FN Digital Democracy

Indigenous Experiences with Online Voting

May 2021

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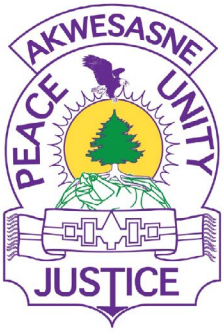

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Note to the Reader

Additional details about the authors are included at the end of the report.

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Executive Summary

The purpose of this report is to examine the opportunities and challenges online voting presents for participation and governance in First Nations in Canada. Specifically, the report draws on the experiences of three First Nations: Tsuut'ina Nation, Wasauksing First Nation and Nipissing First Nation. The research for this report was conducted by Dr. Chelsea Gabel (McMaster University) and Dr. Nicole Goodman (Brock University), who were contracted in September 2017 by Indigenous Affairs and Northern Development Canada to survey community views on online voting and produce a report.

Guided by a community-engaged research process, our approach to the project included the following methods: (1) 27 semi-structured interviews and a focus group; (2) a 2016 Online Voting Roundtable; (3) a community-engaged research project entitled First Nations Digital Democracy and d) local employment and capacity building. Significant input was provided by First Nations at every stage of the process, including feedback of the draft report and its recommendations.

Overall, the report finds that online voting is appealing to First Nations as a way to enhance participation, self-determination and governance. In particular, it can serve as a tool to improve voting accessibility and engagement for members living off-reserve. The engagement of off-reserve members is important as communities may require participation and approval thresholds to pass community-based legislation such as Land Code frameworks.[1] In this context, online voting represents a tool for communities to bridge participatory gaps with off-reserve members and increase capacity to ratify legislation. Findings suggest online voting adoption also enhances inclusiveness and the representation of voices in key community decision-making. Benefits aside, there are also important considerations around the cultural appropriateness of online voting and whether adoption of the technology is consistent with community visions of self-determination and local decision-making.

1 Previously a Land Code had to obtain an approval of 25 percent + 1, however on December 13, 2018 the Framework Agreement on First Nation Land Management was amended to a simple majority or a higher threshold set by the First Nation.

Good Practices and Recommendations

The report offers eight good practices along with 17 steps that should be considered as part of each good practice. Good practices include: responsiveness and resources from the Government of Canada; community knowledge, engagement, outreach and communication; consultation; building digital capacity; building tools and strategy; clear processes, resources and alignment; a focus on technology and the importance of paying attention to language.

Eight final recommendations are presented, providing concrete, actionable steps forward to enable choice for First Nations interested in using online voting and support for those communities actively deploying it.

The eight recommendations are:

1. Amend relevant regulations to allow First Nations to have the choice of using alternative voting methods, such as online voting, in their elections and referendums.
2. Increase earmarked core funding provided by the Government of Canada that could be carried over and support deployment of online and other voting methods.
3. Support the development of a National Centre of Excellence (NCE) or expansion of the First Nations Digital Democracy Project.
4. Enhance responsiveness from the Government of Canada and additional support for Indigenous elections and votes.
5. Create a security framework for online voting implementation.
6. Work with community-owned service providers to enhance Internet connectivity and digital literacy in First Nations.
7. Provide additional research support from ISC/CIRNAC and Tri-Council Agencies for community-engaged research with Indigenous communities focusing on technology.
8. Explore the development of online voting technologies.

Priorities and Next Steps

The first and key priority action is to amend the Indian Band Election Regulations, Indian Referendum Regulations and First Nations Elections Act Regulations to allow for the use of alternative voting methods in First Nations elections and referendums.

The second priority is to move forward with recommendations that have broad support and could be implemented relatively quickly. These recommendations include enhancing the Government of Canada's responsiveness, working with community-owned service providers and undertaking activities to enhance Internet connectivity and digital literacy.

A third priority is to ensure implementation of the report and promote community buy-in and ownership of recommendations, and to maintain momentum and leadership around key recommendations. We propose coordinating an additional meeting or Alternative Voting Workshop to bring community organizations, governments, and leaders together to discuss the report and prioritize recommendations.

Introduction

Indigenous nations are innovating in important ways, and some are turning to technology as a way to resist encroachment by industries, federal and provincial governments, and other forces. Digital technologies can be used as an effective means to overcome disadvantage by improving community capacity, affirming Indigenous identity, and providing culturally relevant information to northern and isolated communities. Digital technologies can also play an important role in maintaining and reinvigorating cultural practices by enhancing intergenerational engagement by connecting elders and youth and enhancing the preservation of Indigenous knowledge.

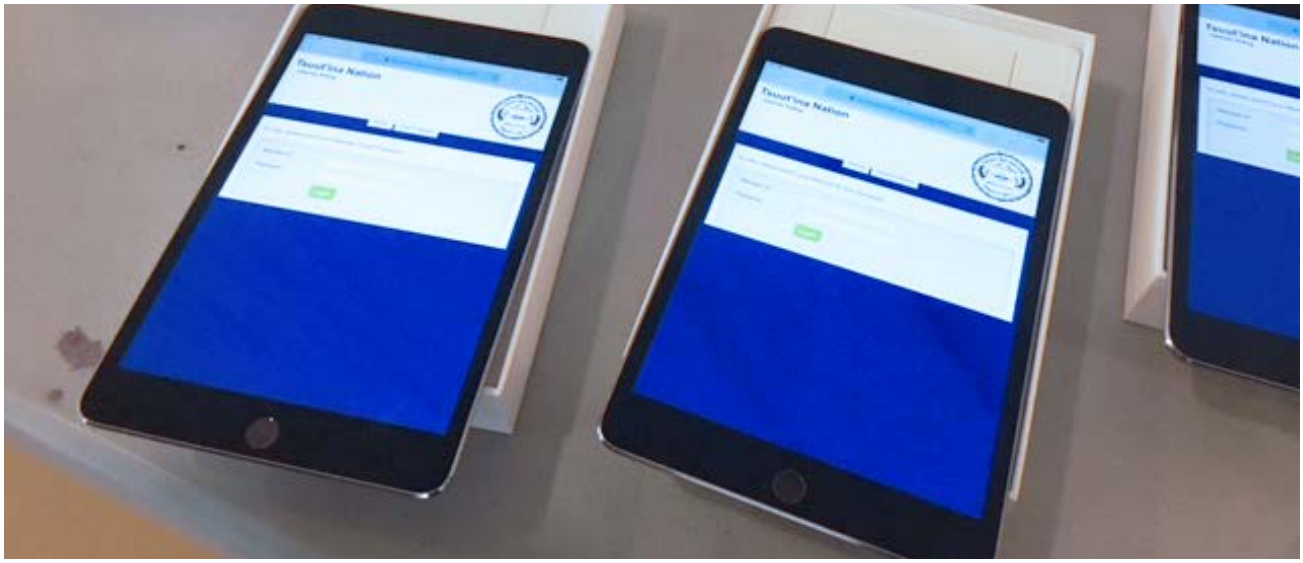
One recent trend in Indigenous adoption of digital technology is the use of online voting for elections, referendums, ratification and agreement votes and community consultations. First used by Tahltan First Nation in British Columbia for two votes in 2011, more than 80 First Nations across Canada have now deployed online voting.[2] Electronic voting usage is expected to exceed 120 communities by the end of 2020.[3] Online voting is primarily used in the context of ratification and agreement votes often to ratify First Nation-led frameworks that move nations out from under the Indian Act, enhancing their autonomy. In 2013, Nipissing First Nation was the first community in Ontario to pass its own constitution, the Chi-Naaknigewin. Likewise, utilizing online voting, Whitefish River First Nation held a ratification vote to approve their Matrimonial Real Property Law in 2015, and Wasauksing First Nation approved their Land Code in 2017.

Online voting is appealing to Indigenous communities as a way to enhance community member participation, self-determination and governance. It can also be used as a tool to improve voting accessibility and engagement, especially for those communities where large numbers of members live off-reserve. The engagement of off-reserve members is crucial and could help First Nations meet participation and approval thresholds (depending on what the community has decided) to enact First Nation created laws and policies. In this context, online voting can represent a tool for communities to bridge participatory gaps with both on and off-reserve members and increase capacity to ratify such legislation. The extension to vote online can also support the engagement of on-reserve members who may not be inclined to attend the band office for various reasons. In these ways, voting online can enhance the inclusiveness and the representation of voices in key community decision-making. However, there are also important considerations around the cultural appropriateness of online voting and whether inclusion of the technology is consistent with community visions of self-determination and local decision-making.

2 This number is based on conversations with First Nations and online voting vendors. It is likely that more First Nations have used online voting but given that there is no central repository for such information, it must be collected individually.
3 There are 634 First Nations in Canada.

The objective of this report is to explore the opportunities and challenges online voting presents for participation and governance in First Nations in Canada. The report pays special attention to the implications for self-governance and its future usage, which inform policy recommendations for First Nations and the Government of Canada regarding online voting use for First Nations elections and votes. Specifically, the report examines Indigenous experiences with online voting in Canada by drawing on the experiences of three First Nations: Tsuut'ina Nation, Wasauksing First Nation, and Nipissing First Nation. Other sources of information include 27 interviews, a focus group and a roundtable with Indigenous leaders, community members and other identified experts.

The report is organized in seven sections. The first portion provides historical and contemporary context regarding First Nations governance and elections. Second, key definitions are presented, and the methods that inform this report are outlined. The third section discusses attitudes toward online voting generally in Canada as well as from Indigenous perspectives. Fourth, key benefits and barriers to online voting are presented based on a review of scholarly research and technical reports. These strengths and challenges are discussed generally and in Indigenous contexts specifically. Fifth, community profiles of Wasauksing First Nation, Nipissing First Nation and Tsuut'ina Nation provide reviews of these nations' practical experiences deploying online voting. Sixth, based on research and community experiences, 18 good practices are suggested to support the use of online voting in Indigenous communities in Canada. Finally, the report concludes with eight policy recommendations to guide the future support of online voting adoption in Indigenous communities and their elections and votes more broadly. Concrete next steps are also provided.



Indigenous Elections and COVID-19

The relevance of this report and importance of its recommendations has been magnified by the onset of the COVID-19 pandemic. The pandemic has disrupted Indigenous elections and referendums across the country. While some were postponed, others went forward with them despite public health concerns. On March 19th, 2020, an internal email from Indigenous Services Canada explained that if elections held under the Indian Act and First Nations Elections Act did not move forward as scheduled, communities ran the risk of a governance gap. There is no provision in either Act for an extension even in times of crisis (Lisk, 2020). As a consequence, communities held elections at a time when they might not have otherwise, and when elections for other governments in Canada were postponed (e.g., New Brunswick's municipal elections).[4]

Shoal Lake #39 is one community that proceeded with their election only to learn that a memo from Indigenous Services Canada was circulated shortly after recommending that First Nations not proceed due to public health concerns related to COVID-19 (Ibid).[5] Atikamekshen Anishnawbek First Nation in northern Ontario is another community that proceeded with their election on June 27th, 2020. They used a combination of online and paper ballots. The tension between holding regular elections and referendums and doing so safely during a pandemic has thrust discussions of online ballots back into the limelight and emphasizes both the importance of this report and the need for communities to choose balloting options that work best for the well-being of the community.

4 *In the past the way that decisions have been made by the federal government in response to outbreaks, such as the H1N1 influenza, have left many Indigenous communities feeling stigmatized and less valued. For example, Health Canada sent more than two dozen body bags to a Manitoba First Nation in preparation for a possible flu outbreak instead of other needed supplies, such as masks, respirators and alcohol-based hand sanitizers (NCCAH, 2016). Many Indigenous communities do not have access to physicians or hospitals and are many miles away from urban centres to be treated for serious conditions, which makes them additionally vulnerable.*

5 *Regulations enabling the cancellation or postponement of First Nations elections were registered on April 8, 2020. This new temporary regulatory option allows First Nations leaders to continue exercising their roles and duties within their communities for up to 6 months, with the potential to extend for another 6 months.*

Background on Indigenous Governance and Elections

Prior to colonization, Indigenous peoples had their own systems of governance and the capacity, tools and authority to deal with particular issues within their communities. However, factors such as the enduring legacy of colonization, dispossession from the land, disruption of traditional lifeways, the long-term effects of the residential school system, and the Indian Act have created enduring conditions of dependency as Indigenous peoples have been confined to the administration of federal and provincial bureaucracies. The Indian Act in particular has framed the relationship between the Crown and Indigenous peoples in settler terms, ignoring treaty commitments, Indigenous systems of governance, and the inherent right to self-determination. Additionally, it imposed a foreign governance system, the Indian Act system.

Many Indigenous peoples understand the Government of Canada, through Indigenous and Northern Affairs Canada (INAC), as the agent responsible for both historical and contemporary forms of colonization and dispossession. The Minister(s) responsible have the authority to make, veto and alter community decisions, suspend operations, or terminate them. This authority creates a situation where Indigenous peoples and nations have little trust in INAC and a lack of willingness to engage in processes that are led by the Department. Instead, they are increasingly empowering themselves outside of the systems put in place and operated by the Government of Canada. At the same time, however, the Crown maintains a fiduciary duty to Indigenous peoples across the country, with INAC traditionally taking on much of the work to uphold this duty to Indigenous peoples. This structure creates a relationship where Indigenous peoples and nations are putting self-determining practices into place outside of the structures of government, while government continues to maintain its authority over communities.

The complicated nature of this relationship has been recognized recently in the move to split INAC into two departments: Indigenous Services Canada (ISC) and Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC). While this reorganization may support improved service delivery, an initial lack of consultation with Indigenous communities and the absence of a public plan for the dissolution of INAC prompted concern and uncertainty among many communities and Indigenous organizations.[6] Elections within

6 *The dissolution of INAC and plan to create two new departments was one of the recommendations of the 1996 final Report of the Royal Commission on Aboriginal Peoples (RCAP). It has been pointed out that this item was one of 444 recommendations outlined in Volume Two and the context now is very different (Coburn, 2018). There has also been no word on the other recommendations that were supposed to be implemented alongside the splitting of INAC. The Minister of CIRNAC undertook engagement sessions with First Nations, Inuit and Métis people to address the creation of these departments. Details about these sessions and participating communities can be found here: https://www.rcaanc-cirnac.gc.ca/eng/1512679042828/153988623655.*

Indigenous communities provide a concrete example of this concern. It is unclear which department will take responsibility for supporting communities in their voting processes and implementing the necessary changes to the regulations related to Indian Band Elections (C.R.C., c. 952), Indian Referendums (C.R.C., c. 957) and the First Nations Election Act (SOR/2015-86). Further, Indigenous peoples are interested in implementing decision-making processes that are not subject to the authority of either Minister. In this respect, they view the role of the Government of Canada as supportive, to build capacity in their communities. In terms of leadership and decision-making, communities are best placed to understand their own needs, and they need to be empowered to determine their own solutions to those needs. With respect to electoral governance, this means First Nations' having control over their elections and votes, and the types of voting methods they use with arm's length support from the government. While the option to use online voting exists for First Nations operating under custom election codes, communities whose elections are governed by the terms of the Indian Act and the First Nation Election Act are currently restricted to the use of paper and mail-in ballots.

Indigenous communities hope that online voting will reduce barriers to participation. For those off-reserve members included in Band Council votes as a result of the Corbière v. Canada decision, it will offer a quicker and easier alternative to the mail-in ballot system.[7] The move will give their members greater voice and contribute to sustainable governance structures. This move is especially important given that Indigenous peoples feel their voices have often been repressed, and their communities marginalized, due to ongoing colonial relations in Canada. The First Nation partners engaged for this report are optimistic about leveraging online voting and other technologies as mechanisms for representation, to enhance their relationship with community members through increased engagement, elevate confidence and capacity in critical areas, contribute to sustainable governance structures, and ensure their ongoing self-determination. The question is whether the use of digital technology, and in the context of this report online voting, is relevant to, and fits the needs of, Indigenous peoples as they move forward in their quest to build their communities and nations.

7 *The Supreme Court of Canada decision in Corbiere v. Canada declared that subsection 77(1) of the Indian Act, which limited the right to vote at band elections to First Nation members residing on the reserve, was against the Charter of Rights and Freedoms. Subsequently, all members of a First Nation, at least 18 years of age, were extended voting rights at their band's election held in accordance with the Indian Act. The court decision also obligated Canada, through regulations, to develop a mechanism by which off-reserve members could exercise this new voting right without having to travel excessive distances. Thus, a mail-in balloting system was developed.*

First Nation Elections and Ratification Processes

Processes

First Nations in Canada are increasingly tasked with conducting ratification votes and referendums on a range of issues. The requirement to hold ratification votes stems from the increasing popularity of First Nation Land Codes and custom election codes. Land and election codes are legislations developed by individual First Nations that replace sections of the Indian Act. To successfully pass legislation, First Nations are required to hold ratification votes among their members that provide community approval for the developed legislation. From the Government of Canada's perspective, ratification votes help to ensure that all members of a First Nation are able to offer their informed consent concerning issues that impact their collective rights and resources.

In the case of First Nation referendums, there are four primary scenarios where ratification votes are utilized by First Nations. The first scenario occurs when a First Nation wishes to designate or surrender reserve land. Under section 39.1 of the Indian Act, a First Nation is required to hold a referendum vote among its members as part of the process to approve a proposed designation or sale of land. The second common scenario for First Nation referendums is the amendment of Land Codes or custom election codes. In designing their own Land Codes and election procedures, many First Nations will include provisions which require a referendum to be held on a proposed amendment. The third scenario where referendums are often required is to ratify agreements made between one or more First Nations and the Government of Canada or a private sector business. These agreements include those pertaining to the outcomes of self-government negotiations, Impact Benefit Agreements signed between a First Nation(s) and a private sector developer or business, and agreements on the settlement of certain claims related to historical injustices. The fourth scenario for First Nations referendums arises in relation to the development of First Nation constitutions. While not necessarily guided by federal legislation or a government-to-government agreement, First Nation constitutions have become increasingly popular among First Nations across Canada. It has become common for First Nations to approve the terms of their constitutions through holding a referendum.

Definitions and Methodology

Definitions

Indigenous

In this report, we use the more uniting and less colonizing term *Indigenous* to refer to First Nations, Inuit, and Métis peoples of Canada. The Martinez Cobo Study (1982) provided the most widely cited "working definition" of Indigenous peoples: Indigenous communities, peoples and nations are those which, having a historical continuity with pre-invasion and pre-colonial societies that developed on their territories, consider themselves distinct from other sectors of the societies now prevailing on those territories, or parts of them. They form at present non-dominant sectors of society and are determined to preserve, develop and transmit to future generations their ancestral territories, and their ethnic identity, as the basis of their continued existence as peoples, in accordance with their own cultural patterns, social institutions and legal system. It also notes that an Indigenous person is:

> *... one who belongs to these Indigenous populations through self-identification as Indigenous (group consciousness) and is recognized and accepted by these populations as one of its members (acceptance by the group). This preserves for these communities the sovereign right and power to decide who belongs to them, without external interference.*

This report features First Nations specifically, however, we recognize that Métis and Inuit communities may be interested in pursuing online voting in the future. The Métis Nation of Ontario, for example, used online voting for an election in 2016.

Online Voting

Online voting is often associated with receiving, casting and counting a ballot over the Internet. Online voting differs from electronic voting which includes "systems where the recording, casting or counting of votes in political elections and referendums involves information and communication technologies" (International IDEA, 2011: 6) but not necessarily an Internet connection for the reception, transmission and tabulation of ballots. Online voting can take place on-site in controlled settings such as polling places or at public kiosks that are set up in high traffic areas such as libraries, community centres, and shopping malls. Public kiosks offer slightly less control for election officials because they are not established in designated polling places. Public kiosks offer slightly improved access and convenience for electors given that these are places they might visit regularly, which minimizes the time it takes to travel to a poll.[8]

Online voting can also occur remotely in uncontrolled settings. The most popular type of remote online voting refers to systems where ballots are obtained, cast and counted using an Internet connection (Goodman, 2017; U.S. Public Policy Council of the Association of Computing Machinery, 2010). This type of online voting is used by Indigenous communities in Canada and is the definition embraced by this report. Under this approach, electors can access an online ballot from any electronic device with an Internet connection at home, work, or another place of convenience. Remote online voting presents the greatest access and convenience for electors and the least control for election officials, posing greater security risks than online voting in more controlled settings.

There are also hybrid types of online voting wherein a ballot can be received using an electronic device with an Internet connection, but then must be printed, completed by hand and mailed back to election authorities. A similar approach allows for a paper ballot to be completed by hand, then scanned into an electronic format and submitted by email. These approaches are considered to be online voting, even though the reception, casting and tally of the ballot do not all occur online (Goodman, 2017; iVote Advisory Committee, 2015). Such approaches are used for uniformed and overseas citizens in the United States and are recommended by computer scientists as posing fewer security risks. Barriers of this type of online voting could include access to a printer, scanner and physically mailing the ballot.

8 *Online voting is not to be confused with voting by telephone, which is a different voting method that does not use an Internet connection. Voting by telephone has been used by some communities and is mentioned in this report, but is not a focus of the report.*

Methodology

This report is informed by a combination of primary research and a review of secondary sources. Secondary sources include scholarly journal articles and books, technical reports, government documents, magazine and news articles and survey data. Primary research comes from three sources: (1) semi-structured interviews and a focus group; (2) a 2016 Online Voting Roundtable; (3) and a community-engaged research project entitled First Nations Digital Democracy. The report was also presented by the researchers and discussed with seven First Nations at an Alternative Voting Workshop hosted by First Nation Land Management Resource Centre and the Government of Canada on March 25 and 26, 2019 in Mississauga, Ontario.

Twenty-seven semi-structured interviews were carried out with community actors, Indigenous leaders, identified experts, CIRNAC, Elections Canada and online voting vendors. Four interview guides were used, which included a guide for communities, Elections Canada, CIRNAC and general lines of inquiry for other actors, identified experts and technology vendors. Questions focused on probing knowledge about and experiences with Indigenous attitudes toward online voting, rationales for use, benefits and barriers to adoption, legislative hurdles, effects of online voting on self-determination and community capacity, security risks and mitigation measures, good practices for Indigenous adoption of online voting and recommendations for how online voting use could be better supported to enhance the scope of Indigenous self-determination of decision-making processes. Specific questions were targeted or skipped based on the expertise and experience of interviewees. In addition, one focus group with four participants was conducted in Tsuut'ina Nation, using the community questionnaire as a guide. Interviews with Elections Canada personnel were also conducted in a group format. All participants were made aware of the nature of the report prior to commencing the interview.

Second, an Online Voting Roundtable to inform the Special Committee on Electoral Reform and Canada's national debate on electoral reform debate is a main source of content. The Centre for e-Democracy hosted the Roundtable in partnership with the First Nations Digital Democracy project and McMaster University on September 26, 2016 at the University of Ottawa. The Roundtable foregrounded the role online voting could play in Canada's federal electoral process and in efforts for reconciliation with Indigenous people. Ministers, Members of Parliament, academics, policymakers, citizens and leaders of Indigenous communities and organizations, and e-democracy experts from around the world came together to discuss the adoption and policy considerations of online voting in Canadian federal elections. The Roundtable was unique in that it brought an Indigenous perspective to the electoral reform debate on online voting.

Third, information and data in the report come from a research project led by the authors entitled First Nations Digital Democracy, which was funded by a Social Sciences and Humanities Research Council of Canada Partnership Development Grant. This project involves a partnership approach based upon long-standing research collaborations, relationships with Indigenous communities, and the online voting community. It includes stakeholders across diverse sectors that share a deep interest in issues of digital technology, Indigenous self-determination and governance, electoral participation, and public policy with the goal of better understanding the impacts of digital technology on Indigenous participation and governance. Given the importance this project plays in informing the content and approach to producing this report, it is explained here.

A Community-Engaged Approach

The project takes an approach that is community-engaged and participatory, whereby community partners generate knowledge about themselves, rather than being the objects of study. This commitment shapes the project design, methodological approach and dissemination strategies. Furthermore, the community-engaged approach adopted by this project mobilizes multiple knowledge systems to address a set of complex social issues. The approach emphasizes the value of research to support and develop understanding and achieve evidence-based policy and positive community change. A community-engaged approach ensures that project outcomes are accessible to all audiences and promises intellectual, cultural, social and economic benefits to a range of stakeholders. These benefits transcend what one individual consultant, scholar, or partner could deliver.

Community-engaged research promotes community ownership of both process and outcome. This research not only enhances the quantity and the quality of data collected but also the overall sense of community control and ownership of the process. It also results in a deeper understanding of a community's unique circumstances and challenges, a more accurate framework for adapting "good practices" to the community's needs, and a greater likelihood that findings and recommendations will be implemented. All data and research instruments generated in this process will be passed on to the community for their own use, including follow up research.

A fourth element that guides the approach taken to the research project and this report is community employment and capacity building. The project has involved the training of community-based surveyors, training in elections, and training in research methods.

The experiences drawn upon and highlighted in this report are the result of ongoing relationship building as part of the First Nations Digital Democracy project. All research was carried out with communities, taking their guidance on research design, research questions and project outcomes. We worked with Wasauksing First Nation (Ontario) for

their Land Code ratification vote in 2017. Relationship building spanned over two years and included multiple community visits, meetings, presentations, submissions for the community newsletter, community reports, and the training of First Nation youth in the community. Nipissing First Nation (Ontario) trialed online voting before the inception of the project but since 2014 has been a key partner attending project meetings and taking part in the Online Voting Roundtable. Finally, the project supported Tsuut'ina Nation (Alberta) with an opinion poll and a referendum regarding whether to cultivate, process and legally sell cannabis on the Nation. Engagement has involved multiple community visits, a presentation to Chief and Council, and a mock vote that taught community members how to use online voting and build digital literacy. The report looks closely at how these communities have proceeded with online voting, recent changes or developments to online voting approaches and scope, lessons learned, and future plans for deployment. The community-engaged approach is appropriate for this project given the need to learn from community members about the strengths and weaknesses of online voting and the challenges and opportunities they feel will accompany online voting.

Current Climate for Online Voting:

Attitudes Toward Online Voting

Overall, increases in advance voting, and a rise in the proportion of electors who say they did not vote for reasons of "everyday life and health" supports the use of alternative voting methods that can enhance voter convenience and access. Public opinion data suggests Canadians would like to see online voting offered in elections and would make use of it. Non-voters also point to online voting as a potential solution to promote their participation in elections. Finally, data from municipal elections show that online voters are more satisfied with the voting experience than those who vote in-person by paper at the polls. In addition, in spite of choosing to vote by paper, a majority of paper voters say they would like the option to vote online in future elections.[9]

Canadians are generally receptive to having online voting offered in elections, which is likely part of a broader trend where electors are seeking, and making use of, more accessible voting opportunities. The recent upsurge in participation at advance polls in federal, provincial and municipal elections is one example (Goodman, 2017). Canadians are increasingly attributing their non-voting behaviour to everyday life or health issues, such as being "too busy," out of town or having an illness or disability. For the 2015 general election, 48 percent of non-voters state reasons of everyday life or health to explain their non-participation, while 40 percent claim political reasons (lack of interest in politics, lack of information) and 8 percent express issues related to the electoral process (not on voters' list, could not prove identity). Indigenous non-voters living off-reserve are slightly more likely to identify with political reasons (43 percent) than everyday life or health issues (41 percent) as their rationales for not voting in the 2015 federal election (Elections Canada, 2016).

In terms of attitudes toward voting by Internet, the 2011 Survey of Electors asked questions about possible online voting use. Fifty-seven percent of non-voters surveyed indicated that they would have voted online had the option been available, while a further 9 percent said they might have done so (Elections Canada, 2011). Furthermore, when non-voters were asked how they could be encouraged to participate, 14 percent cited online voting as a solution.[10] This percentage suggests that online voting is an option non-voters would support to encourage their participation.

9 *In this section, paper voting refers to voting by paper in-person at a physical poll location. Voting by paper ballot via mail is specified as mail voting or voting by mail.*

10 *This percentage is the largest in the "electoral process issues" category. Twenty-one percent cited issues with the electoral process: 5 percent asked for more accessible poll locations and 2 percent said more information about election dates and poll locations would encourage their participation.*

Public opinion polls also point to support for online voting. Data collected by EKOS in 2016 shows that a majority of Canadians say they would use online voting. Seventy-seven percent of respondents say that would be "somewhat" or "very likely" to vote online in the next federal election. Similarly, a 2016 poll of 1,000 Canadians conducted by AskingCanadians finds that 76 percent of those polled say they would be likely to vote online if it were an option. When then asked about their preference for electoral reform, 42 percent said online voting, 25 percent supported electoral system change and 20 percent chose mandatory voting.[11] While these questions do not directly ask about support, likelihood of use is often regarded as an indicator of public support for online voting (Germann et al., 2014; Goodman, 2017; Trechsel & Vassil, 2010).

When online voting is offered in municipal elections alongside other voting options such as telephone and in-person paper voting, it is by far the most popular. For example, looking at the 23 Ontario municipalities that offered all three voting methods simultaneously (Internet, telephone and in-person paper ballots at the polls) in the 2014 municipal elections, 56 percent of ballots were cast by Internet, 32 percent by paper and 13 percent by phone (Goodman & Stokes, 2020). The Internet Voting Project, a 2014 study of online voting deployment in 47 Ontario municipalities that surveyed 33,090 online voters and 1,766 paper voters, finds that a strong majority of online voters are satisfied with the voting method (95 percent) and would like to see it offered in future municipal (98 percent), provincial (95 percent) and federal (94 percent) elections. By comparison, satisfaction with paper voting is much lower at 68 percent. Furthermore, a majority (78 percent) of persons who chose to cast a paper ballot say they would use online voting in a future election. Forty-seven percent say they would do so under "special circumstances," such as in cases of illness or inclement weather, while 30 percent report they would vote online "no matter what." Paper voters' reported preference for online voting suggests support for the voting method, particularly in cases when circumstances may prevent them from attending a physical poll location.

11 *Thirteen percent said "none of them."*

Indigenous Perspectives Toward Online Voting

Data on Indigenous attitudes toward online voting is limited. Available information from select First Nations suggests receptiveness to the policy change. However, it is important to note that all 634 First Nations in Canada are unique and highly contextual. While online voting may work well in one community, in another it may not be a good fit, nor deliver the same impacts, which highlights the importance of community control over voting options. Connectivity also varies by community and may be a barrier in some First Nations. Community-engaged research undertaken by the First Nations Digital Democracy project finds support for online voting among First Nations that partnered in the research, however this finding does not reflect the opinions or experiences of all First Nations.

In the context of federal elections, data collected by Elections Canada suggests support for online voting among Indigenous non-voters. For example, in a survey of electors in the 2011 federal election, 54 percent of Indigenous non-voters indicated they would have taken part had they been able to vote online (Elections Canada, 2011: 25). Furthermore, Indigenous respondents cited online voting as a possible means of encouraging Indigenous electors to cast a ballot in federal elections.

Community-engaged survey research carried out as part of the First Nations Digital Democracy project also points to support for online voting among First Nations. For example, in a 2017 vote to ratify their Land Code, 30 percent of Wasauksing First Nation electors cast ballots online. The voting method was most popular among middle-aged members living off-reserve. Similar to municipal results, survey data indicates that online voters are more satisfied (100 percent) than paper voters (89 percent). Wasauksing electors chose to vote online for reasons of convenience (41 percent), accessibility (24 percent), wanting to try something new (12 percent) and other reasons (24 percent). One hundred percent of online voters say they would be likely to use the voting method again in a community referendum and Chief and Council election. With respect to impacts on engagement, 13 percent of online voters say they "probably" would not have voted if online ballots were not an option.

Despite choosing to vote by paper, paper voters in the communities surveyed by the First Nations Digital Democracy project generally report positive attitudes towards online voting; albeit the strength of support varies by community. In a survey of paper voters in Wasauksing First Nation, 63 percent said they would vote online in a future vote. Twenty-eight percent noted they would use online voting "in all circumstances" while 35 percent said they would use it in "special circumstances" such as in cases of illness, inclement weather, mobility issues, or if they were traveling. When asked about their voting preference if they could not make it to a poll, 49 percent said they would choose to vote online, 22 percent would vote by mail, 10 percent would appoint a proxy, 5 percent

would cast a telephone ballot, and 5 percent would abstain.[12] In terms of concerns with the technology, 41 percent reported having no concerns. Of those that cited concerns, lack of access (21 percent), security (18 percent), privacy (8 percent), fraud (8 percent), and lack of knowledge (2 percent) were identified. Overall, survey data suggests that online voting was the preferred voting method in Wasauksing First Nation and an option that both paper and online voters would like to see in the future.[13]

Data from paper voters in Whitefish River First Nation also finds support for online voting, although members' attitudes are less positive. With respect to future votes, 56 percent of paper voters say they would vote online (20 percent "in all circumstances," 36 percent in "special circumstances"). The top three reasons given by paper voters for wanting to use online voting was convenience (41 percent), privacy (8 percent), and accessibility (7 percent). However, paper voters in Whitefish River First Nation were more likely to say they "wouldn't vote online" (33 percent) and to express concerns with the voting method. Lack of computer and/or Internet access (26 percent), security (19 percent), replacing voting traditions (8 percent), privacy (6 percent), fraud (5 percent) and other reasons (7 percent) were cited as concerns with voting online.

Generally, available data suggest support for online voting among Indigenous voters. In a federal context, Indigenous non-voters point to online voting as a reform that could promote their participation. In communities that partnered with the First Nations Digital Democracy project, online voters are satisfied with the voting method and paper voters say they would use online voting, especially in situations when they could not attend a physical poll location. While it is difficult to generalize support, as attitudes toward online voting differ by community and may not be positive in all cases, available data from Elections Canada and select First Nations suggest the voting method is desired in those contexts and could be in others.

12 *The remaining 5 percent said they did not know what they would do if they could not attend a physical poll location.*
13 *Data from non-voters was not collected.*

Online Voting: Benefits and Barriers

This portion of the report outlines findings from scholarly studies and technical reports that examine the benefits and drawbacks of online voting. The majority of research focuses on the effects of the voting method in national, sub-national and local government contexts but there is modest work addressing Indigenous use of online voting. As such, some of the findings discussed here speak to application of the technology generally and may not be directly applicable to the unique contexts of Indigenous communities. Each Indigenous nation is unique and what works well or does not apply in one community could have the opposite effect in another. It is important to keep in mind the highly contextual nature of the 634 First Nations in Canada when evaluating the benefits and pitfalls of online voting. This section begins with a review of the findings about online voting generally, in a range of contexts, and then looks more closely at what we know about Indigenous deployment of online voting.

Overall, the benefits of online voting include increased access, convenience, and turnout alongside administrative benefits. By comparison, the barriers to online voting tend to centre on security concerns, issues regarding authentication and verification, potential increased risk for coercion and decreased participation among electors who are older, less educated and lower income. Overcoming these barriers requires special attention to the structural aspects to online voting, which include: a strong legal framework, widespread technological availability (primarily Internet access), and a supportive political culture (Alvarez, Hall & Trechsel, 2009; Goodman, Pammett & DeBardeleben, 2010; Maurer, 2020; Schwartz & Grice, 2020). In particular, a supportive political culture needs to be in place not only among election officials, but also the public. It can also be driven by "policy entrepreneurs" who have successfully made the case for online voting in jurisdictions in Canada, Estonia and Switzerland (Goodman, 2010; Goodman & Pammett, 2014; Mendez, 2010). While concerns will continue to exist, when the correct structures are in place, online voting is seen as a means to enhance voter accessibility and modernize elections. The benefit of accessibility is particularly important for Indigenous communities, as discussed below.

A central benefit of online voting is its potential to improve voter access. This benefit is especially true for electors that face additional barriers when casting a ballot such as having difficulty attending a physical polling location or voting unassisted. The onset of the COVID-19 pandemic has exacerbated barriers to voting for some electors, especially those with weakened or compromised immune systems or those who cannot travel to vote. These events have placed a greater focus on remote types of voting such as online ballots given their potential to enhance voter accessibility while maintaining public health. In terms of reducing voting barriers, online voting adoption in Canadian municipalities has facilitated the use of special applications that have allowed persons with disabilities to vote

unassisted, improving the privacy and equality of the vote for those electors (Germann & Serdült, 2017; Goodman, Pammett & DeBardeleben, 2010). Other groups who benefit from the enhanced access to ballots from remote locations include citizens and military living abroad (Germann et al., 2014), persons who are incarcerated, students away at post-secondary school, seniors or other persons with mobility issues, those living in remote areas, and electors not in the area on voting day such as First Nations living off-reserve (Goodman & Smith, 2017; Goodman et al., 2018). Studies of voting in First Nations find that those living off-reserve are more likely to cast an online ballot and report improved access to the ballot box, which facilitates improved public input in community decision-making (Budd, Gabel & Goodman, 2019). In addition, interviews conducted for this report communicated that online voting can deliver significant improvements to accessibility in remote First Nations. Although access to devices and connectivity can be a barrier, if strategies are put in place to mitigate these challenges, significant improvements in voter access can be realized.

Voter convenience is another popularly mentioned benefit and often the main reason why electors vote online (Fragnière, Grèzes & Ramseyer, 2019; Goodman, 2017). For example, 66 percent of Internet voters surveyed after the 2014 Ontario municipal elections stated they voted online because of convenience (Goodman & Pyman, 2016). These findings are also reflected in other places within Canada, such as in Alberta (Kamenova & Goodman, 2015) and Nova Scotia (Goodman & Smith, 2017), and internationally in Estonia (Alvarez, Hall & Trechsel, 2009), Brazil (Spada et al., 2016) and Australia (Goodman & Smith, 2017). This support the results of other studies that "convenience voting" mechanisms, such as vote by mail, are also quite popular (Germann & Serdült, 2017).

The convenience offered by online voting also provides an additional benefit of increased voter engagement. What studies show is that this convenience has been made clear to older, more educated, and wealthier voters, as they are the most likely to take advantage of the option (Goodman, 2014; Goodman & Pyman, 2016). These voters are also the most likely to vote online in the first place (Goodman et al., 2018), and tend to be the "stickiest" in that they are the most likely group to continue using online voting after the first time they use this method (Mendez & Serdült, 2017). These findings run against the accepted wisdom that the additional convenience of online voting will lead to increased youth engagement, with studies showing that youth participating for the first time tend to gravitate towards paper ballots (Goodman & Pyman, 2016). Overall, while online voting can engage voters, increased expectations for youth engagement should be tempered (Goodman, 2017).

One of the areas with the greatest expectations for online voting has been to increase voter turnout (Goodman, 2010; Goodman & Stokes, 2020). Here the benefits are somewhat mixed, though still positive in the Canadian context. Some studies have found increases in turnout of up to 10 percent (Solop, 2001; Spada et al., 2016), with others finding changes which range from no increase in turnout to up to 3 percent (Alvarez et al., 2009; Gerlach

& Gasser, 2009; Germann & Serdült, 2017; Solvak & Vassil, 2018; Trechsel & Vassil, 2010; Vassil & Weber, 2011). Some more recent work finds the implementation of online voting increases turnout among specific groups of voters such as expatriates (Germann, 2020a) and those with less frequent voting histories (Petitpas, Jaquet, & Sciarini, 2020). This lack of consistency shows the importance of context because when other methods of convenience voting are available (including vote by mail), the introduction of online voting has a lower impact on voter turnout (Germann & Serdült, 2017; Goodman & Stokes, 2020; Mendez, 2010).

Further, being able to use online voting in municipal elections in Ontario increased voter turnout by approximately 3.5 percentage points with increases twice as large if voting by mail was not adopted beforehand (Goodman & Stokes, 2020). While it is important to keep in mind that these increases may be greater at the municipal level than at higher levels of government (Kousser & Mullin, 2007), we might also expect the increases in Indigenous elections and votes at the community level. This expectation is supported by some existing studies discussed in the next section, which focus on First Nations already experimenting with online voting. Finally, related to voter turnout, another benefit to online voting is that it is habit-forming, meaning that individuals are more likely to use online voting if they have in the past (Solvak & Vassil, 2018).

In addition to benefits for voters, there are also administrative advantages associated with online voting. One noteworthy benefit here is a reduction in ballot errors and spoiled ballots. Spoiled ballots typically occur when the voter incorrectly marks their choice on the ballot (Elections BC, 2014), with about 0.05 percent of paper ballots being rejected for this reason (Goodman, 2017). Further, typically 3-4 percent of paper ballots are incorrectly counted by those individuals chosen to count the ballots by hand (Goodman, 2017). By using online voting, however, it is not possible to submit an improperly marked ballot, and ballot miscounting is eliminated because there cannot be subjective interpretation of the ballot markings. Studies have found that use of online voting can reduce unnecessary voter mistakes (Germann, 2020b).

Finally, online voting has been said to improve efficiency and accountability, including making the counting of ballots and announcing the results faster (Goodman, 2017; Pammett & Goodman, 2013). There are large differences in how long it has actually taken to announce election results though, with it taking anywhere from 30 minutes to 3+ hours in Canadian municipal elections. The biggest issue in announcing results quickly has been computer problems stemming from tabulating and verifying the results (Ibid).

While there are many benefits of online voting, there remain barriers to its full implementation. At the core of these barriers are concerns over security, which are a result of the technology behind online voting (Cardillo, Akinyokun & Essex, 2019; Epstein, 2010; Murray, 2020). Much of this concern stems from the related concepts of authentication, and auditability and verification (Galois, 2015; Schryen & Rich, 2009).

Looking first to authentication as a potential barrier, one of the most important parts of running a successful election is for officials to be able to confirm that voters are who they claim to be, are eligible to vote, and that only one vote is counted (Ahmad et al., 2020; Gritzalis, 2002). Authentication processes are especially important in situations where voters are eligible to cast their ballot more than once, such as in Estonia (Trechsel & Vassil, 2010). The main concern with authentication in jurisdictions that rely on traditional identity documents, such as Canada, is that there is not a secure way to digitally verify a voter's identity (Goodman, 2017).

While Estonia uses electronic ID cards to authenticate voters (Alvarez, Hill & Trechsel, 2009; Trechsel & Vassil, 2010), Canadian municipal elections have typically relied upon a PIN code, which security experts stress is not secure enough for a large-scale rollout (Goodman, 2017). One way to overcome this barrier is to employ a "layered" approach used in places like Switzerland (Chevallier, 2010). In this approach, a voter would have a combination of personal information or a response to a secret question, an object such as a voting card or special code, and biometric data.[14] Given the lack of biometric data available to election officials, this strategy may be difficult to put into practice in Canada, but it is important to keep in mind moving forward.

Related to authentication, voting requires auditability and verifiability. Election officials need to be able to audit and verify the accuracy of election results before they are released to the public. Such processes are made more challenging in the context of remote online voting which takes place between an individual's personal device and computer servers either owned or contracted out by elections officials. In such instances the voters' device is unsupervised and arguably outside of the voters' view unless steps are taken to ensure the device did not modify the vote (e.g., malware for example). In addition, the counting portion of the vote relies on computer algorithms instead of human verification (Benaloh et al., 2014; Essex, 2016).

While there are security concerns regarding paper ballot elections, online voting introduces the potential for security breaches that can affect the vote on a larger scale (e.g., distributed denial of service (DDoS) attacks) (Culnane et al., 2017; Elections BC, 2014). Continuing to employ practices that have been used as a baseline to improve safety such as Transport Layer Security (TLS) and introducing other elements such as end-to-end encryption and cryptographic end-to-end verifiability can help to mitigate the security

14 *This approach is seen as potentially more secure than mailed PIN codes.*

concerns on both individual and universal levels (Elections BC, 2014; Goodman, 2017). Blockchain technology has also been touted as a potential solution (Nasser et al., 2016). In addition, as much as online voting can make the voting process more private for some, it can also pose issues for voter privacy. Voting at home can increase instances of voting fraud or coercion (Goodman, 2017), including situations of family voting where families are forced to vote collectively or there is undue familial pressure to vote for a particular candidate or party (Cardillo, Akinyokun & Essex, 2019; Smith, 2013). However, this is more of a general issue with unsupervised voting rather than with online voting specifically.

In terms of ballot secrecy, one potential threat is malware which could allow an outside actor to compromise votes by changing or viewing them. This threat can exist at the client-side, in transit, or at the server-side (Cardillo, Akinyokun & Essex, 2019). A second issue is the tension between ballot secrecy and verifiability. The potential trade-off between electoral officials' needs for votes to be verifiable and citizens' need for privacy and ballot secrecy (OSCE/ODIHR, 2013; Saglie & Segaard, 2016) can be difficult to navigate when both are understood as minimum requirements. Trying to overcome this tension has slowed the adoption or expansion of online voting in some jurisdictions (e.g., Switzerland and Estonia) (Goodman & Smith, 2017). Cryptographic end-to-end verifiability poses a potential solution to this trade-off because it offers the ability to lock ballots into encrypted boxes and then add the boxes before unlocking the total. This approach also provides the ability to offer the public a mathematical proof that everything was conducted correctly (Galois, 2015).

Another barrier to the widespread adoption of online voting is concern over a lack of digital access and literacy. In this case, a switch away from paper ballots would mean those with high levels of digital literacy, and greater access to digital technology, will continue to participate through online voting (Sciarini et al., 2013; Serdült et al., 2015). Those individuals without digital access and literacy will be left behind (Goodman et al., 2018). This potential digital divide has been seen in some municipal elections in Ontario, where getting rid of all paper ballots meant those "with low digital access and skills" stopped voting (Goodman et al., 2018: 17). This outcome is not necessarily from offering online voting, however. By continuing to offer paper ballots even those on the lesser side of the divide will continue to have access to voting. Also important is that much of the concern has been on older voters losing access, but research on municipal elections in Ontario has shown that the average age of an Internet voter is 53, with those between 55 and 64 being the most likely to vote online (Goodman & Pyman, 2016). This finding means that older voters are able to access online voting and are making use of it more often than others. Other concerns about low-income voters being disenfranchised can also be dealt with by offering online voting across multiple platforms, so that it is accessible with more than just the latest technology.

Benefits and Barriers from Indigenous Perspectives

Many of the benefits and barriers connected to online voting outlined previously are directly relevant for Indigenous communities. However, the unique historical, political, social and legal context of Indigenous communities presents an additional set of benefits and challenges for online voting adoption. This section provides an overview of these benefits and barriers based on the experiences of First Nations and academic and technical research.

While it is recognized that the Chief and Council system is a colonial governance structure, a primary benefit of online voting among Indigenous communities is its ability to increase political participation and engagement through improved voter access (Budd, Gabel & Goodman, 2019; Gabel et al., 2016a; Gabel et al., 2016b; King & Benedict, 2016). Indigenous communities often face geographic and residency challenges when attempting to facilitate citizen participation. Communities with a large proportion of off-reserve citizens have this particular challenge. In the absence of online voting, those living off-reserve typically have two options for participating in community votes: travelling to the community to vote in person or casting a mail-in ballot. Both of these options tend to be perceived as burdensome and undesirable for many off-reserve citizens, resulting in poor off-reserve participation and engagement. Online voting improves voter access by providing an easy and efficient way for off-reserve members to cast a ballot and have their voice heard in the election of candidates or important policy decisions that affect the nation (Gabel et al., 2016a).

While improving voting access is a benefit in other contexts, such as for out-of-town or seasonal electors in municipal elections in Canada, First Nations experience a distinct barrier to citizen engagement given the number of citizens residing off-reserve. In addition, the COVID-19 pandemic has further reinforced the accessibility benefits of online voting for First Nations. Holding an election during a pandemic poses serious public health risks, especially for Indigenous peoples who live in rural, remote and isolated communities. These communities have unique characteristics that make it difficult for them to deal with disease outbreaks and are at greater risk when it comes to COVID-19 due to overcrowded housing, food insecurity and poverty linked to poor health outcomes. Online voting presents one solution to support engagement and reduce barriers to voting.

A second unique benefit of online voting is that it may help to foster an overall sense of community connectedness. Due to historical experiences with colonialism, many Indigenous persons often feel disconnected from the political processes and activities in their community. This disconnection is especially true in remote Indigenous communities with large off-reserve populations (Jack, 2016; Nashkawa, 2016). Research has found that online voting can alleviate feelings of disconnect by fostering dialogue among members of Indigenous communities as well as between Indigenous and local government leaders

(Gabel et al., 2016b). For both on- and off-reserve citizens, online voting provides an accessible pathway for participation that spurs more general interest and engagement with community affairs. In the experiences of community leaders and administrators, the interest in online voting among members has helped to compliment more traditional in-person engagement and outreach strategies, while also allowing officials to reach out to and share information with off-reserve members (Jack, 2016; King & Benedict, 2016; Nashkawa, 2016). Overall, existing research has shown online voting to make positive contributions to community connectedness among both on- and off-reserve members of Indigenous communities.

Finally, a central benefit of online voting for Indigenous communities is that it increases the capacity to self-govern. A key challenge for Indigenous communities to enact their own laws and regulations is achieving the high participation quotas imposed by the federal government (Gabel et al., 2016a; Jack, 2016; King & Benedict, 2016; McMahon, 2014; Nashkawa, 2016). Online voting serves as a critical tool to help communities reach participation quotas by facilitating the participation of both on- and off-reserve members. Furthermore, online voting helps to enhance self-government for First Nations by improving administrative capacity. For example, online and digital voting methods help to simplify ballot-counting processes allowing for results to be calculated and released immediately (Chief Shining Turtle, 2016; Nashkawa, 2016).

Advancements in administrative capacity as a result of the use of online voting have been shown to carry forward beyond official voting periods. In the experience of Whitefish River First Nation for instance, online voting helped the community to create a membership email directory that has facilitated subsequent outreach and service delivery (Gabel et al., 2016b). Finally, the improvements in government responsiveness and administration that online voting brings have been shown to also improve self-governance capacity by improving trust between First Nation citizens and band governments (Budd, Gabel, Goodman, 2019; Gabel et al., 2016a; Jack, 2016; Nashkawa, 2016). With increased trust comes more effective governance, as community members are more likely to participate when they are less suspicious of their government.

By contrast, Indigenous communities face a number of challenges to successfully implement online voting technology. The most immediate challenges they face are in relation to issues of access. Many Indigenous communities, particularly those located far from urban centres, do not have the necessary technological infrastructure for reliable access to high-speed Internet (Gabel et al., 2016a; Jack, 2016; King & Benedict, 2016; Monague, 2016). Alongside access to technological infrastructure, the "start-up" costs associated with online voting (including building accurate member lists and the technological infrastructure for voting needed within the community) can also be significant, with no clear way for communities to fund this innovation. This invariably limits uptake of online voting within these communities.

Another issue of access is related to the technological skills and experience necessary to navigate online voting platforms. Many communities who have used online voting have highlighted members' unfamiliarity with online voting registration processes as a discouraging factor in deciding to vote online (Gabel et al., 2016b). Differences in technological skills and experience within communities have been shown to lead to hesitation toward the adoption of online voting. Research has shown that there is a perception among many communities that a shift to online voting will benefit younger, more tech-savvy community members who have the financial resources to afford devices to participate (Jack, 2016). Overall, challenges and barriers in relation to access can discourage adoption of online voting at the community level and may limit uptake among certain groups of Indigenous community members.

Another barrier for the successful deployment of online voting in First Nations is potential conflicts between online voting methods and traditional Indigenous values and customs. Many communities fear that a shift toward online voting may inadvertently result in less in-person dialogue and deliberation between community members (Gabel et al., 2016a). In many Indigenous cultures, direct, face-to-face deliberation is an important component of decision-making. The fear exists that online voting, and similar digital technologies, might replace these face-to-face interactions with more isolated, anonymous forms of digital participation that in the long run will lessen the overall sense of community and political engagement. Cultural concerns also exist around online voting because virtually all online voting platforms offered in Canada are offered in either English or French as opposed to traditional Indigenous languages (Gabel et al., 2016b). In sum, there is a significant concern about the adoption of online voting within Indigenous communities due to the perception that online voting does not accord with traditional values and can further erode traditional systems of governance. This concern is especially important given the lack of Indigenous providers of online voting services.

Concerns over a potential loss of tradition following a shift to online voting have not materialized in some jurisdictions, however. Notably, where human connections were prioritized there was widespread satisfaction, whether in the form of community forums, or canvassers going around from house to house as part of a community engagement strategy (King & Benedict, 2016; Monague, 2016). This finding points to an important focus moving forward with online voting: there needs to be sustained attention to the alignment of the method of voting with traditional customs. Doing so will offer the most effective options for First Nations and will produce the best outcomes. Alignment with traditional customs could involve the use of digital technologies outside of voting in order to facilitate decision-making by communities, such as community discussion boards, or finding new and innovative ways of engaging off-reserve members (Jack, 2016; Monague, 2016).

What the existing research shows is that by putting online voting into practice, communities build towards their goals of self-determination (Gabel et al., 2016a & b), in large part

because they are able to pass their own laws as a result of modernized and improved governance mechanisms. Having control over the electoral process can help foster a sense of community connectedness. Alongside a broad digital strategy, the research shows that there is a real opportunity to empower communities, both locally and in their relationships with external organizations (Gabel et al., 2016b; McMahon et al., 2014). Alport and Hill (2006) further suggest that kiosks could provide instructions in local languages to overcome minority language, literacy or numeracy issues that impede participation. We suggest future research might consider examining the potential for technologies beyond online voting to address the problem of political exclusion among Indigenous groups and other excluded groups of voters.

Community Profiles

General Overview

As noted, more than 100 Indigenous communities in Canada have used online voting for elections and other types of community votes and consultations. Online voting is appealing to First Nations as a tool to enhance participation, accessibility and overall political engagement, particularly for those living off-reserve. Communities that have used online voting have done so for a variety of vote types including referendums, elections, ratification and agreement votes and community polls. These votes have covered a range of issues such as land governance, local electoral procedures, matrimonial real property laws and impact benefit agreements. By far the most common deployment of online voting has been for the ratification of community legislation in the form of First Nation Land Codes and electoral codes. Both of these types of legislation provide an opportunity for First Nations to opt out of the relevant sections of the Indian Act (i.e., lands or elections) and replace them with community-developed rules and procedures.

Historically, to enact these pieces of legislation, First Nations were required to hold ratification votes that meet imposed participation quorums. Quorum requirements led communities to experiment with online voting as a means of maximizing voter participation, particularly by engaging off-reserve citizens. In some communities, as many as 75 percent of citizens may live off-reserve. In cases where the minimum threshold to pass a Land Code was 25 percent + 1 of the list of total eligible voters to cast ballots "in favour," attaining this standard was difficult based on certain community norms of lower voter turnout. Previously, a Land Code had to obtain a participation and approval rate of 25 percent + 1, however, on December 13, 2018, the Framework Agreement on First Nation Land Management was amended to provide for a simple majority or higher threshold set by the First Nation – a practice consistent with other important votes in Canada.[15]

15 *Other key changes established in the Act include modernizing the verification process and role of the Verifier (see sections 7 and 8 of the Framework Agreement).*

In terms of geographic dispersion, communities in British Columbia, Ontario, Manitoba, Alberta, Newfoundland and Labrador, New Brunswick, Nova Scotia, Northwest Territories and Quebec have trialed online voting; although most activity has been concentrated in the provinces of British Columbia and Ontario. Adopter communities range widely in population size from 42 citizens (Aitchelitz Band) to 12,565 members (Mohawk Council of Akwesasne) with an average registered membership of 1812. However, many share similarities in off-reserve residency. Looking at 49 communities that have used online voting, the average proportion of registered members residing off-reserve is 63 percent of the total registered population. Further, 74 percent of those 49 communities have an off-reserve population greater than 50 percent. This proportion of off-reserve members is approximately the same as the national average of First Nation off-reserve residency which stands at 65.7 percent. These numbers point to one of the major motivations for First Nations to deploy online voting: enhancing the participation of off-reserve citizens. Overall, there is a fair amount of geographic and demographic dispersion among communities that have used online voting, with the exception of the shared characteristic of off-reserve residency.

Wasauksing First Nation

Community Context

Wasauksing First Nation (Wasauksing) is an Ojibway, Odawa and Pottawatomi community located adjacent to Parry Sound, Ontario. The community has a land base of approximately 7875 hectares and a total citizenship of 1090, including 369 citizens residing on-reserve. On February, 25, 2017, Wasauksing First Nation became the 70th First Nation in Canada to ratify its own unique community-based Land Code. The passage of the Wasauksing First Nation Land Code was the culmination of a lengthy process that began in 2013 when Wasauksing became a signatory to the Framework Agreement on First Nation Land Management.

The Framework Agreement is a government-to-government agreement originally signed between 13 First Nations and Canada on February 12, 1996. The Framework Agreement established a new approach to the recognition of the inherent right of lands and resources governance, requiring ratification by each of the signatory First Nations and by Canada. Canada enacted the First Nations Land Management Act to fulfill its obligation to ratify the Framework Agreement. It was given royal assent on June 17, 1999. A First Nation ratifies the Framework Agreement by enacting a Land Code. The Framework Agreement is an initiative by the First Nations to opt out of 44 land management sections of the Indian Act and take over responsibility for the governance, management and control of their reserve lands, environment and resources. Land Code First Nations have all the legal status and powers needed to govern and manage their lands and resources.

Rationale for Use

In the process of ratifying their Land Code, Wasauksing introduced online ballots as a complementary voting option alongside traditional paper and mail voting. Online ballots were offered during the advanced voting period as well as on voting day, held on February 25, 2017.

The use of online voting by Wasauksing was motivated by several goals linked to the Land Code ratification vote and the community's broader pursuit of self-government and self-determination. With respect to the Land Code, online voting was utilized with the hope of facilitating the community to reach the required minimum voter participation threshold. In particular, it was seen as a strategic tool to enhance participation amongst Wasauksing's off-reserve citizens. Under the Framework Agreement, First Nations are required to hold a ratification vote. At the time of Wasauksing's vote, the Framework Agreement required one of three participation thresholds to be met for the Land Code to be successfully ratified. [16] In the case of Wasauksing, 50 percent + 1 of the 251 registered voters needed to vote "yes" on the Land Code, and at least 25 percent + 1 of all 725 eligible voters had to cast a "yes" vote – taking the total required "yes" votes to 183. Wasauksing passed their Land Code with 191 ballots in favour.

Like many First Nations, a large portion of Wasauksing's citizens reside off-reserve, which creates challenges for political involvement such as potentially being less informed and engaged with the political affairs of the community. Online voting was viewed alongside other digital tools, such as social media, as an avenue to educate and engage off-reserve members with the Land Code vote. Online ballots are considered less costly, administratively efficient and provide a means of increasing voter turnout amongst on- and off-reserve members. In sum, the use of online voting was driven by the twin goals of helping the community meet the necessary participation quorum to successfully ratify their Land Code and to better engage off-reserve voters.

16 *Prior to December 18, 2018, section 7.3 of the Framework Agreement on First Nation Land Management outlined three participation and approval thresholds that a First Nation may use to ratify a Land Code and individual agreement: (a) a majority of eligible voters participate in the vote and at least a majority of the participating voters vote to approve them; (b) the First Nation registers all eligible voters who signified, in a manner determined by the First Nation, their intention to vote, and a majority of the registered voters vote to approve them; or (c) the community approves them in such other manner as the First Nation and the Minister may agree upon. In all cases, section 7.4 of the Framework Agreement states that a Land Code and individual agreement will not be considered approved if less than 25 percent + 1 of all eligible voters voted to approve them.*

The decision to use online voting in the Land Code vote was also connected to broader goals to modernize governing institutions and processes and support the community's pursuit of self-government and self-determination. For Wasauksing, online voting represents a natural evolution of the community's engagement with digital technology as a means of adapting governance to the changing realities of citizens' lives. For political and administrative leaders in the community, online voting was linked to a general effort to innovate and modernize governing practices. Online voting and other digital technologies offer streamlined, economical and efficient solutions to connect with citizens and enhance the community's capacity to govern. Specifically, political and bureaucratic officials in the community positioned online voting as a resource that could be leveraged to enhance the community's capacity to pursue collective goals and objectives as well as strengthen governance capacity and implement their self-government.

Implementation

Wasauksing offered three voting options to its citizens on the proposed Land Code: traditional paper in-person at the polls, mail voting and online ballots. Traditional paper voting took place on December 10, 2016 as part of in-person advance voting and on the official voting day, February 25, 2017. Mail-in ballots were distributed to citizens via postal mail ahead of the advanced polling and were accepted up until the close of the official voting day. The online voting period opened on December 10, 2016 and closed at 8:00 am on February 25, 2017.

To offer online ballots as an option to their citizens, Wasauksing partnered with private-sector service provider, Vote-Now.com. Vote-Now.com oversaw the online voter registration, ballot-casting and tabulation during the online voting period.

In the lead-up to the vote, Wasauksing's Land Code planning committee undertook a number of initiatives to educate citizens about the Land Code and spread awareness about the vote and the various voting method options. The community hosted several information sessions for its citizens both on- and off-reserve in the months leading up to the vote. At these meetings, the Land Code planning committee shared information about the Land Code and the vote, providing an opportunity for citizens to pose questions to the committee and the Chief. Additionally, the Land Code planning committee also created a website devoted exclusively to updating its citizens on the development of the Land Code. The website offered regularly updated information on the various iterations of the draft and final version of the Land Code and the vote. The third outreach method used by the community to educate and engage its citizen with the Land Code vote were newsletters, which were distributed both in physical and digital copy to Wasauksing's citizens.

Outcomes and Lessons Learned

Wasauksing was successful in its efforts to ratify the Land Code. The final tally resulted in 191 ballots cast in support of the Land Code and 60 that voted against its passage. Interestingly, 151 ballots (75 Internet and 76 mail-in) were cast remotely, while 100 were cast by paper ballot in person at traditional poll locations. This finding suggests that remote voting methods were the preferred voting channel for citizens and provides evidence that remote voting may be important for community engagement and connectedness.

The community's decision to offer online voting in the Land Code vote was motivated strongly by a desire to engage citizens living off-reserve. Data collected from surveys of online and paper voters found that paper voters were more likely to reside on-reserve while those that chose to vote online are more likely to live off-reserve. In addition, as outlined previously, of the 251 votes cast, 151 were cast remotely: 75 by Internet and 76 by paper. These findings suggest that online voting appeals more to off-reserve members and that remote voting methods are important for enabling community participation.

Survey data collected during advanced polls and on voting day suggests that over time, and with more experience, a larger number of paper voters may switch to online ballots in future elections or votes. When asked if they would use online voting in a future vote, 63 percent of paper voters surveyed said they would vote online. Of these respondents, 28 percent said they would do so "in all circumstances," while 35 percent would use it under "special circumstances" such as being ill, away, having mobility issues or being too busy to make it to a traditional poll location. This finding signals that online voting may be increasingly important to voters living both on and off-reserve in the future.

Looking at survey data by age, we see that while paper voting is a preferred voting channel for the youngest and oldest voters, there is significant uptake of online voting among middle-aged electors. This finding indicates that both voting methods are important to connect and engage the community in votes. Satisfaction rates with the voting methods emphasize this finding, with 100 percent of online voters reporting being satisfied with the voting method and 89 percent of paper voters expressing satisfaction with paper voting at the polls. Overall, survey data supports that online voting is a tool to engage citizens that reside off-reserve, an option that paper voters want to see to improve their future voting access and could be a tool to better connect middle-aged voters with these types of policy discussions.

Overall, the community viewed the deployment of online voting in the Land Code vote as a success in three key ways. First, online voting positively contributed to the engagement and participation of off-reserve voting age membership. Second, in engaging off-reserve eligible voters, online voting enhanced the community's capacity to pass the Land Code. Third, the introduction of voting methods and governance tools of the community's own choosing enhances self-determination in the long term by contributing to a sense of collective efficacy that the community can successfully pursue further collective goals and objectives.

Nipissing First Nation

Community Context

Nipissing First Nation is an Anishnaabe community located to the west of North Bay, Ontario. The community's reserve lands rest on the north shores of Lake Nipissing, and it has a land base of 21,007 hectares. As of January 2018, 983 members of the community's total registered population of 2752 reside on-reserve with the remaining 1740 members assuming residence off-reserve. On January 10, 2014, Nipissing First Nation became the first First Nation in Ontario to develop and ratify its own constitution, the Gichi-Naaknigewin. The development of the Nipissing Gichi-Naaknigewin stretches back to 2005, with a draft tabled to Nipissing's band council in August of 2013.

The Nipissing Gichi-Naaknigewin is designed to serve five key purposes within the community: defining who the Nipissing are as a people; setting out the fundamental principles, rules and structures by which Nipissing First Nation will exercise its law-making authority; outlining the relationship between Nipissing First Nation governing structures and Debendaagziwaad (the people of the Nipissing First Nation); setting out the civil and political rights of the Debendaagziwaad and; prescribing accountability of the leadership to its Debendaagziwaad. The Gichi-Naaknigewin is intended to serve as the supreme law of Nipissing First Nation, taking legal precedence over conflicting Nipissing laws and regulations, as well as the Indian Act and other federal and provincial legislation. It is important to point out, however, that the primacy of First Nation constitutions, such as the Gichi-Naaknigewin, over existing Canadian law has yet to be challenged in the courts.

Rationale for Use

The Nipissing Gichi-Naaknigewin was officially ratified on the official voting day held January 10, 2014. In-person advance polling took place from December 5 to 6, 2013. Nipissing's members were offered the opportunity to cast a ballot in the ratification vote by online voting as an additional option alongside paper and mail-in ballots. Options to vote online and by mail were offered beginning on the advance polling dates until the official voting day.

The primary motivation for deploying online voting for the Gichi-Naaknigewin ratification vote was to engage Nipissing's members, particularly those living off-reserve. One of the primary concerns leading up to the ratification vote was that the Gichi-Naaknigewin was complex and articulated several principles which members would need time to consider and understand. Nipissing's leadership feared that if the voting process was considered too cumbersome, members may have chosen to abstain from voting in the referendum. In the past, many members found mail-in ballots to be inconvenient and burdensome due to attestation requirements that typically require another person witness the attestation of a ballot. Online voting does not require attestation, and ballots can be cast easily using a personal computer. In sum, online voting was viewed as a more accessible voting option than mail-in ballots and was considered an avenue to engage a larger number of Nipissing's members in the ratification vote.

Online voting was particularly targeted toward off-reserve members. Nipissing's members are extremely dispersed, residing in various regions across Canada, the United States and internationally. In recent years, these members have embraced digital technology and social media as key tools to access information and stay connected with community affairs. By deploying online voting in the ratification vote, the community sought to leverage the interest and use of digital technology to engage off-reserve members with the Gichi-Naaknigewin vote and enhance voter turnout.

Beyond electoral accessibility and engaging off-reserve members, a key motivation for adopting online voting in the ratification vote was the advantage it provides for administration and vote tabulation. For First Nations, the tabulation of physical paper and mail-in ballots is a lengthy and onerous process. Often the results of a vote are not known until the day following voting day. Online voting has significant appeal in resolving these issues. Online voting improves administrative capacity, allowing the results of votes to be tabulated and transmitted quickly.

Implementation

Nipissing First Nation offered three balloting options to its members for the ratification vote: paper, mail-in, and online ballots. Paper balloting took place during the advance polling days held on December 5 and 6, 2013, and on the official voting day held January 10, 2014. Mail-in ballots were distributed to community members via postal mail ahead of the advanced polling and were accepted up until the close of the official voting day. The online voting period opened on December 5, 2013 and closed on January 10, 2014.

To offer online ballots as an option to their members, Nipissing First Nation partnered with private-sector service provider, Scytl. Scytl is an international company based out of Barcelona, Spain, which offers online voting technology and services to public and private-sector clients. In their partnership with Nipissing, Scytl provided project management support to the community, customized and set up the online voting portal

and offered technical support throughout the voting process. Scytl also provided training for Nipissing's staff and oversaw the destruction of sensitive data following the conclusion of the ratification vote.

Leading up to the vote, Nipissing First Nation conducted a number of initiatives to educate their members about the proposed Gichi-Naaknigewin and the option of online voting. The community hosted a number of in-person consultations and forums leading up to the advanced polling periods. These community meetings provided an opportunity for the community's leadership to communicate information about the Gichi-Naaknigewin and answer questions from members. The meetings were also used to educate members with the online voting technology. The community and Scytl conducted demonstrations of the online voting process aimed at familiarizing members with the process and showcasing the security of the technology. The community also posted information about the Gichi-Naaknigewin and the ratification vote on the community's official website and social media accounts, such as Facebook and YouTube.

Outcomes and Lessons Learned

The Nipissing Gichi-Naaknigewin was successfully ratified by Nipissing's membership by a vote of 319 to 56. Of the 375 ballots cast, 114 were cast in-person by paper ballot, 115 by mail-in ballots, and 146 by online ballot. The results of the vote suggest that online voting was the preferred voting option. More importantly, these findings demonstrate that online voting was critical to the community successfully ratifying its Gichi-Naaknigewin.

Overall, the community was satisfied with its experiences deploying online voting in the Gichi-Naaknigewin ratification vote. Online voting was considered a valuable tool for engaging voters in the ratification proceedings, particularly those living off-reserve. On a more general level, community leaders spoke to the reality that many members often feel disconnected with political issues and processes in the community, and that barriers to active participation (i.e., mail-in ballots) often exacerbate this sense of disconnection. Digital tools, such as online voting and social media that reduce these barriers and make participation more accessible, are viewed as having the potential to remedy general feelings of disconnectedness and spur broader engagement with governing institutions and processes.

However, despite the large uptake of online voting during the ratification vote and the general optimism for digital technology for the community going forward, Nipissing's leaders stressed that it was still important to continue to offer traditional voting options to members. Many community members felt apprehensive about using online voting and perceived it to be a different experience compared to completing and submitting a paper ballot in person or by mail. Consequently, online voting should not be used as an immediate replacement for mail-in ballots. Instead, online voting should be treated as an option that will grow over time as community members gain additional experience and comfort with the technology.

Tsuut'ina Nation

Community Context

Tsuut'ina Nation is an Athabaskan First Nation located 13 kilometres south of Calgary, Alberta. The Tsuut'ina Nation's territory is comprised of the Tsuut'ina Nation 145 Indian Reserve. The community has a land base of 29,417 hectares and a total registered population of 2,342. Of those members, 1,404 reside on-reserve with the remaining 938 members residing off-reserve. Tsuut'ina Nation has used online voting for a number of different types of votes including Chief and Band Council elections, ratification and referendum votes on different types of legislation, and community opinion polls.

The Nation's first experiences date back to 2016 when online voting was used over the course of ratifying The Tsuut'ina Chief and Council Electoral Code. The electoral code replaced the sections of the Indian Act pertaining to the rules and procedures governing chief and council elections, replacing them with rules and procedures developed by the community. Under the terms of Stream A of the Tsuut'ina Legislative Process, the community was required to seek community approval of the proposed electoral code through a Citizen Ratification Vote. Online voting has also been used most recently in June of 2018 in a referendum on the production, sale and use of cannabis on the Nation's territory.

Rationale for Use

Tsuut'ina Nation's first experience with online voting dates back to 2016 when the technology was used to ratify The Tsuut'ina Electoral Code. The Tsuut'ina Electoral Code went through the Tsuut'ina Legislative Process twice. The first round of deliberation began in April of 2015, however due to unforeseen circumstances the ratification vote for the proposed legislation scheduled for December 18, 2015 did not take place. Tsuut'ina's Chief and Council made the decision to bring the proposed legislation back to the introduction stage of the Tsuut'ina Legislative Process in order to amend the terms of the legislation and provide further engagement with Tsuut'ina citizens. A second legislative phase was launched in January of 2016, at which point The Tsuut'ina Electoral Code went through multiple rounds of community consultation before being successfully ratified via a citizen ratification vote on March 11, 2016.

Over the course of ratifying the legislation, the Nation made the decision to offer online voting as an option for citizens. Part of the motivation for taking this approach was to adhere to ISC's Conversion to Community Election System Policy, which requires First Nation custom election codes to be approved by a majority of electors (50 percent + 1).[17] Thus, one of the key motivations for adopting online voting was to encourage greater participation among the Nation's members to help Tsuut'ina reach the quorum imposed by the federal government. Another key motivation for the adoption of online voting was to improve the efficiency of the vote tabulation process and allow the Nation greater autonomy over the management of elections and votes. Finally, online voting was also adopted partly based on an effort to reach specific target populations. The mobility of online voting platforms helps to improve electoral accessibility for those who are physical unable to travel to polling locations located on-reserve. Further, administrators also view online voting as a means of engaging younger voters. Roughly half of Tsuut'ina Nation's citizenry are under the age of 40, making young people one of the key target demographics for online voting.

Implementation

In the ratification of their electoral code, Tsuut'ina Nation offered three balloting options to its citizens: in-person paper ballots, mail-in ballots, and online ballots. Both mail-in ballots and instructions for online voting registration were mailed to citizens prior to the official voting day on March 11. There were no advanced polls for the ratification vote, and instead in-person, mail-in ballots and online ballots were all cast and tabulated during the official voting day.

In order to offer online ballots as a voting option to their members, Tsuut'ina Nation partnered with the online voting vender, Simply Voting. Simply Voting is a Montreal-based service provider that offers a number of election services to various governmental and non-governmental organizations. In the ratification vote of The Tsuut'ina Electoral Code, Simply Voting managed the online voting portion of the ratification vote helping to guarantee the privacy and security of the platform during the ballot casting and tabulation phases of the vote.

17 *It should be noted that s.3.2 of the Conversation to Community Election System Policy allows a community to approve a custom election code in a manner other than a 50 percent + 1 ratification vote. The exact alternative method of approval is mutually agreed upon by a First Nation and ISC.*

The process involved in ratifying the electoral code was conducted through the terms of the Tsuut'ina Legislative Process. The process involved a number of community engagement activities: a legislative update video clip posted on YouTube; in-person information sessions; in-person community reviews where citizens could offer feedback, input and recommendations on The Tsuut'ina Electoral Code; and mailed-out copies of the final documentation and voting notice.

Outcomes and Lessons Learned

The Tsuut'ina Electoral Code was successfully ratified by the Tsuut'ina's membership by a vote of 443 to 318. Among Tsuut'ina's 1161 eligible voters, 761 participated in the ratification vote producing a turnout rate of 65.5 percent.

Overall, Tsuut'ina's experiences with the use of online voting during the electoral code ratification vote were highly positive and have led the Nation to deploy online voting over the course of a number of other referendum and ratification votes, as well as in Chief and Band council elections. The Nation's experience with using online voting over the course of several different types of votes covering various issues has generated a number of lessons learned and the recognition of key challenges that must be addressed going forward.

One of the most important lessons that Tsuut'ina has learned is that votes must be incorporated into community meetings and events. This lesson arises out of the difficulty of attracting voters to polling stations for the sole purpose of casting a ballot in a referendum or ratification vote. Participation has been found to be much higher when votes are held in conjunction with a community meeting or event that will attract voters to a central location within the Nation. In the past, the Nation has had difficulty reaching quorum when votes do not coincide with community gatherings.

A second key lesson concerns the technical details of online voting registration. The community has found that it is advantageous to register voters using randomly generated usernames and passwords as opposed to registration information assigned to individual voters on the basis of first and last names. This lesson learned emanates from the fact that many members of the nation share the same first and last names, which can pose issues managing registration information. Administrators have noted that it is far easier to manage registration lists manually and assign voters wishing to vote online randomly generated login information.

Despite the overall positive response from the community toward the introduction of online voting, Tsuut'ina's administrative staff did note that some in the community, particularly elders, remain distrustful of online voting. This lingering distrust was attributed largely to challenges around computer literacy. To overcome this challenge, administrators

identified focus groups and learning workshops with elders as a way to help increase comfort with online voting and enhance digital literacy. Similar recommendations were offered but with a focus on youth, where administrators noted that holding mock votes in the Nation's schools would help to improve the civic knowledge and ultimately encourage participation.

In addressing these challenges, administrators noted that support from the federal government in the form of funding, literacy programs and equipment would be welcomed. These resources would ideally be put toward funding education and online voting platforms in the community as well as providing greater support for promotion and community outreach.

Good Practices

Engaging with Wasauksing First Nation, Tsuut'ina Nation and Nipissing First Nation, as well as working with other First Nations as part of the First Nations Digital Democracy project and carrying out interviews for this report, revealed a number of good practices with respect to online voting implementation. While the usage of online voting will be highly contextual depending on the unique needs of the community, these lessons provide broad suggestions for Indigenous communities that are considering using online voting, or those who have deployed the technology in the past and are looking to refine their approach to implementation. Eight good practices are described in Table 1 along with 17 steps, corresponding descriptions, and examples from specific communities.

Table 1: Good Practices for the Implementation of Online Voting in First Nations

Good Practice	Steps	Description	Examples
Responsiveness and resources from the Government of Canada	Government of Canada responsiveness	Obtaining necessary information from the Government of Canada in a timely manner is crucial to vote success.	In some cases, delays obtaining information and relevant reports from the Government of Canada delayed voting implementation, and voting dates had to be postponed. For example, in Wasauksing First Nation delays in receiving a survey of the reserve and survey report delayed the vote.
	Reference guide and resources	Having a guidebook available for the Election or Ratification Officer and communications team on how to utilize the online voting platform. Such a guidebook is helpful in assisting voters, the preparation of reports, and properly recording the voting method of voters (e.g., in-person or mail-in ballot).	Some communities have used reference guides supplied by technology vendors that provide additional information about online voting.
Community knowledge, engagement, outreach and communication	Knowing your members and understanding your needs	Knowing the unique needs of community members and understanding what the community wants out of a vote helps determine whether online voting is a good fit and which model of implementation to use. For example, some members may prefer a mail package whereas others are online and prefer email.	Recognizing the need to meet quorum, in some cases federally mandated, many communities have turned to online voting. Knowing community members is critical for ensuring voter access. In Wasauksing First Nation, young families were identified as a group that are not as mobile and have a harder time attending poll locations. Election officials went door-to-door with iPads to promote participation.
	Community engagement and digital skill building	Interviewees echoed consultation with community members as a key best practice to ensure community members' comfort with the technology. Also, allowing members to trial the technology prior to launch can enhance digital literacy.	Discussions with community members could take place at public meetings, council meetings, as part of mock votes, community event or feast, coffee with the Chief, or other type of outreach. Tsuut'ina Nation hosted an opinion poll using online voting at a community meeting to allow citizens to trial online voting and build familiarity with the voting method and technology. As part of this process, they gauged citizen opinion as to whether online voting should be used in future elections and referendums.

Good Practice	Steps	Description	Examples
Community knowledge, engagement, outreach and communication	Education, outreach and communications	Community outreach and education is critical to ensure online voting uptake and success. Citizens should be made aware of the option to vote online and the strengths and weaknesses of the technology. A robust communications strategy should reach out to members using multiples modes of communication i.e., social media was recommended for reaching young people while newsletters and newspapers were suggested as being more effective for reaching elders. To maximize capacity building, communication strategies should be built on current community activities. Community events were also suggested as a useful approach to outreach. To promote attendance, First Nations suggested organizing such events as dinners with raffles or giveaways. Such events should be organized for both on- and off-reserve members.	Wasauksing First Nation held a series of information sessions for on- and off-reserve citizens, some in conjunction with major community events. A meal was served at each meeting. There were also educational presentations, raffles and time for open discussion about the Land Code and the voting method. Wasauksing also promoted the vote through monthly newsletters and social media. In another community, Whitefish River First Nation, youth and elders were brought together at a Youth Centre to discuss the importance of voting and the Matrimonial Real Property Law. In terms of broader communications, the Mohawk Council of the Akwesasne promoted online voting through their local radio station, newspaper and on social media. Some communities hired technology vendors to assist with communications.
Consultation	Consulting with the community	Consulting with community members before using online voting was identified as a best practice for ensuring the comfort of community members with the technology. If implementation occurred, it was also communicated as an important precursor to broader education and outreach.	This consultation could take the shape of a discussion at a public meeting, council meeting, mock vote, or community event, coffee with the Chief or another initiative. Tsuut'ina hosted a mock vote to educate community members and get their thoughts on whether online voting should be used for an important community vote.

Good Practice	Steps	Description	Examples
Building digital capacity	Demonstrations and mock votes	It was communicated that there is a lot of value in asking for demonstrations and taking time to consider which vendor is a good fit. Testing out the platform with community members before launching the vote and having staff members test it to identify mistakes and resolve them ahead of time is important. Some First Nations have made telephone voting available in the event that digital capacity is problematic.	A mock vote or a short video with a demonstration could show how online voting works. Rama First Nation and Tsuut'ina Nation both employed this strategy with great success. While telephone voting is an option, it has also posed a lot of challenges for users.
	Enhance digital literacy	Ensuring members have the skills to vote online is important for equal access. Not everyone may have experience using a device with an Internet connection, and online voting itself may be new. Hosting skill-building meetings or workshops, mock votes where members can try out the technology, or other kinds of trials, can build digital literacy. Also, using email and social media more frequently to get members used to being online and connecting with the community online is important to enhance comfort with technology.	Whitefish River First Nation held a meeting at their Youth Centre where youth walked elders through the technology, providing a sense of confidence for elders. Tsuut'ina Nation held a mock vote where members could trial online voting as part of a general opinion poll. Academics who study the impacts of the technology were present to educate members, answer questions, and walk them through the process.
Building tools and strategy	Accuracy of the voters' list	One of the key tools to having the successful deployment of online voting is an accurate voters' list to ensure all eligible voters receive a Voter Information Card or Letter. This list was communicated as a struggle for many First Nations and a necessary tool in building an online voting model.	To improve list accuracy, many communities worked with third-party vendors In cases where accurate lists were obtained (i.e., Mohawk Council of the Akwesasne), electronic lists were used that allowed electors to vote at any polling station, improving voter access.
	Build an email database of members	Since reaching off-reserve members is crucial to obtaining fuller participation or meeting thresholds, many communities are looking to build email lists to better reach citizens living off-reserve. These lists are perceived as a best practice for ensuring invitations to vote can have a wider reach.	Wasauksing First Nation and Nipissing First Nation are both building lists for this purpose.

Good Practice	Steps	Description	Examples
Clear processes, resources and alignment	Incremental approach	A key takeaway is to take an iterative approach to online voting deployment, which involves proceeding in small, slow steps. First Nations recommend starting with a low-stakes vote such as a ratification vote or community consultation to trial the technology before using it in a binding election. This trial also involves testing different approaches or features to see what works best in the unique context of the community.	Tahltan First Nation piloted online voting for two agreement votes before using it in a Chief and Council election.
	Clear processes, roles and responsibilities	Having clearly established roles and responsibilities was communicated as being important for the successful deployment of online voting. This practice involves tailoring Indigenous election processes so that one person is responsible for the online portion of the vote and having clear expectations and accountability should issues arise. Furthermore, clearly outlining the responsibilities of the technology vendor is essential to avoid misunderstandings.	The Mohawk Council of the Akwesasne has a Chief Election Officer that oversaw the voting process.
	Technical and other resources	Building technical knowledge in communities is a good practice. Understanding encryption and storage protocols, the authentication process, and the responsibilities of the vendor were identified as areas where knowledge could be improved. In the context of Canada, it was recommended that some kind of central organization or project could be created to support this knowledge – see recommendation 3. Other types of support such as reference guides for Election Officers and Ratification Officers addressing how to utilize the online voting platform were suggested as a good practice.	Larger First Nations such as the Mohawk Council of the Akwesasne have larger technical departments, but these resources vary based on community size and resources. There is an opportunity for academics to play a role to build technical knowledge and capacity in First Nations.

Good Practice	Steps	Description	Examples
Clear processes, resources and alignment	Ensure alignment of the vote	It is important to ensure that the voting platform aligns with the ratification procedures. For example, for Land Code votes, a ratification process is developed that outlines voting rules and procedures, and the requirements of the voting platform. Providing clear requirements for voting platforms encourages the standardization of voting services offered by service providers (different service providers offer varying reporting options, access to the voting platform, etc.)	Alignment depends on the nature of the vote. Wasauksing First Nation paid close attention to alignment of the vote in the ratification of their Land Code.
Focus on technology	Security	Having a secure voting system and maintaining the integrity of votes is a key consideration. No specific security measures that are unique to First Nations were suggested. However, computer scientists suggested a best practice in Indigenous communities would be to use a model of online voting like that used for military in the United States whereby electors receive a ballot electronically, print and mark it and then mail it to election authorities. This approach maintains a paper record while making it easier to receive ballots and reduces mail costs.	This approach to voting is used for military in the United States as part of the MOVE Act.
	Access	Accessibility of technology is essential to ensure equality of the vote, especially given the access challenges faced by First Nations. This lack of access could include cases where persons do not have an Internet connection or access to an electronic device and in situations where electors may be too busy or unable to attend a polling location.	In Wasauksing First Nation, election officials went door-to-door with iPads to enable access given the poor fiber optics throughout the community. The Mohawk Council of the Akwesasne did the same. In Nipissing First Nation,public voting stations allowed electors to cast paper or online ballots.
Paying attention to language	Using open language where desired	Communities writing or amending their own electoral codes or constitutions should be mindful to use broad language around voting methods and elections. Keeping language as open as possible will keep opportunities open for communities and may not require additional revisions in future.	The provision for alternative voting methods is suggested.

Conclusion

This report offers actionable policy recommendations that are informed by:

- **Long-term engagement with First Nations that have implemented online voting;**
- **An Online Voting Roundtable including Indigenous leaders from across the country;**
- **Interviews with Indigenous leaders, identified experts, Elections Canada and technology vendors;**
- **A focus group in Tsuut'ina Nation; and**
- **An Alternative Voting Workshop organized by the First Nations Land Management Resource Centre and the Government of Canada held on March 25 and 26, 2019.**[18]

Recommendations focus on First Nations gaining more autonomy over their elections and votes, and resources to support local voting processes.

Online voting offers distinct benefits to First Nations, particularly through its potential to engage off-reserve members. Engagement of off-reserve members, and those living on-reserve land who may face additional barriers to voting such as mobility issues, caring for small children, or who live in a remote area of the community, is crucial to ensure the community voice informs policy decisions and elects leaders. Enabling greater participation in ratification votes, agreement votes, consultations, referendums and elections is important for strengthening inclusion, representativeness, and building community capacity. Online voting has also been found to increase voter participation, stimulate intergenerational communication between youth and elders, and enhance self-determination in First Nations. Elements such as security, connectivity, digital literacy, accurate voters' lists and cultural attitudes can be barriers to use.

18 *Participants of the workshop included: First Nations Land Management Resource Centre: Julie Pellerin, Crystal Restoule, and Jennifer Predie; Government of Canada: Dr. Sarah Byrne and Meaghan Squire; First Nations – Temagami First Nation: Carolyn Laronde and Desiree Senf; Beausoleil First Nation: Jane Copegog and Crystal Roote; Nak'azdli Whut'en First Nation: Catherine Lessard; Tsuut'ina Nation: Alison Heavenfire and Cree Big Plume; Madawaska Maliseet First Nation: Mario Pelletier; Nipissing First Nation: Joan McLeod; and Drs. Gabel and Goodman.*

Recommendations

1. Amend the Indian Referendum Regulations to allow for the use of alternative voting methods in First Nations referendums administered under these regulations. A second important step is to revise the Indian Band Election Regulations and First Nations Elections Act Regulations to provide the same provision (option) for elections.

While modifying legislation governing referendums and elections is required, any changes of this nature need to be meaningfully discussed and accepted by First Nations given an archaic provision that requires Government of Canada ratification officers to be present.

This recommendation is the first step toward ensuring that voting method selection is a First Nation decision.. Amending the regulations that govern voting would allow First Nations to make their own choices about the types of voting methods that work for their unique communities. The wording of this change should be broader than "online ballots" to provide for the use of alternative voting methods, which could include online, electronic, telephone voting and other options. The specific language of this change should be established with First Nations. This change would provide the legislative basis for online voting and other voting methods that communities may wish to adopt based on their needs or voting context. Language regarding ballot tabulation should also be amended to provide for the use of electronic tabulators in the event that First Nations want to retain paper voting but use technology to support the tally of ballots. The language for the change should be vetted with communities beforehand.

Making these amendments would be relatively straightforward. While further engagement with First Nations would be required, there is strong support among First Nations consulted for this report to make their own decisions about voting methods and choose their own options.

The Government of Canada should consider advancing a regulatory amendment to provide the option of online voting separately and in advance of other potential amendments to the regulations. Given the speed at which First Nations are taking up online voting and pressures of the COVID-19 pandemic, it is crucial that the Government of Canada prioritizes amendments to the referendum regulations. Care should be taken when making such changes to minimize the downloading of responsibilities and costs to First Nations. These amendments would not preclude the government from carrying out additional consultation for other matters and making further modifications in the future.

2. Increase earmarked core funding provided by the Government of Canada that could be carried over and used to support use of online voting and other alternative voting methods such as mail-in ballots.

Many First Nations communicated that the cost of online voting can be a barrier to use. While some communities had funds on hand to pay for online voting, others had applied to various funds to obtain monies to support implementation. Increasing dedicated monies to offset these costs would go a long way to support First Nations in the modernization of their elections and votes. First Nations communicated clearly that any increase in funding should not be accompanied by additional barriers. Specifically, it should include no clawback and have the ability to carry over. The use of monies should be discretionary and there should be no reporting. In this regard, the monies should be a grant rather than a contribution. These monies could allow for trials and use of online ballots and would ensure First Nations have the ability to use the technology. It would also ensure that activities such as penetration testing, an important security protocol, and updates to voters' lists could be undertaken.

The cost of online voting varies by community and is based on the nature of the vote, the number of eligible electors, the online voting model chosen and the services vendors provide (e.g., some vendors may provide project management whereas in other cases this function is carried out by community leadership). Vendors reported some votes costing $500 and others upwards of $10,000, depending on the number of electors, whether project management or other services were included, whether a mail out was required, and completeness of voters' and email lists.

3. Support a National Resource Centre or expansion of the First Nations Digital Democracy Project.

The engagement undertaken for this report made it clear that First Nations could greatly benefit from more institutionalized support for their elections and votes that is distinct and separate from Government of Canada control. This support could be facilitated via the creation of a National Resource Centre (NCR) or the expansion of the First Nations Digital Democracy Project. The mandate of the NCR or First Nations Digital Democracy project would be to support Indigenous communities in the administration and promotion of elections and votes and could include the following:

- Providing material support and advice to communities developing their own electoral codes and procedures;

- Providing this same support to communities who have their own custom codes or self-government agreements but would like to add legislative amendments to use online voting, other alternative voting methods, tabulators, or other

changes to voting processes;

• Working with communities to create education and outreach plans for elections and votes;

• Hosting good practices and resources related to the deployment of online voting and other election technologies. Resources would include providing communities with suggested security standards (recommendation 5) and operational guidelines that would support them during the vendor selection process;

• Creating custom presentations of good practices via Webinar;

• Providing technical support for votes (i.e., providing iPads to support votes);

• Offering online voting support (on-site or off-site) to design and administer a vote;

• Researching and preparing reports to boost community knowledge and capacity; and

• Training of local youth and elders.

Other suggested models included a partnership with, or modeled after, the First Nations Technology Council in British Columbia. In addition, First Nations Land Management Resource Centre (FNLMRC) will continue to provide support to First Nation signatories.

4. Enhance responsiveness from the Government of Canada and additional support for Indigenous elections and votes.

A key message communicated by First Nations is that implementation of online voting was slowed or impeded given delays in the Government of Canada's responsiveness to provide information required for the administration of the vote or for preparing documents to be voted on. Specific cases cited include delays in the provision of registrar data and in the preparation of surveys and conclusions of land description reports of the reserve land. While these issues relate to voting processes generally (i.e., a delay in receiving the land survey) and not specifically to online voting, it remains imperative to improve the Government of Canada's responsiveness to First Nation requests for information needed for the administration of votes, including those carried out using online voting.

Additional support for Indigenous elections and votes is also recommended in areas such as training election and ratification staff, communications, and voting outreach and education. Many communities indicate that while they do not want the Government of

Canada directly facilitating training and communications, they would welcome having other actors support these components of elections. One solution is for the Government of Canada to provide funding for a National Resource Centre or an expansion of the First Nations Digital Democracy Project (recommendation 3) and provide resources and funding to facilitate the organization's support for First Nations in these areas.
In addition, the creation of a fund or funding program that could support elements of elections that may not be directly linked to online voting would strengthen capacity. Such a fund could support initiatives that some First Nations are struggling with such as financing technology to store their records so that future generations have access and can preserve their own processes, promotional videos as part of voter outreach, designing their own networks and hosting their own servers. In addition, a key improvement the government could make is to provide an electronic list of members to First Nations instead of a paper one.

5. Draw on the expertise of leading experts and scholars in the field, create a security framework for online voting implementation. Such a document could be developed via the Centre of Excellence or First Nations Digital Democracy Project.

A key challenge for online voting use in Canada is the absence of security guidelines or standards. There is more online voting activity at the community level in Canada – in Indigenous nations and municipalities – than anywhere else in the world, yet there are no security guidelines or standards in place. Many First Nations have questions and concerns about security or the authentication of voters and could benefit from a document that provides minimum level security standards for online voting deployment. This document would be discretionary and provide a useful tool to vet vendors, educate Indigenous leaders about online voting security and enhance electoral integrity. The document would also support procurement processes because one vendor may have lower fees but may not have a comparable technology solution or security. Indigenous leaders should be included in this process to provide perspective regarding how some design elements might differ in the context of Indigenous votes which could have implications for security.

6. Work with community-owned service providers to enhance Internet connectivity and digital literacy in First Nations.

Limitations in Internet connectivity and digital literacy are a key barrier encountered by some First Nations considering using online voting, or those who have implemented the technology. Poor connectivity can be related to the absence of broadband infrastructure or mediocre infrastructure that produces lower quality connections. Affordability is another challenge, especially in remote areas where the cost of a connection is much higher than in urban ones. Where possible, strategies to improve connectivity should take on a community-centric model, viewing communities as producers of infrastructure, not just

consumers. This model can be achieved by supporting the work of community-owned and operated service providers who understand, and are better positioned to respond to, the specific needs of communities. Support for service providers could come in the form of additional funding for infrastructure such as fiber optics or satellite connections. Such funding would reduce costs for businesses, community buildings, and for individual subscribers. Other support should come in the form of training community members to be able to manage, operate, and maintain their own networks.

Some First Nations also require support to improve digital literacy so that they have the digital skills to vote online. Digital skill building is currently undertaken through Innovation, Science and Economic Development Canada's Digital Literacy Exchange Program, however the funding window has closed for this program. Additional support needs to be made available to build digital literacy in communities, especially in a context where language and cultural appropriateness may be barriers to traditional skills-building approaches. This support could be achieved through the creation of a program that takes a community-centric approach to building digital skills by focusing on community needs and capacity building. Community ownership and control are central to such approaches, from the tools being developed to serve the unique needs of each community, to community-owned service providers delivering Internet access. By building capacity within Indigenous communities to control, own, operate and manage service provision, the needs of the community are better served and can then be used to bring the community together.

7. Increase research support from ISC/CIRNAC and Tri-Council Agencies for community-engaged research with First Nations (and all Indigenous communities and organizations) on the effects of digital technology.

Indigenous peoples are the most researched people in the world, and much of this research has been conducted without their permission, consultation, or involvement. The ethical conduct of government and some researchers has been questionable and too often, there has been disregard for Indigenous cultural, traditional, and shared knowledge. As a result, research activities often cause community members to feel that they have been "researched to death," without benefit to their community. The scars left by past colonial relationships mean that research partnerships must, above all, ensure a voice for Indigenous peoples in designing and carrying out research that contributes to their social well-being, rather than the priorities of academic, government, or industry partners.

Trust and relationship building are at the heart of community-engaged research. This type of research with Indigenous peoples and nations involves lengthy and ongoing community engagement processes that can extend over many years. In addition, layers of ethics review processes beyond university ethics boards, the creation of community

advisory boards, provision of training and capacity building in the community are important and necessary aspects of working with Indigenous peoples. A key step toward ensuring the use of digital technology is an Indigenous decision, and that communities have access to knowledge about the effects of such policy change, is for ISC/CIRNAC to work with Tri-Council agencies to support and encourage research that is community-led or community-engaged (e.g., research that is either led by communities themselves, or co-developed with communities, carried out in the context of Indigenous timelines and that puts value back into the community through knowledge creation and transfer, training and skill building).

8. Explore the development of online voting technology.

Some communities emphasized that the recurring cost of online voting services is a burden. While having the Government of Canada financially support the use of technology could offset this burden, some interviewees noted that having access to online voting technology that was not proprietary would serve their community well. In the longer term, ISC/CIRNAC, Elections Canada, Indigenous communities and academics could consider exploring developing online voting technology that could serve First Nations on their terms. This initiative should be guided by community voice and could be led by a Centre for Excellence or Project outlined in recommendation 3.

Priorities and Next Steps

There is widespread consensus in the First Nations engaged for this report that the first priority is for the Government of Canada to change the relevant regulations to allow for online voting for elections and referendums.

A second priority is to ensure implementation of this report, promote community buy-in and ownership of recommendations, and maintain momentum and leadership around key recommendations. We propose that ISC/CIRNAC fund and coordinate additional Alternative Voting Workshops in to bring together the communities featured in this report, other interested communities, Indigenous organizations, governments, and leaders to discuss the report and prioritize recommendations.

Finally, a third priority is to move forward with recommendations that have broad community support and could be implemented relatively quickly. These recommendations include increasing earmarked core funding from the Government of Canada (recommendation 2) and initiating the groundwork to establish a National Resource Centre for First Nations (recommendation 3).

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