

San Francisco could become first local government to use open-source voting system

By **Dominic Fracassa** | September 3, 2017 | Updated: September 3, 2017 4:00pm

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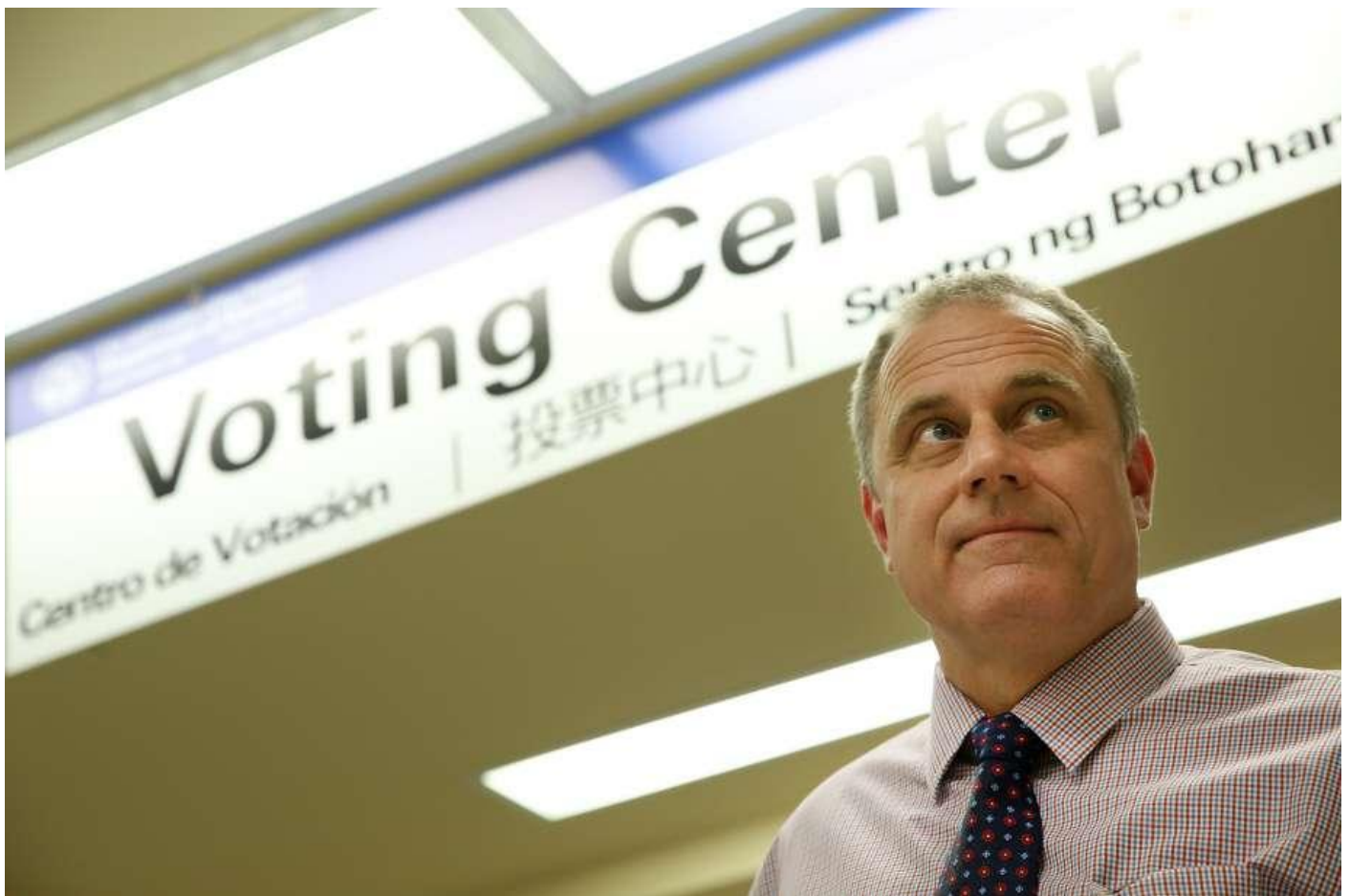


Photo: Santiago Mejia, The Chronicle

John Arntz, the director of the Department of Elections in San Francisco, at City Hall on Thursday, Jan. 26, 2017 in San Francisco, Calif.

San Francisco has taken a tentative step toward deciding on whether it will become the first local government in the country to run its voting machines on open-source software.

The notion of shifting away from using proprietary technology sold by private companies to computer code made freely available for anyone to use and modify has been talked about for years. But it's been getting more attention since the city allocated \$300,000 to study the issue.

Last week, Elections Director John Arntz opened discussions with Slalom, a consulting group selected by the city to prepare a detailed report on what San Francisco would face if it decides go to an open-source voting system. The report is expected to be finished by January at a cost of around \$175,000.

Proponents of open-source voting systems say local governments using them would be able to hold elections with an unprecedented level of control, transparency and security. It's a concept that's gaining wider attention nationwide given the specter of vote tampering that arose during last year's presidential election.

California Secretary of State Alex Padilla has said he would support an open-source voting system, assuming it could pass the state's certification protocols. In April, Padilla **endorsed** the Voting Modernization Bond Act of 2018, which seeks \$450 million to upgrade the state's antiquated voting machines. Some of that money could be spent by county elections officials to research and develop open-source voting systems.

Supporters say open-source systems would be reliable because they can be constantly assessed by a swarm of programmers who can spot bugs and recommend improvements before election day.

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“To put it simply, you want to have as many eyes on the code as possible,” said Brent Turner, secretary of the [California Association of Voting Officials](#), a group dedicated to implementing open-source voting systems.

Open-source software could allow the city to more fully understand and adjust how votes are tallied. Currently, vendors of electronic voting equipment provide few details about how their machines operate, claiming those details are proprietary. Governments are also beholden to private vendors if they want to make a change to the software running the machines.

“You’re stuck with whatever they provide,” said Chris Jerdonek, president of the San Francisco Elections Commission and the chairman of the commission’s Open Source Voting System Technical Advisory Committee. “Open-source would give the city an opportunity to say, ‘We want to make a tweak,’ and then they’d be free to do that.”

Open-source proponents also say governments could save money by reducing their reliance on outside vendors. Just how much San Francisco might save isn’t totally clear, but for the past 11 years, the city has spent an average of \$2 million annually on its voting equipment, which it buys from Dominion Voting Systems. This year, the city renewed its contract with Dominion through 2018 for \$2.3 million.

There are doubters, however.

Many technology and security experts stress that open-source software is not inherently more secure just because a lot of people are looking for bugs and plugging security holes.

“Software designed for inspection tends to be ‘better’ — although transparency does not magically improve security,” said Deirdre Mulligan, an associate professor at UC Berkeley’s School of Information.

And Jack Miller, the chief information security officer at SlashNext, a cybersecurity firm, questioned whether an open-source voting project could attract enough skilled volunteers to police the software code effectively.

But Turner said the term “open source” can be a bit of a misnomer, suggesting that the code is open to inspection and alteration at any time. In reality, Turner said, access to the code could be controlled by the city, even if it remains visible to the public.

“It’s a publicly held code that can be locked down before it’s utilized in a real election,” Turner said. And if hackers do manage to manipulate the code, “with an open-source system, someone will see it and you’ll have all these smarty-pants try to outshine each other to fix the problem. They’re the proofreaders,” Turner said.

Any hope of receiving additional funding to exploring open-source voting will be “fully contingent” on the consulting firm’s findings in January, said Jerdonek, the elections commissioner. The biggest potential roadblock, he said, is getting city officials to take the risk of being the first in the nation to try it.

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