



STAFF REPORT

SUBMITTED BY: Chris Frotten

DATE: November 14, 2022

SUBJECT: Electronic Voting

ORIGIN

The next municipal elections will be held on Saturday, October 19th, 2024. In preparation, Staff is requesting direction from Council on whether electronic voting will be an available method in future elections.

BACKGROUND

Council's role in elections is to appoint a Returning Officer, approve the use of electors list, approve the electoral mechanism, election budget, election by-law and ensure that the method and system of voting are able to deliver fair elections and accurate results. Section 146A of the Municipal Elections Act bestows municipal councils with the legislative authority to select the method and system of voting.

Today, citizens can use the Internet to conduct their banking, make purchases and donations, sign petitions, renew and apply for government licenses and pay their taxes. The power of the Internet to transform the nature of traditional service delivery, particularly to improve communication and access to information, has raised interest in its uses to enhance the accessibility of the electoral process as well.

Its ability to create new participative spaces as well as expand existing ones suggests it has the capacity to improve accessibility to voting for many electors. Furthermore, the Internet's influence on other aspects of elections and government, such as campaigning, fundraising, membership recruitment, protest, lobbying and access to information for media and citizens, signifies that it now has an increasingly important relationship with electoral politics and will likely continue to have a considerable impact on the character of democracy in nations worldwide.

The newly emergent concept of electronic democracy suggests it may be useful to further explore the potential of the Internet to improve the electoral process for parties, groups, election administration, and of course, citizens. At the same time however, there remain many concerns surrounding the notion of Internet voting, primarily related to public confidence and trust in the security of the voting process. The goal of this report is to assess the considerations involved in the potential introduction of electronic voting in the next municipal election.

DISCUSSION

The term electronic voting is a blanket term used to describe an array of voting methods that operate using electronic technology. The following section discusses the benefits and risks associated with Internet voting in general, primarily concentrating on remote Internet voting.

Benefits

Proponents of electronic voting make several arguments in favour of its implementation. These are related to technology, social issues and election administration. First, electronic voting has the potential to make the **voting process easier** and **more accessible** for electors. This is especially true for remote Internet voting and telephone voting given that ballots can be cast from any computer with an Internet connection or any working telephone. These latter methods substantially lower the cost of voting for many electors by creating many more access points from which they are able to vote. There is the potential to eliminate long line-ups at polling stations and better address accessibility issues for persons with disabilities, those suffering from illness, those serving in the military or living abroad, those away on personal travel, snowbirds and other groups of citizens such as single parents who may find it difficult to visit a traditional polling station. Additionally, remote methods of Internet voting afford electors the opportunity of being able to **vote at any time**, a feature that further enables electors' ability to cast a ballot.

With regard to special populations of electors, Internet and telephone voting may also be methods of engaging those voters who are considered the hardest to reach, particularly **young people** aged 18 to 30. These electors are most familiar with the technology, are the most frequent reported users and would likely benefit the most from the extension of remote types of electronic voting. Internet and telephone voting seem to be especially useful ways of engaging young people away at university and who are not registered to vote in that particular constituency.

Internet and telephone voting could allow **greater secrecy** for special populations of electors with disabilities (including visually or hearing impaired). By voting electronically and therefore unassisted, these electors are afforded a greater degree of anonymity when casting a ballot. Enabling secrecy for these groups enhances the equality of the vote.

Enhancing accessibility and creating more participatory opportunities for electors holds promise to positively impact **voter turnout**. Generally, the academic literature addressing electronic voting and turnout decline presents inconclusive results concerning whether the extension of on-line voting has a positive effect on electoral participation. Cases in which remote methods were implemented have produced mixed results. Though some areas in Canadian municipalities that have reported some instances of increased turnout. The length of time remote Internet voting options remain in place appears to be related to increases in both its use and in voter turnout.

Related to administration, Internet and telephone voting are claimed to produce **faster and more accurate election results**. Internet and telephone voting systems are said to deliver a faster official ballot tabulation process and are alleged to be more accurate than other types of counting which are sometimes

criticized for error. In addition, fewer election facilities, election workers and election supplies are required, thus reducing the burden of choosing fair locations and searching for workers.

Over the long term all types of Internet voting have the potential to be **less expensive** to operate and execute than traditional paper ballots which require setting up and staffing polls. However, the start-up costs for machines or kiosks can be very high.

Finally, all types of Internet voting and telephone voting have the potential to improve the overall quality of ballots cast by reducing or eliminating ballot errors and by creating better informed electors. There can be **no ballot errors**, and, if the legal structure in a jurisdiction requires the option to **spoil a ballot** or allows for protest votes, a button can be added in some programs to give electors the option to cast a protest vote (or decline to vote). Furthermore, depending on the architecture of the Internet voting system, there is the possibility for additional information to be displayed regarding candidates and their policy positions in conjunction with the on-line vote. This would provide voters with basic information about the candidates and party platforms, and therefore better informing them to vote.

Drawbacks and Risks

Those opposed to, or skeptical of, electronic voting point to several drawbacks and perceived risks that are associated with types of Internet voting and telephone voting methods. The most prominently cited risk relates to **security**. Threats of computer viruses or hacker-orchestrated 'denial of service' attacks are most commonly mentioned as problems that could compromise an election and public confidence in electronic voting. This concern is most prevalent with regard to the security of personal computers. In light of this, the maintenance of **ballot secrecy** is presented as an issue when using computers that are unprotected, located in public places, or which may be susceptible to virus attacks. Other potential technical problems or issues include power outages or malfunctions in Internet connectivity as well as the possibility of servers shutting down or crashing. The reliable recording and storage of votes is also an important consideration.

Problems with **access** are raised. The material on remote Internet voting discusses the potential for a "digital divide", which can occur in two ways. There is a digital divide between those who have home computers with Internet connections and those who do not. Second, there may be a digital divide between those who have faster access and those who have slower connections and hence lower quality access. People with higher incomes are more likely to be able to afford access. Furthermore, access is often less expensive and of higher quality in urban areas. Those with lower incomes and who live in rural areas are at a disadvantage. Therefore, the extension of Internet voting has the potential to create divides with respect to many socio-economic variables, namely income, education, gender, geography and race and ethnicity. These potential divides could be problematic for participation and representation.

It is said that remote Internet and telephone voting present greater opportunity for **fraud** and **coercion** or vote-buying. Fraud occurs when someone votes on another's behalf without their permission, whereas coercion or vote-buying takes place when a voter is pressured by others to vote in a way that he or she would not have otherwise. Both present problems for ballot integrity since it is important that every vote cast be tallied as the voter intended. There is additional opportunity for fraud in electronic voting systems

if voter notification cards, which contain unique passwords required to cast a ballot, are intercepted. In the case of ballots not cast in person it is more challenging to verify a voter's identity. Remote voter authentication can be a problem since it may be difficult to confirm that the person voting is actually who he or she claims to be. While digital signatures and passwords can help, they are not foolproof and could potentially be shared.

The issue of **voter education** is cited as a concern. A lot of time and money must be invested to ensure that the public is aware that electronic voting is an option and that voters are able to understand and use the on-line system to cast a ballot. Without correct marketing and advertising it will be difficult to engage electors.

Privatization is a concern when electoral administrators cede control to a hired firm. Contracting elections out to private companies to run the electronic operations has negative implications for some people, and hence has the potential to negatively impact public confidence and trust in government and elections.

Finally, perhaps the most significant social concern is the threat of **disintegration of social capital** or civic life. The proliferation of electronic election services has the power, some say, to alter the nature of electoral participation by causing more electors to vote alone instead of at a polling place with others. This threatens to erode civic life, local social networks and groups related to elections.

BUDGET IMPLICATIONS

In 2020, our election costs totalled \$27,779. This included everything needed to administer the election, such as supplies, materials, polling station rentals and election workers. The only cost not tabulated would be time spent by other municipal staff on the election.

Based on our costs related to election workers and polling station rentals during the last election and the estimated cost of electronic voting (which is calculated on a per elector basis), using electronic voting would be practically cost neutral.

LEGAL IMPLICATIONS

Section 146A of the Municipal Elections Act bestows municipal councils with the legislative authority to select the method and system of voting.

PUBLIC CONSULTATION/COMMUNICATIONS

N/A

RECOMMENDATION

There is no doubt there are many benefits but still some drawbacks to the use of electronic voting. Those in favour of Internet and telephone voting argue that they provide improved levels of accessibility that can increase voter turnout and reach people who would not vote if required to attend a physical voting

site. By the very nature of services being offered, improved access to voting for many electors is an acknowledged benefit. Even with the recent successes observed in the municipal elections in Nova Scotia in 2012, 2016 and 2020, where a significant percentage of electors voted by phone or on the web, some saw increased voter turnout, but this was not the experience for all municipalities.

While most would agree that online voting is consistent with our increasingly online society, questions of how to maintain the security, validity, and integrity of our elections are still remain.

That being said, in 2020, 26 municipalities across the province offered Internet or telephone option to voters, compared to 20 in 2016. Electronic voting is becoming increasingly popular as the technology advances and improves. There are also different formats in which you can provide electronic voting to try and mitigate the drawbacks and risks. For example, some use it during advance polls only while others provide both paper and electronic voting methods.

In the end, the reality is that all electoral mechanisms carry a certain amount of risk. It is the responsibility of the Returning Officer to manage these risks as best they can. It is also incumbent upon electors not to engage in prohibited activity or corrupt practices respecting the vote.

The question is whether the risks of electronic voting are an acceptable trade-off for increased accessibility and convenience? Based on our research, the improved security and reliability of the systems and the growing use of electronic voting in our region, province and country, I would say the answer is yes. I therefore recommend that Council approve the use of electronic voting as a means of voting in our Municipality.

SUGGESTED MOTION

Move to recommend to Council to approve the use of electronic as a means of voting in the Municipality and direct staff to draft a by-law regulating its use.

ATTACHMENTS

- Section 146A of the Nova Scotia Municipal Elections Act
- 2020 AMANS Electronic Voting Presentation
- Online resources:
 - https://electionsnovascotia.ca/sites/default/files/2013_AR_appendix_InternetVoting.pdf
 - <https://www.municipalworld.com/feature-story/internet-voting/>
 - https://www.elections.ca/res/rec/tech/ivote/comp/ivote_e.pdf

(b) if no person is expressly required to administer it, then before the clerk, returning officer, registrar of voters, revising officer, deputy returning officer, a judge, barrister, notary public, justice of the peace or a commissioner for taking affidavits.

(2) The oath shall be administered without fee or reward. R.S., c. 300, s. 146.

Vote by mail or other voting method

146A (1) A council may by by-law authorize voters to vote by mail, electronically or by another voting method.

(2) The by-law referred to in subsection (1) shall provide for the system of voting for any election that occurs after the date stated in the by-law or the date the by-law takes effect, including

- (a) the notification of electors;
- (b) the form of the ballots where applicable;
- (c) the swearing in and voting on election day;
- (d) the method of counting the ballots or votes; and
- (e) the rejection of ballots or votes.

(3) The by-law may provide for

- (a) the contents of voters kits;
- (b) the places where voting can occur or ballots can be delivered instead of mailing, if applicable;
- (c) the process for sorting, storing or cataloguing any ballots received;
 - (ca) voting by telephone, via the Internet or by any other electronic means, including a combination of different electronic means;
 - (cb) the method of recounting the ballots or votes;
 - (cc) additional hours and dates for voting at an advance poll, including permitting voting twenty-four hours per day over a period of days;
 - (cd) the appointment and duties of an auditor to audit and monitor the performance of the system of voting;
 - (d) any matter or thing necessary to effectively conduct the election, including matters or things under Sections 75, 76, 77, 78, 79 and 86.

(3A) Where an auditor is appointed under the by-law, the auditor shall, before entering upon the duties of the office, take the oath in the form prescribed by the regulations.

(4) Not fewer than sixty days before ordinary polling day, the returning officer shall establish procedures and forms for the conduct of voting in accordance with the by-law and provide a copy of the procedures and forms to each candidate for election.

(5) Where a by-law under this Section is in effect, the provisions of this Act respecting the matters dealt with by the by-law apply only if the by-law so specifies.

(6) Notwithstanding subsection (5), where a by-law provides for voting via the Internet through the unsupervised use of a personal computing device, the by-law must also permit voting by some other means on each advance polling day and on ordinary polling day.

(7) A by-law made pursuant to this Section may provide for the creation of offences and may

(a) impose a fine not exceeding ten thousand dollars or imprisonment for a maximum term of two years less a day, or both;

(b) impose a minimum fine;

(c) provide for imprisonment, for not more than one year, for non-payment of a fine.

(8) The *Remission of Penalties Act* does not apply to a pecuniary penalty imposed under a by-law made pursuant to this Section.

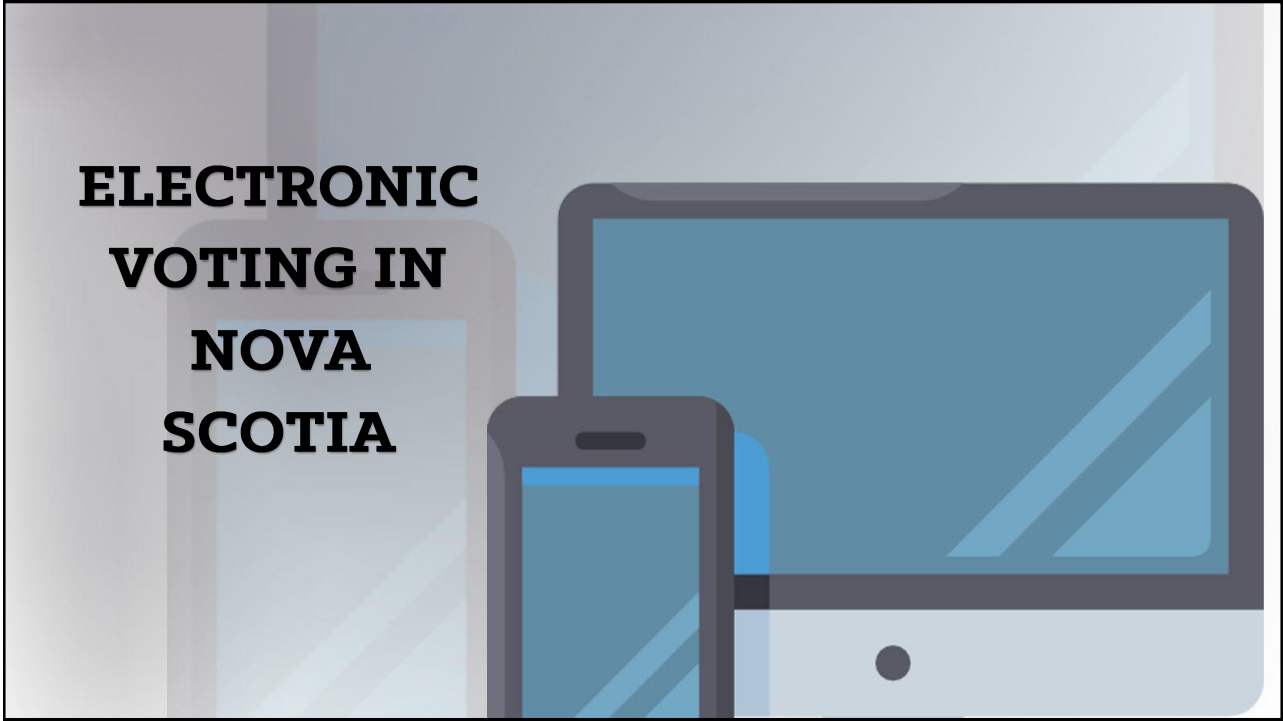
(9) The limitation period for the prosecution of an offence under a by-law made pursuant to this Section is two years from the later of the date of the commission of the offence and the date on which it was discovered that an offence had been committed. 2003, c. 9, s. 41; 2007, c. 46, s. 24; 2008, c. 24, s. 2; 2011, c. 68, s. 23; 2015, c. 47, s. 25.

Oath of councillor

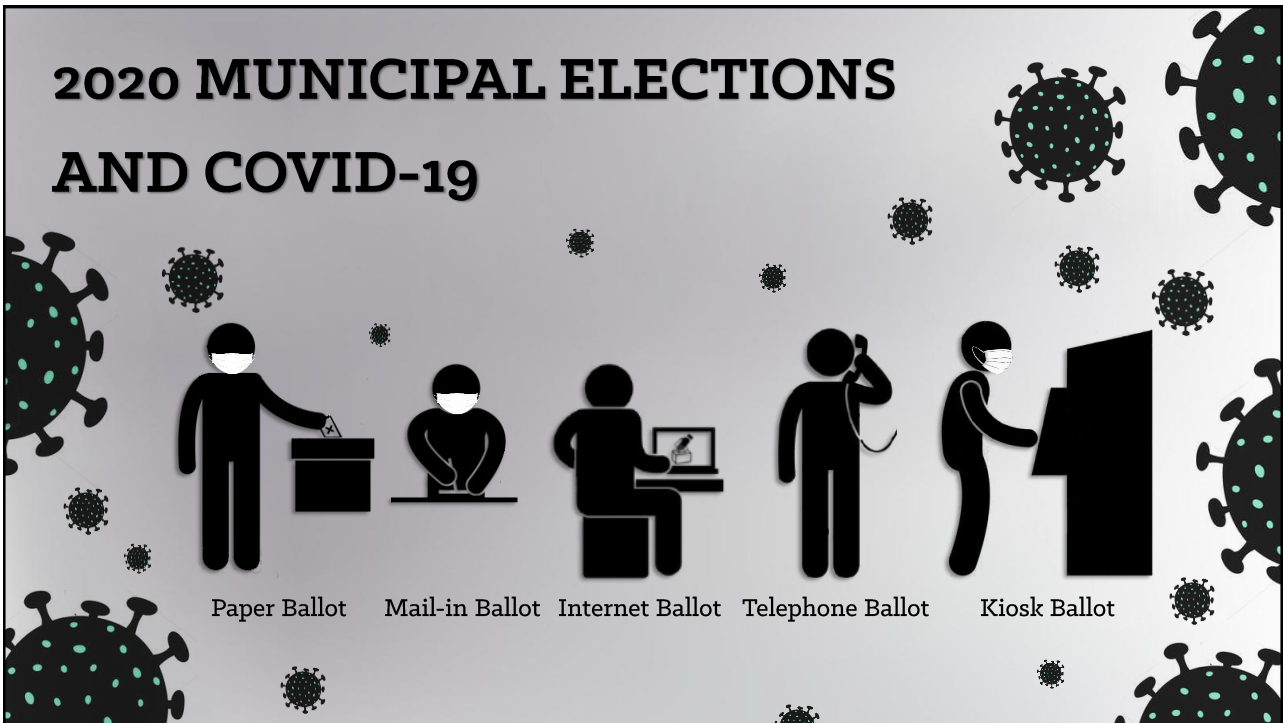
147 (1) A councillor shall, before entering upon the duties of his office, be sworn by taking the oath of allegiance and of office in prescribed form.

(2) The oath shall be administered by a judge, justice of the peace, the mayor or warden, or the clerk.

(3) The clerk shall enter a certificate of the taking of the oath in the minutes.



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THE NOVA SCOTIA EXPERIENCE



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HOW HAS E-VOTING BEEN IMPLEMENTED IN NS?

Municipalities with an Electronic Voting Option, 2016 Municipal and School Board Elections

	Municipality	Advance Vote	Election Day
1	Berwick	eVote	eVote
2	Digby (Town)	eVote	eVote
3	Middleton	eVote	eVote
4	Truro	eVote	eVote
5	Yarmouth (Town)	eVote	eVote
6	Antigonish	Paper, eVote	Paper, eVote
7	Argyle	Paper, eVote	Paper, eVote
8	Bridgewater	Paper, eVote	Paper, eVote
9	Clare	Paper, eVote	Paper, eVote
10	Digby (Mun)	Paper, eVote	Paper, eVote
11	Kentville	Paper (Sr. Fac.) eVote	Paper (Sr. Fac.) eVote
12	Shelburne (Town)	Paper (Sr. Fac.) eVote	Paper (Sr. Fac.) eVote
13	Stewiacke	Paper, eVote	Paper, eVote
14	Windsor	Paper (Sr. Fac.) eVote	Paper (Sr. Fac.) eVote
15	Cape Breton	eVote	Paper
16	Chester	eVote	Paper
17	Halifax Regional	Paper, eVote	Paper
18	Lunenburg (Mun)	eVote	Paper
19	New Glasgow	eVote	Paper
20	Pictou (Mun)	eVote	Paper
21	Pictou (Town)	eVote	Paper
22	Stellarton	eVote	Paper
23	Victoria	eVote	Paper

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WHAT IS COUNCIL'S ROLE IN ELECTIONS?

- Authorize voters to vote by mail, electronically or by another voting method via By-Law
- Approve election budget
- Approve use of elector lists
- Appointing Returning Officer



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THE REALITIES OF E-VOTING



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E-VOTING IS ACCESSIBLE AND CONVENIENT

- Surveys of non-voters indicate that being too busy, out of town or ill/disabled is a reason that they did not vote.



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E-VOTING IS POPULAR AMONG VOTERS

2008



2012



2016



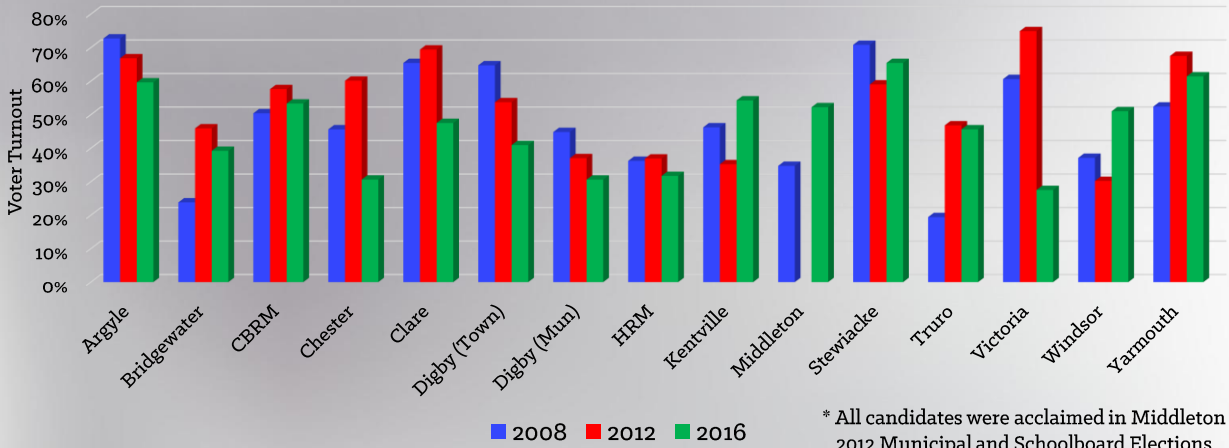
- Post-election surveys indicate that a voter who has cast an electronic ballot will **continue to vote electronically** in future elections.



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E-VOTING IS NOT THE SOLE SOLUTION TO DECLINING TURNOUT

Voter Turnout, 2016, 2012 and 2008 Municipal and Schoolboard Elections



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PERCEIVED VULNERABILITIES



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INCREASED VOTER FRAUD

- Voter fraud is **extremely rare** in Canada. Almost all multiple voters suffer from some form of mental dementia, usually as a result of advanced age or substance abuse.

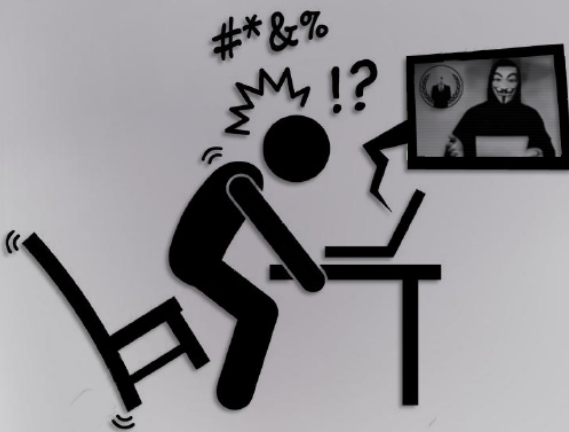


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TECHNOLOGICAL THREATS

- “There has been **no evidence** of vote tampering or rigging in a **public election** using Internet voting”

(Elections BC, 2011: 27)



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THE DIGITAL DIVIDE

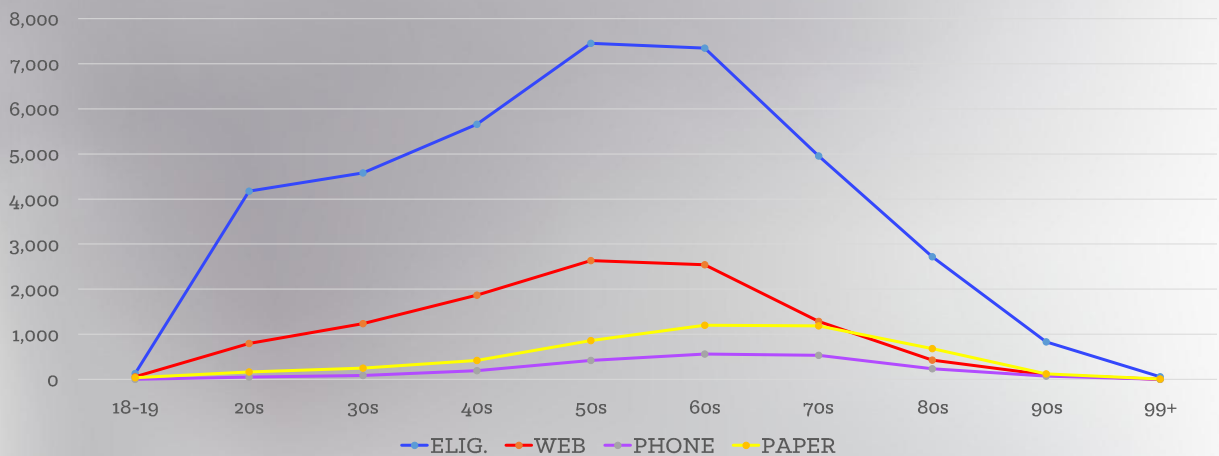
- The digital divide based on age, income and level of internet use is **narrowing** in Nova Scotia.



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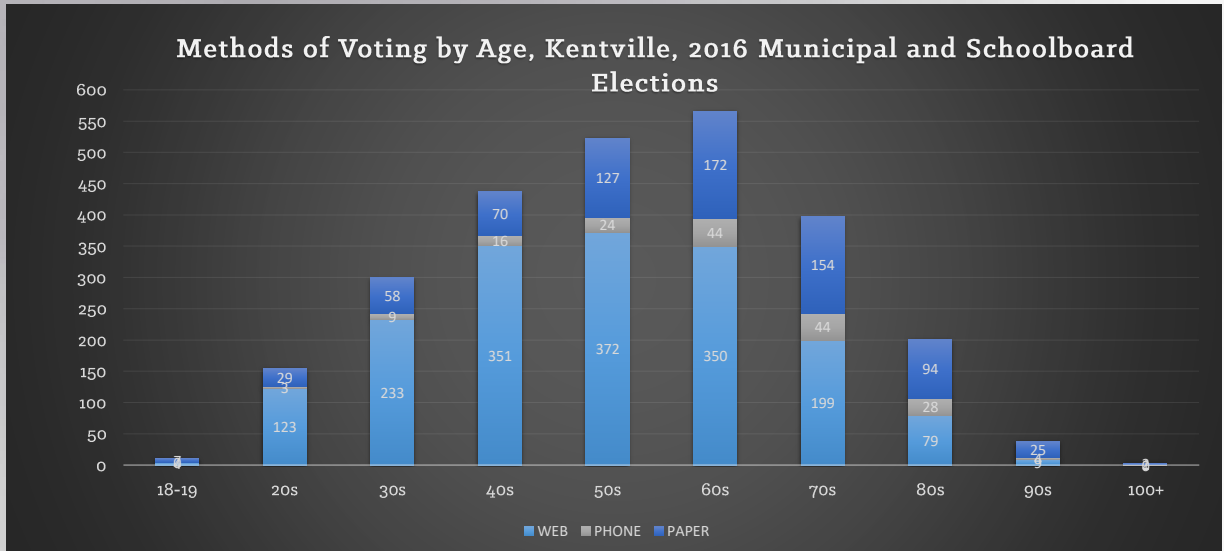
THE DIGITAL DIVIDE CONT.

Type of ballot cast, by age group, Antigonish Town, Argyle, Bridgewater, Clare, Digby Mun, Kentville, Shelburne Town, Stewiacke, and Windsor 2016 Municipal and Schoolboard elections



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THE DIGITAL DIVIDE CONT.



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DO THE RISKS OUTWIEGH THE BENEFITS?



- “No electoral mechanism (electronic or paper) can ever be **absolutely secure** from every possible offense or risk”.

(Elections Canada, 2013: 25)

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