DATE: August 31, 2018

TO: Members of the Board of Supervisors

FROM: G' Angela Calvillo, Clerk of the Board


We are in receipt of the following required responses to the San Francisco Civil Grand Jury report released June 29, 2018, entitled: “Open Source Voting in San Francisco.” Pursuant to California Penal Code, Sections 933 and 933.05, named City Departments shall respond to the report within 60 days of receipt, or no later than August 28, 2018.

For each finding the Department response shall:
1) agree with the finding; or
2) disagree with it, wholly or partially, and explain why.

As to each recommendation the Department shall report that:
1) the recommendation has been implemented, with a summary explanation; or
2) the recommendation has not been implemented but will be within a set timeframe as provided; or
3) the recommendation requires further analysis. The officer or agency head must define what additional study is needed. The Grand Jury expects a progress report within six months; or
4) the recommendation will not be implemented because it is not warranted or reasonable, with an explanation.

The Civil Grand Jury Report identified the following City Departments to submit responses (attached):

• Office of the Controller:
  Received August 17, 2018 for Recommendation Nos. R5 and R6.

• Office of the Mayor:
  Received August 28, 2018 for Finding Nos. F1, F2, F3, F4, F5, F6, F7, and F8; and Recommendation Nos. R1, and R2.

Continues on next page
• Department of Elections:
  Received August 28, 2018 for
  Finding Nos. F1; F2, F3, F4, F5, F6, F7, F8, F9, F10,
  F11, F12, F13, F14, F15, F16, F17, F19, and F20; and

• Department of Technology:
  Received August 28, 2018 for
  Finding Nos. F10, F12; F21, and F22; and
  Recommendation No. R7.

• Elections Commission:
  Received August 30, 2018, for
  Finding Nos. F1, F2, F3, F4, F7, F8, F10, F11, F12,
  F13, F14, F15, F16, F17, F19, and F20; and

These departmental responses are being provided for your information, as received, and may not
conform to the parameters stated in California Penal Code, Section 933.05 et seq. The
Government Audit and Oversight Committee will consider the subject report, along with the
responses, at an upcoming hearing.

c:
Honorable Teri L. Jackson, Presiding Judge
Kanishka Karunaratne Cheng, Mayor’s Office
Mawuli Tugbenyoh, Mayor’s Office
Andres Power, Mayor’s Office
Marie Valdez, Mayor’s Office
John Arntz, Director, Department of Elections
Roger Donaldson, President, Elections Commission
Don Chan, Elections Commission
Ben Rosenfield, City Controller
Todd Rydstrom, Office of the Controller
Peg Stevenson, Office of the Controller
Natasha Mihal, Office of the Controller
Tonia Lediju, Office of the Controller
Linda Gerull, Executive Director, Department of Technology
David German, Department of Technology
Jon Givner, Office of the City Attorney
Alisa Somera, Office of the Clerk of the Board
Debra Newman, Budget and Legislative Analyst
Severin Campbell, Budget and Legislative Analyst
Ashley Clark, Budget and Legislative Analyst
Lori Campbell, Foreperson, San Francisco Civil Grand Jury
To: Hon. Teri L. Jackson  
Presiding Judge of the Superior Court  
400 McAllister Street, Room 008  
San Francisco, CA 94102-4512


Dear Honorable Judge Jackson,


Sincerely,

Roger D. Donaldson, President  
San Francisco Election Commission
San Francisco Elections Commission Response

Findings
F1. There is not a clear project owner that is responsible for building an Open Source Voting System in San Francisco, which prevents the project from making any progress.

Disagree partially.

[General Note / Preamble: Regarding the report’s references to the “project,” progress on the project, and ownership of the project, until the City and County of San Francisco makes an official commitment to starting and funding the project (anticipated with the budget signing on August 1, 2018), there hasn’t been an official project to own and make progress on. Rather, the project was a proposed project, and it was being considered and assessed. Questions around slow progress, then, would better be phrased as slowness to deciding to start a project.]

Regarding making progress, rather than the lack of an owner, the Commission believes that the lack of funding and a commitment from the City to start the project was the main reason for the lack of progress. In particular, there wasn’t a project to own. This is in part why the Commission unanimously passed a resolution (“Open Source Voting Systems Resolution #2”) at its June 20, 2018 meeting that said, in part (as well as reiterating its request for funding later in the resolution)—

RESOLVED, That the Elections Commission calls on the Mayor and Board of Supervisors to state their commitment to effectively proceeding with San Francisco’s open source voting system project, so that the Elections Commission, Department of Elections, and the rest of San Francisco can state publicly and unambiguously that San Francisco has decided to move forward.

Regarding ownership, and assuming the City has committed to starting the project, the Commission certainly agrees that the lack of an owner would hamper progress. This is in part why the Commission in its June resolution called for the Department of Elections to be named the owner of the project once it is started, and established a policy that the project “be led by a dedicated project director / project manager who reports to the Director of Elections.” Having said that, the lack of an owner technically does not prevent progress from happening. For example, the Commission’s OSVTAC has been making progress even in the absence of funding, a project owner, and commitment from the City.

F2. Progress on the Open Source Voting project has been limited because responsibility has consistently and ambiguously been passed around between organizations without a clear source of funding or a mandate for completion.

Disagree partially.

The Commission would rephrase this by omitting the word “clear”: “without a source of funding or ....” There was no source of funding, clear or unclear. See also the response to F1 and its “General Note / Preamble” for the main reasons for the lack of progress.

F3. Progress on the Open Source Voting project has been slow because of the large number of stakeholders, and the dispersal of their expertise, and the uncertainty each party has about the overall project.
Disagree partially.

The Open Source Voting project has a relatively small number of stakeholders compared to other technology projects in the City. For example, unlike many other technology projects which may be used by many different departments, the Department of Elections is the only Department that would even need to use the resulting system. See also the response to F1 and its “General Note / Preamble” for the main reasons for the lack of progress.

F4. Progress on the Open Source Voting project has been slow because all parties are appropriately concerned about security, and few within San Francisco government have the technical background to accurately evaluate security concerns.

Disagree wholly.

While all parties may be concerned about security, this is not a reason for progress being slow. See also the response to F1 and its “General Note / Preamble” for the main reasons for the slow progress.

Regarding security, the Commission believes that there are a number of people within San Francisco government with the technical background to accurately evaluate security concerns. These include OSVTAC members, the Office of the CISO, and people within the Department of Technology.

F7. The California counties that use Ranked Choice Voting are in the same financial predicament as San Francisco when it comes to procuring their voting system software. This makes them ideal partnership candidates, as they face the same set of challenges under the same regulatory authority.

Disagree partially.

Ranked Choice Voting is a relatively small portion of the system, but not insignificant, and so should not be the sole determining factor in deciding partners. There are other factors to consider.

F8. Too many variables remain unresolved to draw confident analysis about completion cost or timeline of the OSV project.

Agree.

F10. The security of an Open Source Voting System would reflect the ratio of the number of good actors to bad actors that are looking at it to find vulnerabilities, which makes getting the attention of external security experts a top level priority for the OSV project.

Disagree partially.

The Commission believes that the security of the system is a function primarily of the quality of the system and the processes around its use rather than the number of people “looking at it.” The number of people looking at it is secondary. For example, if the system is designed well, has
San Francisco Elections Commission Response

high quality, and has good processes around it, the number of people looking at the code will have little or no bearing. Also, looking only at the number of actors is an oversimplification. For example, if the “good actors” are small in number and highly skilled, it wouldn’t necessarily help to throw dozens or hundreds of unskilled “bad actors” at it. Having said that, the Commission does believe that involving skilled security experts should be a priority of the project. Also, getting the attention of volunteers is only one way of involving experts. Experts can also be hired or procured. A proper development plan would include security as part of the project plan, and security would be included as part of the certification process.

F11. If an Open Source Voting system is going to be used only by San Francisco, it is unlikely to attract the requisite attention of security experts and white-hat engineers necessary to be confident in its security.

Disagree wholly.

Given that the project is the only open source voting project in the United States and can be designed with potential future use by other jurisdictions in mind, the Commission believes that it would attract significant attention. Moreover, even if it doesn’t attract attention, this shouldn’t matter. The City should draw its confidence from the experts that it involves in the project directly and not rely on volunteers that may or may not materialize.

F12. The ability to efficiently patch vulnerabilities in open source software is a foundational property of successful and secure open source projects, and certification by the Secretary of State poses an unscoped period of delay to any patch to an OSVS system.

Disagree partially.

For starters, this finding is true for proprietary software (including proprietary voting systems) just as much as it is true for open source software. For voting systems, the physical processes around their use is just as, if not more important than, the security of the software itself, and can be used to address both hardware and software issues. Physical processes include but are not limited to things like – securing the machines, securing ballots, doing adequate audits by hand-checking the paper ballots against the computer-generated results, having trained poll workers, etc.

F13. Although patches to open source systems are common, any patch of an election system will necessitate recertification by the California Secretary of State. The timeline and cost of this recertification can vary wildly depending on the size of the fix, and its urgency. There is some evidence that modular certification can be supported by the Secretary of State.

Disagree partially.

Small changes can be added through an administrative approval without full recertification.

F14. There are a large number of non-profit organizations that are willing and eager to help develop an OSV system, as both developers and advisors.

Disagree partially.
While it seems like there should be a large number of such organizations, we haven’t yet seen them come forward with concrete help. Also, the Civil Grand Jury Report only mentions three organizations – none of which has volunteered and one of which (18F) is not even a non-profit.

**F15.** Federal agencies specializing in developing reusable Open Source Technologies, such as the USDS and 18F, are ideal partnership candidates for an OSV project, but their involvement would require that some federal funds be used for the project.

Disagree partially.

The Commission agrees that federal agencies are a potential source of partners, but not necessarily ideal.

**F16.** No organization within San Francisco government has formed formal partnerships with non-profit organizations to develop, test, or to advise on OSVS best practices.

Agree.

**F17.** No organization within San Francisco government has begun formal discussions with the Secretary of State about the potential for partnership.

Agree.

**F19.** Developing Election Systems is currently outside of the mandate for San Francisco's Department of Elections.

Disagree partially.

While section 13.104 of the San Francisco Charter does not enumerate “developing an election system” as a specific requirement of the Department of Elections, it is certainly within the scope of the Department’s authority. For example, San Francisco’s Charter says in Section 13.104 (“Department of Elections”) that, "The department shall be administered by the Director of Elections, who shall be vested with the day-to-day conduct and management of the Department and of voter registration and matters pertaining to elections in the City and County."

**F20.** San Francisco's Department of Elections has no experience developing critical software.

Agree.
San Francisco Elections Commission Response  

Recommendations

**R3.** Recommends the Election Commission’s OSVTAC should organize and maintain a website to serve as an informational portal on the OSV project. This should include links to (and summaries of) all reports written on the subject (including by the SoS, EC, OSVTAC, CGJ, Slalom, BoS). This resource should be completed by October, 1 2018, and be updated consistently.  

Response option 3 – Further Analysis Required

This recommendation will be implemented in the recommended timeframe. In the short term, the Commission will ask OSVTAC to do it.

The Elections Commission does not have adequate resources to implement this recommendation on an ongoing basis. Further analysis will be required to determine the responsibility and resourcing. The Elections Commission will provide an update for this recommendation no later than 28 December 2018.

**R4.** Recommends publishing a quarterly summary of the state of the OSV project. The report should include: an estimate of the completion date, current cost projections, and highlight emerging issues. Until a Program Manager is hired, the reports should be authored by the EC, and afterwards, the report should be authored by the program manager. Reports should commence October 1, 2018, and continue at the start of each quarter until project completion.  

Response option 3 – Further Analysis Required

The Elections Commission does not have adequate resources to implement this recommendation. Further analysis will be required to determine responsibility and resourcing. The Elections Commission will provide an update for this recommendation no later than 28 December 2018.

**R9.** Recommends that San Francisco’s Elections Commission conduct a systematic evaluation of partner interest in using the OSV system developed in SF. This evaluation should reach out to all Departments of Elections in all counties within California, focusing on potential use and cost sharing. This analysis and reporting should be completed by April 1st, 2019.  

Response option 3 – Further Analysis Required

The Elections Commission does not have adequate resources to implement this recommendation. Further analysis will be required to determine responsibility and resourcing. The Elections Commission will provide an update for this recommendation no later than 28 December 2018.
R11. Recommends that the Department of Elections, along with the Election Commission, reach out to 18F and the USDS to evaluate a possible partnership to build the OSV system with them. These communications should be issued by October 1st, 2018, and the results of those inquiries should be made publicly available after discussion concludes. (F14, F15)

Response option 4 – Will not be implemented

Due to resourcing and subject matter expertise, neither the Department of Elections nor Elections Commission will perform direct outreach and evaluation of possible partnership with 18F and USDS. Alternatively, the Department of Elections Director will send a letter by October 1, 2018 to 18F and USDS to introduce the CCSF Department of Technology for these discussions.

R12. Recommends that the Elections Commission establish a coalition of supportive non-profit organizations in a formal structure to support the project. This list of collaborators and contacts should be constructed and published by January 1st, 2019. (F14, F16)

Response option 3 – Further Analysis Required

The Elections Commission does not have adequate resources to implement this recommendation. Further analysis will be required to determine responsibility and resourcing. The Elections Commission will provide an update for this recommendation no later than 28 December 2018.

R13. Recommends that the Department of Elections, working with the Elections Commission, establish a Memorandum of Understanding with the California Secretary of State that addresses how the California certification process will accommodate modular development and vulnerability patches, to align the SoS’s process with open source best practices. The discussion of this memo should begin by January 1st, 2019. (F7, F12, F13, F17, F18).

Response option 1 – Recommendation has been implemented

The Department of Elections Director has agreed to implement this recommendation by stated date of January 1, 2019.
August 28, 2018

The Honorable Teri L. Jackson
Presiding Judge, Superior Court of California, County of San Francisco
400 McAllister Street, Room 008
San Francisco, CA 94102

Dear Judge Jackson:

Pursuant to Penal Code sections 933 and 933.05, the following is in reply to the 2017-18 Civil Grand Jury report, Open Source Voting in San Francisco. We would like to thank the members of the Civil Grand Jury for their interest in the City's efforts to develop an open source voting system.

The City has been engaged in discussions regarding open source voting for several years. In 2014, the Board of Supervisors passed a resolution committing the City to work with other jurisdictions to create new voting systems, including systems using open source software. Since then, the City has dedicated resources toward assessing the feasibility of developing an open source voting system. The FY 2016-17 budget included $300,000 to hire a third party consultant to conduct a business case to investigate the feasibility of the City developing an open source voting system. This report was released in March 2018, and outlined multiple options for the City to consider in the development of this system, along with estimated costs, timelines, and key next steps. Informed by this report, the recently signed FY 2018-19 and FY 2019-20 budget included $1.6 million over the two years to conduct a more in-depth discovery phase, which would provide additional clarity around the requirements, cost, and timeline of developing this system.

The Civil Grand Jury's report focused on the delays in moving the project forward, providing a number of findings and recommendations to streamline the project toward completion. Given that the City and County has a core responsibility to administer accurate elections, the open source voting system project has proceeded at a pace to ensure that any final product support its core function in conducting elections. We welcome the Civil Grand Jury's findings and recommendations, and will seek to incorporate them into the next steps of the project, as appropriate.

A detailed response from the Mayor's Office, Department of Elections, and Department of Technology to the Civil Grand Jury's findings and recommendations are attached.

Thank you again for the opportunity to comment on this Civil Grand Jury report.

Sincerely,

London N. Breed
Mayor

John Arntz
Director, Department of Elections

Linda Gerull
Executive Director, Department of Technology
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<td>Open Source Voting in San Francisco (Published: June 29, 2018)</td>
<td>F1</td>
<td>There is not a clear project owner that is responsible for building an Open Source Voting System in San Francisco, which prevents the project from making any progress.</td>
<td>Department of Elections</td>
<td>Disagree, wholly</td>
<td>The Open Source Voting Project has had clear leaders, owning discreet aspects of the project. As the project has been funded through the Committee on Information Technology (CIT) under the City Administrators Office, the City Administrator has thus far owned the effort to explore the development of a voting system. The Department of Elections has provided support and technical requirements for election processes, and the Department of Technology has owned the technical aspect of the project.</td>
<td>Department of Elections</td>
<td>Disagree, wholly</td>
<td>Mayor</td>
<td>The City Administrator and the City's Committee on Information Technology (CIT) have provided funding towards the City's efforts to develop a voting system. CIT serves as the central IT policy and funding body for the City, in order to ensure cross-departmental coordination. First, CIT allocated funds for a contractor to prepare a business case on the feasibility of the City developing a voting system. Second, CIT allocated funds for a project manager position who will identify the requirements to apply to developing a voting system.</td>
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<td>Open Source Voting in San Francisco (Published: June 29, 2018)</td>
<td>F2</td>
<td>Progress on the Open Source Voting project has been limited because responsibility has consistently and ambiguously been passed around between organizations without a clear source of funding or a mandate for completion.</td>
<td>Department of Elections</td>
<td>Disagree, wholly</td>
<td>The Open Source Voting Project has had clear leaders, owning discreet aspects of the project. As the project has been funded through the Committee on Information Technology (CIT) under the City Administrators Office, the City Administrator has thus far owned the effort to explore the development of a voting system. The Department of Elections has provided support and technical requirements for election processes, and the Department of Technology has owned the technical aspect of the project.</td>
<td>Department of Elections</td>
<td>Disagree, wholly</td>
<td>Mayor</td>
<td>Recommends that the Mayor include funding in their next budgeting cycle to hire a “Program Manager” dedicated to shepherd the project forward and own the project. Regardless of the department they report to, the Program Manager will be responsible for communicating with collaborating jurisdictions, engaging experts, managing and tracking project risks, and establishing cost and timeline targets. The Program Manager would need qualifications in technology management, design thinking, and procurement. Funding should be allocated for this process in the next budget cycle.</td>
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**Open Source Voting in San Francisco**

*Published: June 29, 2018*
The Open Source Voting project is a complex, multi-faceted project which has required buy-in and ownership from multiple city stakeholders including the City Administrator, Department of Elections, and Department of Technology. The FY 2016-17 budget included $300,000 to conduct a feasibility study to assess the development, costs, and risks of an Open Source Voting System. The study was completed by Slalom Consulting in March 2018, and identified important next steps in the development of a system. As a result of this report, the final FY 2018-19 and FY 2019-20 budget included $1.6 million over the two years to move forward with the project, including hiring a Project Manager who will centrally own and manage this project moving forward.

Recommendation 2 (F1, F2, F3, F8) recommends that the Mayor include funding in their next budgeting cycle to hire a “Program Manager” dedicated to shepherd the project forward and own the project. Regardless of the department they report to, the Program Manager will be responsible for communicating with collaborating jurisdictions, engaging experts, managing and tracking project risks, and establishing cost and timeline targets. The Program Manager would need qualifications in technology management, design thinking, and procurement. Funding should be allocated for this process in the next budget cycle.

Mayor (Response due: August 28, 2018) has been implemented. The final FY 2018-19 and FY 2019-20 budget includes a total of $1.6 million over the two years for the Open Source Voting System project. These funds are a combination of DoE funding included in the Mayor’s proposed budget and other General Fund dollars added by the Board of Supervisors. This funding will, in part, be used to hire a Project Manager responsible for communicating with collaborating jurisdictions, engaging experts, managing and tracking project risks, and establishing cost and timeline targets.

Recommendation 3 (F2, F3, F4) recommends the Mayor’s Office set up a working group responsible to centralize the expertise relevant for the OSVS project and approve structural decisions made by the Program Manager. The working group should contain (at minimum) a representative from the Mayor’s office, DoE, DSITAC, CDT, and DoT. After planning completes, funding requests for the OSVS would be recommended to the working group by the Program Manager, and would then be recommended to the Mayor for inclusion in the city budget. This group should be formally constructed by October 1, 2018, and should begin a hiring process for a Program Manager as soon as funding is allocated.

Mayor (Response due: August 28, 2018) will not be implemented because it is not warranted or reasonable. The FY 2018-19 and FY 2019-20 budget includes a total of $1.6 million over the two year budget for the Open Source Voting System project. This funding will, in part, be used to hire a Project Manager. Collaboration is key for project of this nature, and the Project Manager will work to engage with stakeholders as the project moves forward. The goal of collaboration is a shared vision, this recommendation will not be implemented at this time due to process needs of hiring a project manager first to develop and oversee project tasks, resources, risks and schedule. Then the Mayor’s office will consider setting up a working group to advise the DoE and DoT on the OSVS project. The working group would include representatives from DSITAC, CDT, leading security experts, open source partners, election specialists, hardware designers, and other jurisdictions who are willing to support the project with their expertise.
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<td>Open Source Voting in San Francisco [Published: June 29, 2018]</td>
<td>F3</td>
<td>Progress on the Open Source Voting project has been slow because of the large number of stakeholders, and the dispersal of their expertise, and the uncertainty each party has about the overall project.</td>
<td>Mayor (Response due: August 28, 2018)</td>
<td>Disagree, wholly</td>
<td>An Open Source Voting System that could support the election needs of the City has not been built in the US. It is a complex project that requires in-depth analysis and design of the security, reliability, performance and sustainability of the system. Work on this project has proceeded in logical order with the completion of a Feasibility Study and soon, the hiring of a Project Manager to oversee project tasks, resources, risks and schedule.</td>
<td>Recommends that the Mayor include funding in their next budgeting cycle to hire a “Program Manager” dedicated to shepherding the project forward and seen the project. Regardless of the department they report to, the Program Manager will be responsible for communicating with collaborating jurisdictions, engaging experts, managing and tracking project risks, and establishing cost and timeline targets. The Program Manager would need qualifications in technology management, design thinking, and procurement. Funding should be allocated for this process in the next budget cycle.</td>
<td>Mayor (Response due: August 28, 2018)</td>
<td>Has been implemented</td>
<td>The final FY 2018-19 and FY 2019-20 budget includes a total of $1.6 million over the two years for the Open Source Voting System project. These funds are a combination of OIT funding included in the Mayor’s proposed budget and other General Fund dollars added by the Board of Supervisors. This funding will in part, be used to hire a Project Manager responsible for communicating with collaborating jurisdictions, engaging experts, managing and tracking project risks, and establishing cost and timeline targets.</td>
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<td>Mayor (Response due: August 28, 2018)</td>
<td>Disagree, wholly</td>
<td>An Open Source Voting System that could support the election needs of the City has not been built in the US. It is a complex project that requires in-depth analysis and design of the security, reliability, performance and sustainability of the system. Work on this project has proceeded logically with the completion of a Feasibility Study and soon, the hiring of a Project Manager to oversee project tasks, resources, risks and schedule.</td>
<td>Recommends the Mayor’s Office set up a working group responsible to centralize the expertise relevant for the OSV project and approve structural decisions made by the Program Manager. The working group should contain (at minimum) a representative from the Mayor’s office, DoE, OIT, OSVTAC, DoT, and DoF. After planning completes, funding requests for the OSV would be recommended to the working group by the Program Manager, and then be recommended to the Mayor for inclusion in the city budget. This group should be formally constructed by October 1, 2018, and should begin a hiring process for a Program Manager as soon as funding is allocated.</td>
<td>Mayor (Response due: August 28, 2018)</td>
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<td>The FY 2018-19 and FY 2019-20 budget includes a total of $1.6 million over the two year budget for the Open Source Voting System project. This funding will, in part, be used to hire a Project Manager. Collaboration is key for this project and, as the Project Manager will work to engage with stakeholders as the project moves forward. The goal of collaboration is a shared priority; this recommendation will not be implemented at this time due to process needs of hiring a project manager first and developing and overseeing project tasks, resources, risks and schedule. Then the Mayor’s office will consider setting up a working group to advise the DoE and DoT on the OSV project. The working group could include representatives from OSVTAC, DoF, leading security experts, open source partners, election specialists, hardware designers, and other jurisdictions who are willing to support the project with their expertise.</td>
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<td>F4</td>
<td>Progress on the Open Source Voting project has been slow because all parties are appropriately concerned about security, and few within San Francisco government have the technical background to accurately evaluate security concerns.</td>
<td>Department of Elections (Response due: August 28, 2018)</td>
<td>Disagree, partially</td>
<td>The City has appropriately sought to better understand the security risks associated with developing a voting system. Security is one of many elements involved in a project to develop a voting system which has required the City’s consideration and attention.</td>
<td>Recommends the Mayor include funding in their next budgeting cycle to hire a “Program Manager” dedicated to shepherding the project forward and seen the project. Regardless of the department they report to, the Program Manager will be responsible for communicating with collaborating jurisdictions, engaging experts, managing and tracking project risks, and establishing cost and timeline targets. The Program Manager would need qualifications in technology management, design thinking, and procurement. Funding should be allocated for this process in the next budget cycle.</td>
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Open Source Voting in San Francisco

Finding: Progress on the Open Source Voting project has been slow because all parties are appropriately concerned about security, and few within San Francisco government have the technical background to accurately evaluate security concerns.

Response: The City has appropriately sought to better understand the security risks associated with developing a voting system. Security is one of many elements involved in a project to develop a voting system which has required the City's consideration and attention.

Recommendation: The Mayor's Office set up a working group responsible to centralize the expertise relevant for the OSV project and approve structural decisions made by the Program Manager. The working group should contain (at minimum) a representative from the Mayor’s office, DoE, OSVTAC, COIT, and DoT. After planning completes, funding requests for the OSVS would be recommended to the working group by the Program Manager, and would then be recommended to the Mayor for inclusion in the city budget. This group should be formally constructed by October 1, 2018, and should begin a hiring process for a Program Manager as soon as funding is allocated.

Response: The FY 2018-19 and FY 2019-20 budget includes a total of $1.6 million over the two year budget for the Open Source Voting Project. This funding will, in part, be used to hire a Project Manager. Collaboration is key for project of this nature, and the Project Manager will work to engage with stakeholders as the project moves forward. The goal of collaboration is a shared priority, this recommendation will not be implemented at this time due to process needs of hiring a project manager first to develop and oversee project tasks, resources, risks and schedule. Then the Mayor’s office will consider setting up a working group to advise the DoE and DoT on the OSV project. The working group would include representatives from OSVTAC, COIT, leading security experts, open source partners, election specialists, hardware designers, and other jurisdictions who are willing to support the project with their expertise.

Finding: Today, only one company can operate California certified Ranked Choice Voting Elections - Dominion Election Systems. San Francisco has a continuing legal obligation to purchase systems from Dominion, regardless of cost or competitiveness, due to county RCV rules, restrictions on procurement due to LGBT discrimination in other states, and state certification requirements.

Response: The Department of Elections does not have a continuing legal obligation to use a voting system provided by Dominion Voting Systems (DVS). However, legally mandated factors can limit the City’s options to obtain or use voting systems provided by a vendor. Currently, only Dominion provides a voting system that is approved by the California Secretary of State for conducting ranked-choice voting elections.

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Recommendation: The Office of the Controller set up a process to trigger review of city RFPs that only receive one bidder, and, when feasible, perform a market analysis to determine why the procurement process has not induced participation of additional vendors. This process should be in place by April 4, 2019.

Response: The FY 2018-19 and FY 2019-20 budget includes a total of $1.6 million over the two year budget for the Open Source Voting Project. This funding will, in part, be used to hire a Project Manager. Collaboration is key for project of this nature, and the Project Manager will work to engage with stakeholders as the project moves forward. The goal of collaboration is a shared priority, this recommendation will not be implemented at this time due to process needs of hiring a project manager first to develop and oversee project tasks, resources, risks and schedule. Then the Mayor’s office will consider setting up a working group to advise the DoE and DoT on the OSV project. The working group would include representatives from OSVTAC, COIT, leading security experts, open source partners, election specialists, hardware designers, and other jurisdictions who are willing to support the project with their expertise.
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<td>Recommendations to the Controller evaluate the premium San Francisco pays for its Voting System compared to (1) the price paid by other California counties that use Ranked Choice Voting, and (2) the price paid by California counties that do not use RCV, and (3) the price paid by cities/counties outside of California who use RCV. This analysis should be published by April 1, 2019.</td>
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<td><strong>Open Source Voting in San Francisco (Published: June 29, 2018)</strong></td>
<td>F6</td>
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<td>The California counties that use Ranked Choice Voting are in the same financial predicament as San Francisco when it comes to procuring their voting system software. This makes them ideal partnership candidates, as they face the same set of challenges under the same regulatory authority.</td>
<td>Department of Elections (Response due: August 28, 2018)</td>
<td>Recommends that the Department of Elections, working with the Elections Commission, establish a Memorandum of Understanding with the California Secretary of State that addresses how the California certification process will accommodate modular development and vulnerability patches, to align the SOS’s processes with open source best practices. The discussion of this memo should begin by January 1, 2019.</td>
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<td>Open Source Voting in San Francisco</td>
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<td>Too many variables remain unresolved to draw confident analysis about completion cost or timeline of the OSV project.</td>
<td>Department of Elections (Response due: August 28, 2018)</td>
<td>Recommends that the Mayor include funding in the next budget cycle to hire a “Program Manager” dedicated to shepherding the project forward and own the project. Regardless of the department they report to, the Program Manager will be responsible for communicating with collaborating jurisdictions, engaging experts, managing and tracking project risks, and establishing cost and timeline targets. The Program Manager would need qualifications in technology management, design thinking, and procurement. Funding should be allocated for this process in the next budget cycle.</td>
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**Open Source Voting in San Francisco**

- **Finding:** The California counties that use Ranked Choice Voting are in the same financial predicament as San Francisco when it comes to procuring their voting system software. This makes them ideal partnership candidates, as they face the same set of challenges under the same regulatory authority.

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**Open Source Voting in San Francisco**

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<td>F9</td>
<td>Department of Elections</td>
<td>Though certification by the California Secretary of State is an indication that an election system is reasonably secure, certification does not guarantee election system security.</td>
<td>Department of Elections conducts assessments of all voting systems before their use in California. The SOS's assessments include reviews of a system's hardware, firmware, and software. Further, the SOS places all proposed voting systems under stress testing and user testing to measure whether a voting system meets existing requirements and usability standards. The intent of the SOS's thorough review of voting systems is to assess whether existing requirements are met regarding security rather than to guarantee system security from all possible factors.</td>
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<td>F10</td>
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<td>The security of an Open Source Voting System would reflect the ratio of the number of good actors to bad actors that are looking at it to find vulnerabilities, which makes getting the attention of external security experts a top level priority for the OSV project.</td>
<td>Any voting system development will benefit from obtaining the attention of external security experts during development. However, the City meeting a certain ratio of good to bad actors does not of itself ensure the identifying of vulnerabilities in a City-developed voting system.</td>
<td>Department of Elections</td>
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<td>F11</td>
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<td>If an Open Source Voting system is going to be used only by San Francisco, it is unlikely to attract the requisite attention of security experts and white hat engineers necessary to be confident in its security.</td>
<td>While one principle of using open source software is that security increases according to the greater number of users of open source software, the City could contract with multiple consultants or firms expert in security matters to increase confidence in the security of a voting system.</td>
<td>Department of Elections</td>
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Recommends that San Francisco's Elections Commission conduct a systematic evaluation of partner interest in using the OSV system developed in SF. This evaluation should reach out to all Departments of Elections in all counties within California, focusing on potential use and cost sharing. This analysis and reporting should be completed by April 1st, 2019.
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<td>The Department cannot agree that patches to open source systems are common since the California Secretary of State that addresses how the California certification process will accommodate modular development and vulnerability patches, to align the SOS’s process with open source best practices. The discussion of this memo should begin by January 1st, 2019.</td>
<td>Will not be implemented</td>
<td>This recommendation is unwarranted, especially in consideration of the January 1, 2019 deadline, because the City must still identify a person with the appropriate skills to fill the project manager role. The project manager will need to lead efforts to define the specifications of a voting system, and the City must determine the manner by which it will develop a voting system before engaging the Secretary of State to possibly enter a Memorandum of Understanding. The City does not currently have accurate descriptions of a voting system, a modular development of a voting system, the patching regimen associated with an open source voting system, or how open source best practices in regards to developing a voting system would align with the SOS’s processes.</td>
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<td>Although patches to open source systems are common, any patch of an election system will necessitate re-certification by the California Secretary of State. The timeline and cost of this re-certification can vary wildly depending on the size of the fix, and its urgency. There is some evidence that modular certification can be supported by the Secretary of State.</td>
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<td>Open Source Voting in San Francisco</td>
<td>There are a large number of non-profit organizations that are willing and eager to help develop an OSV system, as both developers and advisors.</td>
<td>The Department does not have experience in this field to know whether the total count of such organizations represents a “large number.”</td>
<td>Will be implemented</td>
<td>In conjunction with the Department of Technology, the Department of Elections will contract 18F and the USDS by October 1, 2018, regarding the evaluation of a possible partnership to build an open source voting system.</td>
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<td>Federal agencies specializing in developing reusable Open Source Technologies, such as the OSS and 18F, are ideal partnership candidates for an OSV project, but their involvement would require that some federal funds be used for the project.</td>
<td>Disagree, partially</td>
<td>The Department cannot agree with this finding since the Department has no previous interactions with these federal agencies. The Department believes the finding is accurate regarding the City needing to utilize federal funds to meet the criteria associated with partnering with these agencies.</td>
<td>R12 [F15] Recommends that the Department of Elections evaluate the possibility of incorporating 2018 HAVA funding into the development of the OSV system, so that federal technology agencies have jurisdiction to help develop the project. The feasibility of this should be formally evaluated and published by the Department of Elections by January 1st, 2019.</td>
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<td>R11 [F14, F15] Recommends that the Department of Elections, along with the Election Commission, reach out to 18F and the USDS to evaluate a possible partnership to build the OSV system with them. These communications should be issued by October 1st, 2018, and the results of these inquiries should be made publicly available after discussion concludes.</td>
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<td>Open Source Voting in San Francisco (Published: June 29, 2018)</td>
<td>No organization within San Francisco government has formally organized partnerships with non-profit organizations to develop, test, or to advise on OSVS best practices.</td>
<td>Agree with the finding</td>
<td>The Department has not formally organized partnerships with organizations in relation to the City developing an open source voting system.</td>
<td>R33 [F7, F12, F13, F17, F18] Recommends that the Department of Elections, working with the Elections Commission, establish a Memorandum of Understanding with the California Secretary of State that addresses how the California certification process will accommodate modular development and vulnerability patches, to align the SOS’s process with open source best practices. The discussion of this memo should begin by January 1st, 2019.</td>
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<td>No organization within San Francisco government has begun formal discussions with the Secretary of State about the potential for partnership.</td>
<td>Agree with the finding</td>
<td>The Department has not formally commenced discussions with the Secretary of State regarding the City partnering with the City in developing a voting system.</td>
<td>R33 [F7, F12, F13, F17, F18] Recommends that the Department of Elections, working with the Elections Commission, establish a Memorandum of Understanding with the California Secretary of State that addresses how the California certification process will accommodate modular development and vulnerability patches, to align the SOS’s process with open source best practices. The discussion of this memo should begin by January 1st, 2019.</td>
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San Francisco's Department of Technology has responsibility for technology projects.

The Department has no recent experience with the SOS' approval process in relation to the City developing its own voting system.

The Department's mandate is to administer the processes necessary to conduct elections such as voter lists, polling places, etc., rather than to create or develop large technical systems. The City's Department of Technology has responsibility for technology projects.

The Department does not have extensive experience developing open source platforms for an Open Source Voting system in the near future, because they lack in-house critical faculties and experience in software development.

The City does not currently have accurate descriptions of a voting system, a modular development of a voting system, the patching regimen associated with an open source voting system, or how open source best practices in regards to developing a voting system would align with the SOS' processes.

Recommends that the City not directly build the software for an Open Source Voting system in the near future, because they lack in-house critical faculties and experience in software development.

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August 17, 2018

The Honorable Terri L. Jackson  
Presiding Judge, Superior Court of California, County of San Francisco  
400 McAllister Street, Room 008  
San Francisco, CA 94102  

Dear Judge Jackson:

Pursuant to Penal Code sections 933 and 933.05, the following is in reply to the 2017-18 San Francisco Civil Grand Jury reports, Open Source Voting in San Francisco and Accessory Dwelling Units and Modular Housing. We would like to thank the Civil Grand Jury for their work.

The Civil Grand Jury's reports provided important findings and recommendations on each of the topics reported on in this session. We will use this work to inform future audit and project planning and communication with leadership, stakeholders, and the public on these issues.

If you have any questions about this response, please contact me or Deputy Controller Todd Rydstrom at 415-554-7500.

Respectfully submitted,

Ben Rosenfield  
Controller

cc: Todd Rydstrom
Civil Grand Jury Report: Open Source Voting in San Francisco

Required Responses to Recommendations 5 and 6:

Recommendation 5

R5. Recommends the Office of the Controller set up a process to trigger review of city RFPs that only receive one bidder, and, when feasible, perform a market analysis to determine why the procurement process has not induced participation of additional vendors. This process should be in place by April 1, 2019. (F5, F6)

Response

Will not be implemented; Not warranted or reasonable.

The San Francisco Administrative Code Chapter 21, Acquisition of Commodities and Services, already requires the City’s Contracting Officers to “review solicitations to determine whether the solicitation could be altered and reissued in a manner that would be likely to attract responsive offers”. Also, Administrative Code Chapter 6 provides guidance for construction and professional services contracting. Specifically, Section 6.23 (c), Procedure Upon Rejection or Failure of Bids, provides guidance to Department Heads on appropriate actions to take for no or one bid. Further, the Office of the Controller already conducts audits and investigations of the City’s contracting procedures, including those relating to the Requests for Proposals process in fulfillment of the San Francisco Charter, Appendix F, Section F.1.106.

Recommendation 6

R6. Recommends the Office of the Controller evaluate the premium San Francisco pays for its Voting System compared to (1) the price paid by other California counties that use Ranked Choice Voting, and (2) the price paid by California counties that do not use RCV, and (3) the price paid by cities/counties outside of California who use RCV. This analysis should be published by April 1, 2019. (F5, F6)

Response

Requires further analysis.

Based on the Office of Controller’s preliminary analysis, there are no California counties using Ranked Choice Voting at this time. Moreover, Secretary of State has only approved Dominion's voting system for conducting ranked-choice voting elections. The Office of Controller’s Office has identified the following non-California jurisdictions that currently use Ranked Choice Voting and could be used for future analysis, if needed:

- Basalt, CO
- Cambridge, MA
- Minneapolis, MN
- State of Maine
- Portland, ME
- Santa Fe, NM
- St. Louis Park, MN
- St. Paul, MN
- Takoma Park, MD
- Telluride, CO