2021 Professional Practices Program

Improving Efficiency with the Esri Application Suite

King County, WA

Submitted by:

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About King County Elections

King County Elections (KCE) conducts accessible, secure, and accurate elections for over 1.4 million registered voters in Washington State. King County has voted universally by mail since 2009 and, for many years, held the title as the largest vote-by-mail jurisdiction in the country.

Summary

In an all vote-by-mail environment, ballot drop boxes are a key component of accessibility. Drop boxes provide an easy, convenient, and secure way for voters to get their ballots directly into our hands and quickly transported back to our facility for processing and tabulation.

We began 2016 with only 10 drop boxes located throughout the county. As of the 2020 Presidential election, there were 73 drop boxes in place. With this expansion, more than 96% of registered voters live within three miles of a drop box location. In urban areas, such as Seattle, 75% of voters live within just one mile of a drop box. As drop box locations expanded, KCE prioritized placing new boxes in historically underserved and lower voter turnout communities.

This expansion of drop box locations brought new opportunities and challenges to the KCE team. The Esri GIS-enabled application suite has provided an effective and robust solution to the challenge of opening, closing, and collecting ballots from such a wide array of drop box locations.

The utilization of this platform has increased the output of ballot collection (driver) teams, reduced costs, improved record keeping, increased the ability of KCE to nimbly coordinate a large team of drivers while out in the field, and allowed for more informed decision-making when allocating resources. Esri is an example of how technology can be used to facilitate and promote democracy and voter participation, while increasing efficiencies and data-driven decision making.

End-to-End Technology to Increase Efficiency and Expedite Response Times

Adding 63 new drop box locations in just four years demonstrated the need to identify ways to increase efficiency and keep costs down as much as possible. Covering every corner of the 2,307 square miles that make up King County – with one drop box even requiring a ferry ride – it quickly became clear that technology was needed to effectively scale a secure and robust drop box program.

While voters have been trending more and more to drop box returns in recent years, the unique situation of the 2020 election resulted in 75% of our total returns, or 909,987 ballots, came back to KCE through drop boxes during the 18-day voting period. What’s more, in the Presidential election we saw unmatched early turnout. After the first five days of voting, our team had collected 244,500 ballots from drop boxes. In 2016, that same period saw about 10,000 ballots returned by drop box.

As drop boxes filled up throughout the voting period, voters could alert KCE via phone, email, or on social media and the Esri application suite allowed our team to be nimble in response, change direction at the drop of a hat, and quickly get to full drop boxes to empty them and get them ready for the next onslaught of democracy in action.

In addition, our drivers were able to quickly to deliver ballot packets and retrieve ballots from voters with disabilities or other obstacles to returning it on their own. Our drop box program staff partnered closely with the customer service team to quickly print the voter-specific materials and add them to a driver team’s route, all within just a few minutes.
Along with the drop box team, we worked with our internal Geographic Information System, IT, and design teams to customize an Esri platform that aligned with our specific needs. This included three synchronized programs that we chose for the app:

**Workforce for ArcGIS:** Provides daily work assignments and schedules. Adding and removing stops to a route in Workforce is simple, reflects the change immediately in the platform, and sends the driver team an alert via text message, cutting down on calls back and forth between dispatch and driver.

**Google Maps:** Provides navigation and mapping support, including being able to track driver teams in the field in real-time so the program supervisor and drop box program staff can adjust throughout the day as needed.

**Survey123 for ArcGIS:** Provides a survey for driver teams to complete when emptying a drop box. The data is shared in real-time to the ballot drop box program supervisor and team, providing in-depth insights for logistical and staff planning needs.

Each morning during the voting period, supervisory staff upload and assign routes to drivers in Workforce. From there, drivers navigate between locations using Google Maps. Once the team arrives at their assigned drop box location, they use Survey123, where surveys track all key steps in ballot collection and security. Survey123 allows drivers to scan and record security seal numbers, all while ensuring each part of the process is followed by completing the assigned checklist and providing a place for drivers to upload photos or notes when needed. These surveys include an approximate number of ballots collected from each box along their route and the real-time delivery of this data allows our ballot processing team to adjust their staffing and workflow throughout the day.

**Intuitive User Experience**

User-friendliness was paramount to the KCE team when implementing the use of the Esri app suite. Driver teams are made up of temporary workers of various backgrounds. Many are retired, all come from different work experiences and education levels. It was important to utilize a system that would be quick to train and easy to use. Esri delivered on both fronts.

The workflow is intuitive, allowing workers who had used manual and paper routing systems in past elections to adapt quickly. The interface is simple, uncluttered, and focused solely on what staff need to get the job done. Our driver teams have expressed over and over how Esri makes their routes clearer, records easier to organize and retain, and jobs easier at every step of the way.

**Real Results & Continuous Improvement**

By simplifying the process of ballot collection from start-to-finish and increasing the data available to KCE staff, the utilization of the ESRI app suite has reduced both operational and staff costs, increased transparency and coordination across workgroups, and improved record keeping and retention. Driver teams are no longer spending extra time navigating to their next step and no longer wrestling with a clipboard full of paperwork. Supervisors can easily track progress throughout the day and make decisions based on what is happening in the field at any given time.

The app suite has connected our teams and helped us to adapt quickly amidst any unexpected situation, from adverse weather to gridlock traffic to a crush of unprecedented early returns. Esri has proven invaluable to King County Elections. As we look forward to upcoming elections, we’ll continue to use and expand upon the Esri platform to run efficient, cost-effective, secure, and accessible elections for our voters.
Esri platform is simple and user-friendly

Driver teams fill out a survey on each of the drop boxes they empty noting location, scanning the ballot container’s tag and giving an exterior and interior inspection. This allows us to anticipate maintenance and other needs, and ultimately save money.

The survey also includes an estimation of ballots collected, which is updating in real-time and informs staffing decisions and workflow on the ballot processing floor.

A King County driver identifies first stop on the route through the Workforce for ArcGIS.
Esri dashboard provides up-to-date information from the field

Dispatcher’s view of a day’s assignments on a web map. Driver teams were tracked on this map throughout the day and rerouted as needed.

Example of a dashboard screen showing which drop boxes have already been picked up for the day (completed surveys).
Teamwork makes the dream work

King County drop box team withstand the rain to empty ballot drop boxes during the 2020 Presidential election.

Drivers deliver returned ballots to King County Elections' warehouse.

Trained King County staff empty drop boxes in teams of two.

Voters reached out regularly via phone and on social media to alert KCE when boxes were beginning to fill up.

In this example, the voter assumed we would be done for the evening. However, in the end we were able to use the Esri platform to re-route a team who were in transit back to our facility to empty that box before calling it a night.
Our team put this video together at the end of the busy first weekend of voting in the 2020 Presidential election to show voters what the ballot collection process looks like.

Watch how trained elections staff empty drop boxes here.