

Policy settings for a trial of online voting in 2016 local elections

Proposal

1. I propose Cabinet responds to local government requests to trial online voting in local elections,¹ by agreeing to proposed policy requirements that will apply to any territorial authority seeking to participate in a trial. Whether a trial is enabled would be subject to confirmation that participating territorial authorities, and any voting technology proposed for use in the trial, have met these policy requirements.

Executive summary

2. I propose that Cabinet agree to the proposed requirements (attached) as a basis for a possible trial by the local government sector, of online voting in the 2016 local elections. I am not seeking agreement to enable a trial at this point. Rather, I seek approval to release the attached requirements document and allow local government the opportunity to demonstrate that the proposed requirements can be met.
3. An identity risk assessment has determined that the level of identity-related risk associated with online voting in local elections is low. The proposed design for an online voting trial does not require an ongoing authentication mechanism such as RealMe. Use of RealMe would also require voters to pre-register, which is not compatible with the design of the proposed trial. A requirement for territorial authorities to use RealMe would, therefore, be inappropriate for a trial and I do not propose to require it at this stage. However, the potential benefits of RealMe for online voting, and local elections generally, will need to be considered again separately should online voting be made available for local elections following appropriate trials.
4. A trial in 2016 would need to be enabled by regulations drafted within the constraints of the current provisions of the Local Electoral Act 2001 (the Act). As a result, a number of trade-offs are required and only a limited degree of innovation is possible.
5. Participation in a trial of online voting for local elections needs to be limited, in order to manage risk. I propose that I, as Associate Minister of Local Government, am delegated authority to decide which territorial authorities may take part in a trial. I would make this decision in consultation with the Minister of Health, as District Health Board elections would form part of the trial, and on the basis of a recommendation from Local Government New Zealand. There is a possibility that even if a trial is enabled, no territorial authorities proceed to trial online voting in 2016.

Background

6. In September 2013, Cabinet agreed to the establishment of an Online Voting Working Party (the Working Party) to consider the options, costs and security issues of online voting in local elections [Cab Min (13) 29/7 refers]. Cabinet considered the Working Party's report in July 2014, and noted its finding that trialling online voting in the 2016 local elections was feasible [Cab Min (14) 405 refers].

¹ Online voting refers to remote access voting by a voter, who can use their own computer, tablet or other internet-enabled device from any location, to cast their vote over the internet.

7. The Working Party suggested the Department of Internal Affairs (the Department) should lead the development of a trial of online voting. However, the July 2014 Cabinet paper indicated it may be more appropriate for local government to lead any trial, as requests for a trial have come from the sector. Cabinet sought further information on whether or not to proceed with a trial in 2016, including any proposed legislative amendments and governance and funding arrangements for a trial [Cab Min (14) 405 refers].
8. In December 2014, Cabinet agreed (EGI Min (14)(20/14) that while there was no principled objection to a trial of online voting for local elections in 2016 or as reasonably practicable thereafter, any trial would have to be led by local government. It was agreed that a trial would not be enabled until local government had demonstrated that an online voting trial can meet security expectations and operate in accordance with the principles of the Act. Cabinet invited me, as Associate Minister of Local Government, to report back with proposed requirements for a trial and seek a decision on whether to proceed with further work with local government. This paper provides that report-back.

Comment

Reasons for a trial of online voting in the 2016 local elections

9. Local authorities are interested in trialling online voting for several reasons. Firstly, online voting may assist certain groups of electors, such as the visually impaired, or those living in remote areas or overseas, who can struggle to vote by post. It also enhances opportunities to issue voting documents in other languages to assist non-native English speakers.
10. Secondly, online voting could help ensure voters' intentions are correctly expressed. Local elections usually involve several different elections, and voters often need to use two different voting systems (First-Past-the-Post and Single Transferable Voting (STV)) on the same ballot paper. This can lead to inadvertent spoiling of ballot papers. Online voting could help by, for example, ensuring that voters do not unintentionally invalidate their vote by using non-sequential numbers for candidates in STV elections.
11. Thirdly, online voting may help maintain viability of the local electoral system in the long-term. A cultural shift toward digital communication is also reflected in the declining use of postal mail for many New Zealanders. This may impact on the perceived accessibility of local elections conducted through postal ballot.

Report back on trial requirements

12. The proposed requirements for any territorial authority identified as a potential participant in a trial of online voting are attached to this paper. I consider that if local government can demonstrate that a trial by specified territorial authorities would meet these requirements, then a trial by those councils should be enabled in regulations. Table 1 outlines the key outcomes sought.

Table 1: Summary of proposed online voting trial requirements

Trial parameters	<ul style="list-style-type: none"> Online voting is to be made available to all electors in an election, alongside postal voting Voters should be able to use their own device and should be able to vote without needing to pre-register Online voting should be available throughout the whole of the voting period Feedback on user experience must be sought
Online voting systems	<ul style="list-style-type: none"> Voters must be provided with a randomly generated login ID and password along with their postal voting documents

	<ul style="list-style-type: none"> • Login IDs must be linked to the electoral roll • Voters must have an opportunity to deliberately submit a blank or incomplete voting document, but must be notified by the system if they have incorrectly completed an online voting document • The system must not allow a voter's identity and the content of their vote to be linked
Usability and accessibility	<ul style="list-style-type: none"> • Voting technology must be understandable, easy to use, and maximise opportunities for people with disabilities • Online voting systems must comply with Web Content Accessibility Guidelines
Systems operation	<ul style="list-style-type: none"> • Online voting systems and processes must preserve the integrity of individual votes and local elections as a whole • There must be control procedures for any technical operations associated with the online voting system, and any incidents threatening the integrity of the system must be notified to the Electoral officer in question and dealt with according to procedures drawn up in advance • Voters' preferences must not be decrypted until after voting has closed
Interoperability	<ul style="list-style-type: none"> • All components of the online voting system must be interoperable (i.e. mutually compatible) • Interoperability must be proved through testing
Integration with postal voting	<ul style="list-style-type: none"> • There must be a secure and reliable method to aggregate electronic and postal votes and to calculate the correct result • Aggregated votes must be counted using the counting processes used for the existing postal voting system
Security	<ul style="list-style-type: none"> • The online voting system must be secure and reliable • Compliance with New Zealand Information Security Manual, applicable ISO standards, and other benchmarks is required
Audit system	<ul style="list-style-type: none"> • Any features of the online voting system that may influence the correctness of the results shall be auditable • Conclusions drawn from the audit process must be documented to provide assurance that the election result is true and accurate and to feed into overall trial learnings
Assurance and accountability	<ul style="list-style-type: none"> • Territorial authorities have overall responsibility for ensuring compliance with requirements for a trial of online voting, which shall be assessed by independent assurance providers • Before any online voting election or poll takes place, the relevant electoral officer shall satisfy him or herself that the online voting system is legitimate and operates in accordance with the proposed requirements and relevant legislation.

13. It is important to note that online voting systems can be designed in a way that makes them very secure, and protects votes as they are transmitted and stored. However, there will always be a residual risk in relation to the devices that people use to vote.² The attached requirements document for territorial authorities participating in the trial includes a recommendation that councils provide secure facilities³ to allow voters to access the online voting system and vote. While this will help address the privacy concerns of voters who do not trust their home computers, I am advised that, short of requiring all voters to use such facilities (negating the benefits of remote online voting) there is no way to eliminate this risk to vote secrecy.
14. The proposed requirements will provide a framework of detailed outcomes that any online voting system will be required to meet and guide local government in developing online services. The requirements have been informed by overseas practice in this area, and adapted to the context of a trial of online voting alongside postal voting under the New Zealand local electoral framework. The requirements are intended to provide a basis for territorial authorities and their election service providers to develop online voting system technical specifications that meet the principles of the Act. It is possible that practical issues arising from this process may indicate the desirability of minor technical changes to detailed aspects of the framework.
15. The framework will also form the basis for Local Electoral Regulations to govern the conduct of the trial. These will not be finalised and promulgated until the framework is finalised and I am satisfied that the relevant territorial authorities have demonstrated their ability to conduct a trial in accordance with its requirements. I expect to seek Cabinet agreement to any such regulations towards the end of 2015.
16. I therefore seek Cabinet agreement to the proposed trial requirements attached to this paper. I also propose that Cabinet delegate to me, as the Associate Minister of Local Government, the authority to decide policy on any further minor and technical matters that may arise as part of the development of technical requirements and enabling regulations.
17. I am not seeking Cabinet's agreement to enable a trial at this point. Rather, I seek to release the attached document to allow the local government sector the opportunity to demonstrate that the proposed requirements can be met. If a trial is to be enabled for the 2016 local elections, enabling regulations will need to be considered by Cabinet before the end of 2015.

Constraints associated with a trial in 2016 local elections

18. A trial in 2016 would need to be enabled within the constraints of the current provisions of the Act. As a result, there are certain trade-offs between objectives. The need to comply with existing provisions also limits the degree of innovation that is possible to realise the opportunities presented by online voting.
19. One example is the inability of electors to vote separately in the individual local elections (e.g. mayor, councillor, regional council, district health board). Under postal voting, the use of a combined voting document requires voters to submit votes for all elections together. The marking of voters off the electoral roll (vote scrutiny) occurs on the basis of that single combined postal voting document.

² It is likely that there will be voters who will use devices that are already corrupted or infected to vote. For example, the presence of 'keylogger malware' (which records all the keystrokes and screen clicks a user makes) would mean that someone voting online, on an infected computer, could have the secrecy of their vote compromised.

³ 'Secure facilities' means a secure device and a physically secure environment with privacy.

20. Streamlining vote scrutiny practices for online and postal voting is necessary for obtaining timely election results. As such, voters in the proposed 2016 trial will be expected to submit votes for *all* elections in which they wish to vote *at the same time* using *either* online *or* postal voting. If a voter votes twice in an election, utilising both the online and postal option, the Act requires both votes to be discounted. This creates the potential for a large number of innocent duplicate votes that could not be included in the final count. A key mitigation for this risk is clear messaging as part of communication with electors. Under the proposed requirements for a 2016 trial, responsibility for this rests with participating territorial authorities.
21. Another inherent trade-off associated with online voting is between the *verifiability of election results* and *secrecy of the vote*. It is international good practice that electoral systems do not allow voters to have proof of how they voted, as this creates potential for vote-buying or voter coercion. However, in the online context, allowing a voter to verify how their vote was recorded is a key way of mitigating the risk of votes being modified by hackers, as well as being important to public confidence in the integrity of the system. Internationally, the tension between verifiability and secrecy is often resolved by allowing voters to subsequently change their vote. This allows verification of votes cast without introducing vote-buying risk, as any votes cast in exchange for payment could always be recast. The Local Electoral Act does not allow electors an opportunity to change their vote.
22. The proposed requirements for any trial in 2016 resolve this tension by prioritising the importance of verification over maximising the protection of secrecy, although both objectives are reflected in requirements. Although inappropriate influencing of voters has not been identified as an issue in local elections to date, this risk would need to be addressed by amending legislation if online voting was to be made generally available in local elections in the future.

Potential requirement to use RealMe

23. My officials have carried out an Evidence of Identity risk assessment to understand and identify the level of identity-related risk associated with online voting for local elections and whether the level of risk warrants requiring the use of RealMe (attached).
24. The risk assessment found the level of identity-related risk associated with local elections is low. This means that utilising a randomly generated username and password to authenticate voters would suffice for a trial. As the proposed method for casting the vote during the trial does not require a voter to be recognised on an ongoing or returning basis, a persistent authentication mechanism is not needed.
25. It is also important to note that incorporating RealMe would have implications for design of the proposed trial. Use of RealMe would require voters to pre-register in order to be able to vote online as territorial authorities would have to link a voter's RealMe ID to their electoral ID. The local government sector wants to make it as easy as possible for voters to use online voting in order to really test uptake, but pre-registration would be an unnecessary barrier to uptake. Requiring use of RealMe would therefore be inappropriate for this trial, and therefore I do not propose to put such a requirement in place.
26. Further, there may be design implications for RealMe if it was used for a trial of online voting in local elections. Use of RealMe for a trial will change the RealMe service's risk profile, by introducing new and different risks. Although solution security is a major component of RealMe service design, it is not possible to say whether current security design is acceptable in light of these new identified risks until there is more detail known about the proposed online voting systems to be used.

27. Use of RealMe for any possible future introduction of online voting as a general option in local elections would have to be considered at the time. Currently, RealMe is used for elector enrolment in local and parliamentary elections. In 2014, there were 304 new enrolments through RealMe (for which a verified account is required) and 20,567 updates to enrolments (which can be done through a login account, although some used a verified account). I consider there are potential benefits of RealMe for local elections in the long term that it would be worth exploring.

Participation in a trial

28. Participation in a trial needs to be limited, in order to manage the risks associated with use of internet-enabled technology for local government elections. I propose that Cabinet delegate the authority to decide which territorial authorities will be authorised to potentially participate in the trial to me, as the Associate Minister of Local Government. Before making this initial decision, I intend to seek a recommendation from Local Government New Zealand (LGNZ) on which territorial authorities should, subject to their meeting the technical requirements, be authorised to participate in the trial, taking into account the following key considerations:
- Online voting should not be trialled in a manner that could be seen to prejudicially affect the outcome of a particular election.
 - Trial participants should be determined with a view to minimising total costs and disruption to the public, in the event that any technology issues prevent or delay a clear election result.
 - Trial participants should be determined in a manner that equitably recognises the commercial interests of online voting service providers.
 - Trial participants, and the overall scope of the trial, should be determined with a view to testing the operation of online voting in the context of:
 - complex aggregations of electoral issues and combinations of First Past The Post and Single Transferable Voting elections;
 - differing service levels of postal and internet services; and
 - a variety of geographic, demographic and socioeconomic circumstances.
29. A recommendation that represents the views of local government as a whole is appropriate, given that any trial would be led by, and for the benefit of, the whole sector. I expect that LGNZ will canvas interest from across the local government sector in developing its recommendation to me.
30. A trial of online voting will include those District Health Board elections conducted by the participating territorial authorities. It will therefore be appropriate that I consult the Minister of Health in determining potential trial participants.
31. There is a possibility that even if a trial is enabled, no territorial authorities proceed to trial online voting in 2016. This may be because councils are unable to demonstrate in time for a trial in 2016 that they can meet requirements, or because it is found that complying with the proposed policy requirements is not financially viable for the local government sector at this point in time. In this regard, I consider that releasing the proposed requirements will test local government appetite and readiness to trial online voting.

Consultation

32. This paper was prepared by the Department of Internal Affairs. The Treasury, the Ministries of Justice, Health, Pacific Island Affairs, the Offices for Disability Issues, Senior Citizens, Ethnic Communities, the Privacy Commissioner, and the Electoral Commission have all been consulted in the development of this paper. The Department of the Prime Minister and Cabinet has been informed.
33. In the preparation of the proposed requirements in the attached document, the Department has consulted with a range of external stakeholders, including the Society of Local Government Managers and Local Government New Zealand, election and online voting service providers, and online security experts.

Financial implications

34. There are no financial implications arising from the proposals in this paper. The costs of developing any trial are to be borne by local authorities, in accordance with previous Cabinet decisions [EGI Min (14) 20/14 refers].

Legislative implications

35. The Act allows for regulations to be made authorising any form of electronic voting. This means that a trial of online voting can be enabled using regulations alone, although this will have certain implications for the way a trial is designed and conducted.
36. Before recommending such regulations, I am required⁴ to be satisfied that the voting method to be authorised will be able to operate in a manner consistent with the prerequisite principles of the Act, including the need to:
- protect freedom of choice of voters and the secrecy of the vote;
 - protect public confidence in and understanding of local electoral processes; and
 - provide transparent voting methods and the adoption of procedures that produce certainty in electoral outcomes.
37. It will not be possible to assess whether online voting will be able to operate consistently with the principles of the Act until the operating requirements are established, the systems are developed, and the testing of the security and accessibility of the system has been completed.
38. I therefore seek Cabinet approval for me to instruct the Parliamentary Counsel Office to prepare the draft regulations, if and when the voting technology solutions have been developed and tested sufficiently to satisfy me that they can operate consistently with the proposed trial requirements, as well as the principles outlined at paragraph 36. Draft regulations would be considered by the Cabinet Legislative Committee in late 2015.

Regulatory impact analysis

39. The regulatory impact analysis requirements apply to the proposals outlined in this paper. The Chair of the Department of Internal Affairs' Regulatory Impact Analysis Panel has reviewed the regulatory impact statement (RIS) (attached) prepared by the Department and considers that the information and analysis summarised in the RIS meets the quality assurance criteria.

⁴ Section 139(2) of Local Electoral Act 2001.

Human rights, gender and disability perspective

40. There are no human rights or gender implications arising from the proposals in this paper. The development of online voting as a voting method could assist the visually impaired and other disabled people to vote independently. It would also advance New Zealand's implementation of the United Nations Convention on the Rights of Persons with Disabilities, specifically Article 29 on participation in political and public life.

Publicity

41. Subject to Cabinet agreement, I propose to issue a media release, noting the intention to enable local government to begin developing online voting for a possible trial at the 2016 local elections.
42. As part of this, I will invite LGNZ to initiate a call for expressions of interest by territorial authorities wanting to participate in a trial of online voting, with a view to LGNZ formulating a recommendation to me on which territorial authorities should be identified as potential participants, on the basis of the considerations outlined in paragraph 28.
43. I also seek Cabinet's agreement to publish this Cabinet paper, with the related Cabinet Minutes, and the attached policy document, on the Department of Internal Affairs website.

Recommendations

44. The Associate Minister of Local Government recommends that the Committee:
1. **note** that on 8 December 2014, Cabinet:
 - 1.1 agreed that there is no principled objection to enabling local government to trial online voting for local elections in 2016 or as reasonably practicable thereafter;
 - 1.2 agreed that for a trial of online voting to be enabled, the local government sector must demonstrate that any voting technology solution(s) developed can operate securely and the requirements of the Local Electoral Act 2001 can be met;
 - 1.3 invited the Associate Minister of Local Government to report to the Cabinet Economic Growth and Infrastructure Committee with proposals on detailed settings for a trial, and seek a decision on whether to proceed with further work with local government; and
 - 1.4 noted that the Minister's report-back will include an Evidence of Identity risk assessment, which will identify the level of identity-related risk associated with the provision of online voting for local elections [EGI Min (14) 20/14 refers];
 2. **note** that an Evidence of Identity risk assessment was completed which:
 - 2.1 found that identity-related risk for local elections is low; and
 - 2.2 when combined with the lack of need for ongoing authentication, does not justify requiring territorial authorities to use RealMe for online voter authentication during the trial;
 3. **agree** to the proposed trial requirements attached to this paper and summarised in Table 1 as the basis for:
 - 3.1 regulatory requirements in respect of a trial; and
 - 3.2 the development of technical specifications by territorial authorities participating in a trial, to ensure that online voting technology will operate consistently with the principles of the Local Electoral Act 2001;

4. **agree** to delegate to the Associate Minister of Local Government, in consultation with the Minister of Health, the power to decide which territorial authorities may take part in a trial, after seeking a recommendation from Local Government New Zealand, based on the following considerations:
- Online voting should not be trialled in a manner that could be seen to prejudicially affect the outcome of a particular election;
 - Trial participants should be determined with a view to minimising total costs and disruption to the public, in the event that any technology issues prevent or delay a clear election result;
 - Trial participants should be determined in a manner that equitably recognises the commercial interests online voting service providers; and
 - Trial participants, and the overall scope of the trial, should be determined with a view to testing the operation of online voting in the context of:
 - the most complex aggregations of electoral issues and the interplay of different voting systems;
 - differing service levels of postal and internet services; and
 - a variety of geographic, demographic and socioeconomic circumstances;
5. **agree** to delegate to the Associate Minister of Local Government, the authority to decide policy on any further minor matters that may arise as part of the development of enabling regulations;
6. **agree** to delegate to the Associate Minister of Local Government, approval to instruct the Parliamentary Counsel Office to draft regulations enabling a trial;
7. **agree** that the Associate Minister of Local Government may:
- 7.1 make technical revisions to the attached online voting policy document as may be needed before it is published;
 - 7.2 publish this Cabinet paper, with the related Cabinet Minutes, and the attached policy document; and
 - 7.3 invite the local government sector to demonstrate that online voting can be trialled in a manner that meets the requirements in the attached document.



Hon Louise Upston
Associate Minister of Local Government

23/04/2015