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Volume 1 Technical Proposal
From the Commonwealth of Kentucky for Application to the
Effective Absentee Systems for Elections (EASE) 2.0 Grants

Proposed Period of Performance: August 2013 – December 2018

Title of Proposal: *Enhanced Statewide Election Administration System and Online Ballot Delivery Platform for Uniformed and Overseas Citizens*

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TECHNICAL APPROACH AND JUSTIFICATION

1. Executive Summary

Kentucky Secretary of State and Chief Election Official Alison Lundergan Grimes has worked diligently to strengthen the Commonwealth's presence as a national model for military and overseas absentee voting election administration.

During Secretary Grimes' 2012 travels to the Middle East, she witnessed firsthand the challenges military and overseas voters encounter. Soldiers, sailors, airmen, and guardsmen repeatedly asked Secretary Grimes, "Does my vote actually count?" In support of improving military and overseas voting, a Kentucky uniformed service member stated, "Marines, soldiers, sailors etc., are all wired in these days even when we are "out in the field" in Afghanistan, we still come back to operating bases where we have pretty good communication ability. Electronic communication has taken over as far as how we connect with back home...I look forward to seeing Kentucky be in front on this issue." *Major Amy McGrath, USMC.*

This past year Secretary Grimes worked closely with the members of the 2013 General Assembly and successfully passed legislation (Senate Bill 1), based largely upon her recommendations, to protect and strengthen military and overseas citizens' voting rights. Senate Bill 1 allows military and overseas voters to register to vote and update their registration online, ensures that military and overseas voters have sufficient time to vote in special elections, and extends existing protections to state and local elections and National Guard members.

The Commonwealth of Kentucky submits this application for the Federal Voting Assistance Program ("FVAP") 2013 EASE Grant 2 program on behalf of the Uniformed and Overseas Citizens Absentee Voting Act of 1986 (UOCAVA) voters it serves. The Commonwealth of Kentucky is the proud home of two United States military installations, Ft. Knox and Ft. Campbell, with 65,000 active-duty military personnel, Reserves, and National Guard members. In addition, 350,000 veterans, the fourth largest population in the United States, reside in Kentucky. As a grant recipient, beginning in 2014, Kentucky will focus on both research areas FVAP has prioritized: (1) developing a statewide online ballot delivery system, and (2) centralizing (single-point) enhanced election administration and voter communication functions within the state voter registration system.

If awarded this grant, the Commonwealth of Kentucky will apply the funds to establish a secure online ballot delivery system through which a UOCAVA voter may apply for and receive voter registration materials, military-overseas ballots, and other voter information. This project is mission-critical to the efficient and effective administration of elections in Kentucky and its 120 counties; a single, unified, point of entry is necessary and long overdue. The primary goals of this project are to improve access to the voting process for UOCAVA voters, increase the number of UOCAVA voters, reduce UOCAVA ballot rejection rates statewide, and improve upon Kentucky's average of 26 percent ballots returned and counted¹. Specific county processes and procedures will be considered in developing this new statewide online ballot delivery system to ensure the system is fully integrated into current processes, including the Commonwealth's voter registration system.

¹ "Uniform and Overseas Citizens Absentee Voting Act, Survey Observations, October 2011," United States Election Assistance Commission.

Project Objectives include:

- Evaluating current county processes and procedures to establish a baseline from which to measure future results.
- Developing a single election administration process for all counties to expedite election setup times. The online ballot delivery system will include voter management, election building, and ballot building.
- Developing a secure and accessible online ballot delivery and marking system.
- Delivering an automated data collection and reporting solution to include all findings and required reports. The centralized online system will report by county and aggregate at the state level.

This new centralized online ballot delivery system will provide the tools necessary to serve Kentucky's UOCAVA voters in a more timely fashion and allow eligible voters to securely access, mark, and return their ballots by mail to their local election officials prior to the close of the polls for any election in the Commonwealth of Kentucky beginning in 2014.

The Office of the Secretary of State, in conjunction with the State Board of Elections, will oversee and administer these new processes and enhancements to ensure that the Commonwealth's election laws and administrative regulations, as well as requirements of this EASE Grant 2 are strictly followed. The Secretary of State and State Board of Elections will work closely with internal IT staff and technology providers yet to be selected.

As Secretary of State Grimes has said, "Our military stands up for us, and they deserve to have us stand up for them."

This grant will facilitate important work and advancements for Kentucky's military and overseas absentee voting.

2. Goals and Objectives

UOCAVA voters routinely face increased burdens at every phase of the election and absentee voting process. Similarly, the county clerks who administer elections in each of Kentucky's 120 counties, who are often constrained by short staffs and reduced budgets, face comparable challenges in UOCAVA election administration. In addition to regularly scheduled local, state, and federal elections, from 2008 through 2012 Kentucky election officials conducted 103 local option elections and 14 special elections to fill unexpired terms. Senate Bill 1 extends protections to UOCAVA voters so that they may actively participate in **all** elections. While Kentucky's 120 counties have historically performed proficiently in timely delivering UOCAVA ballots, the Commonwealth seeks to partner with FVAP to continue this success by creating and sustaining a more streamlined process. An online ballot delivery system and a single, unified point of election administration will further improve these citizens' voting experience and ease the burden on and promote efficiency in our 120 counties.

Moreover, the time to implement an online ballot delivery system here in the Commonwealth of Kentucky is now. In 2012, the Office of the Secretary of the State and State Board of Elections began work to overhaul and modernize our statewide voter registration database. The new voter registration system will replace the current mainframe system with a Microsoft Windows client-server application and provide improved functionalities and search capabilities. The projected launch date is October 2013.

The proposed online ballot delivery system will:

- Develop a comprehensive statewide solution that integrates with existing tools (e.g., Kentucky's new statewide voter registration database) to ensure secure, accessible, and consistent services to UOCAVA voters statewide;
- Build and deploy the new system in time for the May 20, 2014, statewide primary election;
- Increase Kentucky's 26 percent rate of successfully returned and counted ballots;
- Significantly reduce costs associated with mailing ballots to UOCAVA voters.

Technology presents a considerable opportunity for significant successes in our ability to provide timely support to Kentucky's UOCAVA voters. With technology, we can increase voters' participation in elections and, more importantly, improve the ability of those who may have encountered barriers under our current procedures or have not voted in the past to successfully participate in all elections.

The proposed secure, universally accessible online ballot delivery platform will require coordination with work already complete on the Commonwealth's new statewide voter registration system. Kentucky UOCAVA voters will be able to access their ballots online through any web-enabled device's web browser. The voters will have access to their ballots 24 hours a day, 7 days a week for the duration of the voting access period (45 days) from any location with Internet access. The Commonwealth will also seek to deliver tools that improve the flow of information to voters before, during, and after an election. For Kentucky's 120 election administrators, the Commonwealth will strive to deliver new solutions for creating elections, building ballots, and managing voters, along with a reporting module that allows for complete FVAP data collection and reporting.

After benchmark assessments are completed in each of the 120 counties, the electronic delivery of ballots will be the first objective. In addition to providing great value to voters, counties, and the Commonwealth, ensuring the integrity of the ballot delivery system is paramount. While preliminary exploration has been conducted, full integration with the state's voter registration processes and hosting requirements must be reviewed and documented. The end goal is to provide a seamless migration, county-by-county, to the highly secure electronic delivery and HAVA-compliant accessible marking of ballots.

Benefits derived from this new online ballot delivery system will include:

- **Better Security: State-of-the-Art Secure Electronic Ballot Delivery**
Secure electronic delivery of blank ballots via a state-of-the-art system that gives voters access to a HAVA-compliant, fully accessible marking and error-prevention process will be delivered in Kentucky.
- **Better Accessibility and Accuracy: State-of-the-Art HAVA Compliance and Accessibility with Error-Proof Process**
Printing and hand-marking a PDF is often burdensome and not accessible. And without an electronic marking component, voter errors such as extraneous marks on the ballot can be made and often go undiscovered, leading to both spoiled ballots and disenfranchisement of UOCAVA voters. A ballot marking tool will prevent these errors.
- **Simplicity and Reduced Administrative Burden: No Double-Proofing of Ballots**
The new system will include a unique election administration tool that imports ballot data directly and auto-proofs those ballots, eliminating the need for counties to double-proof ballots.
- **Simplicity for Voters: Providing an Online Portal**
A centralized online portal provided by the Commonwealth, with a unique link for each county, will provide a single, unified point of entry for Kentucky's voters to apply for, receive, and complete their ballots, all while maintaining county independence. Upon completion of the ballot, voters may easily print and return by mail the ballot with any and all required paperwork (e.g., affidavits for signature and envelopes). To expedite the process for voters, the Commonwealth of Kentucky also intends to implement a feature that will automatically populate key fields of the forms in the ballot package. This feature will save voters keystrokes and valuable time. This data will come from the voter registration database.
- **Administrative Streamlining: Implementing Tracking Barcodes**
Barcodes will be applied to ballot delivery methods to facilitate the processing and tracking of ballots submitted. This will also provide needed information for communicating ballot status to voters.
- **Administrative Streamlining: Automated Ballot Remaking**
The Commonwealth will seek new technology with ballot-on-demand printers to automatically remake all electronically marked ballots. This technology will significantly reduce the time and costs associated with local election officials transcribing ballots onto

scannable ones and reduce the risk human error inherent in manual remarking.

- **More Accurate and Comprehensive Data Gathering**

The proposed online ballot delivery system, interfacing with Kentucky's new voter registration system, will efficiently track the processing of Kentucky's UOCAVA ballots and provide more accurate statistical data than is currently available. The new system will also be able to capture and deliver the required data-collection statistics in a variety of detailed, configurable reports.

The new system will also provide the ability to gather accurate, quantifiable data necessary for an in-depth evaluation of the relationship between electronic transmission of blank ballots and ballot transit time.

- **More Thorough Data: Providing Valuable Data Types**

It is important to compile data that has value and may be used to improve the overall process for both long- and short-term goals. New areas the Commonwealth of Kentucky plans to monitor include the following valuable data types:

- Web traffic;
- Ballot return rates;
- Processing accuracy and efficiency;
- Preference statistics for the number of ballots completed online versus in print; and
- A comparison of:
 - Online electronic ballot delivery when the voter receives their ballot by email
 - Previous, static electronic delivery methods where the user accesses a PDF version of the ballot, prints the ballot, and marks the ballot by hand

These innovations will allow Kentucky's UOCAVA voters, no matter where they are in the world, to register to vote, request a ballot, mark their ballot selections and return their ballot via mail, and also check the status of the process via online, real-time tools. This new centralized system will allow the use of modern technology to reduce failure rates and increase the percentage of ballots returned and counted on Election Day.

Success Criteria:

- **Impact:** Research will be conducted with Kentucky's 120 counties through a single, centralized electronic system. Since 2008, the Commonwealth has experienced a significant decrease in UOCAVA voter participation. In 2008, the Commonwealth issued 8,191 ballots in the primary and general elections, and only 2,088 ballots were issued in 2010. Previous federal reports indicate that Kentucky's UOCAVA population may include up to 10 times the number of ballots sent in 2008. One of Secretary Grimes' top priorities is to educate these voters on the ease of use of the new online ballot delivery system.

The proposed online ballot delivery system will:

- Improve services to UOCAVA voters with disabilities and better accommodate UOCAVA voters with last-minute requests for emergency or replacement ballots;
- Be used for all elections—local, state, and federal; and

- In conjunction with voter outreach, increase UOCAVA participation.

Measurable Impact:

- Addresses **every** stage of the voting cycle: blank ballot delivery, ballot markup, ballot return success, ballot tracking, automated ballot remaking, and challenges after ballot return;
 - Links to Kentucky's statewide voter registration system;
 - Retains FPCA capability with planned effort to integrate with state systems;
 - Links to county and/or state resources, such as online, tailored voter pamphlets;
 - Links to county and/or state ballot tracking system; and
 - Provides ability for voter to mark ballot online 24 hours a day, 7 days a week from any location with Internet access.
- **Sustainability:** This grant will allow the Commonwealth of Kentucky to build and refine this statewide online ballot delivery system through 2018. After the grant program, Kentucky will seek to cost-effectively sustain and maintain the system through our budgeting process. Research data gathered through this grant will be maintained and shared with FVAP and other states/jurisdictions to stimulate future successes in elections. The success of Kentucky's new online ballot delivery system will facilitate the enhancement of voting standards for UOCAVA voters nationwide.
 - This grant will result in a centralized state-of-the-art platform for Kentucky's UOCAVA voters and reduce the overall costs of 120 independent county processes. As a hosted solution, there will be no significant increase of elections staff.
 - It is anticipated that administrative efficiencies realized from implementation of this system will minimize the impact of ongoing costs.
 - Using the results of this research effort, the Commonwealth of Kentucky will continue to seek legislative changes that will allow increased use of advanced technologies as they develop to further ease voting processes for UOCAVA voters.
 - **Scalability:** The research conducted and systems created will be easily scaled to serve other voting populations in the future. The platforms developed in this effort may be extended to any other county or state with similar legislative requirements and/or restrictions. Also, the use of 2D barcode technology on ballots will allow election officials to enjoy a significant increase in voter participation with no additional impact upon staffing for duplication or tabulation of ballots.
 - **Strategic:** The proposed system includes a comprehensive, multi-pronged solution that gives the voter a choice among methods to receive and mark his or her ballot. Use of the proposed system, which features instant ballot access 24 hours a day, 7 days a week from anywhere with an Internet connection, will overcome inherent issues with the transmission of blank ballots and other materials via a constrained postal system and electronic mail.
 - Integration with existing processes will provide continuity and simplicity for election administrators, and preserve the integrity of the process.

- Test new capability to improve efficiency of processing UOCAVA ballots once received in the elections office through use of 2D barcode technology.
 - Decrease the potential for and number of UOCAVA ballots that may be marked incorrectly and/or have extraneous marks, which previously resulted in challenged, spoiled, and uncounted ballots.
- **Collaborative:** The robust nature of the data collection process will allow the Commonwealth of Kentucky to actively share data on ballot delivery and single POC/centralized systems with FVAP and other state and local officials.

Once the Commonwealth of Kentucky chooses its partner, the goals, objectives, and methods associated with the proposed project may also be shared with the partner's client base.

3. Schedule and Milestones

Proposal Schedule

This proposal presents a comprehensive and ambitious set of features and capabilities. The milestones and schedule below reflect a high-level overall plan. Kentucky is currently balancing a number of important initiatives that will impact our 120 counties, including legislative redistricting² and the October 2013 launch of the new statewide voter registration system. Thus, full system rollout will be handled in phases with our counties. Upon award and funding, details a comprehensive rollout plan will be finalized.

Phase I: Project Initiation, Planning and Voter Registration Integration

Duration: August 2013 – November 2013

The initial phase consists of defining the project, planning a detailed timeline, finalizing internal staff, evaluating and choosing necessary vendors, and informing/educating all county election officials. Some initial planning will be accomplished through the grant application process; however, project objectives and timelines may need to be redefined based on the funds available.

Milestones/Deliverables:

1. Executed agreement with chosen vendor
2. Hire Project Manager
3. Completion of Project Charter Documentation
4. Completion of Project Management Plan
5. Completion of Voter Registration and other database integration

Phase II: Analysis Phase

Duration: October 2013 – December 2013

This phase will serve to define business requirements, all integration points, security needs, and database structure. It will also model expected usage by UOCAVA voters and local election officials. During this phase, the state and counties will define current state metrics and improvement goals by county.

Milestones/Deliverables:

1. Completion of Project Requirements Documentation
2. Completion of county Benchmarking Reviews
3. Architecture Plans Documented and Confirmed
4. Completion of Initial Testing Plans

Phase III: Design Phase

Duration: December 2013 – March 2014

The third phase of the grant will consist of designing new software and updating software code for the statewide voter registration system and online ballot delivery system. During this phase, the architects will create system architecture and data models and design system reports. Project team will begin seeking user input to ensure that new features meet user needs.

² On June 20, 2013, the Governor of Kentucky issued a call for a special legislative session to begin August 19, 2013, to address redistricting.

Milestones/Deliverables:

1. Completion of Design Specifications
2. Data and Hosting Models complete
3. Test Plans prepared
4. May Primary launch addressed and functionality signed off on
5. Status Reporting

Phase IV: Development Phase

Duration: February – July 2014

During this phase, technical staff will build the system to match previously formulated designs. Final releases will be tested with training documents prepared. The developed software will be demonstrated to local election officials and electors to further refine its features. The May 2014 Primary will be the first deployment of the new system.

Milestones/Deliverables:

1. Beta Version System: statewide voter registration system integration, ballot building tool, election building tool, electronic ballot delivery, election administration tools, ballot transcribing tool, tracking tool
2. Testing Results presented
3. Training Documentation readied and validated with counties

Phase V: Implementation Phase

Duration: March - December 2014

After the system is complete, users will be trained on new features, and the system will be installed to production. Guidance for UOCAVA voters will be posted online. Each election may include greater enhancements and new procedures to achieve the incremental goals established.

Milestones/Deliverables:

1. Training of Election Officials completed
2. May 2014 Primary Delivery of Online Ballot Delivery and Marking System
3. November 2014 General Election – Full System Deployment
4. Data Collection completed

Phase VI: System Enhancements, Evaluation and Reporting Phase

Duration: April 2014 - December 2018

A report covering financial costs, usage statistics, comparisons to past elections, and voter and election official satisfaction will be submitted to FVAP in regular intervals. Software issues identified during election cycles will be corrected, with a final update submitted to FVAP. The findings and conclusions will include a comparison of results against goals and objectives, a report on lessons learned, and cost-benefit analysis. This report will allow best practices to be applied to future election cycles.

Milestones/Deliverables:

1. Survey of Voters and Clerks Completed
2. Usage and Data Analysis Report
3. Program and Financial Reporting to FVAP and Stakeholders
4. Final Software Updates and Documentation Readied

4. Management Approach

The Commonwealth of Kentucky, under the leadership of Secretary of State Alison Lundergan Grimes, is committed to supporting the voting rights of Kentucky's UOCAVA voters. Senate Bill 1, championed by Secretary Grimes, makes these voters a priority. The Commonwealth is prepared to continue in its efforts to improve registration and voting access for UOCAVA voters by developing an **Enhanced Statewide Election Administration System and Ballot Delivery Platform for Uniformed and Overseas Citizens** for use by all 120 counties.

The Office of the Secretary of State, in conjunction with the State Board of Elections, will take the lead in administering the grant and will be the recipient of the grant funds. A financial analyst will be assigned to manage the funding and financial reporting for this grant. All information on allowable expenses and auditing reports will be managed by the financial analyst and will be collected and included in regular financial reports.

The project manager will ensure that technical, training, financial, and support staff are working together to complete system milestones in a timely manner. During the development of the project, the project manager will compile data and evaluate the workflow and overall strategy. The project manager will ensure that construction and implementation of the system proceeds on schedule and that all of the milestones listed in the *Schedule and Milestones* section of this application are completed in a timely manner.

The system will be developed by a team that is comprised of both in-house IT staff and one or more election technology firms. The technology firm(s) will work under the general oversight of a full-time project manager assigned by the Office of the Secretary of State. In-house IT staff will ensure the Commonwealth of Kentucky controls all proprietary information. The Commonwealth will negotiate any contracts to ensure that any updates and improvements will be accomplished without renegotiating contracts and without any adverse effect on milestones or timelines.

This system, when fully integrated with the voter registration database and other administrative processes, will provide UOCAVA voters with access to register to vote, request an absentee ballot, receive a ballot, mark the ballot, and mail the ballot to the appropriate county for processing.

A phased-in implementation of various features and capabilities of the online ballot delivery system will increase the probability of success. One of the first steps will be to finalize the vendors and/or contractors that will be included in this project. While final determinations have not been made, the Commonwealth of Kentucky has consulted with providers and other states with similar systems/capabilities already instituted and has outlined potential roles for key elements of the project.

4.1 Objectives:

- Improve access and timely delivery of military and overseas ballots through the use of the online ballot delivery and marking system;
- Streamline Kentucky's UOCAVA election administration processes for election officials;

- Evaluate the impact a centralized process for all 120 counties has on success rates for UOCAVA voter registration and voting;
- Evaluate the relationship between electronic transmission of blank ballots and ballot transmission time.
- Provide data on the number of UOCAVA voters, ballot return rate, and the methods by which ballots are sent;
- Determine methods to improve participation among Kentucky’s UOCAVA voters;
- Develop a proactive plan for communications with Kentucky’s UOCAVA voters before, during, and after an election and measure the impact outreach has on registration, ballot requests, and ballot return.
- Enhance the administrative training each jurisdiction provides through a custom online training curriculum created specifically for the internal systems and processes in each jurisdiction.

4.2 Proposed System Attributes

The following provides additional detailed components of the proposed online ballot delivery system:

Election Administration

- **Election and Ballot Preparation:** This tool will allow all county election officials to enter their ballot styles in a single template regardless of the county’s election management system. This data may then be used to deliver the online ballots in a universally accessible way, speeding up the process for election officials to timely deliver ballots to voters.
- **Voter Management:** This will allow Kentucky’s election officials the ability to manage UOCAVA voters and ensure that once they are registered they are eligible to access their ballots online, eliminating delays in their ability to access a full and complete ballot for any election.

Accessing the Ballot

- **Online Absentee Ballot Request:** UOCAVA voters may request an absentee ballot in conjunction with registering to vote. Kentucky plans to allow immediate access to online ballots during election periods.
- **Single Centralized Access:** All voters will be directed to a single point of entry that may be accessed through multiple sources, including the FVAP, Secretary of State, and State Board of Elections websites. Using secure sign-in information, voters will be matched with their full and complete ballots. This single point of entry page allows for consistent messaging to each and every UOCAVA voter.
- **Online Ballot Delivery:** UOCAVA voters will have secure access to their online ballots and the ability to mark, print, and mail the ballot. They may also choose to print a blank ballot and hand-mark and then return it by mail.

Processing Ballots

- **2D Barcodes:** Ballots produced by the ballot delivery system will have a 2D barcode that contains the ballot style, precinct, and the voter's selections (but none of the voter's identifying information). Blank ballots will contain a barcode for ballot style only. These barcodes will allow UOCAVA ballots to be processed more quickly and eliminate manual remaking of ballots. Kentucky will need to add a ballot-on-demand system to implement the barcode program.
- **Online Ballot Tracking:** The system will provide an enhanced online ballot tracking system for Kentucky's UOCAVA voters that will automatically update when a ballot is printed by a UOCAVA voter and when a local election official scans a returned ballot.
- **Return Envelope Tracking:** The envelope template contains a barcode with the voter's unique ID. This barcode enables identification of the voter when the ballot envelope is received and scanned by the sorter, flagging the voter in the voter registration system as having returned the ballot.
- **Accessibility:** The ballot delivery system will be both Section 508 (ADA) and Section 203 (alternative languages) compliant. The ability to improve our service to wounded military and UOCAVA voters with disabilities will be an additional benefit.

Transparency and Communications

- **Notifications:** The system will provide the ability to communicate directly with UOCAVA voters by email and other methods to alert them of an election, notify them when ballots are available, confirm ballot receipt, and provide links to vital information, including return deadlines. Both state and county websites will also contain and provide links to important voter information.
- **Voter Surveys:** At the end of each ballot marking process, the voter will be able to provide feedback on the complete voting process. Like the ballot itself, the survey process is accessible and ADA compliant. This "voice-of-the-voter" feedback will provide important insight into the voter experience.
- **Training:** Online training will be developed for both UOCAVA voters and local election officials. This will include a sample election site for a complete interactive training experience.
- **Help Desk:** A support team will be available to address questions by all participants in the UOCAVA voting process. The training will also include a technical level of support for questions relating to use of online tools and voter-specific interfaces. State and county escalation procedures will be documented to ensure all issues are resolved timely and completely.

Data Collection and Evaluation

- An automated data collection and reporting system will be included in this research. All research findings and reports will be collected in a centralized system by county and then aggregated at the state level. This will ensure that publishing results and allowing others,

including FVAP, to review the data is streamlined and improved for use throughout the state and by other participating jurisdictions.

- At the outset of this important project, we will conduct a full review of the current processes and procedures, historical data, and systems in order to create a county and state baseline. This benchmark will be used to draw conclusions and identify project findings. This information and the metrics created will be reviewed and updated after each election cycle. The baseline will be vital for the success of the research and will allow us to measure results from improvements made during this research project.
- Following each election cycle, data will be analyzed for and with each county and supporting technology teams. Suggestions and recommendations will be provided and acted upon to improve the results for future election cycles.

Business Continuity

- To ensure that Kentucky's UOCAVA community is well served by this system at all times, the Commonwealth of Kentucky will develop a robust business continuity plan that will ensure the system remains available in the event of failures of primary servers and communications. This includes proper backups of systems and data, alternate sites in the event of failure of the primary site, and redundant hardware and communications.
- In addition, a highly secure (physical and technological) environment will be required to ensure the integrity of the voting process. Sufficient capacity will be required to survive high traffic when all jurisdictions have elections at the same time.

Security

- One of the challenges of any effort such as this is to balance the availability and ease of use against the security, integrity, and voter privacy of the solution. To this end, security of our proposed solution is paramount and will be one of the primary criteria in the effectiveness of our project and a key factor in its continuance after the grant period.
- All communications between the voter's browser and the server will be secured using a minimum of 256-bit encryption. Voter-related data stored on the system will be encrypted using 2048-bit encryption.
- The ballot delivery system shall not retain any record of the voter's selections anywhere on the system, to include transaction logs, cache, etc., after the voter has exited the system.
- Whether the Commonwealth of Kentucky or a vendor hosts the system, a physically secure facility using the most secure industry standards for threats against communications and malicious file threats (e.g. highly secure firewalls, procedures to protect against denial of service attack, anti-virus and anti-spyware applications, etc.) will be required.
- The copy of the extract of the state's voter registration system will be used for the sole purpose of authenticating voters and will be protected from dissemination to anyone, including internal vendor staff.

4.3 Justification for modification of current processes

Kentucky's current UOCAVA absentee voting process relies heavily on a costly delivery service (postal service) that takes too long to deliver the ballots (or registration requests) both to and from UOCAVA voters. Additionally, the transient nature of many UOCAVA voters means that additional delivery time is required to forward ballots to the voters' actual locations. This is particularly true of deployed military personnel. Many UOCAVA voters do not keep their mailing addresses current with election offices, resulting in mail never being delivered or being delayed even further by forwarding. Nationally, FVAP estimates that 17 percent of military voters never receive their ballots. Use of the Internet allows voters access to their ballots and a means of marking their selections at any location with access to the Internet during the 45 days prior to an election. Additionally, email addresses have a higher likelihood of remaining current than physical mailing addresses. And even if neither the physical nor email address is current, an eligible UOCAVA voter will be able to proactively access his or her ballot 24 hours a day, 7 days a week through our system.

4.4 Performance Indicators, Projections, and Performance Measures

Prior to the start of the project, we will work with each county to develop baselines relative to their UOCAVA voters.

Ballot Delivery

- **Availability:** Will provide UOCAVA voters access 24 hours a day, 7 days a week during the 45-day voting period.
- **Ballot Accuracy:** Voters will receive the correct ballot styles, contests, and candidates specific to their registered address.
- **Increased Voter Participation:** With a user-friendly tool to assist in voting in a timely manner, we expect more UOCAVA voters will exercise their right to vote.
- **Guaranteed Delivery:** Online ballot delivery to UOCAVA voters will be guaranteed and validated, whereas ballots sent via postal service may not be delivered due to incorrect addresses, slow service, voter being on temporary duty elsewhere, etc.
- **Projection:** We expect that the percentage of UOCAVA voters obtaining their ballots electronically through this system will double or triple between 2014 and 2016.

Ballot Return

- **Availability:** Will provide the UOCAVA voter access 24 hours a day, 7 days a week during the 45-day voting period.
- **Increased Voter Participation:** With a user-friendly tool to assist in voting in a timely manner, we expect more UOCAVA voters will exercise their right to vote.
- **Improved Timeliness:** With the ability for UOCAVA voters to immediately access ballots when they are available rather than waiting for postal service or email delivery, UOCAVA voters will be better able to meet statutory deadlines. This should reduce the number of UOCAVA ballots that are rejected because they are not returned on time.
- **Voter Errors:** System will prohibit over-votes and warn about under-votes, virtually eliminating voter intent issues because stray marks and non-compliant marking will be impossible.
- **Ballot Tracking:** UOCAVA voters can track receipt and acceptance of their ballots by the elections offices via a ballot tracking tool.

- **Online Voter Pamphlet:** UOCAVA voters will have online access to comprehensive information about candidates and measures. Currently, UOCAVA voters often do not receive such information because materials are frequently not printed before ballots are mailed.
- **Data:** Statistics are not currently maintained regarding accessing online voter pamphlets and ballot tracking applications by UOCAVA voters. This data will be captured with respect to information accessed through the system.
- **Projection:** We expect that more ballots will be returned on time.

Auto Duplication of Ballots

- **Reduced Costs:** Staff costs and time will be decreased as manual effort is reduced.
- **Better Accuracy:** The automated duplication of ballots from the 2D barcode will reduce errors that could occur with a manual duplication effort.
- **Scalable:** Auto duplication allows election offices to absorb increased UOCAVA participation without significantly increasing ballot processing effort and staff. It also allows election offices to expand the capabilities being developed for the UOCAVA community to other communities (e.g., disabled voters) in a cost-effective manner.
- **Data:** There is no baseline figure, as duplication of UOCAVA ballots is not currently needed. Performance in this area will be judged by comparing what manual duplication would have to cost to actual costs using auto duplication.

Ballot Challenges

- **Improve Resolution Rate:** For those participating in the electronic process, transit time will be greatly reduced, allowing ballots to be timely returned and processed, and more time to resolve challenges. With email or mobile phone numbers, UOCAVA voters whose ballots are challenged can be notified electronically in a timely manner, again leaving more time for resolution.
- **Lower Incident Rate:** Use of the online tool will help reduce challenges in the first place by electronic enforcement of business rules.
- **Projection:** We predict that the percentage of UOCAVA voters whose ballots are not processed due to unresolved challenges will be cut in half.

Other

- To assess whether voters are experiencing difficulty accessing the system, the number of individuals who start to use the system but abandon the process before completion will be tracked.
- We will report and track statistics on system reliability and system and application errors encountered.

4.5 Risk Identification and Mitigation

Risk	Impact	Prob	Mitigation
Election system vendor is unable to meet the needs of the project on schedule.	high	med	Select a vendor with a strong track record of success. Manage vendor deliverables with regular status updates.

Ballot data is finalized with insufficient time to implement online election.	high	high	Integrate online election vendor systems with current election management systems for direct transfer of data. Thorough pre-testing. Timeline same as print vendor.
Will vendor be able to demonstrate system integration with voter registration system?	high	low	Select a vendor with proven success in integrating election data and a knowledge of statewide voter registration systems.
UOCAVA voter registration data changes frequently during the course of the election.	low	high	Integration with state's voter registration system. Schedule voter registration database updates in advance.
UOCAVA voters may not have Internet access.	high	low	Continue current practice of mailing paper ballots for those voters
Tight project timescales mean that delays will lead to missed election or go-live date.	med	med	Limit features/capabilities implemented with first election to current, stable capabilities. Select vendor that has previously deployed an election on tight timeline.
Ballots of online election contain errors.	high	low	Audit vendor's quality assurance process. Ensure all acceptance, logic, and accuracy tests are completed successfully before election go-live date.
Project subject to malicious electronic attack.	med	med	Work to secure based on DCA-approved and other standards. Create a detailed business continuity and disaster recovery plan.
Submission of multiple ballots by the same voter.	very low	high	Control detection and control of multiple ballots at election office using existing controls.
Physical security at data center may be compromised.	high	low	Maintain security management measures compliant with SAS 70 Type II [TI1] defined in the data center service level agreement.
Vendor staff may present a security risk to the project.	med	med	Require security checks on vendor employees to assess risk of possibility of such occurrences.
Customer demand for the election services might be larger than anticipated.	med	med	Ensure that the technical system is elastic and built to cope with the largest possible demands. Automatic monitoring of system configured for notifications 24/7 should system go outside of expected parameters.
Negative news stories about the new voting methods appear in the local press.	med	high	Engage with local press during the voter engagement campaign and provide them with positive stories and photo opportunities to educate them about benefits.
Turnout is low, impacting	low	low	Strong UOCAVA voter outreach and messaging

research results.			program starting well before first election.
Culture change issues may generate negative feelings in internal staff and stakeholders working on the project.	high	high	Start internal promotion of the project as soon as possible after contract agreement. Also provide complete visibility of the service development to end users throughout the process.
Risk that the vendor will not maintain leadership position in fast-changing industry.	med	low	Select vendor with strong track record and committed leadership.
Risk that key leaders may leave project or job.	med	low	Strong succession planning and employee development program. Cross training. Strong process documentation.
Some of the technologies may be new to some election staff.	med	med	Limit number of new features/capabilities implemented first election. Ensure staff receives relevant training before they employ their skills.

5. Current and Pending Project Proposal Submissions

The Commonwealth of Kentucky has no ongoing projects related to online ballot delivery and marking systems.

Volume 2 – Budget Proposal

Commonwealth of Kentucky Budget Proposal *Enhanced Statewide Election Administration System and Online Ballot Delivery System for Uniformed and Overseas Citizens*

This system proposes integrating current election business processes and new technologies and will rely almost entirely on the resources and expertise of an elections technology partner. The Office of the Secretary of State and the State Board of Elections will provide oversight and existing staff as needed for a number of hours over the five-year duration of the grant at no charge to this grant. One new FTE will be hired for this project.

Direct Labor:

- Program Manager: A full time program manager will be assigned to manage all aspects of this grant and the associated development of the new system. The individual will work full time and report directly to the Office of the Secretary of State and the State Board of Elections. The Program Manager will oversee the daily operations of this grant project. The individual will ensure that all milestones and phases of the project are handled according to the plan and integrated properly to ensure the project’s success.

Direct Labor Costs Breakdown –

Position Title	Hourly Salary	# of Hours 3 Years	Salary for 3 Years	Fringe Benefits 3 years	Direct Labor Total
Program Manager Status: Position Vacant	\$ 23.00	<ul style="list-style-type: none"> • 1950 per year • 5850 total hours for 3 years 	\$44,850 / yr \$134,550 total	17,940 / yr \$53,820 total	\$188,370

Note: Position based on 52 weeks per year @37.5 hours per week, with minimal overtime hours.

No further personnel, including administrative and clerical positions, or direct labor costs, or the associated fringe benefits, are allocated to this project.

Other Direct Costs

1. Travel:

- a. We anticipate 5 in-person regional tours during the course of this project. The meetings will be for benchmarking and data collection, training and project launch with all 120 counties.

Projected travel for state associates and project team to regional meetings:

- 5 tours at \$5,000 each.
- **Total travel budget: \$25,000**

4. Equipment

Automated Ballot Remaking - Ballot on Demand

- a. The project will acquire equipment necessary for the automated remaking of UOCAVA ballots via a 2D Transcriber barcode. Equipment consists of printers packaged with the required operational software that will be deployed to each of the selected high volume counties. The cost for the printers also includes training, installation, and other items required for deployment. These printers are essential to the Ballot on Demand process. Barcode scanners will be used for a pilot project to research the feasibility of automatic ballot duplication using Ballot on Demand printers of ballots, which are downloaded through the online ballot delivery tool.

Printer Packages	15 units @ \$16,000 each (to be allocated based on research plan and ballot volume)	\$240,000
5 year Licensing and Software plus warranty	15 units @\$17,500	\$262,500
2D Barcode Scanner	7 @ \$750 each	\$5,250
	Total	\$507,750

EASE Grant 2.0 Application Budget Summary

Direct Labor	\$188,370
Travel	\$25,000
Elections Technology Vendor and System Hosting & Maintenance	\$1,876,039
Help Desk	\$93,750
Reporting and Training	\$35,000
Equipment	\$507,750
Supplies and Materials	\$23,000
Total Budget	\$2,748,909

Return on Investment Analysis

The proposed implementation of these new technologies and process improvements will benefit the Commonwealth of Kentucky and our UOCAVA voters in a number of ways by improving access, enhancing informational offerings, improving privacy and security, and reducing failure rates in every stage of the absentee voting process. Further, these changes will improve county efficiencies as well. With 120 counties, we have a variety of processes that are used by election officials (including work-around solutions) in order to meet the 45-day mailing deadline. This is confusing for voters and officials. The proposed centralized system will ensure that UOCAVA voters and those looking to register have a common process regardless of the county they are eligible to register and vote in. The new system will increase efficiencies and streamline the process, leading to cost savings for all 120 counties.

While many parts of the country are using PDF ballot delivery, we believe this fully integrated solution for ballot delivery, marking and full ballot package presentment is the most beneficial option. We believe that the innovative strategies Kentucky will both build and test, such as: 1) an integrated election administration platform for all counties and voters; 2) enhancements to our statewide voter registration system; 3) ballot-on-demand technology and 2D scanners to protect the privacy of these votes; and 4) voter notifications, will advance development and facilitate the groundwork for the next generation of these types of creative tools and applications.

The substantive return on investment can be measured both qualitatively and quantitatively.

Anticipated results from receiving grant funding are:

- Improved voter registration and access to the ballot
- Increased voter look-up processes and quality of voter information available online
- Expanded ballot-on-demand technology
- Improved confidentiality in the ballot duplication process to enhance vote secrecy
- Expanded and proactive notification and tracking to voters
- Comprehensive UOCAVA benchmarking and pre and post-election reporting

These measures, along with other data points determined after the full county benchmarking assessment is completed, will be evaluated at the intervals described in the proposal and agreed-upon during the funding process.