

The overall perspective of the recent report by the San Francisco Civil Grand Jury (SFCGJ) on the Open Source Voting System (OSVS) project is appropriate: the project has not been making sufficient progress and something needs to be done to start getting things accomplished. In that regard, the report supplements the work of the Elections Commission.

However the report gets some facts wrong and it misses key points about how the project should best move forward. The law about not revealing sources hinders the report's ability to offer persuasive reasons for the Election Commission to reconsider its assessments about the project. The report does not adequately recognize the very significant work the Elections Commission has done since 2015 to move the project forward and provide the project with direction and oversight. The report reflects a significant effort by the SFCGJ to investigate and understand issues surrounding the OSVS project, issues that the Elections Commission has been involved with and leading on for years. There have been significant recent developments that are not reflected in the report. As a result, it is not clear what the report beneficially contributes beyond what the Elections Commission has already been doing, other than to provide some reinforcement for the notion that constructive action is overdue.

The following are some assessments of the report's findings and recommendations. I encourage the President of the Elections Commission to respond to the SFCGJ regarding all of the findings and all of the recommendations, except perhaps R5, even if not required, especially to express some differing or supplemental perspectives. Doing so would beneficially reflect the leadership and expertise among members of the Elections Commission and the willingness of the Elections Commission to provide effective principle oversight for the OSVS project.

## Findings

**F1, no clear owner.** Agree.

**F2, dispersed responsibility and lack of funding.** Agree.

**F3, large number of stakeholders; dispersed expertise; uncertainty.** Disagree. This might apply to some stakeholders, but not generally. The Elections Commission has demonstrated a high degree of expertise, ably supplemented by its OSVTAC, and has not been hindered by concerns of uncertainty. The Board of Supervisors has been consistently supportive. Neither has been holding the project back, except perhaps indirectly with passive deference to others.

**F4, security concerns.** Disagree. Security in voting systems is a highly, publicly studied issue. It is one of the engineering issues to deal with while developing the system. It is not a reason to not get started. The Elections Commission and Board of Supervisors have long been acting accordingly.

**F5, lack of options from traditional vendors.** Agree.

**F6, no option but to accept Dominion pricing.** Disagree somewhat. This is only a problem because San Francisco has been slow to develop its own open source system. If San Francisco had started active development of an OSVS in 2011, for example, it would have been in a better position to avoid the increased Dominion pricing.

**F7, other RCV counties face same issues.** Disagree somewhat. There is only one other California county that uses RCV, Alameda County. San Leandro uses RCV, but is a city in Alameda County. Santa Clara County has no jurisdictions that use RCV, but it is considering RCV capabilities that go beyond San Francisco's current needs in its RFP for a new system. RCV is actually only a small additional part of what is needed by San Francisco. Alameda County has needs for its voting system that San Francisco does not have. Other vendors besides Dominion have RCV capabilities. Availability in California is driven in part by demand and having adequate time to respond to that demand.

**F8, Costs and timelines not adequately known.** Disagree. What is likely possible is known sufficiently well to justify getting started with agile, incremental approaches. An apparent early certainty of waterfall approaches is often deceptive. The report does not acknowledge these distinctions of modern software development.

**F9, Certification helps to indicate, but doesn't guarantee security.** Disagree somewhat. Nothing guarantees security. Also, security is a matter of degree, not a binary state of either having it or not. Security is multi-dimensional in nature. Security is as much a matter of implementation and procedure surrounding a computer system as it is a matter of the computer system itself. To some extent, security is a matter of perception, not just objective assessment.

**F10, Security and ratio of good actors to bad actors.** Disagree somewhat. It is not just a matter quantity, but also of expertise, quality of review, and incentives. A single bad actor can compromise a system.

**F11, An SF-only system won't attract enough white-hats.** Disagree somewhat. As an example, OSET's Washington, D.C. pilot system attracted some top talent, enough to kill a poorly constructed project. A lot of security researchers would love the challenge of finding holes in an open source voting system in order to make it better, even if near-term use were somewhat limited.

**F12, patches have unscoped certification delay for an OSVS.** Disagree somewhat. This issue is not unique to open source voting systems. There is no reason to expect that the Secretary of State would handle this less well for an OSVS.

**F13, costs and timelines to certify patches.** Disagree somewhat. This issue is not unique to open source voting systems. Even without modular certification, certification to incremental changes can and usually is already done incrementally.

**F14, non-profits as developers and advisors.** Agree.

**F15, Federal agencies require federal funding.** Perhaps. However they have expertise and experience that can be shared, with or without a formal partnership that requires federal funding.

**F16, No non-profit partnerships.** Agree, but see F1 and F2.

**F17, No partnership discussions with Secretary of State.** Perhaps, but see F1 and F2.

**F18, DoE familiarity with certification process.** Perhaps. What did the DoE do for the certification?

**F19, Developing OSVS is outside DoE mandate.** Disagree. There is nothing in the charter that excludes this from the DoE's mandate. The DoE is responsible for acquiring the voting systems it uses. There is nothing that limits that responsibility to certain modes of acquisition, i.e. buying or leasing pre-made systems, contracting for custom systems, developing internally, or some combination of those. Being responsible for developing a custom voting system is not a part of the DoE's traditional activities, but this project can't be constrained by the excuse that we've never done it before so we can't do it or be responsible for it, not even by engaging with outside resources.

**F20, No DoE experience developing critical software.** Perhaps. There is an issue of scale. What is the most critical software the DoE has developed? Lack of experience does not mean that the DoE would not be the best place to lead this project from.

**F21, DoT willingness for open source.** Perhaps, but what is the breadth of their experience at this scale. Their track record on the OSVS project (e. g. the COIT funding application) has not been inspiring.

**F22, DoT lacks experience developing open source used elsewhere.** Perhaps, but what is the extent of their experience developing at this scale and criticality for open source or any other kind of software?

## Recommendations

**R1, funding.** The Board of Supervisors has recently increased the funding for the OSVS project, just as it did for FY 2016-17. Both times that was done despite resistance from the mayor's funding bureaucracy. The new mayor, London Breed, has expressed greater support for such funding.

**R1, program manager.** This was part of the Election Commission's 2015 OSVS resolution and should have been done in CY 2016 or early 2017 at the latest.

**R1, project owner.** Despite Finding 1, the SFCGJ makes no recommendation about this. The President should take this opportunity to assert the Election Commission's views that the Director of Elections should be the project owner with the "program

manager” reporting to the Director of Elections.

**R2, working group.** It is not clear that this group is really needed. If it is constituted, it should only be advisory to the Director of Elections and not supplant the primary oversight role of the Elections Commission. The Elections Commission should at least have a seat on the working group, possibly in addition to the seat for the OSVTAC, and probably should chair the group. The only other acceptable alternatives for chairing the group would be for the Director of Elections or the Program Manager to chair the group. The program manager should not be hired or managed by this group. That would not provide proper accountability. The Board of Supervisors should also be given an opportunity to designate a member of this group, someone who is not necessarily a member of the Board of Supervisors. Funding requests for the project should be subject to Elections Commission review and approval. Additional review by this group and COIT is a good way to assist the mayor in developing a budget, but funding for this project should not necessarily compete with other COIT projects for a piece of a predetermined IT total budget.

**R3, OSVTAC reporting of OSVS information resources.** It should be acknowledged the extent to which OSVTAC and the Elections Commission are already doing this. A web presence specifically for the OSVS project is something that should become the responsibility, directly or indirectly, of the program manager.

**R4, quarterly status reports.** This should immediately become the responsibility of the Directory of Elections, as project owner, who can delegate it to the program manager, when hired.

**R5, controller monitoring of single-response RFPs.** Not specifically related to the Elections Commission, but likely an excessive request.

**R6, controller analysis of premiums paid for voting systems.** Spills more ink. This recommendation is based in part on a misconception that more than one other California county uses RCV and that RCV is a particularly important factor to control for, given all of the variables that can effect pricing. It is not clear what is meant by “premium”. It might be interesting to know how much less San Francisco would pay if the voting system market were more competitive, but that is a counterfactual comparison that the Controller is likely not well equipped to perform. It is not clear what relevance this would have for making progress on the OSVS project. The President should recommend, in consultation with the Controller, that this would not be a worthwhile activity.

**R7, DoT not directly build OSVS in the near future.** “Directly” apparently means doing it solely in-house, which rather misses the point, because that was not a likely next step anyway.

**R8, DoE not directly build OSVS in the near future.** Similarly, “directly” apparently means doing it solely in-house, which rather misses the point, because this was not a likely next step anyway. However in any case, processes for building the OSVS should be used as recommended by the program manager and approved by appropriate

oversight functions, with any additional in-house faculties and experience acquired accordingly and as needed.

**R9, Elections Commission evaluates interest from other California counties.** This is something that the Director of Elections, as project owner, should be responsible for with some delegation to the program manager and using other resources to advantage. Efforts of the California Clean Money Campaign in promoting support in San Francisco and in the state legislature should be acknowledged. It could be better to have a better functioning project before soliciting interest from other counties. The report overestimates the value and underestimates the potential governance issues and impact on costs and timelines of partnering with other counties too soon. An incremental, agile approach should focus on San Francisco's specific, minimal requirements to establish a track record for the project. Scope creep should be resisted. It is important to recognize the different kind of business model that an open source project requires when attracting other counties. The SFCGJ report does not acknowledge this kind of distinction. The Travis County project failed in no small part because they did not have a realistic business model for a much bigger project that they could not sustain themselves. They only spent \$300,000 before stopping the effort. The problem was not, as the report suggests, that they hit an annual funding shortfall one year.

**R10, use 2018 HAVA funding.** This is a good recommendation, but perhaps with a schedule that is more ambitious than necessary.

**R11, discuss partnerships with 18F and USDS.** This is a good recommendation, but perhaps with a schedule that is more ambitious than necessary. The work that OSVTAC has done in this area should be acknowledged and leveraged.

**R12, coalition of non-profits.** Establishing relationships with non-profits should be the responsibility of the Director of Elections and the program manager who use other resources to advantage. Different non-profits can help in different ways. A formal structure specific to non-profits is likely not an appropriate way to use the assistance they can provide. The Elections Commission's 2015 OSVS resolution encouraged engagement with non-profits and this should have started in CY 2016.

**R13, MoU with Secretary of State.** Discussions should start, but the value of negotiating an memorandum of understanding is overrated. The Secretary of State will be reluctant to make substantive commitments. As long as there is mutual interest to accomplish something, this is better approached instead as an incremental effort that both sides learn from as the project progresses.