



## Tablet PC Solution Helps Make Elections Easier and More Accessible

### Overview

**Country or Region:** United States  
**Industry:** Professional Services—IT services

### Customer Profile

Election balloting software firm  
Democracy Live is based in Seattle and has four other offices around the United States. The company has 30 employees.

### Business Situation

Democracy Live wanted to build on the success of its LiveBallot balloting software to make in-person voting easier to manage and more accessible for voters with disabilities.

### Solution

Democracy Live took advantage of built-in accessibility features in Windows 8.1 and the portability of Microsoft Surface Pro to create a lightweight and affordable alternative to traditional bulky voting machines.

### Benefits

- An accessible solution for all voters
- A high level of security for sensitive data
- Simpler and less-costly elections

“Together with Microsoft, we are launching a new paradigm in elections that will allow Americans to have the most modern voting system in the world.”

Bryan Finney, President, Democracy Live

As part of its mission to revolutionize the voting process, Democracy Live has used its expertise in election administration and voting technology to pioneer new balloting solutions that have made it simpler for citizens with disabilities and those living abroad to participate in the democratic process. With the LiveBallot Tablet app, Democracy Live has combined the computing power and accessibility features of Windows 8.1 and Microsoft Surface Pro tablets to create a lightweight, portable, lower-cost alternative to heavy, aging voting machines that are in use at most polling places. Election officials, who are required by federal law to ensure voting accessibility—often within tight budget constraints—can use LiveBallot and Surface Pro to make polling places easier to set up and manage, while simultaneously making them more welcoming to voters with disabilities.

Surface™

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## Situation

When voters go to the polls on Election Day, they may take it for granted that their polling places will have the necessary voting technology set up so they can easily cast their votes. For voters with disabilities, the process can sometimes be a challenge. Due to vision impairment, mobility issues, or other limitations, people with disabilities may have difficulty using a traditional voting machine. In order to ensure that all voters have equal opportunities to participate in elections, the United States government passed the Help America Vote Act (HAVA) which mandates that all polling places must provide voting equipment that can accommodate the 35 million American voters with disabilities.

Democracy Live, based in Seattle, Washington, was founded in 2007 with the goal of simplifying the voting process for all US citizens by providing interactive balloting tools that also reduce the cost of holding elections. In 2010, Democracy Live released its LiveBallot application to make it possible for voters with disabilities, voters in the military, and Americans living abroad to access their local ballot materials online. With LiveBallot, which is built on the Microsoft Azure cloud computing platform, local election officials can easily update ballot materials, and candidates can update their profiles and even include video statements.

As of 2014, LiveBallot has been used in more than 500 elections by US voters in 96 countries. The success of LiveBallot led the company to expand its solutions to further modernize and simplify the voting process.

“There are nearly 200,000 voting locations across the United States, and many of them are currently using aging voting machines that run proprietary software and are reaching the end of their lifespan,” explains

Bryan Finney, President of Democracy Live. “These machines are often heavy, expensive to store, difficult to transport, and complicated to set up. This can be a challenge for polling place volunteers. In addition, traditional voting machines may not be equipped to accommodate voters. We thought it made sense for us to find a way to replace these cumbersome 70-pound machines with a lighter, modern, and more accessible alternative.”

## Solution

Democracy Live felt that advancements in technology made an excellent platform to replace the bulky, aging voting machines. The company evaluated a variety of tablet alternatives, and selected Microsoft Surface Pro as the flagship device for its new voting solution. “Surface had all the elements we were looking for, and it came from a trusted partner whose technology was already part of our applications,” says Finney. “We know that Microsoft understands enterprise-level security and accessibility requirements, and Surface runs the Windows 8.1 operating system, which is already familiar to millions of voters.”

### Easy-to-Use, Security-Enabled Solution

The combined LiveBallot application and Surface Pro tablet voting solution is known as LiveBallot Tablet. At the polling place, the Surface tablet is enclosed in a sturdy case and connected to a receipt printer. Prior to the election, balloting and voter registration information is uploaded the highly secure Microsoft Azure-based LiveBallot application. On Election Day, the data is downloaded via Azure to the Surface tablets. Voters use Surface to progress through each race on the ballot and mark their vote. When they have finished the ballot and confirmed their votes, the printer produces a paper receipt that includes a quick response (QR) code. A

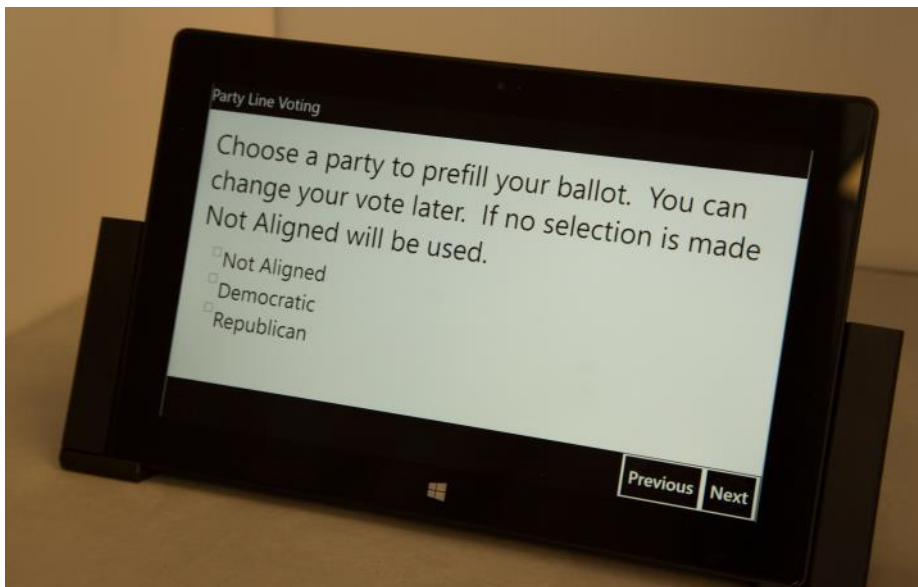


Image 1: The Microsoft Surface tablet offers a larger screen size and a greater ability to accommodate assistive technologies than other tablet platforms that Democracy Live evaluated.

poll worker takes the receipt and scans the code into the machine that tabulates the votes.

“In the past, the process of converting a voter’s ballot into scannable form for tabulation was a time-consuming manual task that required poll workers to copy the voter’s choices onto a separate document,” says Finney. “It could take days or even weeks, depending on the size of the local electorate. So LiveBallot not only offers a rugged, lightweight, portable alternative to traditional voting machines, but also can significantly reduce the time and work involved in the overall election process.”

Although companies across many industries have embraced cloud technology because of its high availability and lower cost when compared with on-premises hardware, government organizations may be leery about having sensitive information—like election data—stored in a hosted environment. Democracy Live has

specifically chosen technology that can help allay that concern.

“When we talk to local election officials, I let them know that Windows 8.1 is Microsoft’s most secure and well-deployed operating system in the world,” says Finney.

### **Extensive Testing to Ensure Accessibility**

In addition to ensuring that LiveBallot Tablet has superior security, Democracy Live has worked hard to ensure that the offering has superior accessibility as well. The company worked with disability experts at research universities and disability advocacy organizations around the country, and their feedback has helped shape the final product. Ardis Bazyn is a former member of the board of the American Council of the Blind and a current member of the board of the California Council of the Blind, and she has been working on issues of accessible voting since 2000. She also runs her own consulting service, and she was part of the team that has been working on the accessibility of the LiveBallot Tablet solution.

“In any given election, as many as 20 percent of voters have a disability of one type or another that might make it difficult for them to use a standard voting machine,” says Bazyn. “It is not a simple process to reconfigure one of those machines to make it more accessible. Tablet PCs are smaller and lighter, and they are also a more modern technology, so they all come with some level of accessibility features already built in.”

Bazyn helped Democracy Live evaluate several different touchscreen tablet solutions, and they determined that Microsoft Surface Pro was the one that offered the most options to increase accessibility. “None of the other platforms were compatible with as many assistive

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Ardis Bazyn, Board Member, California Council of the Blind

devices as the Surface running Windows 8.1,” says Bazyn. “Surface has a larger screen that can provide magnification for voters with visual impairments, and it is easy for voters with disabilities to plug in other assistive technology like large-key keyboards, headphones, tactile buttons, or sip-and-puff devices that enable quadriplegic voters to interact with the Surface using a tube into which they inhale or exhale. The other tablet models weren’t able to accommodate all of these accessibility tools.”

Bazyn was also impressed by Democracy Live developers’ responsiveness to feedback about accessibility issues, and the product was repeatedly tweaked to make the solution even better. In addition to solving accessibility issues at polling places, Bazyn sees great potential for LiveBallot Tablet to help those voters who have trouble even getting out to vote.

“The biggest problem for many people with disabilities is transportation, particularly in small towns without a public transit system,” explains Bazyn. “And due to municipal and state budget cuts, there aren’t as many subsidies to help with transportation. LiveBallot Tablet offers some very exciting possibilities. Its light weight and easy portability mean that it could be taken to senior centers or nursing homes, and perhaps one day it could even allow people to vote in their own home.”

#### **Successful Pilot Deployments**

LiveBallot Tablet had its public debut at a voting precinct in Charlottesville, Virginia, in 2012, when a working version was set up as a demonstration and pilot test to get election officials’ feedback. In 2014, Democracy Live arranged another pilot project with El Dorado County, California. But the more exciting development for Democracy Live was the use of the Surface

as an official voting device in Kittitas County, Washington, which had already used LiveBallot to distribute ballot materials to county voters who are in the military or live abroad.

Washington is different from other states in that almost all voting is done by mail, rather than at public polling places. However, local counties must also set up in-person voting centers where citizens can submit their completed ballots. In a general election, Kittitas County normally has two such locations: one at the county courthouse and one at a senior center. For the past two years, the County Auditor’s Office—which manages elections in the county—has also worked with students at Central Washington University in Ellensburg to set up an Election Assistance Center (EAC), where students can access, mark, and submit their local ballots. In 2014, the EAC included a LiveBallot Tablet that students could use, whether or not they have disabilities.

Kittitas County belongs to one of two coalitions of election officials in Washington who are working together to figure out the best way to provide accessible voting for the 2016 elections. The county is very interested in LiveBallot Tablet, and it needed a good way to test it under real election conditions.

“We felt that working with the EAC was a win-win situation for us—the students had access to a more accessible voting setup, and we were able to evaluate its potential as a solution to mandatory voting accessibility rules,” says Jerry Pettit, County Auditor for Kittitas County. “Our current voting machines were purchased in 2005, and they are expensive to use and maintain. As a county, we’re not afraid to try new things. The combination of Surface with LiveBallot—which we were already

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using to deliver ballot materials to overseas and military voters—is an exciting new option for us. We think it can help people with disabilities become much more comfortable with the voting process, because many of them are already using Windows 8.1 in their daily life.”

#### **Certifying the Solution and Looking Toward the Future**

Traditionally, states and counties require federal certification to use new voting machines. LiveBallot Tablet is technically not a “voting machine” because it does not tabulate the votes. Instead, it is categorized as a “ballot marking device,” and it is not subject to federal certification. However, Democracy Live has had LiveBallot Tablet reviewed and audited by a federally accredited laboratory as a certified accessible ballot marking device that can be used by any precinct in the United States. This makes it the first nationally certified tablet-based balloting solution running on widely available hardware and software.

Democracy Live has been talking with state, county, and municipal election administrators across the country, and they have expressed great interest in this sort of compact, inexpensive, flexible balloting solution. The company is also developing new solutions that will make elections simpler and less costly to conduct and easier to vote in. LiveBallot Mobile will allow voters to view and mark a ballot from a smartphone or other mobile device, and LiveBallot Tabulation will offer a lightweight, low-cost, next-generation alternative to legacy tabulation systems.

“These new tools open the door for a more universal, lower-cost election solution that includes tabulation and even voter registration,” says Finney. “The ultimate goal for Democracy Live is the deployment

of LiveBallot on any Windows device so that a voter can access a ballot; read about, watch, and interact with candidates appearing on their ballot; and then cast their ballot anytime and anywhere.”

#### **Benefits**

With its original LiveBallot software, Democracy Live made it easy for voters with disabilities and those living abroad to view and print their local ballot materials. With the LiveBallot Tablet solution based on Microsoft Surface running Windows 8.1, the company has continued to make voting more accessible for all citizens while also making the process of holding an election easier and less expensive. The company’s choice to use the Microsoft Azure cloud platform has helped Democracy Live allay the security concerns of election officials who are evaluating the solution.

#### **An Accessible Solution for All Voters**

To ensure that LiveBallot Tablet works for all voters, the solution complies with accessibility regulations in the Americans with Disabilities Act (ADA) and the Help America Vote Act (HAVA), and the user interface meets the most current Web Content Accessibility Guidelines developed by the World Wide Web Consortium.

“There are 35 million voters with disabilities in the United States, and federal law requires that there be an accessible balloting device in every voting location across the country,” says Finney.

“Compared with other operating systems, Windows 8.1 offers superior accessibility features like the Narrator screen reader, along with extremely high levels of security. Combined with Surface as part of LiveBallot Tablet, Windows 8.1 allows any voter, regardless of physical limitations, to independently and privately access and

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#### **A High Level of Security for Sensitive Data**

When Democracy Live talks with local election personnel, the fact that the LiveBallot Tablet solution is built on Microsoft technology has proven to be a strong selling point. “The security and scalability of Azure, along with the long-standing proven Windows environment, offers elections administrators a technology partner that they can trust to ensure that the foundation of our democracy is secured and will work for millions of voters,” says Finney.

“Microsoft has decades of experience helping state and local governments deploy innovative solutions,” adds Finney. “No other provider in this field has the company’s deep-level resources, technology, and expertise. Together with Microsoft, we are launching a new paradigm in elections that will allow Americans to have the most modern voting system in the world. Instead of waiting 10 to 15 years to purchase expensive new voting machines, election administrators can easily afford to keep up with changes in technology.”

#### **Simpler and Less-Costly Elections**

By the time the 2016 general election is held in the United States, 7,000 voting precincts will need to replace outdated voting equipment that includes nearly 1 million devices. LiveBallot Tablet offers election administrators a much less expensive alternative to traditional voting machines that is also easier to use.

“The cost of transporting traditional hardware to every precinct in a large county can cost [US]\$500,000 or more for every election,” says Finney. “There is some

federal and state funding available for the purchase of new balloting systems, and that can help defray the cost of the transition. But one big advantage of LiveBallot Tablet is that it offers an immediate return on investment because cities are immediately able to realize a significant decrease in the money necessary to maintain, store, and transport the devices.”

## For More Information

For more information about Microsoft products and services, call the Microsoft Sales Information Center at (800) 426-9400. In Canada, call the Microsoft Canada Information Centre at (877) 568-2495. Customers in the United States and Canada who are deaf or hard-of-hearing can reach Microsoft text telephone (TTY/TDD) services at (800) 892-5234. Outside the 50 United States and Canada, please contact your local Microsoft subsidiary. To access information using the World Wide Web, go to:

[www.microsoft.com](http://www.microsoft.com)

For more information about Democracy Live products and services, call (855) 655-8683 or visit the website at:

[www.democracylive.com](http://www.democracylive.com)

## Microsoft Surface

Microsoft Surface offers a revolutionary Windows 8.1-based computing platform that uses a 360-degree natural user interface to help users simply and intuitively interact with digital content. Accommodating multiple users simultaneously and responding to natural hand gestures and real-world objects, Surface offers the potential to build a multitude of cutting-edge applications and solutions. With Surface technology and the Microsoft Surface SDK, customers and partners can quickly and easily deliver engaging application experiences and open up new business opportunities in the fast-growing multitouch computing category.

For more information about Microsoft Surface, please go to:

[www.surface.com](http://www.surface.com)

### Software and Services

- Microsoft Surface Pro
- Windows 8.1