OPEN SOURCE VOTING SYSTEM
TECHNICAL ADVISORY COMMITTEE

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ELECTIONS COMMISSION
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To: Elections Commission

From: Open Source Voting System Technical Advisory Committee (OSVTAC)

RE: Recommendations of Next Steps for the Open Source Voting System Project

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The Open Source Voting System Technical Advisory Committee (OSVTAC) adopted the recommendations below by a vote at its January 9, 2020 meeting.

Recommendations of Next Steps for the Open Source Voting System Project

With the Nov. 2019 election over, the start of the 2020 budget season, and the start of a new year, TAC would like to suggest the following recommendations of next steps for the open source voting system project.

TAC recognizes that the project does not currently have significant funding. Thus, the recommendations below were selected as things that could be done with relatively little cost while still having a noticeable impact.

TAC also recognizes that Los Angeles has done significant work that they are considering making open source. Thus, our recommendations were also selected not to duplicate any work that Los Angeles has already done. For example, Los Angeles County does not use ranked choice voting.

1. **Project website.** Use the Open Source Voting Project website (https://opensourcevoting.sfgov.org) to post project information. This can include things like—
   - Monthly status reports
   - Current project plans
   - Information about the Nov. 2019 risk-limiting audit pilot project, including links to the open source code that was used
   - Reports and draft reports

- Funds remaining

2. **Project plans.** Develop and keep current project plans for various funding scenarios. Such plans should include how the project could proceed and what could be built with different levels of funding. This would help advocates to advocate for funding at the local, state, and federal levels, and by providing transparency could help to attract additional partners.

3. **Prioritizing components.** Prioritize working on system components that are both (1) essential for a voting system and (2) that would replace proprietary and/or non-open source software components currently in use. For example, while risk-limiting audit (RLA) software is useful, it is not a mandatory part of a voting system and would not replace the use of any non-open source software by the Department of Elections. Also refer to the "Recommended Implementation Order" of TAC's Recommendations document for further details:
https://osvtac.github.io/recommendations/implementation-order#7-recommended-implementation-order

4. **Technical lead.** Hire a new technical resource with experience in developing open source projects.

5. **Dialogue with TAC.** Allow a representative of the Department of Technology or Department of Elections to discuss technical issues with TAC in-depth and on a regular basis. Previously, when the Department of Technology had a technical lead for the project, the technical lead wasn't permitted to interact with TAC members.

6. **Pilot open source RCV tabulator.** Pilot using the open source ranked choice voting "universal tabulator" that was federally certified and used in Eastpointe, Michigan in November 2019. The developers of the universal tabulator are based in San Francisco and have expressed interest in helping San Francisco at no charge:
https://github.com/BrightSpots/rcv
This would be a low-cost way to start replacing proprietary software with open source software.

7. **Open source RCV tabulator certification.** Work with the Secretary of State to see what it would take to get the open source universal tabulator certified for use in San Franciso so that it could be used instead of the proprietary Dominion software.

8. **Pilot open source results reporter.** Pilot using TAC's open source results reporter in the November 2020 election. Work with TAC so that TAC can understand what additional features would be needed for the Department of Elections to be able to start using it. The experience of the RLA project shows that the Department can start using open source software without lengthy or expensive waterfall-style planning. This would be another low-cost way to start replacing non-open source software with open source

software.

9. **Open source software contest.** After the Nov. 2019 election, the Department of Elections posted the complete set of ballot card pictures online. This gives people the ability to re-derive and check the vote totals for all contests from those pictures. San Francisco could hold a contest open to the public (to individuals or teams of people) to tabulate the ballot cards using new or existing open source software. This would have several benefits, including—

    1. it would provide more information about the cost and feasibility of using open source software to tabulate vote-by-mail ballots,
    2. it could provide more options for a more robust solution to tabulate vote-by-mail ballots using open-source software (as well as the image interpretation software for precinct scanners),
    3. it could let people discover if any errors were made by the Dominion software, and
    4. it demonstrates the usefulness of San Francisco's new open data policy.

    As a leading city in the United States, San Francisco could draw a lot of attention, interest, and willing participants to a contest like this. Perhaps a small amount of prize money could even be used to help entice participants and draw attention to the effort.