or result in vote buying and election fraud any more than does the existing system.*

The Elections Canada study clearly articulates that there is a need to conduct further research in order to better determine how Internet voting impacts voter participation. Any such research would also be used to build benchmarks to assist in the objective evaluation of the technology within the broader context of election service delivery. In order for this to occur, a greater number of jurisdictions will need to implement Internet voting and allow their program to be studied - a prospect which now appears more likely for 2014. To date, local jurisdictions in Ontario and Nova Scotia are being profiled as the leadership for Internet voting globally. The continued use of online voting to support the selection of political party leaders[9] and union votes may also urge more to explore use. Furthermore, the documented examination and review of Internet voting will continue to assist others in their own implementation efforts – an Issues Guide and Discussion Paper developed as part of the City of Edmonton's review is case in point.

There has been some research conducted within Ontario specifically in relation to the impact of online voting in the City of Markham. This research points out that Markham's advance voting turnout rose by nearly 300% from 2000 to 2003 along with their use of remote Internet voting. The overall voter turnout, however, stayed relatively the same at 27%. Markham again used Internet voting as an early voting optional channel in 2006 and 2010. In 2006, overall voter turnout rose to 38% but then dropped again to 35.5% in 2010. A review undertaken with respect to the City of Peterborough, who also used remote Internet voting in 2006 and 2010, demonstrates a similar result in that overall turnout did not increase. It is important to note that both jurisdictions only used online voting during early voting periods.

According to a 2011 survey conducted by Elections Canada, 57% of non-voters said they would have voted had it been possible to do so over the Internet. This increased to 67% of non-voters between the ages of 18 to 24. Certainly those jurisdictions adopting the use of remote Internet voting are doing so to enhance the overall




[9] At the federal level in Canada, Internet voting was recently used to elect a Liberal leader and, before that, the leader of the NDP. Provincially, it was recently used as a method of voting to select leaders of the NDP in Saskatchewan, Ontario, and British Columbia, Liberal parties in Alberta, New Brunswick, and British Columbia, and the Alberta Party.

convenience of voting but also to engage youth who have traditionally been underrepresented. The Guelph survey reinforced these findings as 56% of respondents indicated that they would be more likely to participate if remote Internet voting were an option. Moreover, if online voting were offered as a complimentary channel in Guelph in 2014, respondents indicated that they would be more likely to vote online than in person at a voting place.

**Final Thoughts**

Remote Internet voting is an unsupervised form of voting, not unlike telephone and vote-by-mail which are currently used by approximately 33% of municipalities in Ontario. Municipalities using such methods are required to establish specific procedures to ensure that they are regulated and controlled to the highest possible degree. It is the responsibility of the Returning Officer to ensure the method of voting upholds the principles of the Act. It is the responsibility of the voter to ensure he or she does not contravene the provisions of the Act or compromise the integrity of the election process. Section 49 provides that no person shall:

- *Interfere or attempt to interfere with an elector who is marking the ballot;*
- *Obtain or attempt to obtain, at a voting place, information about how an elector intends to vote or has voted; or*
- *Communicate any information obtained at a voting place about how an elector intends to vote or has voted.*

A contravention of any of the above noted provisions is subject to severe penalties ranging from fines to imprisonment or both. Some municipalities require voters to complete an online affidavit prior to voting online in order to confirm a commitment to upholding their responsibilities as an elector. This is a similar to a voting procedure which allows electors to vote at a voting place if they do not have an acceptable form of identification on their person. If evidence suggests a violation of the Act in any regard, the Returning Officer can take appropriate legal action.

Based on the practical research conducted to date and the composition of products currently available, the use of remote Internet voting as a complementary method does not seem to elevate risks beyond what is deemed to be acceptable vis-à-vis upholding the principles of the Act. In fact, the secured use of remote Internet voting serves to enhance and support many of the fundamental principles contained therein, most notably that *an election must be made accessible to all voters.*

Clearly, Internet voting cannot resolve some intrinsic problems which have been linked to the decline in voter turnout. Online voting does, however, offer a new way with which to potentially engage or re-engage underrepresented electors. Remote Internet voting aligns to what has been referred to as *a full transition to the use of technology within contemporary culture.* In the same way, it complements the Council approved City of Guelph Open Government Framework which establishes the foundations with which to encourage and embrace innovation, bolster transparency and accountability and leverage technology to better support civic participation. Although voting is only one aspect of community participation, it is an important one. Often referred to as the cornerstone of democracy, elections serve to reinforce the legitimacy of the political process. If nothing is done to correct the trending decline in participation, there is a real risk in eroding the public trust and bestowing an important civic duty upon a new generation of voters.

**ATT-2**

# City of Guelph Report on Remote Electronic Voting Options

Nicole Goodman, PhD

July, 2013

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## Note to the Reader

This report was prepared by Nicole Goodman, PhD. Nicole is a Post-Doctoral Fellow at the Innovation Policy Lab in the Munk School for Global Affairs at the University of Toronto. The survey instrument was jointly developed by the City of Guelph with input from Nicole and Oraclepoll. The polling firm, Oraclepoll, provided the data collection and preliminary analysis. Special thanks to Carleton University Professor Jon Pammett for his survey comments and advice.

## Executive Summary

This report presents the results of a public opinion survey conducted by Oraclepoll for the City of Guelph between May 23 and June 3, 2013. The goal of the survey was to gain additional insight into electors' perceptions of voting experiences in the City of Guelph and to gauge public sentiment regarding the potential use of a remote Internet or telephone voting option in future local elections. Overall results suggest widespread public support for the introduction of Internet voting and weak to modest support for the initiation of telephone voting. Public readiness for Internet voting can be seen through the fact that potential voters report being most likely to use that voting method in the 2014 City of Guelph election, more likely in fact than traditional paper ballots. Support for telephone voting is modest, even among those who report having poor knowledge of computers and who belong to older age groups. This implies there may not be the same level of public readiness for voting by telephone.

**The following are some key highlights of the findings based on the survey:**

**Public Use**

- A majority (63 percent) of respondents say they would be likely to use remote Internet voting in a future local election.
    - 42 percent say the same for voting by telephone.
- If all ballot options were offered nearly half of all respondents (48 percent) say that they would vote remotely by Internet, 40 percent by paper ballot, and 8 percent by telephone.
- Those aged 34 to 44 reports being most inclined to make use of remote Internet voting.

**Turnout**

- Introducing *online/telephone voting* is the second most cited strategy for how to encourage electoral participation in City of Guelph local elections.
- A majority of non-voters say that they would vote if Internet (55 percent) and telephone (56 percent) voting were an option.
- Non-voters 18 to 44 and over 65 express strong agreement that an Internet voting option would encourage their participation.
- Non-voters over 65 express a noticeable willingness to vote if telephone voting was offered.

**Access to, and confidence in, the technology**

- A majority (62 percent) of respondents say they would feel confident voting by Internet.
    - Nearly one half (47 percent) say the same about telephone voting.
- 87 percent of respondents have Internet access at home.
- 72 percent use the Internet daily.
- 80 percent of those without access have an income of $39,999 or less.

## Introduction

The City of Guelph recently commissioned a public opinion survey to shed light on voting experiences. Notably questions sought to gauge public supportiveness and readiness to adopt alternative electronic methods of voting, including Internet and telephone ballots. This report provides a summary and analysis of the results collected from the 2013 City of Guelph Survey. The goal of the report is to present city administrators and councilors with public perspective of election experiences to help inform their decision regarding whether to introduce an electronic voting option(s) in the 2014 City of Guelph election.

In particular, this report draws on the survey data to answer some specific questions about the possible introduction of Internet and telephone voting options in City of Guelph's 2014 municipal election. These questions include:

- Would the public make use of remote Internet and telephone voting methods?
- Is there a potential impact on voter participation?
- Is there a potential impact on specific groups that may experience greater difficulty participating such as youth and seniors?
- Do electors have access to the technology?
- Do electors have confidence in voting using the technology?

## Who took part in the poll?

The 2013 City of Guelph Survey was carried out between May 23 and June 3, 2013 by the survey firm Oraclepoll. 600 randomly selected residents of the age of majority were contacted and surveyed by telephone. A focus of the survey was to attain equal representation from all 6 wards and this was achieved with 16.7 percent of respondents belonging to each of the wards. The average respondent comes from an urban, suburban neighborhood, has completed technical, community college, has an annual income between $50,000 and $59,999, and is between the ages of 45 and 64.

Gender is slightly overrepresented in this sample, with females accounting for 58 percent of respondents. In terms of age, there is an oversample of older electors. A majority (53 percent) of those surveyed report being 55 and older and 71 percent of the group is 45 and older. This presents some limitations and advantages for data analysis. While there is an under-representation of younger age cohorts, which means there is a greater margin of error for this group, the oversample of older electors provides for more reliable estimates of their attitudes and potential behaviour. Having a larger group of older electors can be helpful in a few ways.

First, older electors typically participate in elections at a greater rate than younger electors. Also, remote electronic voting data from other Canadian municipalities has shown that older age cohorts (those over the age of 55) are the most likely users of the service. Given that this group participates in elections most frequently and has been the largest user group in other communities, it is helpful to have a more reliable picture of whether middle-aged and senior residents in the City of Guelph would make use of the service(s). Furthermore, having an oversample is useful since greater concern is expressed about older electors having access to computers or electronic devices with Internet connections, knowledge of digital technology, and indicating a preference for traditional voting processes and methods.

If future data were collected it would be fruitful to try and achieve more equitable representation among age groups, particularly for the youngest electors since engaging this group is often cited as a rationale for considering electronic voting methods.

Finally, a large majority of respondents report having voted in the previous municipal, provincial, and federal elections; 87 percent, 88 percent, and 89 percent respectively. About an equally large number report being likely to participate in future elections. While voting behaviour is typically over-reported in surveys because it is seen as socially desirable, a larger sample of non-voters would help to better assess whether the option of remote electronic voting methods might entice these electors to participate.

## Potential public use of remote Internet or telephone voting methods

An important consideration when evaluating whether to adopt alternative voting methods is whether electors will make use of the option. Survey respondents were asked some questions about potential use of Internet, telephone, and paper ballot methods, namely whether they would be likely to make use of Internet and telephone voting in local elections, and what their preferred type of ballot would be overall. Results suggest strong public support for the introduction of Internet voting and weak to modest support for the introduction of telephone voting. Those electors surveyed indicate that they would make use of Internet voting in particular, and that it would be the preferred type of ballot.

When asked, "*If you could vote remotely online, how likely would you be to use that method to vote in a future municipal election?*" a majority (63 percent) of respondents express that they would be very likely or somewhat likely to use remote Internet voting in a future local election. By comparison, about a quarter (26 percent) say that they would be somewhat or very unlikely to make use of this method of voting at the local level. This suggests that many eligible electors would cast a ballot by Internet remotely. Looking at these results by age group (see Figure 1) reveals that electors aged 18 to 44 reports being particularly inclined to make use of remote online voting, with those aged 34 to 44 being most likely to do so. This differs slightly from other data addressing Internet voting use at the local level collected in the City of Markham, in which the two youngest age groups reported the strongest likelihood to vote by Internet.

When asked the same question about telephone voting 42 percent of respondents report they would be somewhat or very likely to vote by telephone, while 43 percent indicate being somewhat or very unlikely to do so. Electors' support for voting by telephone in future local elections is much weaker than attitudes toward Internet voting. Furthermore, many respondents aged 18 to 54 say that they would be neither likely nor unlikely to use telephone voting, suggesting a degree of ambivalence toward the voting method. Telephone voting is typically proposed as an alternative voting method that is more appealing to senior citizens than voting by Internet given their familiarity with telephone technology, however even the oldest age group seems somewhat more inclined to try Internet voting than telephone.

Figure 1: Agreement with "If you could vote **remotely online**, how likely would you be to use that method to vote in a future municipal election?"

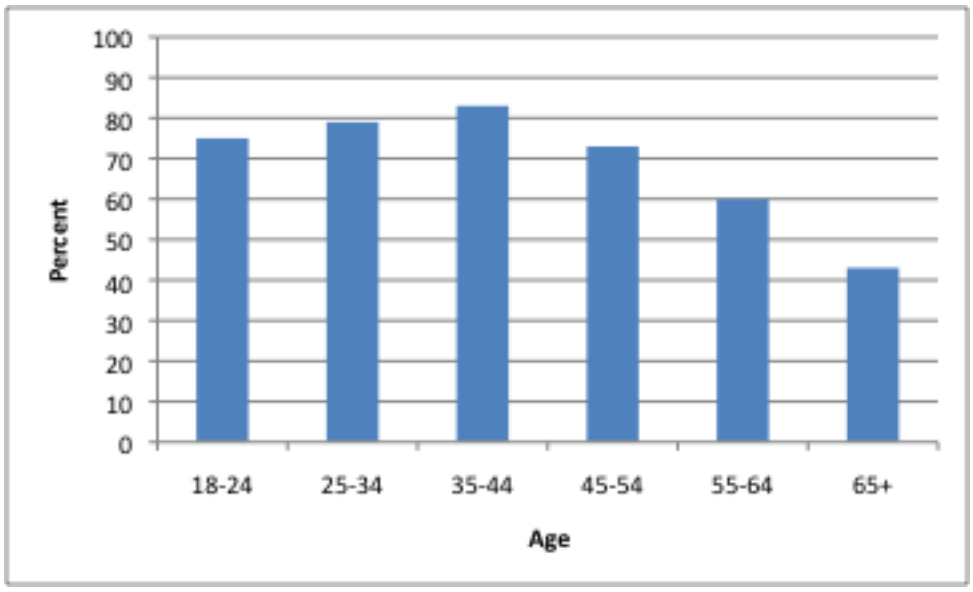
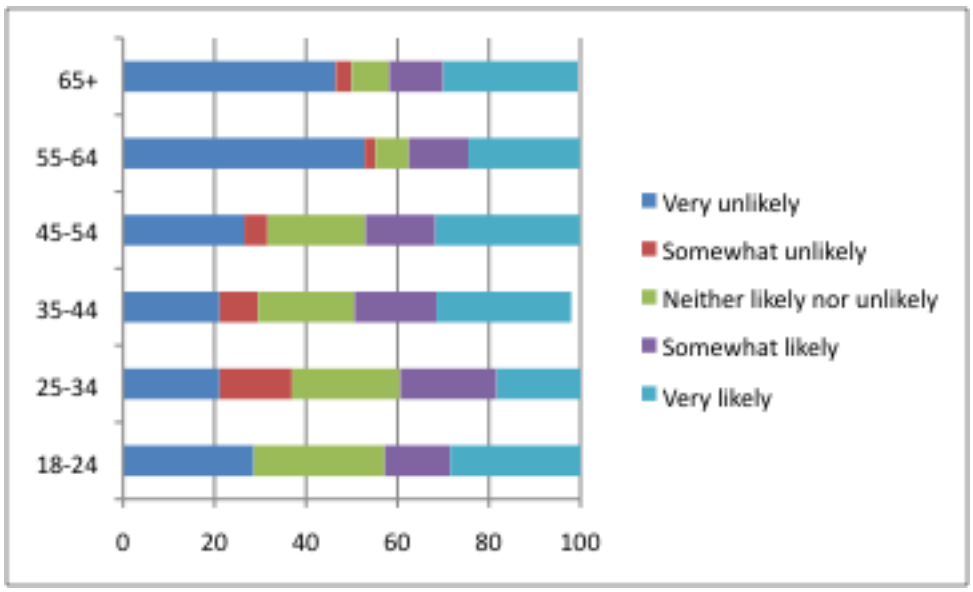



Figure 2: "If you could vote **by telephone**, how likely would you be to use that method to vote in a future municipal election?"




Further evidence of Internet voting being preferred over telephone is found looking to responses regarding which voting method electors would use to cast their ballot in the 2014 City of Guelph election when given the choice between Internet, telephone, or traditional paper ballots. Nearly half of all respondents (48 percent) say that they would vote remotely by Internet, 40 percent by paper ballot, and 8 percent by telephone (see Figure 3). Examining responses by age reveals that all age groups, other than those 65+, select

Internet ballots as their preferred voting method, or equal in preference to paper ballots (see those aged 55 to 64). This suggests that voters would vote remotely online.

Figure 3: "If the City of Guelph offered remote Internet, telephone, and traditional paper ballots in the 2014 municipal election, I would be most likely to vote by:"

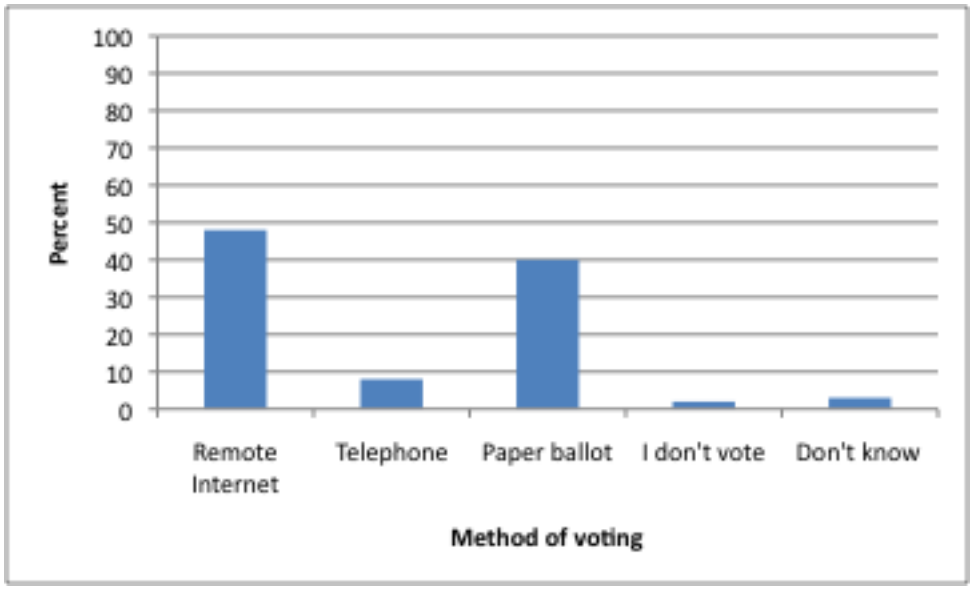
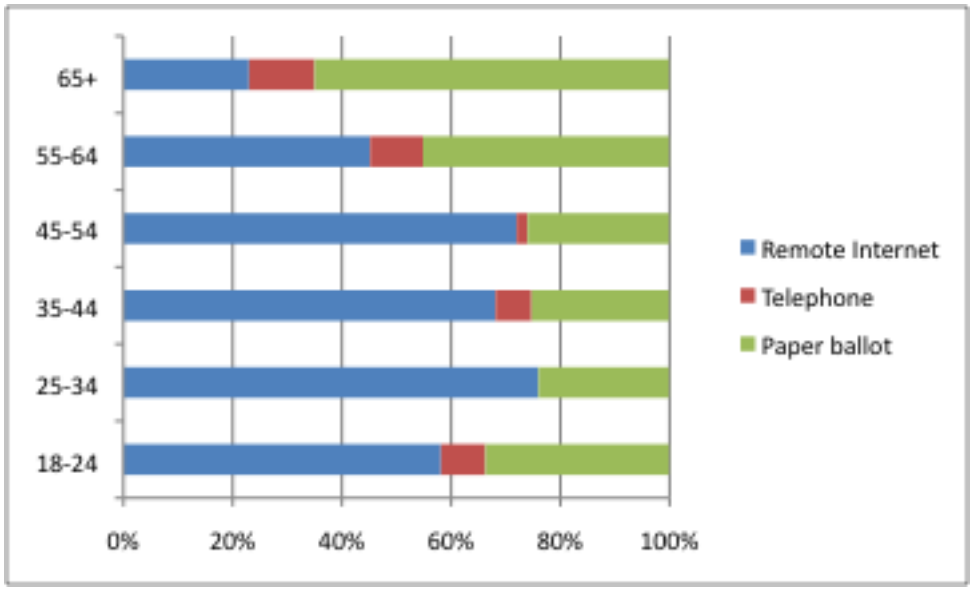



Figure 4: Estimated use of ballot type by age group




Those reporting average to very good knowledge of computers, and those reporting having accessed the Internet on a daily basis, are more likely to say they would vote by Internet. However, those with less familiarity and experience still express that they would be willing to give it a try. For example, one half of respondents (50 percent) who report using the Internet once a week say they would vote by Internet compared to one quarter (25 percent)

of the same group who say they would cast a paper ballot. Furthermore, a small group of respondents without access to the Internet express that they would like to vote online. These results suggest that some of those who have less practice using computers and the Internet are inclined to use remote online voting. If introduced, it would be helpful to ensure public access points were made available with qualified representatives to provide access and assistance for those without the Internet or knowledge of how to use it.

Findings from 34 Ontario municipalities that offered a remote Internet voting option in the 2010 local election supports Internet voting as the most popular method of casting a ballot when offered alongside telephone and paper ballots (see Figure 6). This evidence, coupled with the information collected in this survey, implies that City of Guelph electors would make use of the service if it were an option. With respect to age, data collected from the same election reveals that older electors (those aged 50 to 99) are more likely to vote by Internet than their younger counterparts (those aged 18 to 49) (see Figure 5). This result has less to do with the attraction of online voting, but is a consequence of the fact that older electors are more committed to voting and therefore participate in elections more frequently. Reported rates of use from younger age groups suggest that an Internet voting option would be used by electors representing a variety of age cohorts.

Figure 5: Age of Internet voters in Ontario municipalities in 2010

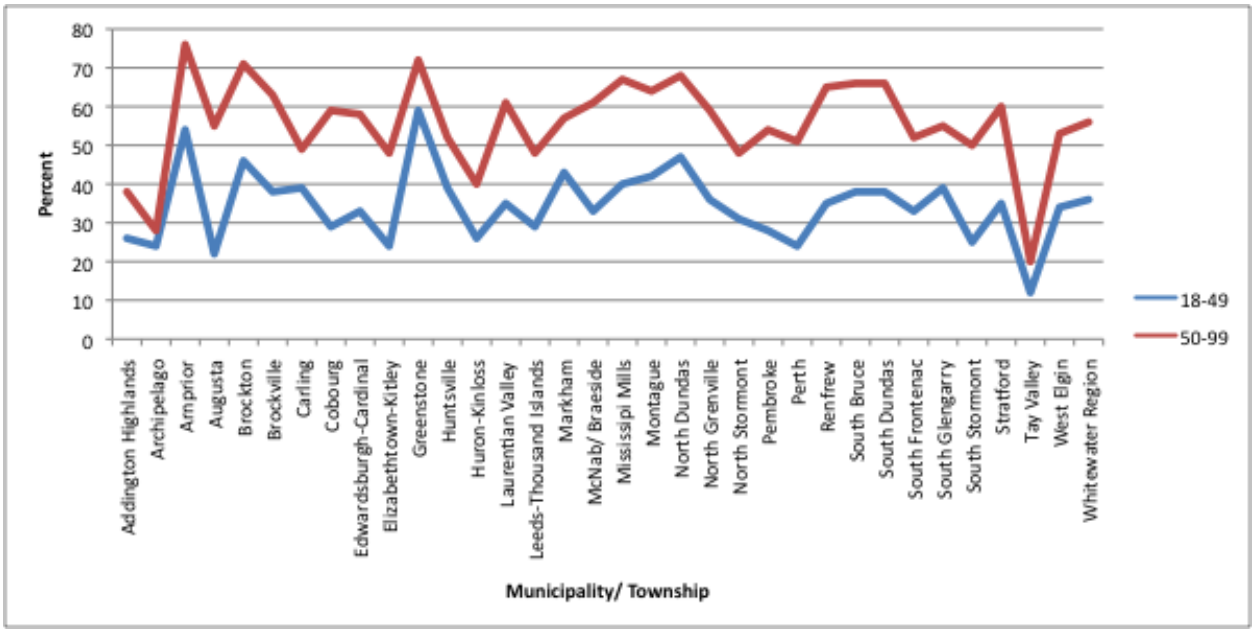
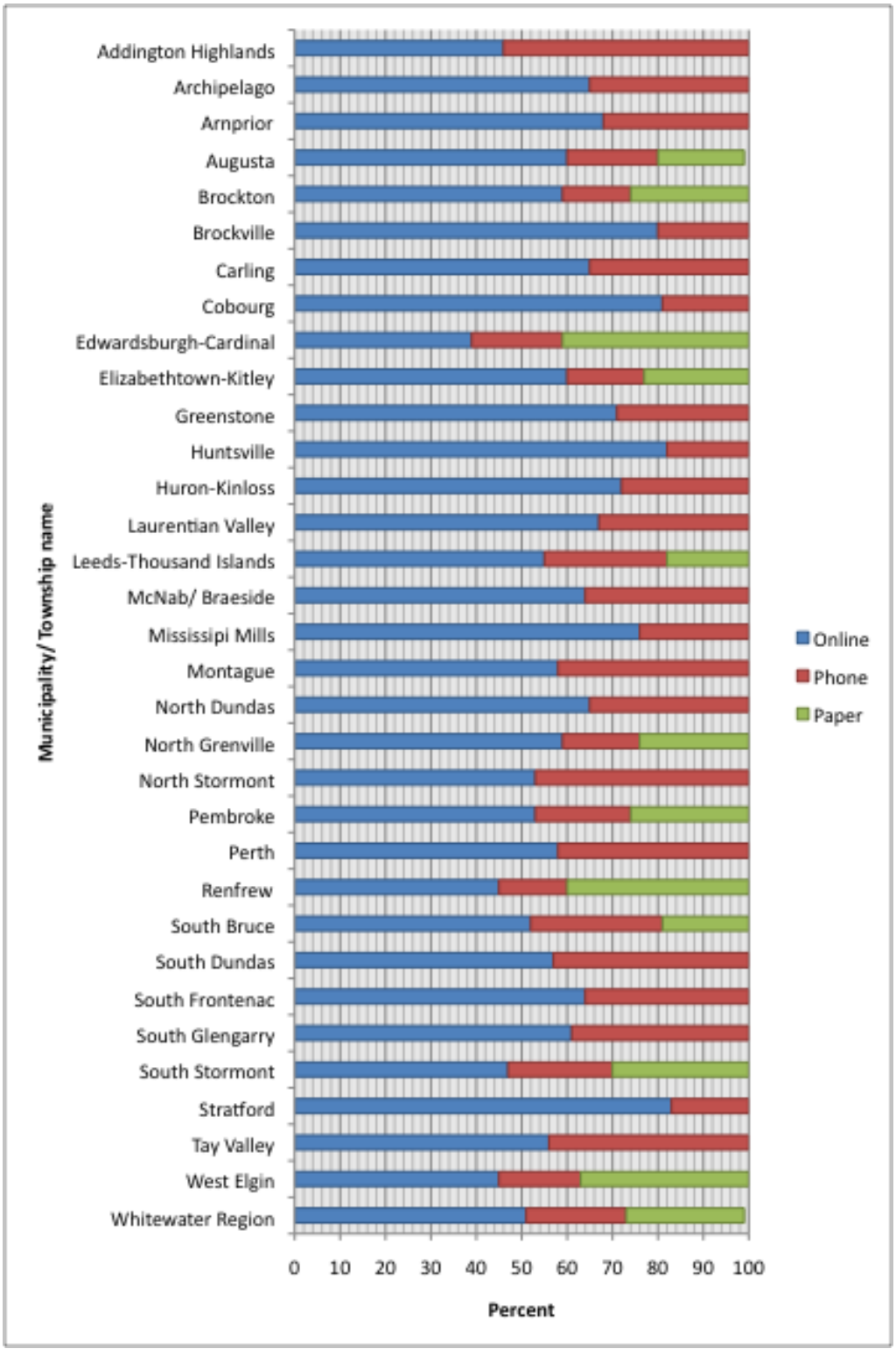


Figure 6: Method of voting used in Ontario municipalities in 2010



## Potential impact on voter participation

Voter turnout is a concern for all levels of government in Canada. For various reasons turnout has noted a decline, which appears to be a long-term trend. Interestingly, while there is a secular turnout decline at federal and provincial levels, municipal turnout has been shown to be much more volatile. Internet voting is suggested as a change that may positively impact voter turnout. In a Canadian context, we do not have the data to support this assertion. We do know that Internet voting has had a positive impact on voter turnout based on some experiences, but in other cases there is no effect or a decrease. In Europe there is limited research on the impact of Internet voting on voter participation. One study analyzing local elections in the country of Estonia shows a positive effect of 2.6 percent, while another study examining national elections there finds no impact.

There are many contextual factors that impact levels of voter participation in elections. The combined impact of multiple variables makes it difficult to say for certain whether one structural change, such as introducing the option of Internet or telephone ballots, would have a positive effect on voter participation in local elections. For example, factors such as the perceived closeness of the race, the issues being addressed, types of candidates running, and the perceived importance of the election are some elements that can have an important impact on voter participation. The incredible inter-complexity of the variables that impact electoral participation suggests one factor alone will not remedy decreases in turnout. That said, the volatility of municipal turnout suggests it may be simpler to affect with the right mix of factors.

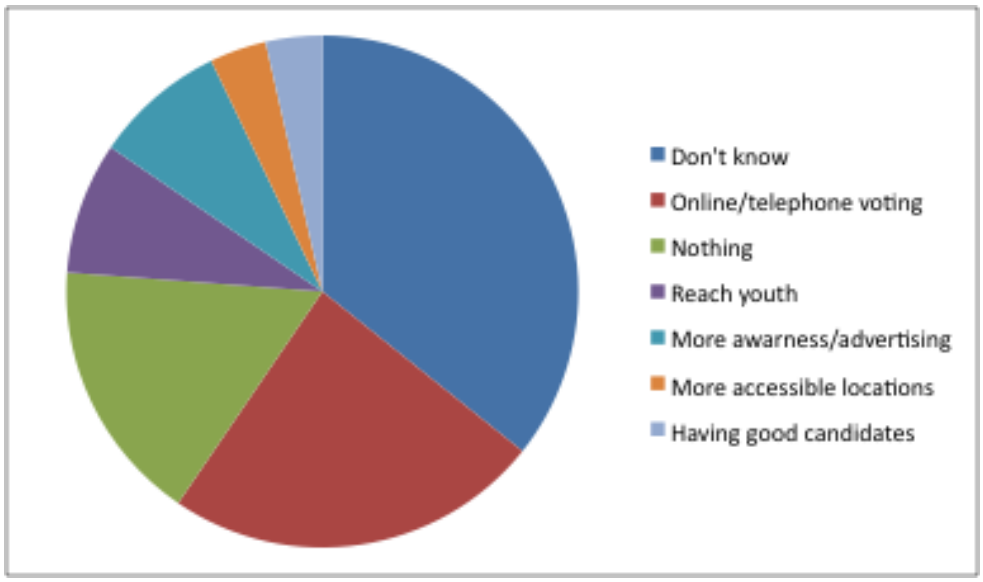
Data from the 2013 City of Guelph Survey finds some support to suggest the introduction of an Internet voting option may improve electoral participation, but this information should by no means be taken as a certainty that an increase would occur. Respondents were asked to make suggestions to improve municipal voter turnout. While nearly one third (30 percent) said they *did not know* of a solution. Next, *online/telephone voting* was the most frequently cited strategy for how to encourage electoral participation (see Figure 7). Suggestions that *nothing can be done*, *reaching youth*, *promoting awareness/advertising*, *increasing the number of accessible voting locations*, and *having good candidates* were also mentioned.[1] While these responses are no clear indication voter participation would increase as a result of offering electronic voting methods, some suggest electors may believe options that improve accessibility and convenience will help.

Although a small portion of survey respondents report having not voted in previous elections (13 percent) the reasons they provide for not participating municipally sheds light on whether alternative methods of voting could help. A large proportion of responses express a *lack of support for candidates* and a *need for better information* both in terms of the electoral event itself and also with respect to candidate policies. Another group say they *don't care about/ dislike* politics. The remainder of comments focuses on issues of accessibility. These include being *too busy* to make it to the polls, being *out of the city/province/country*, *illness/age,* and *inconvenient voting locations*. These types of considerations can be addressed in part by enhancing the accessibility of the voting process through an extended advanced voting period, the presence of voting locations in higher traffic public areas, and remote voting methods, electronic or otherwise, that would allow electors to cast a ballot from their home or work, and while traveling or ill. Previous

[1] Please note other suggestions were made, but they occupied 2 percent or less of the total responses.

research has shown that the convenience and accessibility offered by remote electronic voting methods, particularly Internet voting, is appealing to electors that cite these latter reasons for not having participated.

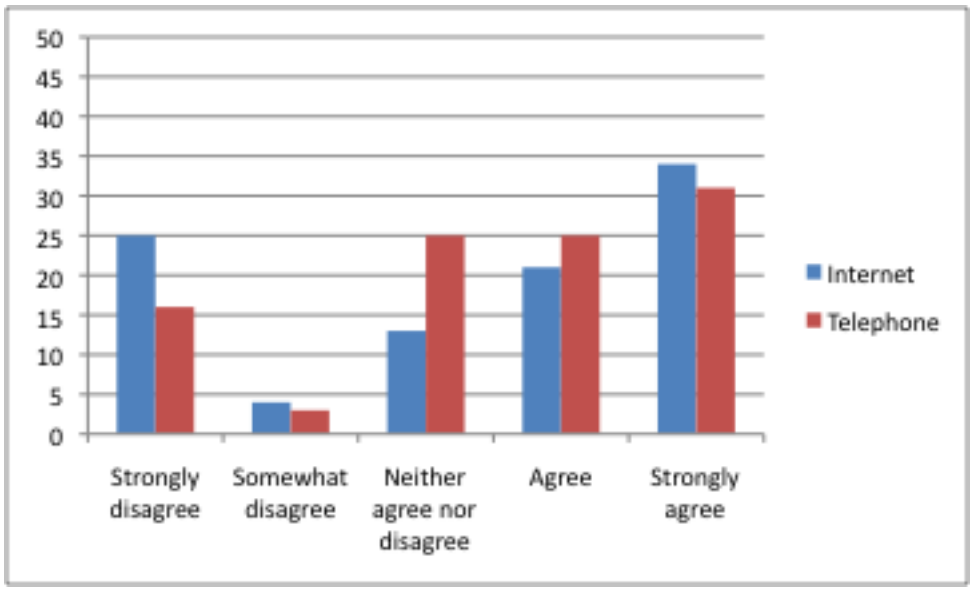
Figure 7: Suggestions to improve municipal voter turnout in the 2014 City of Guelph election




Electors that report not voting in previous elections were asked, "*If remote Internet/telephone voting were available I would vote in municipal elections*" to shed some light on whether these service options would promote electoral participation (see Figure 8). A majority of respondents express agreement that they would vote in municipal elections if these service options existed. Some respondents are again ambivalent regarding whether telephone voting would entice their electoral involvement, while they are much more decisive with respect to Internet voting, either positively or negatively. By age, those non-voters under 44 and over 65 express strong agreement that Internet voting would encourage their participation; while for telephone just those over 65 express a noticeable willingness to vote if it were an option. This information does not signify that turnout would surely increase if these methods were available, non-voters could just be saying this would help when there could be other more influential factors which effect their motivation to participate, but it suggests these voting methods may have an impact especially for younger and older electors.

Overall these results can be taken as evidence that some electors may be more inclined to participate if remote electronic voting methods were offered in the 2014 City of Guelph municipal election, especially Internet ballots. Younger and older non-voters report being especially likely to participate as a consequence and generally the accessibility offered by these options may promote the involvement of those electors who may not have participated because they were too busy, ill, traveling, or perceived voting locations to be inconvenient. That said, the introduction of these voting methods are by no means a guarantee that there will be a positive impact on voter participation and such structural changes will not be a panacea for voter apathy.

Figure 8: Agreement with "If remote Internet/telephone voting were available I would vote in municipal elections" among non-voters




## Access to and confidence in the technology

Resident access to, and confidence in, remote electronic voting technologies is an important prerequisite when considering its adoption. As noted above, there is strong reported access to the Internet in the City of Guelph. 87 percent of respondents say they have access and a further 87 percent indicate they have access to an Internet connection from their home. 72 percent of residents surveyed express that they access the Internet daily, 10 percent do so on a weekly basis, and 4 percent on a monthly basis. This suggests relatively robust Internet penetration among the public. Still, however, 13 percent of those surveyed report not having access. Should Internet voting be adopted it would be important to put measures in place which promote accessibility of Internet ballots by all.

Examining access to Internet by income reveals that about 80 percent of those without access have an income of $39,999 or less. Looking more closely we see that the lower the reported income the less likely a respondent is to report having Internet access at home. This suggests that income may be a key factor in lack of online access for residents. Taking into account access to Internet by age shows that those belonging to the youngest age group (18 to 24) and the oldest age group (those 65+) report the lowest rates of access. Given that Internet voting is widely regarded as a change to improve accessibility it is salient to ensure this complementary method of voting does not exacerbate inequalities for those who do not have, or cannot afford, access.

In terms of confidence in the technologies, 62 percent of respondents overall report agreement or strong agreement with the statement, "*If remote Internet voting were an option for the 2014 municipal election in Guelph, I would feel confident casting my vote online*." When asked the same question with respect to voting by telephone 47 percent say they would feel confident casting a ballot that way. Particularly for Internet, this suggests relatively strong public confidence in the transmission of online ballots. Looking at

responses by age we see stronger confidence for Internet ballots, especially among electors 64 and under. 48 percent of electors 65 and older, however, disagree that they would be confident casting a ballot by Internet. This is an important finding and one that would have to be addressed with public education and outreach should this voting method be adopted.

Figure 9: Agreement with "If **remote Internet voting** were an option for the 2014 municipal election in Guelph, I would feel confident casting my vote online" by age

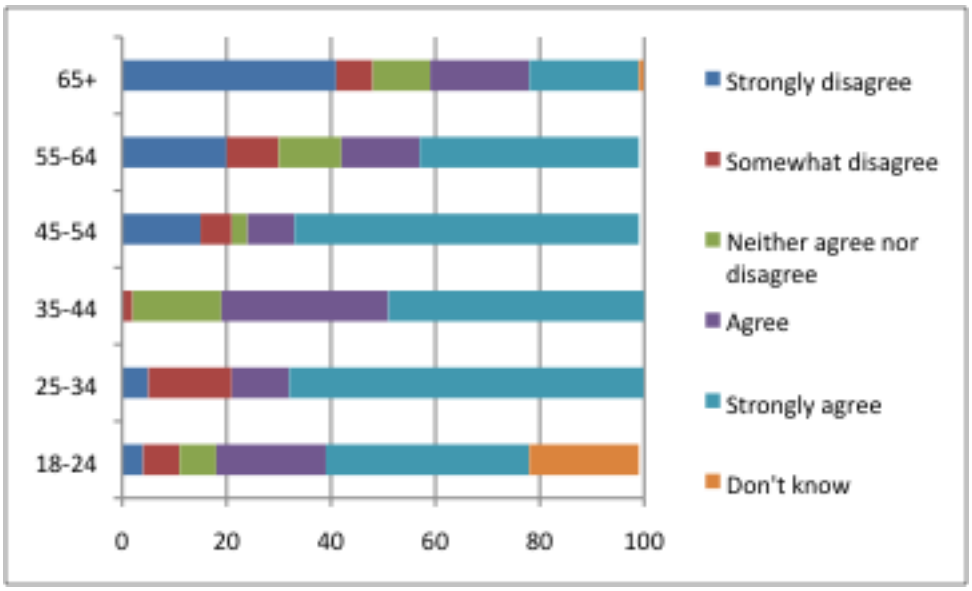
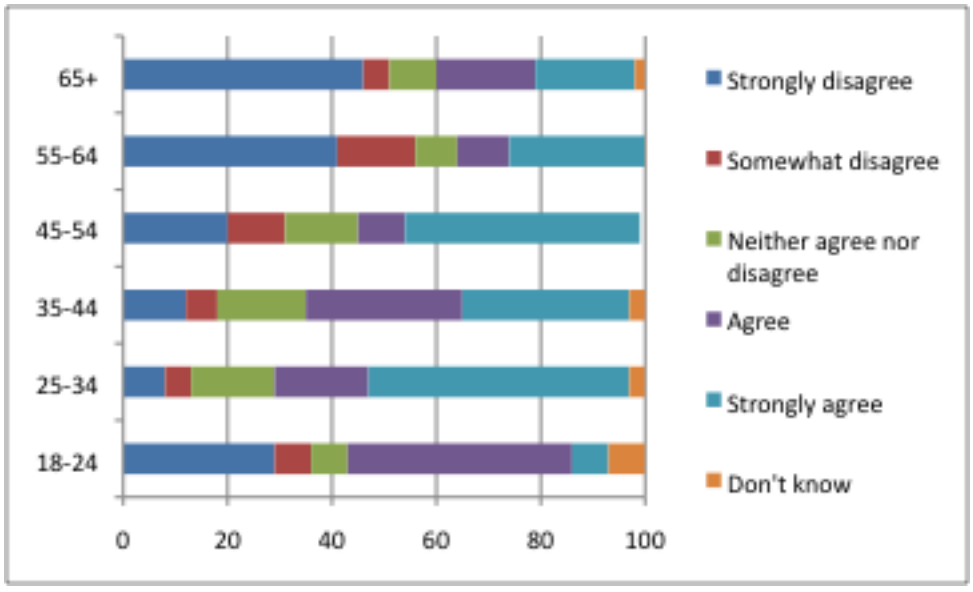



Figure 10: Agreement with "If **telephone voting** were an option for the 2014 municipal election in Guelph, I would feel confident casting my vote by telephone" by age



Confidence in the transmission of telephone ballots is lower among most age groups (except those aged 25 to 34). Notably a majority of those aged 55 to 64 and 65 and older disagree that they would feel confident voting by telephone; 55 percent and 51 percent respectively. Lower confidence in, and reported use of, telephone voting raises questions regarding its effectiveness as an alternative voting method. A robust education and information campaign would be recommended if council decided favourably to adopt it for the 2014 local election.

Overall results indicate there is robust Internet access and penetration among residents. Furthermore, electors express moderate to strong confidence in Internet ballots and more modest confidence in voting by telephone.

## Conclusion

Information collected by 2013 City of Guelph Survey on voting experiences suggests public supportiveness and readiness for remote electronic voting methods. There is particularly strong support for an Internet voting option. A high proportion of electors report having access to the Internet, express confidence is casting their ballots online, and say they will make use of Internet voting, more so in fact than traditional paper ballots. There is weak to modest support for telephone voting and confidence in the transmission of votes using the technology is not as strong as by Internet. Furthermore, there is minimal reported use of telephone voting in future elections. Overall, public attitudes suggest that remote voting by Internet is a desirable alternative voting method for future local elections. Although there is interest in telephone voting, survey results imply this method is less attractive.

**ATT-3**

**THE CORPORATION OF THE CITY OF GUELPH**

**By-law Number (2013)-XXXXX**

A By-law to authorize the use of vote scanners/tabulators for the 2014 Municipal Election.

WHEREAS Section 42 of the *Municipal Elections Act, S.O. 1996* provides that a municipal council may on or before June1 in the year of an election, pass a by-law authorizing the use of optical scanning vote tabulators for the purpose of counting votes at Municipal elections;

**NOW THEREFORE, THE COUNCIL OF THE CORPORATION OF THE CITY OF GUELPH ENACTS AS FOLLOWS:**

1. The use of vote scanners/tabulators is hereby authorized in respect to the 2014 Municipal Elections.

2. By-law Number (2010)-19009 is hereby repealed.

**PASSED this 29th day of July, 2013.**

KAREN FARBRIDGE - MAYOR

BLAIR LABELLE - CITY CLERK

**ATT-4**

**THE CORPORATION OF THE CITY OF GUELPH**

**By-law Number (2013)- XXXXX**

A By-law to authorize the use of Internet Voting in the 2014 Municipal Election

WHEREAS Section 42 of the *Municipal Elections Act, S.O. 1996* provides that a municipal council may on or before June1 in the year of an election, pass a by-law authorizing the use of alternative voting method(s) that does not require electors to attend at a voting place in order to vote;

**NOW THEREFORE, THE COUNCIL OF THE CORPORATION OF THE CITY OF GUELPH ENACTS AS FOLLOWS:**

1. Internet voting is hereby authorized in respect to the 2014 Municipal Election.

**PASSED this 29th day of July, 2013.**

KAREN FARBRIDGE - MAYOR

BLAIR LABELLE - CITY CLERK