Recent U.S. elections have brought to light various challenges surrounding election integrity, voting access, and civic engagement. One solution to all three is technology that is readily available and already used routinely by Americans. Smartphones have become an integral part of our lives for everyday tasks like banking, shopping, entertainment, and transportation, and their proliferation provides a low-barrier opportunity for election administrators.

As the digital landscape evolves, the utilization of web-based applications is expanding, accompanied by the continuous advancement of technology that incorporates the Internet of Things (IoT) and Artificial Intelligence (AI) technologies. This convergence of app development with IoT and AI opens new possibilities and enhances the functionality of these applications, catering to a wider range of user needs – including election processes.

By offering web-based portals that connect seamlessly to government services, election administrators can empower constituents to control their voting experiences, from registration up to casting their ballots. Embracing these modern technologies will not only provide convenience to voters, but also relieve the growing burdens on election administrators.

WEB-BASED APPS PROVIDE THE CONVENIENCE TO WHICH VOTERS ARE ACCUSTOMED

The more we educate and engage voters, the stronger our democratic institutions become. However, the common approach to voter engagement still requires individuals to seek out and access information about voting and elections. While many election officials have made significant investments in making this information accessible, it can still be overwhelming for constituents, given the abundance of information and the sheer number of elections held each year – not to mention the challenges faced by disadvantaged populations.

To address this, election officials can adopt web-based technologies that provide a complete end-to-end experience, allowing voters to perform all necessary tasks from
their smartphones. This comprehensive approach begins with voter registration and extends all the way up to casting one's ballot. An intuitive single-access portal can not only guide citizens through the voting process, but automated communications can notify constituents with information that is directly relevant to them, like when polling places change, upcoming elections, and "remember to vote" reminders. Features such as alerts, online ballot requests, tracking, voice assistance, assistive technology for voters with disabilities, and GPS mapping significantly enhance convenience—and overall engagement.

GREATER OPERATIONAL EFFICIENCY AND TRANSPARENCY MAKE ELECTION ADMINISTRATORS JOBS EASIER

Adopting this approach also has the potential to vastly improve election management efficiency. Automation can simplify processes, reduce workloads, and eliminate human error, alleviating the burden on election office staff and allowing them to focus on their growing list of critical tasks. Moreover, digitizing traditional paper forms ensures that information is readily accessible and reduces the reliance on manual data entry, saving time and reducing the likelihood of errors. The integration of a range of election-related systems further streamlines information management, resulting in faster processes and increased accuracy. For instance, by seamlessly integrating with third-party systems such as the Department of Motor Vehicles (DMV) and GPS data, the verification of voter records can be conducted efficiently, minimizing administrative burdens. Identity validation and verification can be done quickly and easily by constituents by scanning IDs with their smartphone camera and with integrated biometric technologies. By leveraging the range of capabilities possible with web-based voter apps, election administrators can streamline their operations, enhance productivity, and provide a seamless and efficient experience for all stakeholders involved. Furthermore, the emergence of AI holds the potential to radically improve efficiency (as well as security, transparency, and general convenience). IoT is already proven in the election space, such as with e-pollbooks and tools that enable results reporting from mobile devices.

BEST-OF-BREED SOLUTIONS ENSURE THE HIGHEST LEVELS OF ELECTION INTEGRITY

Technology can achieve a high level of security in web-based voter apps, complementing (and largely enabling) paper-based voting systems. To see highly secure apps being used in the real world daily, we can look to the world of FinTech as an example. A recent report claims that mobile payments are used by more than two billion people globally, with millions more coming online each year. That’s countless secure transactions being processed each day.
This high level of security in voter apps is attainable. Election officials can leverage best-of-breed security tools. Platforms like Amazon Web Services GovCloud, which meet strict compliance requirements such as SOC 2 and FedRAMP, provide a robust security framework. Continuous 24/7/365 monitoring enables policy-driven deployments based on best practices and security principles, minimizing the risk of human error. Monitoring and mitigation tools automate provisioning and protect environments, ensuring the utmost security for voter data and information.

In recent years there has been a notable surge in public, researcher, and policymaker interest in post-election audits, specifically surrounding election security and integrity—highlighting their indispensable role in the electoral process. With modern technology, auditing capabilities enable detailed scrutiny of the entire process, including even down to the keystroke, to ensure the integrity of elections.

By prioritizing security and auditing capabilities made possible by modern technology, election officials can instill confidence in voters, assuring them that their information and the integrity of the electoral process are safeguarded.

TECHNOLOGY ENABLES UNPRECEDENTED LEVELS OF TRANSPARENCY AND VOTER CONFIDENCE

A web-based application for voters can offer an unprecedented level of transparency, enabling individuals to access real-time information regarding their registration status, mail ballot status, election night reporting, and more. Push notifications and text messages can provide timely updates on time-sensitive issues, such as last-minute changes in polling places, ensuring that voters are well-informed and not left feeling disenfranchised.

In short, election administrators leveraging web-based voter apps can engage constituents proactively rather than simply putting information out for them to find. Technology makes this possible through automation and integration with a range of systems within the electoral process. This facilitates increased engagement that is relatively effortless for election staff and constituents alike. By embracing technology-driven transparency, election administrators can strengthen the connection between voters and the democratic process, promoting an engaged and informed electorate.