I hereby give notice that an ordinary meeting of the Governing Body will be held on:

**Date:** Thursday, 13 December 2018  
**Time:** 9.30am  
**Meeting Room:** Reception Lounge  
**Venue:** Auckland Town Hall  
301-305 Queen Street  
Auckland

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## Tira Kāwana / Governing Body

### OPEN ADDENDUM AGENDA

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### MEMBERSHIP

**Mayor**  
Hon Phil Goff, CNZM, JP

**Deputy Mayor**  
Deputy Mayor Cr Bill Cashmore

**Councillors**

- Cr Josephine Bartley
- Cr Dr Cathy Casey
- Cr Ross Clow
- Cr Fa’anana Efeso Collins
- Cr Linda Cooper, JP
- Cr Chris Darby
- Cr Alf Filipaina
- Cr Hon Christine Fletcher, QSO
- Cr Richard Hills
- Cr Penny Hulse
- Cr Mike Lee
- Cr Daniel Newman, JP
- Cr Greg Sayers
- Cr Desley Simpson, JP
- Cr Sharon Stewart, QSM
- Cr Sir John Walker, KNZM, CBE
- Cr Wayne Walker
- Cr John Watson
- Cr Paul Young

(Quorum 11 members)

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Sarndra O’Toole  
Team Leader Governance Advisors

12 December 2018

Contact Telephone: (09) 890 8152  
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Website: www.aucklandcouncil.govt.nz

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**Note:** The reports contained within this agenda are for consideration and should not be construed as Council policy unless and until adopted. Should Members require further information relating to any reports, please contact the relevant manager, Chairperson or Deputy Chairperson.
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Te take mō te pūrongo / Purpose of the report

1. To provide an update on the online voting trial for the 2019 elections.

Whakarāpopototanga matua / Executive summary

2. In May 2018 the Governing Body resolved its support in principle for online voting. Since then considerable achievements have occurred as a result of the collaborative work between the participating councils, Local Government New Zealand (LGNZ), the Society of Local Government Managers (SOLGM) and the Department of Internal Affairs:
   - the government has introduced a Bill that will enable online voting using specified classes of electors for a trial
   - the Department of Internal Affairs drafted regulations and consulted on them
   - the Participation Agreement between the nine councils and the working party structure enabled the councils to effectively work together and share costs
   - the working party developed a comprehensive set of technical and security requirements for any potential provider to meet
   - the Working Party completed a full business case for the project
   - a security analysis confirmed the robustness of the process.

3. The estimated total cost for the nine participating councils is $4.230 million. This includes an 18 per cent contingency and does not include any allowance for reimbursements from district health boards and licensing trusts.

4. Auckland Council’s share of the total cost would be approximately $0.927 million, which would reduce to approximately $0.694 million with reimbursements from the district health boards and licensing trusts. This is in line with indications given to the Governing Body meeting in May 2018. That cost would fall into the 2018/19 and 2019/20 financial years.

5. The cost for Auckland Council is proportionately low because only a subset of electors would have the option to vote online in the trial. For other councils the costs are high in proportion to their size. The chief executives of the participating councils consider the costs to be too high to recommend that their councils implement the trial for 2019. This report recommends that Auckland Council agree to not proceed with the trial for the 2019 elections.

6. All the reasons for providing online voting to our electors as a voting method still remain. Experience with developing the project so far has indicated that in all respects it is viable but there is a funding issue which will need to be resolved in conjunction with LGNZ and government.

Ngā tūtohunga / Recommendation/s

That the Governing Body:

a) note the progress on introducing online voting for the local body elections, which has been made collaboratively through the participating councils, Local Government New Zealand, the Society of Local Government Managers and the Department of Internal Affairs.

b) confirm the Chief Executive’s decision that Auckland Council will not proceed with an online voting trial for the 2019 elections due to the costs being unacceptable for the participating councils.
c) reconfirm its support for online voting.

d) request that the mayor, on behalf of Auckland Council, write to the Minister of Local Government asking that
   
i) the Government, in partnership with the local government sector, explore a national or sector-wide system and funding approach for online voting in time for the 2022 elections, or earlier for by-elections if possible
   
ii) the Government proceed with the enactment of the Local Electoral Matters Bill as soon as possible to avoid losing momentum.

e) support Auckland Council continuing to work with the government, other councils and local government sector organisations to introduce online voting as soon as possible.

Horopaki / Context
Prior to May 2018

7. With the support of the Department of Internal Affairs (DIA) and the then Minister of Local Government, an online voting working party was established in 2013 with the goal of providing online voting at the 2016 local government elections.

8. In 2015, the government issued the requirements to be met by a trial of online voting. Eight councils expressed their interest in continuing to participate in the project. The Minister deemed Auckland Council too big to take part. At that stage, the legislation did not provide for a trial with a subset of electors. If online voting was authorised by the Minister, it would need to be available to all electors in an area where this method was adopted.

9. In April 2016, the then Associate Minister of Local Government, Louise Upston, decided to not proceed with the trial because the Government’s requirements could not be met in time.

10. Following the 2016 elections, Auckland Council conducted research on voter awareness. When asked for their preferred method of voting, 74 per cent said they would prefer online voting over postal voting.

11. At its December 2016 meeting, the Finance and Performance Committee resolved to “request the Minister of Local Government to explore a pilot trial of an electronic voting system including by-elections”.

12. In July 2017, the Governing Body agreed a submission to the Justice Select Committee on its inquiry into the 2016 elections, which included a strong recommendation supporting online voting.

13. Following the parliamentary elections in 2017 some councils – including Auckland Council – together with LGNZ and SOLGM, worked with the Department of Internal Affairs to pursue the introduction of enabling legislation. The Local Electoral Matters Bill was introduced into the House in April 2018.

14. At the end of 2017, LGNZ wrote to the Minister of Local Government seeking a financial contribution from central government to assist with the cost of running a trial, with the local government sector meeting the remaining cost. Due as much to timing as to the multiple demands faced by a new government, LGNZ was not successful in its funding bid and the possibility of sector-wide funding was lost for this financial year once councils began their Long-Term Plan 2018-2028 consultation process.

May 2018: support in principle

15. The Local Electoral Matters Bill, currently in front of the Justice Select committee, will allow a trial of a voting method to be conducted with a subset of electors. It also allows data from electoral rolls to be used for authentication purposes.
16. In May 2018, the Governing Body approved the council’s submission on the Local Electoral Matters Bill. At that meeting the Governing Body resolved its support for online voting in principle (resolution number GB/2018/82):

That the Governing Body:

...  
c) support in principle Auckland Council conducting an online voting trial in the 2019 local body elections for a subset of electors, either alone or in partnership with other councils, subject to the following conditions:

i) the enabling legislation and subsequent regulations being passed in time to procure and implement an online voting solution

ii) all risks, including security risks, being appropriately managed

iii) the cost being acceptable

iv) the Governing Body giving final approval for any trial to go ahead.

17. The report noted that costs would likely be in the order of $1 million to $1.5 million.

Tātaritanga me ngā tohutohu / Analysis and advice

Participation agreement

18. Auckland Council staff developed a structure in which interested councils could collaborate in progressing the online project.

19. Eight other councils expressed an interest in being part of a trial. A participation agreement was signed between the following councils:

- Auckland Council
- Gisborne District Council
- Hamilton City Council
- Marlborough District Council
- Matamata-Piako District Council
- Palmerston North City Council
- Selwyn District Council
- Tauranga City Council
- Wellington City Council

20. An online voting working party was formed comprising representatives from all participating councils, with support from LGNZ, SOLGM and DIA.

21. The timeframe was a major challenge for the working party. The Local Electoral Matters Bill was not likely to be enacted before the end of 2018 but to get an online solution in place before the 2019 elections, a provider would need to be identified before the legislation was enacted. On this basis the working party developed a three-phase approach for the project.

22. Phase 1, to 31 December 2018, consisted of running a competitive procurement process to identify a preferred provider and developing a full business case, including total project costs. A commitment to procurement would be subject to the agreement of the participating councils to continue with the project in view of the costs and would be subject to legislation and regulations being in place on time.

23. Auckland Council had the added task of identifying a subset of electors for the purposes of the trial. A subset would need to be proposed for approval by the Minister once regulations were in place.
24. In Phase 2, the contract with the preferred provider would be finalised and the project would start, but the project would be stopped by 31 March 2019 if the legislation was not in place by that date.

25. Phase 3 would include the full development of the online voting solution, the running of the trial and a post-trial evaluation.

**Engagement with the public**

26. For an online voting method to be successful it will need to be accepted, trusted and used by the community. The working party considered that public engagement was important.

27. Two public forums for various stakeholders were arranged, one in Wellington and one in Auckland. Representatives of the information technology sector, security experts, district health boards, government, academia, disability, not for profit groups and others were invited.

**Engagement with local boards**

28. Reports seeking support for online voting and recommendations for subsets for the trial have been presented to all local boards.

29. Eighteen out of 21 local boards expressed support for a trial of online voting, two did not take a position on the trial and one is not supportive of the trial. Twelve of the eighteen supported the inclusion of their area in the subset of electors. Local Board resolutions are in Attachment A.

**Engagement with district health boards and licensing trusts**

30. Elections of other bodies that are conducted in association with the territorial local authority elections are required to use the voting methods used by the territorial local authority, however there is a requirement to consult with the other bodies and take their views into account when making the formal decision to adopt the voting method.

31. Auckland Council staff met with district health board staff to ensure they were aware of the developments with online voting.

**Selection of a provider**

32. A request for proposal was issued by the working party on 27 August 2018. The requirements that needed to be met by a successful tenderer were developed using documentation from DIA, expert advice from the participating councils’ IT staff and were assisted by an international consultant who, as the former CIO of the New South Wales Electoral Commission, had introduced Ivote for the New South Wales state elections.

33. A five-member evaluation panel was established by the working party and included Ian Brightwell. The panel was assisted by a technical support team comprising representatives from Auckland Council, Wellington City Council, an independent security expert and a representative from DIA.

34. Five suppliers responded. The panel finalised its recommendation to the working party for a preferred provider on 8 November 2018.

35. A full business case was developed, with a budget based on the costs submitted by the preferred supplier and other project costs.

**Security**

36. No IT or voting system is 100 per cent secure, but the working party developed technical security requirements to ensure that the online voting solution would guarantee a similar or higher level of security than currently offered by postal voting.
37. The working party engaged a security consultant from reputed information technology firm Dimension Data to review the security aspects of Phase 1 of the online voting trial. The report confirms that appropriate security measures and decisions have been made to the extent possible within the RFP and vendor selection process, and business case development. The full report is contained in Attachment B.

Allocation of costs

38. The estimated total cost for the nine participating councils is $4.230 million. This includes an 18 per cent contingency and does not include an allowance for reimbursements from district health boards and licensing trusts.

39. The Working Party agreed to share costs based on the number of electors having the option of using online voting. For Auckland Council the estimated subset was 154,000 electors. The actual subset, following consultation with local boards, would be decided by the Governing Body. All other councils intended to offer online voting to all electors. On that basis Auckland Council would share approximately 22 per cent of the costs.

40. Auckland Council’s share of the total cost would be approximately $0.927 million, which would reduce to approximately $0.694 million with reimbursements from the district health boards and licensing trusts. This is in line with indications given to the Governing Body in May 2018. That cost would fall into the 2018/19 and 2019/20 financial years.

Costs considered to be too high

41. Auckland Council’s costs are low in proportion to its size because it would be offering the online option to only a subset of electors. The other councils would be offering the option to all their electors and their share of costs is high in relation to their size. For example, the costs for Auckland Council and Wellington City Council are based on a similar number of electors. The cost to Wellington City Council is slightly higher than the cost to Auckland Council. The chief executives of the participating councils consider the costs to be too high to recommend that their councils implement the trial for 2019.

42. Staff therefore recommend that Auckland Council does not proceed with the trial for 2019.

Future of online voting

43. There have been considerable achievements so far as a result of the collaborative work between all participating councils, LGNZ, SOLGM and the Department of Internal Affairs:
   - the government has introduced a Bill that will enable online voting using specified classes of electors for a trial
   - the Department of Internal Affairs drafted regulations and consulted on them
   - the Participation Agreement between the nine councils and the working party structure enabled the councils to effectively work together and share costs
   - the working party developed a comprehensive set of technical and security requirements for any potential provider to meet
   - the Working Party completed a full business case for the project
   - a security analysis confirmed the robustness of the process.

44. Apart from the remaining uncertainty about the timing of the legislation, the only factor preventing online voting in 2019 is funding.

45. Staff consider that all the reasons for continuing to develop an online voting option still apply, including the decline of the postal option, provision for the disabled and those overseas and responding to those who state clearly that they would prefer online voting over postal voting.
46. The Governing Body is asked to re-confirm its support for online voting and to ask the Minister to:

- explore a national or sector-wide system and funding approach for online voting in time for the 2022 elections, or earlier for by-elections if possible, and
- proceed with the enactment of the Local Electoral Matters Bill as soon as possible to avoid losing momentum.

Ngā whakaaweawe me ngā tirohanga a te rōpū Kaunihera / Council group impacts and views

47. Elections and the use of online voting as a voting method do not impact on other members of the council group.

Ngā whakaaweawe ā-rohe me ngā tirohanga a te poari ā-rohe / Local impacts and local board views

48. Local board support for online voting is outlined in the report and resolutions contained in Attachment A.

Tauākī whakaaweawe Māori / Māori impact statement

49. Voter turnout has historically been lower among Māori than non-Māori. We do not have robust information on the impact online voting may have on Māori participation but there are positive indications from the use of online options for participating in the Long-term Plan consultation.

50. A number of iwi have embraced internet technology and provide online voting as an option for their elections.

51. Online voting may have a positive impact on Māori participation in elections.

Ngā ritenga ā-pūtea / Financial implications

52. The nine participating councils agreed to equally share the costs of Phase 1. Auckland Council’s share amounts to approximately $15,000. Auckland Council spent an additional $62,608 on ICT technical resources. These costs do not include the council’s very significant contribution in staff time to run the Working Party, manage the project and lead the procurement process. About 20 staff from the Democracy Services, Procurement, Legal, ICT, Finance and Research and Evaluation Departments were heavily involved in the project on behalf of the sector.

Ngā raru tūpono me ngā whakamaurutanga / Risks and mitigations

53. We intended to trial online voting at the 2019 elections with a view, if successful, to implementing it as a permanent option to postal voting from 2022. For Auckland Council a trial can only be with a subset of electors and so offering online voting as an option for all electors could not happen until after a successful trial. With postponing a trial from 2019 to 2022 a permanent online option for all Auckland Council electors will be delayed until 2025 with the risk that postal services will decline further by that time.

54. There is a substantial risk to the future of online voting if the Government does not assist financially.
Ngā koringa ā-muri / Next steps

55. Staff propose that the mayor writes to the Minister of Local Government to encourage the Government to assist financially to enable online voting to be trialled at by-elections between 2019 and the 2022 elections, as well as at the 2022 elections.

56. Staff will continue to work with other councils, LGNZ, SOLGM and the Department of Internal Affairs to develop the online voting solution and to seek financial assistance from the government.

Ngā tāpirihanga / Attachments

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<td>Security review status report</td>
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Ngā kaihaina / Signatories

Author: Warwick McNaughton - Principal Advisor - Democracy Services

Authorisers:
- Marguerite Delbet - General Manager Democracy Services
- Phil Wilson - Governance Director
- Stephen Town - Chief Executive
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<tr>
<th>Position on Auckland Council’s involvement in the online voting trial for the 2019 local elections</th>
<th>Position on recommendation for the subset of voters eligible to participate in the trial</th>
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<tbody>
<tr>
<td>Supportive of the trial as a whole and of the subset, including support for their local board area being included in the online voting trial for the 2019 election in the event the trial is supported by the Governing Body, and if inclusion of the Upper Harbour area fulfills the demographic requirements necessary as outlined in the agenda report.</td>
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| Upper Harbour (2018-11-15) | Support in principle the trial of online voting as articulated within the agenda report for the 2019 election, for the following reasons:  
  i) to increase participation in under-represented demographics  
  ii) to meet the public expectation of a convenient and secure opportunity to participate in democracy  
  iii) to take a conservative approach to developing alternate methods of secure voting. |
| Henderson-Massey (2018-11-20) | a. notes that Auckland Council has entered into a collaborative agreement with eight other councils to work together towards an online voting trial for the 2019 local body elections.  
  b. endorses the trial of online voting as a tool to enable local democracy, noting that postal voting is still an option for all voters. |
| Hawick (2018-11-19) | i) note that Auckland Council has entered into a collaborative agreement with eight other councils to work together towards an online voting trial for the 2019 local body elections.  
  ii) endorse the trial of online voting as a tool to enable local democracy, noting that postal voting is still an option for all voters. |
| Māngere-Ötāhuhu (2018-11-21) | a) notes that Auckland Council has entered into a collaborative agreement with eight other councils to work together towards an online voting trial for the 2019 local body elections.  
  b) endorses the trial of online voting as a tool to enable local democracy, noting that postal voting is still an option for all voters. |
| Hibiscus & Bays (2018-11-21) | a) tentatively supports the trial of online voting for the 2019 elections however it expresses some concern based on overseas experience regarding security and ease of use for voters  
  b) requests that voter authentication and security must be the top priority for the trial and beyond suspicion, to ensure the authenticity of the electoral result  
  c) requests that online voting must be designed to ensure that it is easy for voters to participate and prove their identity, whilst practically impossible for a third party to tamper with the result or vote illegally  
  d) supports the targeting of a demographic or subset of voters to take part in the trial on the following basis:  
    i. a broad demographic should be selected that can take part across the region and is not limited or overly represented in one ward or one local board area  
    ii. suggests that voters with accessibility needs are a good subset of voters to participate in the trial as they may struggle with the current postal voting system  
  e) support the local board area being included in the online voting trial for the 2019 election in the event the trial is supported by the Governing Body, and if inclusion of the Hibiscus and Bays Local Board area fulfills the demographic requirements necessary as outlined in the agenda report. |
| Otara-Papatoetoe (2018-11-20) | a) note that Auckland Council has entered into a collaborative agreement with eight other councils to work together towards an online voting trial for the 2019 local body elections.  
   b) endorse the trial of online voting as a tool to enable local democracy, noting that postal voting is still an option for all voters.  
   c) endorse the principle of including voters in the trial that are most disproportionately impacted in their ability to participate with the sole postal method.  
   d) endorse the online voting subset including a combination of geographical areas at a local board level and overseas voters and people with a disability.  
   e) note that the number of local boards involved in the trial will be determined by the size of the subset, yet to be confirmed by the Minister of Local Government, and the representativeness of the local board areas combined to the overall voting population.  
   f) recommend that voters in the Otara-Papatoetoe Local Board be considered for the online voting trial. |
| Waiheke (2018-11-22) | a) note that Auckland Council has entered into a collaborative agreement with eight other councils to work together towards an online voting trial for the 2019 local body elections.  
   b) endorse the trial of online voting as a tool to enable local democracy, noting that postal voting is still an option for all voters.  
   c) endorse the principle of including voters in the trial that are most disproportionately impacted in their ability to participate with the sole postal method.  
   d) endorse the online voting subset including a combination of geographical areas at a local board level and overseas voters and people with a disability.  
   e) note that the number of local boards involved in the trial will be determined by the size of the subset, yet to be confirmed by the Minister of Local Government, and the representativeness of the local board areas combined to the overall voting population.  
   f) recommend that voters in the Waiheke Local Board area be considered for the online voting trial. |
| Maungakiekie-Tāmaki (2018-11-27) | a) notes that Auckland Council has entered into a collaborative agreement with eight other councils to work together towards an online voting trial for the 2019 local body elections;  
   b) endorses the trial of online voting as a tool to enable local democracy, noting that postal voting is still an option for all voters;  
   e) recommends all voting information provided online is available in a range of different languages to ensure all voters have the needed information to make an informed vote;  
   c) endorses the principle of including voters in the trial that are most disproportionately impacted in their ability to participate with the sole postal method;  
   d) endorses the online voting subset including a combination of geographical areas at a local board level and overseas voters and people with a disability;  
   f) notes that the number of local boards involved in the trial will be determined by the size of the subset, yet to be confirmed by the Minister of Local Government, and the representativeness of the local board areas combined to the overall voting population;  
   g) recommends that voters in the Maungakiekie-Tāmaki Local Board be considered for the online voting trial. |
| Franklin (2018-11-27) | a) notes that Auckland Council has entered into a collaborative agreement with eight other councils to work together towards an online voting trial for the 2019 local body elections;  
   b) endorses the trial of online voting as a tool to enable local democracy, noting that postal voting is still an option for all voters;  
   g) looks assurance about the security and integrity of the system and that it will be well tested and piloted prior to the election.  
   c) endorses the principle of including voters in the trial that are most disproportionately impacted in their ability to participate with the sole postal method;  
   d) endorses the online voting subset including a combination of geographical areas at a local board level and overseas voters and people with a disability;  
   e) notes that the number of local boards involved in the trial will be determined by the size of the subset, yet to be confirmed by the Minister of Local Government, and the representativeness of the local board areas combined to the overall voting population;  
   f) recommends that voters in the Franklin Local Board area be considered for the online voting trial. |
| Albert-Eden Local Board (2018-11-28) | a) support the trial of online voting for the 2019 local body elections in Auckland, as an additional option to postal voting.  
   b) note that should the online voting trial go ahead the following considerations should be prioritised: i. security of the online system and users’ personal data, ii. accessibility of the system to ensure the independence of voters with disabilities, iii. candidate profiles accessible from the voting platform to ensure voters have sufficient information to make an informed vote.  
   d) support the online voting subset to include people with accessibility issues due to a permanent or long-term disability.  
   e) recommend that voters in the Albert-Eden Local Board area be offered the option to participate in the online voting trial.  
   c) support the online voting subset to include all overseas voters.  
   d) support the online voting subset to include people with accessibility issues due to a permanent or long-term disability.  
   e) recommend that voters in the Albert-Eden Local Board area be offered the option to participate in the online voting trial. |
Papakura (2018-11-28)
a) note that Auckland Council has entered into a collaborative agreement with eight other local authorities to work together towards an online voting trial for the 2019 local body elections.
b) endorse the trial of online voting as a tool to enable local democracy, noting that postal voting is still an option for all voters.

Whau (2018-11-28)
a) note that Auckland Council has entered into a collaborative agreement with eight other councils to work together towards an online voting trial for the 2019 local body elections.
b) endorse the trial of online voting as a tool to enable local democracy, noting that postal voting is still an option for all voters.

c) endorse the principle of including voters in the trial that are most disproportionately impacted in their ability to participate with the sole postal method.
d) endorse the online voting subset including a combination of geographical areas at a local board level and overseas voters and people with a disability.
e) note that the number of local boards involved in the trial will be determined by the size of the subset, yet to be confirmed by the Minister of Local Government, and the representativeness of the local board areas combined to the overall voting population.
f) recommend that voters in the Papakura Local Board area be considered for the online voting trial.

<table>
<thead>
<tr>
<th>Local Board</th>
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<th>Position on recommendation for the subset of voters eligible to participate in the trial</th>
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| Rodney      | a) tentatively supports the trial however it expresses some concern based on overseas experience regarding security and ease of use for voters.  
b) requests that voter authentication and security must be the top priority for the trial and beyond suspicion, to ensure the authenticity of the electoral result.  
c) requests that online voting must be designed to ensure that it is easy for voters to participate and prove their identity, while practically impossible for a third party to tamper with the result or vote illegally.  
| Orakei      | a) support the trial of on-line voting for the 2019 local body elections in Auckland, in addition to postal voting.  
b) note that should the trial of on-line voting for the 2019 local body elections in Auckland go ahead, the following considerations should be prioritised:  
i) Security of the on-line system and users personal data  
ii) Provision of easy, accessible candidate profiles that link to the voting platform to ensure voters have the information to make an informed vote  
iii) Ensure all voting information is translated into the top six spoken languages in New Zealand including Te Reo to ensure all voters have the needed information to make an informed vote.  
c) support the online voting subset for the trial of on-line voting for the 2019 local body elections in Auckland to include all New Zealand resident overseas voters only.  

**LOST MOTION:**

| LOST MOTION: | d) support the online voting subset for the trial of on-line voting for the 2019 local body elections in Auckland to include people with accessibility issues due to a disability, but seek further clarification of the definition “people with a disability.”  
The motion was put to the vote by a show of hands and was declared LOST by 2 votes to 4. |

| Great Barrier (2018-11-20) | a) support the objectives of the trial online voting at the 2019 elections noting some concerns about content security, ballooning project costs and voter accessibility.  
b) recommend that the subset of participating voters does not include Great Barrier Island residents until the island’s broadband infrastructure is more reliable. |
|--------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
### Local Board Supportive of the trial as a whole, supportive of the trial’s subsets, and no position on inclusion of their local board as a candidate subset.  

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<tr>
<td>Manurewa</td>
<td>b) endorse the trial of online voting as a tool to enable local democracy, noting that postal voting is still an option for all voters.</td>
<td>c) endorse the principle of including voters in the trial that are most disproportionately impacted in their ability to participate with the sole postal method.</td>
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<td>d) endorse the online voting subset including a combination of geographical areas at a local board level and overseas voters and people with a disability.</td>
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<td>e) note that the number of local boards involved in the trial will be determined by the size of the subset, yet to be confirmed by the Minister of Local Government, and the representativeness of the local board areas combined to the overall voting population.</td>
</tr>
</tbody>
</table>
| Waitakere       | a) note that Auckland Council has entered into a collaborative agreement with eight other councils to work together towards an online voting trial for the 2019 local body elections.  
 b. support the trial of online voting as a tool to enable local democracy, noting that postal voting is still an option for all voters | c. support the principle of including voters in the trial that are most disproportionately impacted in their ability to participate with the sole postal method.  
 d. support the online voting subset including a combination of geographical areas at a local board level and overseas voters and people with a disability.  
 e. note that the number of local boards involved in the trial will be determined by the size of the subset, yet to be confirmed by the Minister of Local Government, and the representativeness of the local board areas combined to the overall voting population.  
 f. recommend that the local board areas used include the whole of council candidate wards so that councillor candidates are campaigning within a consistent voting system throughout each ward. |
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</tr>
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</table>
| Puketāpapa (2018-11-15) | a) note that Auckland Council has entered into a collaborative agreement with eight other councils to work together towards an online voting trial for the 2019 local body elections.  
   b) note its concerns about the security of online systems and therefore the risks of being an early adopter in this instance. | c) note that Puketāpapa residents have relatively low access to, and use of, the internet.  
   d) agree that Puketāpapa Local Board not be part of this online trial if it goes ahead. |
| Kapātiki (2018-11-21) | b) support the investigation of alternative methods to increase voter participation that do not rely on non-paper-based voting systems. | a) do not support the inclusion of the Kapātiki Local Board area within the online voting trial at the 2019 elections, due to the security risk of manipulation of data, lack of paper records, and concerning results in non-paper-based voting elections in other parts of the world. |

A division was called for, voting on which was as follows:

<table>
<thead>
<tr>
<th>For</th>
<th>Against</th>
<th>Abstained</th>
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<tr>
<td>Chairperson J Gilon</td>
<td>Member A Hartley</td>
<td>Member K McIntrye</td>
</tr>
<tr>
<td>Deputy Chairperson D Grant</td>
<td>Member A Tyler</td>
<td>Member L Waugh</td>
</tr>
<tr>
<td>Member A Smithson</td>
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The motion was declared **EQUAL**.  
The chair exercised their casting vote for so the motion was **Carried**.
Security Review Status Report

Online Voting Working Party
Online Voting Working Party Security Review

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<th>Title</th>
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<tbody>
<tr>
<td>Prepared by</td>
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<td>12/11/2018</td>
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<td>Reviewed /</td>
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<td>Principal Security Consultant</td>
<td>14/11/2018</td>
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<td>Approved by</td>
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<tr>
<td>Peter Benson</td>
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<td>Gaik Lim</td>
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<td>AUCKLAND COUNCIL</td>
<td>Head of Business Systems</td>
</tr>
</tbody>
</table>
Online Voting Working Party Security Review

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Online Voting Working Party Security Review

1. Executive Summary

The Online Voting Working Party have requested Dimension Data to review the security aspects of the On-Line Voting trial, to confirm that appropriate security measures have been addressed.

Given that the trial is still at a relatively early stage, we are unable to provide full and independent assurance that all aspects of security have been addressed through to a production ready instance. However we can confirm that appropriate security measures and decisions have been made to the extent possible within the RFP and vendor selection process, and business case development.

The vendor selection process has been robust, and the selected vendor and project team have the capability to deliver an on-line voting platform within the levels of security and risk as outlined in the initial objectives, i.e. at least as secure as the postal voting equivalent. The technologies involved provide a high degree of assurance of the voting process, and auditability, within the confines of the identified requirements.

The short time frames for development, design, and implementation do pose significant risks, and appropriate controls will be required to ensure that security considerations are addressed appropriately, given the aggressive nature of the project.

In terms of the overall project, there are a number of security considerations and steps still to be undertaken, so this report should not be taken as approval or assurance that the final delivered solution is either fit for purpose or sufficiently secure. At this stage, we would consider this project to be at high risk but being managed appropriately.

The author of this report has been involved in providing advice and guidance to the project, and hence, this is not a fully “independent” assessment, and should be tempered by the notion of involvement, and advice provided during the project to date.

The following sections describe observations and issues identified from the level of engagement available within the project.
Online Voting Working Party Security Review

1.1. Conclusion

The project has developed and designed an RFP for the purposes of selecting an end-to-end service provider for the provisioning and management of an on-line voting solution.

In addition, the project has been working with the Department of Internal Affairs with respect to the voting regulations to enable the progression of the on-line voting technology in conjunction as a “trial” only at this stage.

As of the time of report development, the RFP process has been completed, the vendor (and hosting provider) have been selected as preferred supplier, and a business case has been developed to enable decision making by the Working Party to proceed as required.

Appropriate security measures and decisions have been made to the extent possible into the RFP and vendor selection process.

The vendor selection process has been robust, and the selected preferred vendor and project team have the capability to deliver an on-line voting platform with the levels of security and risk as outlined in the initial objectives of the project.
Online Voting Working Party Security Review

2. Introduction

Central Government is currently progressing legislation to enable a trial of online voting in the local authority elections in October 2019. On the basis that the necessary changes will be made to the regulatory framework governing local authority elections, nine local authorities have formed an Online Voting Working Party ("Working Party"), to provide an online voting option as part of the 2019 local authority elections.

Local Government New Zealand (LGNZ), representing all local authorities, supports the Working Party’s initiative to offer a trial of online voting, and is working with them to increase community understanding and identify lessons arising from the trial.

Provided the enabling legislation is enacted in time, the Working Party intend to trial an online voting option for the 2019 local authority elections only, to demonstrate that online elections will work in the New Zealand local government context.

This report is based on the initial phase of the project only, i.e. the RFP process, preferred vendor selection, and business case development.
Online Voting Working Party Security Review

3. Purpose

Dimension Data had been requested to provide a resource to deliver security consulting work for the online voting project.

The purpose of this document is to provide observations and commentary on the effectiveness and outcomes of the first phase of the project, i.e. RFP process and vendor selection / recommendation, and business case development.
4. **Scope of Review**

The scope of this work was to:

1. **Evaluate the vendor responses to the RFP**
   a. Provide support to the Auckland Council tender evaluator for reviewing the submissions from respondents to the RFP
   b. Assess the information security aspects of the submissions and identify any gaps, weakness and key differences between the short-listed responses.

2. Support Auckland Council’s Information Security Manager in developing the security related aspects and costs for input into the business case that will be submitted to the Governing Bodies for approval to proceed with the chosen technology for the trial.

**Deliverables:**

3. Provide feedback on the responses and make recommendations for the technology to select based on how closely the responses match the requirements in the RFP and subsequent amendments.

4. Costs of the security related work are estimated for inclusion in the business case.
Online Voting Working Party Security Review

5. Approach to Review

The process has involved a committee of 9 local councils (‘Online Voting Working Party’), working together as a steering committee, providing governance and direction to the project. The project team has included an evaluation team, supported by a ‘technical support’ team to evaluate technical aspects of the RFP and responses.

Our approach to the vendor selection / RFP process focused on four key areas as outlined below:

<table>
<thead>
<tr>
<th>Focus Area</th>
<th>Description / Objective</th>
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<tbody>
<tr>
<td>Vendor selection process</td>
<td>Assure quality of RFP process and preferred vendor selection.</td>
</tr>
<tr>
<td>Security Architecture</td>
<td>Assure that the technology, people, processes and described architectures are fit for purpose for performing online voting in local government elections.</td>
</tr>
<tr>
<td>Communication</td>
<td>Determine that input and communication within and external to the project is appropriate based on criticality of the deliverable.</td>
</tr>
<tr>
<td>Risk Management and risks</td>
<td>Identify and highlight key risks that need to be mitigated or considered in future project phases.</td>
</tr>
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Online Voting Working Party Security Review

6. Results of the Review

The results of our review are outlined below:

6.1. Vendor selection process

The vendor selection / RFP process has been well managed, with clear management of governance, process, probity, and analysis.

The RFP was developed using reasonable practice and based on threat modelling and advice from DIA and others to ensure that any vendor selection has met minimum standards and expectations from a security standpoint.

While a number of the proposals were lacking in both quality and security capability, the final two candidates clearly demonstrated they have been involved in delivering successful on-line voting projects globally and could demonstrate they met the minimum quality and security levels required by this project.

The overall security was improved during the short-listing process through the decision to require the vendor to host the solution in an All of Government (AoG) IaaS certified Data Centre, within the commercial space, but with security levels equivalent to All of Government certification.

From a security perspective, the probity process was well enforced in order to help the technical support team make recommendations outside of any potential bias introduced by commercial considerations. Independence issues were addressed throughout the course of the RFP process, and managed appropriately.

The decisions / recommendations were based largely on whether the vendors both had credibility in the industry space being considered, whether they had sufficiently robust processes and controls to have a level of confidence that they could build an appropriate solution, and a clear understanding that they could achieve the required processes and conditions outlined in the RFP, subsequent follow up changes, and flexibility to deliver to requirements in the time frame.

Technically, the preferred vendor has demonstrated strong security and cryptographic controls, consistent with the requirements for protection of the voting process and vote collection, storage, and processing. Strong audit controls along with vote verification systems have been identified based on proven technology. The preferred vendor has also demonstrated sufficient flexibility to provide a level of assurance they can meet local customisation requirements without compromising overall security.

Please note however that vendor selection is only one stage in the security journey; due to time frames, there was insufficient time to perform a full and detailed threat analysis or security architecture / design prior to the vendor selection. These processes will be required to be undertaken in subsequent phases of the project.
6.2. Security Architecture

Overall the security architecture described by the selected vendor is “fit for purpose” in relation to the voting process, the vote collection and tabulation, and the auditing functions required to ensure an accurate voting count. Further detail concerning the security architecture is provided below:

- The election management technical controls provide a level of confidence in the collection, storage, decryption of the votes, and strong audit controls to ensure provable processes.
- The voting process includes double encryption (client and communication), which provides a level of confidence that votes cannot be intercepted and/or changed over the network communication.
- A separate vote verification system has been included, to provide assurance that vote manipulation in the user’s (voter’s) device has been addressed.
- A reasonable level of assurance has been achieved in the vendor having appropriate internal controls and processes to develop and maintain secure voting application systems.

The project has established sufficient confidence in the overall security at this stage of the project to progress forward. This includes agreement to use hosting services providers that are compliant with AoG security requirements, as well as a compliance requirement with the New Zealand Information Security Manual (NZISM).

Due to the tight time frames of the project, a range of detailed security architecture and design activities related to the hosting providers and hosted solution have yet to take place, and it is essential that additional tasks are required in the next phase to perform and agree the following:

- Detailed threat analysis and mapping
- High level security architecture
- Detailed security architecture and design, including all areas of the solution:
  - People
  - Process
  - Technology (including network, application, server, etc.).
6.3. Communication

Given the nature of the project and the aggressive time frames of the project, communications at this stage have been very good, with high levels of engagement by both the stakeholders and the project team.

The next stages of the project will require similar levels of communications to ensure that all parties and interests are adequately represented, particularly related to security concerns.

The nature of the time frames are to some extent dictating the outcomes of the project, and while every project has a trade off between time, cost, quality, it is essential that quality and time are considered the primary concerns to ensure a successful outcome.

External communications, including with interest groups has been reasonable, with public submissions around the draft regulation changes and mediated forums with interested parties including DIA, disability groups, Maori, various universities, and democratic representation.

Within this type of disruptive technology introduction, and the potential impact / implications for public trust and democratic process, it is highly recommended that external communication and input is sought to ensure the robustness of the process, and to ensure that all threats are identified and mitigated appropriately. With this type of technology, the more security and risk experts that provide input to the process, the better. This will help with both risk identification, and to help with confidence building outside the immediate project team.

On-line voting is considered high risk in the media, and there is a lot of “Fear, Uncertainty, and Doubt” (FUD) in the public domain as to whether there is sufficient trust in the technology to proceed. Irrespective of the notion that the objectives of the trial are to be “at least as secure as postal voting”, the degree of public scrutiny on the project should not be underestimated. This is particularly relevant in the face of state sponsored election manipulation fears, such as the purported Russian interference in the US election process.

It is highly recommended that the project consider a proactive and positive communications strategy to establish engagement and comfort / confidence in the project, as opposed to a reactive communication strategy which only reacts to negative media reports.
Online Voting Working Party Security Review

6.4. Risk Management and Risks

The following are risks that have been identified by the author that should be given consideration in the following phases of the project. There is a level of comfort that all appropriate steps have been taken to date. The following are additional considerations for the next phases of the project that should be addressed.

1. **Trial vs production** – While this project is a "trial" of online voting, the intent is to implement and install this into a fully production environment, with use going forward for additional elections / by-elections. There is a potential for thinking that, as this is a "trial", that the environment, systems, security, etc., are temporary.

   In reality, the project needs to ensure the designs, implementation and operation, are suitable for a 3-5 year time frame, i.e. standardised production and operation.

   The second consideration is that the requirements and system designs have been considered for the purposes of Local Body Elections only, and not for National Elections. While stated in the original purpose of the Trial, it should be reinforced that the selected systems and designs should be considered fit for existing purposes only, and subject to full and complete reviews prior to any consideration for any other purposes.

2. **Vendor risk** – a range of detailed design requirements are yet to be ratified and confirmed, due to the draft regulations not either finalised or approved at this stage. This limits the time within which to perform detailed requirement design and system development.

   There are risks associated with this that, while assurances have been provided by the Vendor, it may impact on project delivery or costs. Implications of changes to requirements have yet to be confirmed and therefore are unknown in scope and implications.

3. **Security design** – As previously discussed, while there is confidence in the vendor’s solution from a security perspective, the overall (end to end) security design has yet to be formalised and ratified through the process of detailed threat modelling, high level security architecture, detailed security architecture, implementation and operation.

   Threat Modelling is an essential part of this process, i.e. it is essential that a detailed threat and risk assessment be undertaken to determine as many threats as possible to the infrastructure, operational processes, technology, and voting methodologies. Once the detailed threat landscape and risks have been understood to the extent possible, appropriate controls and mitigations can be designed and implemented.
Online Voting Working Party Security Review

It is essential that this work be performed as early as possible, once the detailed requirements have been identified, and the regulations ratified.

4. **Time vs quality** – The project is working to reasonably aggressive time frames. The vendor has identified that the time frames are currently achievable, however it is recommended that there is sufficient effort applied to ensure that quality (security) is not compromised as a result of the time pressures to deliver the outcome.

5. **Costs / Business Case** – At this stage of the project, reasonable consideration has been given to security requirements, however as detailed requirements have not been fully identified or detailed design undertaken, the final and full costs of implementation and operation of security may not be fully identified.

There is a risk that the required costs of security may require a cost review at some stage in the project. The earlier that detailed designs can be undertaken, the earlier any cost variances can be identified. At this stage, recommendations have been made to include additional costs in the business case for “yet to be identified” security requirements.

6. **Transparency** – Online voting is a significant change from postal ballot voting, and is significantly more complex. While reasonable attempts have been made to ensure security experts have been engaged and security requirements have been addressed, this is one area where involvement and engagement of appropriate interest groups and open experts is recommended to the extent possible. This particularly applies to the threat modelling to ensure that threats have been identified and mitigated to the extent possible.

7. **Threat modelling** – The initial RFP work was developed based on threat models that were developed in 2014, which was fit for purpose for the process of vendor selection.

The threat landscape and technology capabilities and risks have changed since then, with additional risk factors and issues needing to be taken into consideration when developing and operating the online systems. In addition, while the existing threat models are sufficient for a general vendor selection process, they are insufficiently detailed to ensure that all appropriate threats and risks have been covered off in a detailed sense.

The next phase of the project should include a detailed threat assessment / modelling exercise to ensure that all appropriate threat mitigations and safeguards are designed into the project prior to implementation.
Online Voting Working Party Security Review

7. Conclusion

Overall we found the process to be robust and time bound in terms of decision making and managing the vendor process. Democracy Services representation has been strong within the project, and it is paramount that this continues. There are always risks with technical projects that objectives can be missed, and a detailed level of engagement with the democratic services and voting processes is paramount to the success of the project from the perspective of ensuring the delivered capability meets the democratic requirements.

We did note the following concerns that need to be carefully managed in the next stage of the project:

1. Draft Regulation design and interpretation is creating a strain on the project, as the draft regulations are still undergoing change, are subject to a level of interpretation, and are not guaranteed to be passed into regulation. This is creating pressure on the vendor implementation, as a range of detailed design and development requirements will only be understood once the regulation has been passed, with tight time frames following that date for implementation. There is nothing to suggest at this stage however that the timing cannot be achieved.

2. The on-line voting Draft Regulations (and interpretation of the same) are of some concern. While there is an intent to provide equivalency of service between on-line voting and postal voting, technology for on-line voting provides a significantly different threat posture to voting processes, and there are risks that the draft regulations may “water down” or affect the quality of the overall on-line voting process. An example is the authentication process being necessarily limited due to the authentication method; less of an issue with postal (physical) ballot handling, but has a different risk posture for on-line voting systems.

3. In addition, the DIA interpretation of vote verification methodology, while technically feasible, will impact on (lessen) the amount of actual vote verification undertaken by voters, and increase the operational delivery costs. Noted however that these decisions are outside the scope of the project, and are technically manageable within the time frames.

4. The project time frames are necessity aggressive in order to meet the objectives of the October 2019 elections. Given the strong security requirements of the trial, it is essential that there is sufficient time to perform appropriate testing, including source code review, penetration testing, and security audits. This is a substantial piece of work, and the importance of stringent testing (and time to perform) cannot be understated.
Appendix A  Software suppliers review

Five vendors were invited to respond to the closed RFP process, these being:

- Digital Elections
- Link Market Services
- Scyll
- Smartmatic
- Votem

Each of the vendors was compared in a number of areas:

- RFP response completeness and compliance
- Security controls and technical details
- Fitness for purpose in meeting requirements for local government elections
- Vendor robustness, commercial maturity, success in similar use cases
- Other.

From the responses provided by the vendors, the following were discounted by the Technical Support team as being inadequate in a number of areas, including fitness for purpose, quality of controls and security, ability to meet the RFP requirements. The vendors dismissed included Votem, Link Market Services, and Digital Elections.

It should be noted that each provide a commercial offering which may be appropriate for digital elections under specific circumstances, however these were determined as not meeting the objectives of usability or security within a local government election process, or did not meet the requirements of this RFP.

The two remaining candidates, Smartmatic and Scyll, were invited to respond to additional questions / requirements, and to demonstrate their capabilities to a team representing both the Working Party, and the Technical Support team.

Both Smartmatic and Scyll meet the objectives and requirements of the RFP and security requirements, and either are reasonable candidates for selection as the preferred supplier.

From an observation perspective, Smartmatic demonstrated stronger flexibility in meeting changing requirements and demonstrated a stronger level of commitment to meeting tight objectives and time frames.