



Do you see the “election business” changing from a products to a service model? What does that mean for your company and clients?

I believe that some aspects of the elections business will (appropriately, if done right) move to a services model: voter, candidate, and proposition registration systems; elections management systems; e-pollbooks that must span jurisdictions; election reporting systems; perhaps even tabulator systems.

I know that vendors do/will also offer other digital elections components as services, such as the actual voting process (whether it is kiosk-based or remote/internet), and I believe that is wholly inappropriate. There is an enormous range of challenges with such an offering—foremost amongst them those relating to security and assurance. It makes me very concerned, as a security professional, a verifiable elections activist, and as a citizen.

At the core of this issue is the fact that existing vendors have not shown themselves to be technically competent to even simple correctness and security challenges of election systems, nor are they authentic and ethical, IMO. Consequently, to move to a service model which magnifies those concerns a hundredfold is a very, very bad idea.

What this means to my company is that, to differentiate ourselves, we strictly offer products and services that are in alignment with the recommendations of the verifiable elections activist community and are based upon academically peer-reviewed work. As such, if that community says an election component could be offered as a service if it is Done Right, and we publish artifacts (i.e., specifications, source code, crypto protocols, etc.) or a paper that gives evidence that we are Doing It Right, then we will do it. Otherwise, we will not.

What is the future of the industry in an environment where federal funding is gone and state/local funding is so challenging?

Those responsible for running elections will have to do less with more. They will have to not wed themselves to vendors, not buy or lease enormously over-expensive products, and work with companies and communities that offer novel technical solutions and business models that lower the year-upon-year cost of elections.

That being said, I do not believe that federal funding is gone—it is simply missing at the moment. It will only take one enormous national security disaster in federal elections for the situation to change.

How can the private sector work with policymakers and election officials to support innovation and otherwise support election administration?

The main opportunities I see, and which I am actively engaged with, are:

- 1) Facilitating NIST+EAC in the evolution and modernization of the certification of elections equipment (both in definition and execution), particularly with regards to component-based certification on COTS open source hardware and software,
- 2) Facilitating the IEEE in the creation of international standards so that we have component-based, plug-and-play software-based election systems, and
- 3) Help elections officials and policymakers better understand, and take responsibility for, the next generation of products and services. These communities need to be able to own their own systems, services, processes, and materials so that they have full control—physical, fiscal, and digital—and understanding of, their election systems. This means a focus on an education and training strategy that is more “teaching how to fish” than “selling them expensive fish every year”.

What developments in the field are you the most optimistic about? Which ones worry you the most?

What worries me the most is that we will see a massive aggregate purchase across thousands of jurisdictions of the next generation of overly-expensive, opaque, low-quality elections systems which tie elections officials, and thus the taxpaying public, to the same old predatory vendors for the next several years. This is particularly troubling in election subsystems that must witness high-assurance—i.e., voting systems, tabulators, and auditing systems—and is compounded by the offering of these critical systems as services.

What I am optimistic about is new generations of vendors and elections systems which are end-to-end verifiable, software independent, open source, and have commercial support. A flowering of local vendors offering commercial support for open source election systems is the only way that I believe we can both lower the cost of elections and increase their trustworthiness. I see no alternative.

Anything else you think the election community – and especially state legislators and staff – should know?

They should know about the existence of Verifiable Elections. They should know that they do not have to have a love-hate relationship with a vendor. They should know that they should have choice and there should be open competition in this area of digital government. They should look to forward-thinking states and counties to learn best practices.

The main thing that they can do to expedite competition is to eliminate the broken RFP framing that nearly all of them currently use which completely prevents any new competitors in the market.

My prediction is that we will see vote-by-mail expanding over the next 5-10 years until we have half of the USA running elections like Oregon. Complementing that, I believe that we will see early voting centers expanding dramatically. I believe that we will see end-to-end verifiable internet voting for overseas voters within 10 years.

I believe that LEOs and state legislators and staff should look outside of their jurisdictions, states, and dare I say it, even the USA to learn about best practices and solutions with regards to these challenges.