

# Phase III: System Design and Engineering



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### VIII. Stay Connected

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### **Words from Dean**



I am excited to share with you this culminating report detailing the accomplishments and milestones during the System Engineering and Design Phase (Phase III) of the Voting Systems Assessment Project (VSAP). We are one step closer to providing a new and improved voting experience for the County's electorate that ensures the delivery of accessible, secure, trustworthy and transparent election services. This report provides a comprehensive detailing of the design process, the development of the various components of the new voting system, research, partnership with stakeholders, and the activities that led into the final system design and specifications.

As detailed in this report, we have developed functional prototypes that feature sophisticated hardware and software specifications that allow for an interactive demonstration of the voting process. We produced the final system design for the Ballot Marking Device (BMD), an improved Vote By Mail (VBM) ballot, an Interactive Sample Ballot (ISB), a modernized tally system, and developed the concepts for expanded election services including vote centers and early voting. We actively supported legislation that would allow for the regulatory environment needed to implement the new voting experience. With the voting experience model now identified, our work continues as we refine the systems and develop specifications for the manufacturing of the device.

I am grateful to the individuals who have contributed their time and effort into the project. This process was truly a collaborative effort among the members of the VSAP Advisory Committee and Technical Advisory Committee, Board of Supervisors, community leaders, stakeholders, and the general public. The VSAP allowed voters to have a voice in the development of their voting system and shape a fundamental democratic process. We continue to encourage your participation and engagement as we move forward to the next phases in the project and the full implementation in 2020.

Dean C. Logan

DEAN C. LOGAN Registrar-Recorder/County Clerk Los Angeles County

os Angeles County established the Voting Systems Assessment Project (VSAP) to modernize its aging voting system and create a voting experience that meets the needs of its electorate. The InkaVote Plus system, currently used by Los Angeles County, is nearing the end of its service life and relies on major components that were developed in the 1960s. Due to the size and complexity of Los Angeles County, finding a voting system to replace the aging InkaVote Plus system is not an easy task. The County provides election services to over 5 million registered voters in 10 languages. The VSAP takes a collaborative and data driven approach that focuses on the needs of voters and maximizes stakeholder participation.

The VSAP is a comprehensive multi-phase project. These phases represent significant and important efforts towards voting system modernization and are a testament to the thorough and unprecedented approach taken by the VSAP.

- Phase I: Public Opinion Baseline Research (September 2009 July 2010)
- Phase II: Process Assessment (January 2011 December 2011)
- Phase III: System Design and Engineering (January 2012 September 2016)
- Phase IV: Manufacturing and Certification (October 2016 December 2019)
- Phase V: Implementation

### Project Timeline

2010

Phase I: Phase II: Phase III: Phase IV: Public Opinion Process System Design and Manufacturing and Assessment **Baseline Research** Engineering Certification (Sep 2009 - Jul 2010) (Jan 2011 - Dec 2011) (Jan 2012 - July 2016) (Aug 2016 - Dec 2019) Objective: Phase I of the project **Objective:** Phase IV of the project **Objective:** Phase II of the project **Objective:** Phase III of the project sought to compile an array of sought to define fundamental will identify the development will result in the manufacturing baseline data from multiple guiding principles of the project, strategy for a new voting system, and certification of the new voting establish a formalized stakeholder stakeholders that included voters, establish a formal advisory system and its components. pollworkers, advocates, key input body for the duration of the committee with technical community organizations project, and to evaluate and assess expertise, design a new voting the landscape for acquiring a new representing traditionally system and develop the engineering specifications for underserved voter constituencies, voting system. and elections staff. manufacturing and certification.

2011

2016

2020

### **Phase I**

In Phase I of the project, an array of baseline data that would shape the overarching strategy for voting system modernization was gathered. This data was gathered from election stakeholders and subject matter experts such as voters, pollworkers, advocates, key community organizations and elections staff through a variety of research and engagement activities. This research focused on evaluating the current voting system and experience, and learning what users expect of the future voting system. The research revealed that users expect more than just an upgrade in voting technology, and modernization efforts needed to improve the entire voting experience.

### **Phase II**

Building on the research and learnings from Phase I, the VSAP Advisory Committee (AdCom) was established in Phase II to ensure the voice of the voter continued to guide the voting system design process. The AdCom is a formal engagement body composed of stakeholders and experts in elections that represent different communities within the Los Angeles County electorate. As their first task, the AdCom took the results from the research conducted in Phase I and used that data to create and adopt the General Voting System Principles which acts as a guide for voting system modernization. These principles ensure that the new voting system meets the diverse needs of Los Angeles County voters.

Following the development of the General Voting System Principles, the Registrar-Recorder/County Clerk (RR/CC) began its search for a new voting system by assessing the voting systems market and regulatory environment in which these systems are implemented. Prior to conducting this research, the RR/CC had participated in a Request for Information (RFI) issued by the City of Los Angeles in search of federally certified and state approved voting system, and found that none of the seven voting systems evaluated met the City's requirements. The RR/CC also evaluated the acquisition models by which it could acquire a new voting system that would meet the needs of Los Angeles County and its voters.

The RR/CC collaborated with a research team of graduate students from UCLA Luskin School of Public Affairs to conduct research on regulations governing voting systems testing and certification process and its impact on Los Angeles County's goal to implement a new voting system. The research found that without changes to the regulatory environment, it would be very difficult for the RR/CC to meet its goals of acquiring and implementing a new voting system.

These factors along with feedback from the AdCom made a strong case for the RR/CC to acquire a new voting system by engaging in a voting system development project.

### Phase III

Phase III of the project marked a major transition from voting system research to the design and development of the new voting system. The work in Phase III of the project was spread across three distinct and coordinated efforts: Voting system design, stakeholder engagement, and proactive legislative action.

In order to continue engaging stakeholders and incorporate the expertise needed in voting system design, the VSAP Technical Advisory Committee (TAC) was established. The TAC was established to provide the VSAP with the necessary technical expertise in technology, security, transparency, and accessibility during voting system design. The 12 member TAC is a diverse group composed of subject matter experts from a variety of industries and fields. The expertise and guidance provided by the TAC has been an invaluable component to the completion of Phase III. In addition to engaging the members of the TAC, communication and outreach efforts engaged the public and kept them informed about project developments.

To begin to envision and design a new voting system and in an effort to remain aligned with the VSAP values of transparency, citizen participation, and utilizing sound data during this stage, the VSAP launched an "Open Design Search" in January 2012. The Open Design Search engaged a broad range of experts, designers, and the general public to begin to gather ideas for the design of an innovative voting system that will meet the unique needs of Los Angeles County's large and diverse electorate. There were two primary components to the Open Design Search: 1) Open Innovation Challenge and 2) Voter Experience Brainstorming Workshops. This Open Design Search was conducted in partnership with the Information Technology Innovation Foundation Accessible Voting Technology Initiative, Election Verification Network, OpenIDEO, and with funding from the Election Assistance Commission and resulted in over 150 concepts for improving the voter experience for Los Angeles County voters. A full report of this Open Design Search is available on the VSAP website<sup>1</sup>.

In 2013, the RR/CC identified and engaged IDEO to begin to analyze all the data and concepts gathered since project kick-off and to begin to translate that information into refined designs. IDEO is an award-winning global design firm that specializes in human-centered design. This design methodology focuses on users and finds innovative solutions to meet their needs. The engagement with IDEO produced design and engineering specifications for a new voting experience which consists of a new Ballot Marking Device (BMD), an improved Vote by Mail (VBM) ballot, an innovative Interactive Sample Ballot (ISB), and a modernized Tally System. Each of these components was the product of extensive research, stakeholder engagement, the human-centered design process, iterative prototyping, and consultation with the VSAP AdCom and VSAP TAC. Together these components provide voters with an improved modernized voting experience that is more accessible, reliable, secure, and transparent.

<sup>&</sup>lt;sup>1</sup>http://vsap.lavote.net/wp-content/uploads/2016/06/open\_design\_search\_report.pdf

Given the wide scope of the VSAP's modernization efforts, it became apparent that legislative action would be required to make the necessary changes to the regulatory environment to support the VSAP and implement the new voting experience. The VSAP took a proactive role in monitoring and influencing election legislation. These efforts resulted in the passing of SB 360, SB 450, and SB 439. SB 360 allows for the development and implementation of publicly owned voting systems. SB 439 and SB450 expand accessibility and options for voters by authorizing same day voter registration, the ability to vote anywhere within their county's jurisdiction, and requiring counties to provide an early voting period beginning ten days before election day. The project will continue these legislative efforts and leverage the unique research, county resources and political capital available.

The VSAP has gained national recognition for its innovative approach and important achievements. The VSAP has received awards from respected organizations such as the Election Verification Network, the National Association of County Officials, and Government Technology Magazine. For a complete list of awards, please refer to Exhibit A.

With the defined voter experience and system engineering and specifications completed in Phase III, the project will transition into Phase IV: Manufacturing and Certification. New partners need to be identified and engaged for system manufacturing and certification where necessary.

# **Voting System Design and Development**

### **IDEO**

IDEO's experience and approach is well aligned with the VSAP's values and goals and has proven to be a great asset to the project. IDEO is an award-winning global design firm that takes a human-centered, agile design approach to helping organizations in the public and private sectors innovate, develop new products, and provide better customer service. IDEO has great experience developing new ways to serve and support customers (or the public) by uncovering latent needs, behaviors, and desires. Furthermore, IDEO has a proven track record envisioning and bringing to life new products, services and spaces.

IDEO's engagement has allowed us to achieve great accomplishments. IDEO's design efforts, which focused on human factors such as usability and accessibility, generated key findings that shaped the design of the voting system. IDEO incorporated data gathered since the launch of the project into a new and improved voting experience which satisfies the needs of Los Angeles County voters.

### Human-Centered Design

Historically, voting system design has not been driven by the needs of the voters. Primarily, voting systems have been developed to satisfy regulatory requirements and the needs of election administrators. The VSAP's approach to voting system design aimed to focus on voters' needs. With that in mind, the VSAP adopted a non-traditional human-centered design approach to modernize the current voting system. By engaging the public, advisory committees, and key stakeholders, the VSAP prioritizes the needs of voters throughout the development of the new voting system. This process helps facilitate transparency, which in turn builds public trust.

Throughout the design process, IDEO and the VSAP team conducted research with the public and incorporated their input with each prototype design iteration. These research efforts were comprised of focus groups and multiple user testing sessions to collect qualitative data. The data gathered was a combination of observing user interactions with the design prototypes, interviewing users to document feedback, and having users complete surveys. This data was analyzed and used to refine each prototype. This agile, iterative process was repeated until the final design was developed.

### **Agile Approach**

The agile approach utilized in this project is an iterative, incremental method of managing the design and build activities for the project. This approach allows for requirements and solutions to evolve through collaboration of the project teams, designers, committee members and project stakeholders. By following the agile development methodology, there was an opportunity to assess the direction of the project throughout the design and development process. Utilizing this approach, the new voting experience went through an iterative design process, which involved developing prototypes for various system components, testing prototypes, gathering and analyzing data from each test, and continuing to refine the components to arrive at a design that satisfies the needs of the County's diverse voters. Exhibit F shows the design evolution of the voting system.

# **Current Voting Experience**

In the current voting system, voters are assigned a polling place based on their residential address and precinct. Precincts are used to identify what contests a voter is eligible to vote for based on their residential address. Voters must go to that polling place on Election Day between the hours of 7:00 a.m. and 8:00 p.m. to vote. Each polling place is equipped with a paper roster of eligible voters residing in the precinct, a ballot box, paper ballots, and marking devices necessary for voters to mark and cast their ballots.

Los Angeles County currently uses the InkaVote Plus system, which consists of a Vote Recorder, an Accessibility Booth, a Precinct Ballot Reader (PBR), an Audio Ballot Booth (ABB) and a central ballot box. Voters are required to check-in and sign the roster where they are given a ballot. A voter takes their ballot to the vote recorder and makes their selection using the stylus on the device. The voter uses an ink stylus to stamp the vote mark in the desired vote position, and the voter's selections are captured in the corresponding ovals on the paper ballot. Voters who prefer to vote in a language other than English, as well as voters with visual impairments who prefer or require an audio ballot, utilize the Audio Ballot Booth to make their selections on a ballot.

Once a voter has finished marking their ballot, they take it to the PBR which is situated above the ballot box. The voter inserts their ballot into the PBR, which checks for blank ballots or over-votes. An over-vote occurs when more than the maximum number of selections allowed for a contest were made. If a ballot has over-votes or is blank, the PBR notifies the voter, who can choose to cast their vote as is, or spoil it and be issued a new ballot. If a ballot has no errors, it is simply inserted into the ballot box. After the polls close, the paper ballots are returned to the RR/CC where they are inspected, sorted, and tallied.

In addition to voting at the polls on Election Day, voters also have the option to go to the office in Norwalk 29 days before Election Day and cast a ballot in-person. Alternatively, voters can request a Vote by Mail ballot that allows voters to vote at their own convenience and return their ballot through the mail at any time up until Election Day or return it in-person at any polling place on Election Day.

The current processes and technology used to administer elections has remained relatively unchanged over the last 45 years. Over that time there have been significant changes in the size and diversity of the electorate as well as the lifestyles of these voters. Furthermore, the public's expectation of the public sector has evolved. Finally, technology has greatly evolved during this period.













### The vision for the new voting experience includes:





#### Modern Tally System:

Supports ballot-level auditing for a more open and transparent counting process. The improved system can capture and store ballot images, tally both BMD and VBM ballots, and ensures accurate reporting of results.

#### **Interactive Sample Ballot:**

Provides voters the opportunity to mark and save their selections on an electronic sample ballot which generates a selections QR code which can then be taken to a vote center and scanned on a Ballot Marking Device to transfer selections onto the Ballot Marking Device for verification and printing of an official ballot.



#### **Electronic Pollbooks:**

Allows pollworkers to verify registration eligibility of any County voter. This new roster eliminates the need for the voter to go to one pre-assigned polling place with a paper roster that lists the voters for that precinct.





#### **Ballot Marking Device:**

Allows voters to use technology for an easy and accessible experience, while maintaining a paper ballot for the security and integrity of the election.



#### **Early Voting:**

Allows voters to mark and cast a ballot over an extended period of days. The voter will no longer be limited to voting on one particular day.



#### **Vote Centers:**

Allow voters to mark and cast a ballot at any vote center location throughout the county. The voter will no longer be limited to voting at an assigned polling place.





### New Vote by Mail Experience:

Will provide voters with a much more user friendly voting experience. The new ballot and envelope design makes voting a Vote by Mail ballot much clearer and easier to understand.

The new and improved voting systems developed by the VSAP addresses many of the concerns with the current system and represents a complete transformation of the voting experience in Los Angeles County. This transformation extends beyond the polling place and the equipment voters use to mark their ballot. It entirely redefines the voting process and expands the opportunities voters have to cast their ballot.

The new voting experience provides significant improvements by:

- Providing all voters the ability to vote on the same device, regardless of their need to use accessibility features or vote in a language other than English
- Granting voters the option to vote at any vote center location in the County
- Protecting all voters' rights to privately and independently mark and cast their ballot
- Expanding the opportunity for early voting prior to Election Day
- Recording vote selections on paper in human readable text which more clearly captures voter intent and increases public trust
- Providing a more accessible and usable Vote by Mail experience

The voting experience is comprised of multiple components that include:

- A Ballot Marking Device (BMD), which is a new voting device that incorporates a customizable touchscreen interface, an audio interface, and a paper ballot.
- An Interactive Sample Ballot (ISB) which is an online platform where voters can pull up their sample ballot electronically, pre-mark their selections, generate a quick response (QR) code that can be scanned at any vote center to transfer selections onto an official ballot.
- An electronic pollbook for voter check-in at vote centers where pollworkers can access the voter registration data necessary to determine voters' registration status and capture their signature.
- Vote centers which will allows voters to cast their ballot anywhere in the county.
- A new Vote By Mail (VBM) ballot that provides a more user-friendly and accessible experience for voters with a full-faced marked sense ballot which contains contests and selections on one document.
- A modernized tally system that includes scanners to capture ballot images, software to read and tabulate the vote selections, and an interface to report the results.

### **Ballot Marking Device (BMD)**



The new BMD is noticeably more modern in appearance than the current InkaVote Plus voting system. At a glance, the new BMD has a contrasting yellow and black color scheme, it has a privacy shield around the top, an adjustable touchscreen display that looks like a tablet, a set of headphones, a tactile keypad, a pathway for ballots, and four standing legs with noticeable clearance for wheelchair accessibility. Only after interacting with the device will a lot of the features come to surface.

Voters have a number of options to navigate the voting process: using only the touch screen, using the touch screen with the audio ballot, using the touch screen and tactile key pad, using the audio ballot with the tactile key pad, or using an assistive device via the dual-switch port with either the touchscreen or the audio ballot.

Both the touch screen and audio ballot are customizable by the voter. The touchscreen user interface also allows voters to adjust screen contrast and font size. The audio ballot allows for volume and speed adjustment. Both the audio ballot and the touchscreen will support the mandated 10 languages. The voter will be able to select their preferred voting language and toggle between languages at any time during the voting process. The device offers the ability to add additional languages as necessary in the future.

Voters can navigate either the touchscreen user interface or the audio ballot using the tactile key pad that can be useful to voters who have difficulties touching and/or seeing the touchscreen. The control pad can be removed from its nested area and put on the lap of the voter for easier reach. Key pad buttons are uniquely shaped and labeled to assist visually impaired voters. In addition, the device is equipped with audio and dual-switch ports for voters who would like to use their own assistive devices to navigate the voting process.

A built-in printer, scanner and integrated ballot box will streamline the voting process for voters. The new device will allow voters to make their selections, print and review their ballot, and cast their ballot into the ballot box all in one location without the requirement to go to another device or even pick up and hold the ballot. The QR code reader will scan the blank ballot at initiation and display the voter's ballot style so the voter can begin the voting process. If a voter has made their selections on the ISB, they can scan the QR code on the ISB and go directly to reviewing their selections, and make any changes if needed. Voters then print and cast the ballot on the same device. Each ballot box will be secured and has the capacity to hold up to 250 ballots. If the ballot box becomes full, there will be a secure process to replace the ballot box while protecting the confidentiality of the ballots and allowing voting to continue seamlessly.

The BMD is designed to protect a voter's privacy while voting. The yellow privacy shield as well as the security screen prevent other people from being able to easily view the voter's screen. Additionally, if a voter is navigating the voting process using the audio feature and controller, they have the option to turn off the screen so nothing appears on the display. Finally, a voter's selections are not stored in memory on the BMD to maintain privacy of the vote.

The BMD combines the functions of five current separate devices into one. The new device combines all the functions and accessibility features of: 1) the polling booth with ballot recorder, 2) Precinct Ballot Reader 3) Audio Ballot Booth, 4) wheelchair accessible voting booth and 5) ballot box. Voters can go to any of the new BMDs to mark their ballot and use any of the desired accessibility features.

The BMD design also takes into account the needs of the election administrator. The BMD utilizes modular components for easy set-up/breakdown, transportation, storage, maintenance, and updates to system software and hardware.



### Interactive Sample Ballot (ISB)



The development of the ISB is one of the most innovative enhancements to the voting experience. Currently, voters can mark their sample ballot booklet, take it into a polling place, manually copy the selections from the sample ballot booklet onto the ballot, and then cast their ballot. Using the new ISB, voters can mark their choices on an electronic device, save selections as a QR code, go to the polling place, scan the QR code to instantly transfer their selections onto a BMD, verify them, print and cast their ballot. The new ISB will make the voting process much quicker and easier for voters by eliminating the need to manually transfer each individual selection.

The ISB can be accessed through a responsive website from any computer or mobile device with an internet connection. Voters have the flexibility to interact with the ISB using a preferred assistive device, such as a screen reader. Once the voter has made their pre-selections on the ISB, they can take it into the polling place in two different ways. The voter can print their selections on a sheet of paper or they can save their selections on their mobile device. Along with the selections which will be encoded in a QR code, the voter will be provided next steps to complete casting the vote, information on interacting with the BMD using the ISB at the polling place, and an area for the voter to write down the address of their desired vote center.

### **Electronic Pollbook**

An electronic pollbook is an alternative to a paper roster for checking in voters at a polling site, and is key to making the vote center experience possible. Through an electronic pollbook, a pollworker can access a voter's registration status and ballot style, as well as capture the voter's signature. The new BMD has been designed to be compatible with many existing electronic pollbook solutions with little customization requirements.

Electronic pollbook solutions primarily consist of a hardware component, such as a laptop or tablet used by the pollworker, and a software component that provides access to voter registration information through a user interface. The voter registration data may be stored locally on electronic pollbooks or may be hosted on a central database accessed by networked electronic pollbooks. Many of the benefits and capabilities of an electronic pollbook are dependent on a central database and a network connection. The benefits for voters include a faster and more accurate voter check-in, and the ability for their registration status to be verified at any vote center.

Electronic pollbooks also benefit election administrators. Electronic pollbooks allow for more accurate, voter rolls since the time delay for printing and delivering paper rosters is eliminated. Pollworkers can have real time rosters instead of rosters printed days or weeks prior to Election Day. Electronic pollbooks allow for real-time vote center monitoring and turnout statistics. They also improve the post-election reconciliation process by eliminating the need to convert data from paper records into electronic records. The streamlining of these processes has the potential for major cost savings.

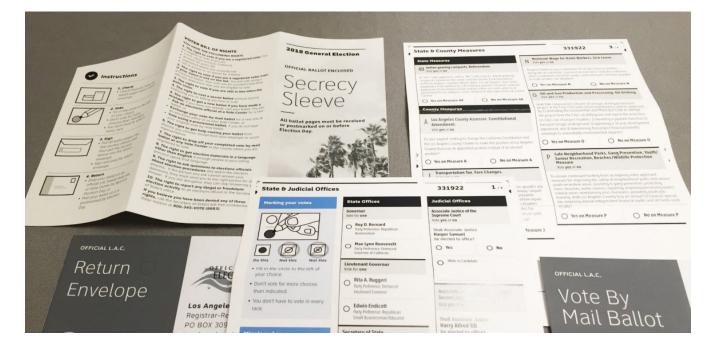
### **Vote Centers**

With our current system, voters who prefer to vote in person are limited to casting their ballot at their assigned polling place, or cast a provisional ballot if they choose to cast their ballot at a polling place that is not their assigned polling place. The provisional voting process is not clearly understood or liked by voters and costly for election administrators. Furthermore, voters may not be presented with all the contests they are eligible to vote in.

In the vote center model, voters can cast a ballot at any vote center location in the County. Pollworkers will be able to verify a voter's registration status and provide them the correct ballot style, preventing the need for the voter to cast a provisional ballot. Furthermore, there will be a 10 day early voting period where a voter can go to any vote center to cast their ballot. This new vote center model allows voters more flexibility and options for casting an in-person ballot. It is more aligned with the lifestyle of Los Angeles County voters.

### Vote by Mail (VBM)

With the development of a new in-person voting experience, comes an enhanced Vote by Mail (VBM) ballot system. The proposed VBM ballot sets out to satisfy the needs of election administrators, while presenting a simple usable design for voters. The new VBM packet contains a secrecy sleeve, a foldable double-sided ballot, and a return envelope. Features such as the ballot size, paper thickness, font size, and multilingual ballot styles offer voters a simple and easy voting experience. The ballot dimensions bay be 8x11 inches or 11x17 inches to accommodate to elections with a small number of contests as well as elections with a large number of contests while minimizing the number of pages. Paper thickness enhances the durability and life span of the ballot. Vote by mail ballots will be available in bilingual formats with a font size and layout that makes it easy for voters to understand and mark the ballot.



### Tally

The scanning of paper ballots and the tally of votes will need change with the implementation of the new voting system. Currently, ballots are scanned and tallied at a central facility using optical mark-sense technology. With the new tally system, paper ballots will be scanned to a digital image and those images will be used to tally the votes using image processing technology. Although votes will continue to be tallied at a central location, the RR/CC will explore the option of implementing remote ballot scanning locations strategically placed throughout the County. Since the results of image processing can be transported more quickly over a secure network than paper ballots can be driven to a central facility, it may be possible to reduce the time it takes to produce tally results. An early prototype of a tally system is currently being developed.

### **Advisory Committees**

The system design and engineering process was greatly guided by the VSAP Advisory Committee (AdCom) and the VSAP Technical Advisory Committee (TAC.) The VSAP established the committees to provide guidance throughout system design, development and implementation. The members of the VSAP AdCom are representatives from various community organizations that represent the County's diverse electorate. Also represented are critical stakeholders such as election administrators, political parties, and members of academia. The VSAP TAC is composed of individuals who have profound expertise in election technology, accessibility, usability, and security. These individuals come from non-profit groups and academic institutions across the country. For a complete list of the committee members and their biographies, please refer to Exhibit B.

Committee members actively participated in the consultation process throughout Phase III. Regular inperson meetings were held at the RR/CC headquarters and at the IDEO offices. These meetings were an avenue for the members to provide their technical input and recommendations for further refinements to the system and design. In addition, the VSAP team facilitated conference calls for committee members to provide their input on usability, accessibility, security, and other key design decisions.

These committees have served to safeguard the integrity and transparency of the process. The committee members contributed valuable time and input to the project. Their engagement to the project will continue as the project transitions into the Phase IV: Manufacturing and Certification.

















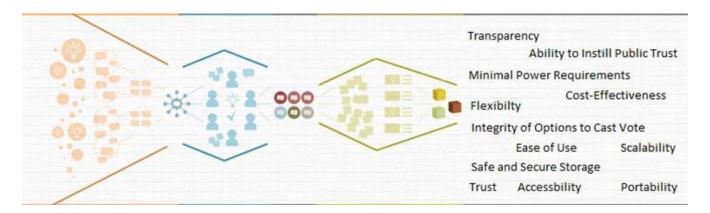






### **General Voting System Principles**

At the forefront of the design process was a set of 14 design principles that were adopted by the VSAP AdCom to ensure that the new design meets the diverse needs of current and future Los Angeles County voters. The specific goal of these principles is to articulate the importance of: voter access and interaction with the voting system, security and auditability, as well as the operational requirements for transporting, setting-up, and operating the voting system.



- 1. The voting system must provide for **transparency**. The processes and transactions associated with how the system is set up, run, and stored should be easy for the public to understand and verify. This should include making hardware components available for inspection, and source code to the extent that the manner of doing so would not jeopardize system security or availability.
- 2. The voting system must be **scalable**. The system must provide sufficient technical and physical capacity to accommodate large and complex ballot styles, growing language needs, extremely large numbers of precincts and consolidation of elections with local districts and municipalities.
- 3. The voting system must be **flexible**. It must provide the ability to adapt to different election types, environments, and changing regulatory requirements, without the need to replace the entire system or to undertake costly system modifications that potentially compromise security.
- 4. The voting system must **instill public trust** by having the ability to produce a physical and tangible record of a voter's ballot to verify the ballot was marked as intended before it is cast and to ensure auditability of the system. It must demonstrate to voters, candidates, and the general public that all votes are counted as cast.
- 5. The voting system must have **integrity and be accountable** to voters and follow existing regulations. System features must protect against fraud and tampering. It should also be easy to audit and produce useful, accessible data to verify vote counts and monitor system performance.
- 6. The voting system must offer a variety of options to cast a vote to ensure that a single/fixed method of voting does not prove to be a barrier and source of disenfranchisement for any group of voters. The system should allow for variety in the location, time, and equipment used to cast a ballot.

- 7. The voting system must guarantee a **private and independent voting experience** for all voters, including voters with a full range of types of disabilities and voters with limited English proficiency. Voting system features must allow the voter to select the language, adjust display features, alternate ballot formats (e.g. Audio Ballot), and method of controlling the marking tool, allowing voters to cast a ballot independently.
- 8. The voting system must be **easy for all voters to use**, in particular, for voters with a full range of types of disabilities and voters with limited English proficiency. The system must support plain language and be intuitive, user-friendly, and accessible to all, in order to minimize and easily identify voter errors. It should also provide all voters the ability to easily correct any errors that appear on their ballot prior to casting their ballot.
- 9. The voting system should be **easy and reliable for election workers to use**, set-up, breakdown, and explain.
- 10. The voting system must be **portable**. It should be lightweight and compact enough for transportation, setup, and efficient storage. A portable system could include features such as hand grips, handles, straps, and wheels that make transporting and maneuvering the voting system easy.
- 11. The voting system must include **features for safe and secure storage**. It should include features such as locks and security seals to protect the integrity of the machine while in the custody of election workers or in storage with election officials.
- 12. The voting system must have **minimal and/or flexible power and connectivity requirements**. It should not require such an extensive amount of power and connectivity that it limits locations where the voting system can be deployed.
- 13. The voting system must have **minimal requirements for system boot/programming** at polling sites and/or vote centers. It must also provide intuitive and quick fix troubleshooting solutions to empower election workers on Election Day. It should be easy to set up for operation by election workers at polling sites and/or vote centers.
- 14. The voting system must be **cost-effective**. Costs considered should include procurement, operating, and maintenance costs as well as consideration of expected system/equipment lifespan.

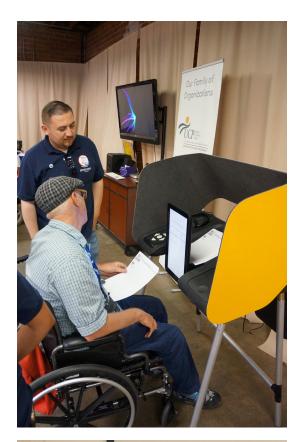
### **Community Engagement Activities**

Since its launch, the VSAP has engaged voters and other key stakeholders through a collaborative and participatory process. This has allowed for extensive data to be gathered regarding the needs and preferences of the diverse Los Angeles County electorate. To date, the Department has engaged over 3,700 voters, poll workers, and election administrators through surveys, focus groups, community discussions, user testing, brainstorming sessions, workshops, interviews and prototype demonstrations to gather the public's feedback and input into the voting system design. The VSAP team has conducted prototype demonstrations and project updates for various organizations. These demonstrations provide a simulation of the voting experience utilizing the BMD. Various community organizations were actively involved during Phase III. Among these organizations are the California Council of the Blind, United Cerebral Palsy of Los Angeles (UCPLA), Native American Veterans Association (NAVA) and the Voter Accessibility Advisory Committee (VAAC), the League of Women Voters, the NALEO Educational Fund, Asians American Advancing Justice, and many others. Organizations assisted us in recruiting participants for various user testing and research activities. These presentations were opportunities to gather feedback from stakeholders and quide decisions around the design.



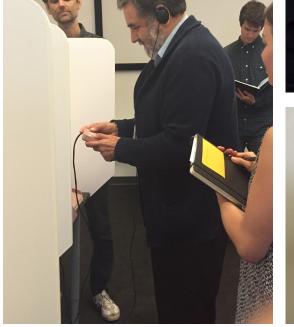














The following table shows the community engagement activities conducted to ensure active involvement of the public since the launch of the project. For a full description of these events, please refer to Exhibit C.

Date	Activity	Number of Participants
September 21, 2009	"Technology, Diversity, and Democracy: The Future of Voting Systems in Los Angeles County" Symposium	100
March 11-29, 2010	Countywide Voter Survey - Phone	651
March 16-28, 2010	Countywide Voter Survey - Online	500
March 31 - April 2, 2010	Focus Groups - RR/CC Staff	64
April 5-6, 2010; April 29 - May 3, 2010	Focus Groups - Registered Voters	100
April 29 - June 8, 2010	Poll worker Survey - Online	1,100
May 7-11, 2010	Focus Groups - Local Election Officials, City Clerks	26
July 21, 2010	Community Discussion - Language Groups	9
August 11, 2010	Community Discussion - Voter Integrity Groups	9
September 20, 2010	Community Discussion - Disability Groups	6
January 24 - March 28, 2012	Open Innovation Challenge	154
January 25 - February 23, 2012	Brainstorming Workshops - AVTI	32
March 30, 2012	Election Verification Network (EVN) Conference Session	24
April 5-6, 2012	Brainstorming Workshops - RR/CC Staff	25
October 1-2, 2013	User Testing - Atkins Research	40
November 4-5, 2013	User Testing	8
November 7, 2013	User Testing - United Cerebral Palsy of Los Angeles	20
January 27 - February 1, 2014	Focus Groups - Atkins Research	95
March 13, 2014	City of Los Angeles Presentation and Project Update	25
September 20, 2014	Tri-League of Women Voters Los Angeles Chapter	30
September 30, 2014	Industry Hills Rotary Club	20
October 2, 2014	Empowerment Congress	24

Date	Activity	Number of Participants
February 5, 2015	User Testing - General Population	5
February 27, 2015	User Testing - Spanish Speakers and Seniors	57
March 3 and 26, 2015	User Testing - Visually Impaired	5
April 29, 2015	User Testing - Election Workers	22
May 26, 2015	User Testing - Seniors	27
May 28, 2015	User Testing - Veterans with Disabilities	40
May 28, 2015	User Testing - Spanish Speakers and Visually Impaired	39
May 30, 2015	User Testing Session - Korean Speakers and Young Voters	39
May 30, 2015	User Testing Session - General Population	39
June 13, 2015	Native American Veterans Association (NAVA)	16
October 10, 2015	California Council of the Blind Prototype Demonstration	12
November 9-20, 2015	Vote By Mail User Testing	76
November 18, 2015	Kiwanis Club of Downey Presentation	20
November 20, 2015	United Cerebral Palsy of Los Angeles Vote By Mail Focus Group	20
June 30, 2016	Phase III Capstone Event	50
July 13-14, 2016	CACEO Conference Prototype Demo	100
July 21, 2016	City of Los Angeles Votes Committee Prototype Demo	30
July 22, 2016	2016 National Association of Counties Annual Conference and Expo	20
July 27, 2016	Community & Voter Outreach Committee (CVOC) Prototype Demo	25
August 5, 2016	United Cerebral Palsy of Los Angeles Prototype Demo	20
August 16, 2016	Voter Accessibility Advisory Committee (VAAC) Meeting Prototype Demo	10
TOTAL		3734

### **Communication Strategy**

The VSAP remains committed to a process of transparency and public engagement. To support this commitment, the VSAP prepares a quarterly report submitted to the Los Angeles County Board of Supervisors (Board). These reports are intended to keep the Board updated on the project's progress and accomplishments. In addition, a quarterly VSAP Newsletter is distributed to the Board, the VSAP Committees, and other County Departments. All quarterly reports and newsletters are made available to the public on the VSAP website<sup>2</sup>.

The VSAP team also provides regular project updates at Community and Voter Outreach Committee (CVOC) and the Voting Accessibility Advisory Committee (VAAC) meetings. These committees are composed of city clerks, voter advocacy groups, and community based organizations.

The VSAP also utilizes various media platforms as a platform for providing information to the public. Various news organizations, both local and national, are kept updated regarding developments in the project. Requests for interviews and documentation are accommodated to allow for accurate reporting of information to the public. During this phase, the project has received extensive media coverage, ranging from print to television. Outlets such as Bloomberg, CBS, The Washington Post, and LA Times have followed and reported on the project. For a complete list of feature articles and television news segments on the VSAP, please refer to Exhibit C.

Furthermore, the VSAP utilizes the RR/CC's social media presence to engage the public in the digital platform. This ensures that we are reaching a wide audience through various communication platforms. The RR/CC is committed to encouraging participation and input in this critical process to ensure the public will have access to information regarding the project.

In order to continue increasing the level of project transparency and access to project data, during this phase, the VSAP launched an improved website that showcases the various iterations of the design, full research reports, media coverage, on-going activities and outreach efforts. The website features an engaging and user-friendly design as well as up-to-date information on the project. The VSAP website is regularly updated to provide access to these resources.

<sup>&</sup>lt;sup>2</sup> http://vsap.lavote.net/newsroom/

## **Legislative Efforts**

The regulatory environment is an important influence to the voting experience of Los Angeles County voters. In order to develop and implement a new modernized voting experience, it was evident that laws, regulations and policies needed to be updated. During Phase III of the project, legislative efforts resulted in significant progress towards creating the framework needed to implement the modernized voting experience developed through the VSAP. These efforts consisted of monitoring and recommending formal positions on bills and active participation with lawmakers and stakeholder groups on the creation of legislation. These efforts involved working with internal partners such as Los Angeles County Chief Executive Office (CEO) Governmental and Legislative Affairs and our advisory committees as well as external partners such as stakeholder groups, elected officials, and other election jurisdictions. Consistent with the project's data driven approach, significant research and data gathering was completed to guide legislative efforts. The key legislative milestones of Phase III are the passing of Senate Bill 360, Senate Bill 439 and Senate Bill 450. These legislative efforts will continue beyond Phase III of the project and will continue to be an integral part of the VSAP.

### **Senate Bill 360 (SB 360)**

The VSAP collaborated with CEO Governmental and Legislative Affairs and Secretary of State Alex Padilla to draft and introduce legislation that supports the VSAP's voting system modernization efforts. The legislation 1) streamlined the voting system approval and certification process for the state; 2) allows counties to contract for the development of voting systems that use non-proprietary software and firmware and disclosed source code; and 3) allows counties to utilize Voting Modernization Fund monies for the initial development of voting systems using nonproprietary software and firmware and disclosed source code.

SB 360 was signed into law on October 5, 2013. This bill strengthened the voting system approval and certification process by streamlining the process and requiring that the state establish standards, which meet or exceed federal standards, for systems used in the state. Establishing these standards provided clarity for voting system design and development.

### Senate Bill 439 (SB 439)

The VSAP collaborated with CEO Governmental and Legislative Affairs and State Senator Allen to draft language and gather support for SB 439. The legislation 1) allows a county elections official to offer conditional voter registration and provisional voting at satellite offices other than on election day; 2) requires the Secretary of State to adopt and publish electronic pollbook standards and regulations governing the certification and use of electronic pollbooks, and prohibits the use of an electronic pollbook not certified by the Secretary of State; and 3) requires the Secretary of State to adopt regulations governing ballot on demand systems and develop a certification program for their use in California.

SB 439 was signed into law on October 10, 2015. The Bill marked a step forward toward the modernized voting experience. The expansion of conditional voter registration to satellite offices expands the options voters have for casting their ballot. The electronic pollbook is a critical component to the vote center experience. The creation of the regulatory framework governing their use will be important to the continued integrity of the election process as the new voter experience is implemented.

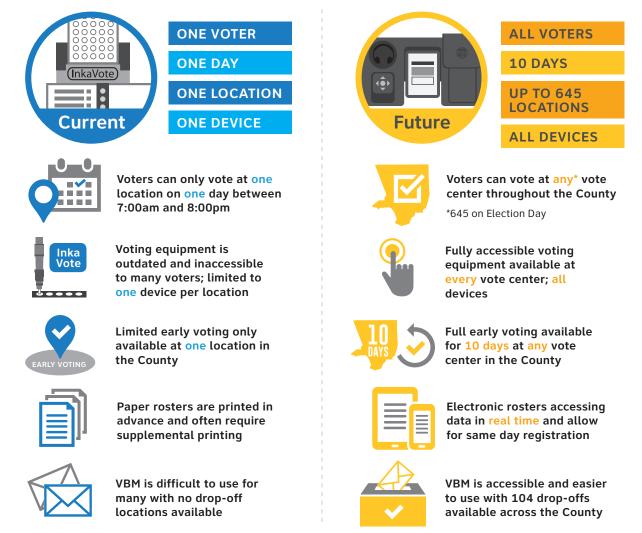
# **Legislative Efforts**

### **Senate Bill 450 (SB 450)**

SB 450 was introduced by State Senators Ben Allen and Robert Hertzberg. SB 450 is a comprehensive bill that changes how elections are conducted in California. The Bill 1) requires counties mail all registered voters a VBM ballot, 2) replaces traditional election day polling places with vote centers, 3) requires that counties open vote centers during the early voting period beginning ten days before the election; and 4) requires counties to create and publish a comprehensive election plan and provide the public with the opportunity to provide input.

The VSAP worked with the authors of SB 450, community stakeholders and the Secretary of State to include a provision that allows Los Angeles County to conduct elections under the requirements of SB 450 without mailing all registered voters a VBM ballot. This exemption from mailing all voters a ballot is offset by an increase in the minimum number of vote centers required.

The Bill was signed into law on September 29, 2016, providing the RR/CC the regulatory framework necessary to implement the new comprehensive voting experience that has been designed in Phase III.



VOTING SYSTEMS ASSESSMENT PROJECT PHASE III: SYSTEM DESIGN AND ENGINEERING

### **Exhibit A: Awards**

#### **2016**

Outstanding IT Project Award – Los Angeles Digital Summit Election Verification Network - Outstanding Innovation in Election Technologies Award

#### 2012

Election Center - Professional Practices Freedom Award for Innovation Election Verification Network Award Quality and Productivity Commission - Certificate of Recognition

#### 2010

National Association of County Officials - 2010 Achievement Award



### **VSAP TECHNICAL ADVISORY CtOMMITTEE**



Henry Balta Senior Associate CIO County of Los Angeles

Henry Balta has been with the Los Angeles County Chief Information Office since August, 2006. In his role as Senior Associate CIO, Mr. Balta is responsible for working with L.A. County departments to provide strategy and creative technical solutions to everyday government business challenges. He is involved in the review and approval of departmental Business Automation Plans and technology acquisitions, as well as providing oversight for major information technology projects.

Prior to joining L.A. County, Mr. Balta served for 4 years as Senior Director of Information Technology for California State University, Los Angeles. Before that, he served in various IT Management positions over 14 years with Farmers Insurance Group, including providing leadership for the corporation's business and technology integration initiatives. Operationally, Mr. Balta has experience in multiple information technology disciplines, including data center operations, network engineering and service delivery.

Mr. Balta has a Bachelor's Degree in Communications from California State University, Fullerton as well management and leadership training from the Kellogg Business School, Northwestern University.



### Michael Byrne Professor of Psychology and Computer Science Rice University

Mike Byrne's research is concerned with usability of technological systems and mathematical/ computational models of human cognition and performance. This includes basic scientific work on theories of human cognition and performance as well as applied usability testing efforts, particularly in the area of voting. His research has been funded by the NSF, NASA, the Office of Naval Research, and NIST. Mike received a B.S. in Engineering and a B.A. in Psychology from the University of Michigan in 1991. The Georgia Institute of Technology awarded him an M.S. in Psychology in 1993, an M.S. in Computer Science in 1995, and a Ph.D. in Experimental Psychology in 1996.

He is currently an associate editor for the journal Human Factors, was previously an associate editor for the journal Cognitive Science, and has served on the editorial boards of the journals Journal of Experimental Psychology: Applied, Cognitive Engineering and Decision Making, and Human Factors.



#### Joshua Franklin IT Specialist (Security) at NIST Washington D.C. Metro Area Computer & Network Security

Joshua Franklin is an IT Specialist (Security) at the National Institute of Standards and Technology. Currently, Joshua is working on voting standards and mobile security.

Prior to NIST, Joshua was with the U.S. Election Assistance Commission for three years. Joshua gleaned extensive experience with voting technologies and the certification of voting systems. At the EAC, Joshua managed multiple federal certification efforts and worked closely with local election officials, laboratories, and manufacturers across the United States. Projects included incorporating static and dynamic analysis tools and software assurance practices into the federal Testing and Certification Program, and surveying Internet voting systems across the globe.

Joshua spent four years working as a technician at the Center for Election Systems in Kennesaw, GA, providing support for Georgia's statewide voting system. Joshua's research interests include cryptography, penetration testing, and securing mobile platforms. He graduated with an M.S. in Information Security and Assurance from George Mason University and with a B.S. in Information Systems from Kennesaw State University in 2009.



### Diane Cordry Golden Policy Coordinator Association of Assistive Technology Act Programsy

Dr. Diane Cordry Golden has 35 years of experience working in the disability, education, assistive/ accessible technology field at the local, state and national level. She served on both federal Access Board Committees providing recommendations for the Section 508 information technology accessibility standards. She has provided testimony for Congressional hearings on issues surrounding accessible voting equipment and served as the technical assistance contractor for the national network of state Protection and Advocacy agencies funded by HAVA. She has provided training for Department of Justice staff on accessible voting systems and has developed multiple technical assistance documents reviewing and analyzing the access features of current voting systems.

Dr. Golden currently serves on the Technical Guidelines Development Committee established by HAVA. She holds a Ph.D. in Special Education Administration with an emphasis in Disability Policy and is currently employed by the Association of Assistive Technology Act Programs.



#### Joseph Lorenzo Hall Senior Staff Technologist The Center for Democracy and Technology

Joseph Lorenzo Hall is the Senior Staff Technologist at the Center for Democracy & Technology, a Washington, DC-based non-profit organization dedicated to ensuring the internet remains free, open and innovative. Prior to joining CDT in 2012, Hall was a postdoctoral research fellow with Helen Nissenbaum at New York University, Ed Felten at Princeton University and Deirdre Mulligan at University of California, Berkeley.

Hall's current work focuses on policy mechanisms that promote trustworthiness and transparency in information systems, as core functions of society and government become networked and computerized. Hall's work at CDT is split between Consumer Privacy, Health Privacy and National Security & Cybersecurity. Hall received his Ph.D. in information systems from the UC Berkeley School of Information in 2008. His Ph.D. thesis used electronic voting as a critical case study in digital government transparency. In his postdoctoral work, he developed techniques to increase the efficiency and usability of accountability mechanisms in electronic elections. Hall holds master's degrees in astrophysics and information systems from UC Berkeley and was a founding member of the National Science Foundation's ACCURATE Center (A Center for Correct, Usable, Reliable, Auditable and Transparent Elections). He has served as an expert on independent teams invited by the States of California, Ohio and Maryland to analyze legal, privacy, security, usability and economic aspects of voting systems. Hall is the Vice-Chairman of the Board of Directors of the California Voter Foundation and a member of the Board of Directors of the Verified Voting Foundation. In 2012, Hall received the John Gideon Memorial Award from the Election Verification Network for contributions to election verification.



#### Jared Marcotte Owner The Turnout

Jared Marcotte is Owner of The Turnout, a consultancy that offers custom web development, interface design, and IT strategy. Recently, he was Officer of Elections Technology at The Pew Charitable Trusts where he worked across all projects in the election initiatives portfolio. One of his primary roles was overseeing the technical work on the Voting Information Project, a collaboration with state and local officials, Google, and Pew to create an open, standardized repository of election-related information for all 50 states and DC. In addition to many years of programming experience in various languages, Jared is also an accomplished interface and interaction designer, having worked on various eCommerce sites and an inappropriately-named polling place lookup tool. Jared has previously worked at Six Apart and IBM, and is a graduate of the University of Vermont. Find him on twitter as @jungshadow, where he mostly catalogs his various interactions with his two kids.



### Brian J. Hancock Director, Testing and Certification U.S. Election Assistance Commission

Brian Hancock has served on the staff of the U.S. Election Assistance Commission (EAC) since its establishment under the Help America Vote Act (HAVA) in 2003. As Director the Testing and Certification Division, Mr. Hancock's programmatic areas of responsibility include overseeing the EAC's efforts in testing and certifying voting systems, working with the National Voluntary Laboratory Accreditation Program (NVLAP) of NIST to accredit independent testing laboratories, and developing and maintaining the EAC's Voluntary Voting System Guidelines.

From 1984 to 2003, Mr. Hancock served on the staff of the Federal Election Commission (FEC). For the last thirteen of those years, he served as an Elections Research Specialist in the FEC's Office of Election Administration. A native of Pittsburgh, Pennsylvania, Mr. Hancock received his undergraduate degree in Political Science from Thiel College in Greenville, Pennsylvania, and earned his master's degree in American Government at the University of Virginia, in Charlottesville.



#### Whitney Quesenbery Co-Director Center for Civic Design

Whitney Quesenbery is the co-director of the Center for Civic Design. Her work in civic design began with her appointment to the U.S. Election Assistance Commission advisory committee writing federal voting system guidelines. She brings to her work expertise in user research, accessibility, and plain language along with a passion for understanding the story behind the data. She is proud to have worked on the plain language update to the California Voter Bill of Rights. The Center for Civic Design is home to the Field Guides to Ensuring Voter Intent, the Anywhere Ballot, and design research to understand how to design election materials to be useful, usable, and accessible. Current projects include work on election materials from voter registration forms to voter guides in states from California to Virginia and Pennsylvania. She is proud to have worked on the plain language update to the California Voter Bill of Rights.



#### Noel Runyan Owner Personal Data Systems

With his degree in Electrical Engineering and Computer Science, Noel Runyan has been working in human factors engineering for over 40 years, primarily developing access technologies for helping persons with visual impairments to use computers and other electronic devices. Since February 2009, he has been a member of the National Braille Press Center for Braille Innovation, working to promote development of low cost and full page braille display technologies.

For the last nine years, he has been seriously studying and testing the accessibility of electronic voting systems, and he was an expert witness in six court cases, wrote the "Improving Access to Voting" report, testified at the PFAW Forum on Election Systems, testified to the US House Administration Subcommittee on Election Reform, testified to the Texas State House Committee on Voting Systems, and led the access testing teams for the California Secretary of State's 2007 Top-To-Bottom Reviews of voting machines.



#### **Richard Sanchez** Chief Information Officer (retired) County of Los Angeles

Richard Sanchez was appointed to the position of Los Angeles County Chief Information Officer (CIO) on August 11, 2009. As Chief Information Officer, Mr. Sanchez provides guidance and advice regarding Information Technology (IT) to the County's Board of Supervisors, Chief Executive Officer, and County departments.

Particular focus within the CIO's Office is the enterprise level and/or multidepartmental projects; reviewing, monitoring, and reporting on major county IT projects and making recommendations to the governing body of the County; and responsible for the preparation and recommendation of County IT standards. The County's Security Information Officer and Geographic Information System Officer report to the CIO.

Mr. Sanchez is a long-term IT professional and has been a Los Angeles County employee for over 35 years. His career experience has spanned application development, systems programming, data center and network operations, and telecommunications service (voice and data) delivery.

He has held numerous senior IT management positions for over 26 years. Prior to his appointment, he was the General Manager for the County's Information Technology Services which is the largest IT service delivery organization within the County providing application development, computing infrastructure, and communication (voice and data) services to all County departments.



### Pamela W. Smith President Verified Voting Foundation

Pamela Smith is President of Verified Voting, a non-partisan nonprofit working to safeguard elections in the digital age. She provides information and public testimony on verified voting issues at federal and state levels throughout the US, including to the US House of Representatives Committee on House Administration. She oversees an extensive information resource on election equipment and the regulations governing its use at the federal level and across the 50 states. Ms. Smith is co-editor of the Principles and Best Practices in Post Election Audits, co-author of "County Votes 2012: A State by State Look at Election Preparedness" and the author of an introductory chapter on audits for Confirming Elections: Creating Confidence and Integrity through Election Auditing. She has been a small business and marketing consultant and nonprofit executive for a Hispanic educational organization working on first language literacy and adult learning.



#### **Charles Stewart III** Professor of Political Science Massachusetts Institute of Technology

Charles Stewart III is the Kenan Sahin Distinguished Professor of Political Science at MIT, where he has taught since 1985. His research and teaching areas include election, congressional politics, and American political development.

Since 2001, Professor Stewart has been a member of the Caltech/MIT Voting Technology Project, a leading research effort that applies scientific analysis to questions about election technology, election administration, and election reform. He is currently the MIT director of the project. Professor Stewart is an established leader in the analysis of the performance of election systems and the quantitative assessment of election performance.

Professor Stewart has been recognized at MIT for his undergraduate teaching, being named to the second class of MacVicar Fellows in 1994, awarded the Baker Award for Excellence in Undergraduate Teaching, and the recipient of the Class of 1960 Fellowship.

Professor Stewart received his B.A. in Political Science from Emory University, and S.M. and Ph.D. from Stanford University.



#### David Wagner Professor of Computer Science UC Berkeley

Professor David Wagner is Professor of Computer Science at the University of California at Berkeley, with expertise in the areas of computer security and electronic voting. He has published over 100 peer-reviewed papers in the scientific literature and has co-authored two books on encryption and computer security. His research has analyzed and contributed to the security of cellular networks, 802.11 wireless networks, electronic voting systems, and other widely deployed systems.

He is a member of the Election Assistance Commission's Technical Guidance Development Committee and a founding member of the ACCURATE center.

### **VSAP ADVISORY COMMITTEE**



#### Nancy Mahr President League of Women Voters of Los Angeles County

Nancy Mahr earned her BA in Political Science from Occidental College. She received a Teaching Credential in Social Studies and English from CSULA and a Certificate in Corporate Communications from CSULB. Prior to starting a family, Ms. Mahr taught high school, including two years in Kampala, Uganda, East Africa, through a Columbia University program. From 1984 to 1995, she worked in community and governmental relations for the Palos Verdes Peninsula Unified School District and the Palos Verdes Library District. In 1996, she became the Public Information Officer for the County of Los Angeles Public Library. Ms. Mahr retired from the County Library in 2007. Currently, Ms. Mahr is president of both the Palos Verdes and Los Angeles County League of Women Voters. She also serves on the Legislative Committee for AAUW California. She is in her second term as an elected member of the Board of Trustees of the Palos Verdes Library District.



#### Eric Bauman Chair Los Angeles County Democratic Party

Eric C. Bauman is the Vice Chair of the California Democratic Party and is also serving his sixth term as Chair of the Los Angeles County Democratic Party, the largest local Democratic Party organization in the nation. Professionally, he is the Senior Advisor to California Assembly Speaker John A. Pérez and the Director of the Speaker's Office of Member Services - Los Angeles (SOMS-LA). Prior to joining the Speaker's office, Mr. Bauman held various senior-level positions throughout California government, including serving as Senior Advisor to California Senate Majority Leader Dean Florez, Senior Advisor to Lieutenant Governor John Garamendi, and as Deputy Insurance Commissioner - overseeing the Community Relations Branch of the California Department of Insurance. Prior to joining the Department of Insurance, he was Special Assistant to Governor Gray Davis and Director of the Governor's Los Angeles Regional Office. Mr. Bauman is a Registered Nurse with graduate education in Health Care Administration. He is a member of the advisory board of the Medical Reserve Corps of Los Angeles and until recently was on the board of Glendale Memorial Hospital and the Latino Coalition Against AIDS.



### Theresa Devoy City Clerk City of Norwalk

Theresa Devoy is the City Clerk for the City of Norwalk. She has been in the Office of the City Clerk since December 2004, when she was recruited to be the Assistant City Clerk. A year later, Ms. Devoy was promoted to City Clerk. Prior to her positions in the Office of the City Clerk, Ms. Devoy worked as a Management Analyst in the City Manager's office for a number of years. In total, she has over 26 years of experience working in municipal government with the City of Norwalk. She has managed projects such as the creation and installation of public art pieces within the City, overseen the City's waste franchise agreements, and assisted with the I-5 Consortium Cities Joint Powers Authority in its efforts to work with the State to widen the I-5 freeway. In addition to her role as City Clerk, she also manages the City's IT division. Ms. Devoy earned her Bachelor of Science Degree in Business Management from California State University, Dominguez Hills and a Certified Municipal Clerk designation from the International Institute of Municipal Clerks Association. She served as a Director and Communications Coordinator for the Southern California City Clerk's Association.



### Efrain Escobedo VP for Civic Engagement and Public Policy California Community Foundation

Efrain Escobedo is the vice president in charge of civic engagement, multi-sector collaboration and public policy at California Community Foundation, responsible for promoting collaboration and advocacy efforts across the nonprofit, public and private sectors to address community problems. Escobedo is recognized nationally and locally as an active leader and expert in Latino civic engagement and elections policy. He has worked extensively with academia, civic and community organizations, as well as with elected officials in developing research, strategies and program to increase voter participation.

Prior to joining CCF, Escobedo was the manager of governmental and legislative affairs for the Registrar of Voters in Los Angeles County, the largest election jurisdiction in the nation with more than 4.5 million registered voters. There, he worked with elected officials to enact numerous initiatives aimed at making the voting process easier for Angelenos, including the electronic delivery of sample ballots and the authorization of online voter registration. Escobedo also served as senior director of civic engagement for the National Association of Latino Elected and Appointed Officials (NALEO) Educational Fund, where he led the development of innovative voter contact strategies and technologies that have helped to engage more than one million young, newly registered and infrequent Latino voters across the country. Escobedo earned his bachelor's degree in American studies and ethnicity from the University of Southern California and is a recent graduate of the Los Angeles County Executive Leadership Program.



#### Kathay Feng Executive Director California Common Cause

Kathay Feng is the Executive Director of California Common Cause. Under Ms. Feng, California Common Cause has taken a leadership role in election and redistricting reform, government sunshine and accountability laws, campaign finance reform, media access, and championing the voting rights of traditionally disenfranchised communities. Prior to joining Common Cause, Ms. Feng directed the Voting Rights and Hate Crimes at the Asian Pacific American Legal Center (APALC), where she worked in a variety of civil rights areas including voting rights and redistricting, hate crimes, police accountability, and anti-discrimination law. She has served on the California Secretary of State's Advisory Committee on Help America Vote Act, the California Secretary of State's Advisory Committee on Voter Participation and Outreach, LA County's Community Voter Outreach Committee (founder), and the LA County Human Relations Commission. Having graduated from Cornell University, she went on to earn her JD from UCLA School of Law.



### **Carolyn Fowler** Election Protection Board Co-Chair Los Angeles County Democratic Party

Carolyn is currently Executive Associate for the California Senior Leaders Alliance and an active member of the Community Voter Outreach Committee. She has provided consulting, training, meeting facilitation, focus groups, speaking and organizational development services to nonprofits, corporations and public sector entities. She is a retired AT&T Executive and previously served as the Chief Operating Officer for the Smiley Group, Inc., a communications corporation focused on human rights. Active in the community Carolyn is "Boot Camp Chair" for the California Democratic Party's Women's Caucus encouraging more women to seek appointments and run for elected office. She is past president of New Frontier Democratic Club and a founding member of California Election Protection Network. She was recently honored by the National Action Network with the Los Angeles 2014 Vanguard Award for Extraordinary Leader. She holds a BA in Business Administration from the University of Michigan and has also completed the Wharton Global MBA International Certificate program at Pennsylvania State University.



### Maria de la Luz Garcia City Clerk City of Long Beach

Appointed to public office in 2015, Maria de la Luz Garcia currently serves as the City Clerk for the City of Long Beach where she is responsible for administering municipal elections, maintaining municipal records, informing the public of upcoming City Council and Commission meetings, and officiating marriages. She has been working in the field of elections both as a voter engagement advocate and as an elections administrator for the past 15 years. Prior to being City Clerk, Garcia was a Senior Project Coordinator in the Office of the Los Angeles City Clerk. In that capacity, she supervised several election operations, co-chaired the Department's Los Angeles Votes committee, which seeks to incorporate community voices in the electoral process, and created and launched the Department's first voter outreach and education campaign known as, "L.A. City Votes!" in partnership with community organizations. Prior to working for the Los Angeles City Clerk's Office, Garcia oversaw the NALEO Educational Fund's Voces del Pueblo voter engagement program where she focused on mobilizing low propensity Latino voters. She has certificates in the area of Leadership from CORO Southern California and the Los Angeles Fire Department's Leadership Academy. Garcia is a graduate of Vassar College where she obtained a Bachelor of Arts degree in Sociology and Anthropology and is currently a candidate for a Master's in Public Administration and a Dean's Merit Scholar at the USC Price School of Public Policy. She lives in Long Beach with her husband and two dogs.



#### **Richard L. Hasen** Chancellor's Professor of Law & Political Science University of California, Irvine

Professor Richard L. Hasen is Chancellor's Professor of Law and Political Science at the University of California, Irvine. Hasen is a nationally recognized expert in election law and campaign finance regulation, and is co-author of a leading casebook on election law.

Professor Hasen holds a B.A. degree (with highest honors) from UC Berkeley, and a J.D., M.A., and Ph.D. (Political Science) from UCLA. After law school, Hasen clerked for the Honorable David R. Thompson of the United States Court of Appeals for the Ninth Circuit, and then worked as a civil appellate lawyer at the Encino firm Horvitz and Levy.

From 1994-1997, Hasen taught at the Chicago-Kent College of Law and from 1998-2011 he taught at Loyola Law School, Los Angeles, where he was named the William H. Hannon Distinguished Professor of Law in 2005. He joined the UC Irvine School of Law faculty in July 2011, and is a faculty member of the UC Irvine Center for the Study of Democracy.

From 2001-2010, he served (with Dan Lowenstein) as founding co-editor of the quarterly peer-reviewed publication, Election Law Journal. He is the author of more than 80 articles on election law issues, published in numerous journals including the Harvard Law Review, Stanford Law Review and Supreme Court Review. He was elected to The American Law Institute in 2009 and serves as an Adviser on ALI's ongoing law reform project, Principles of Election Law: Resolution of Election Disputes.

Professor Hasen was named one of the 100 most influential lawyers in America by The National Law Journal in 2013.



### Ron Hasson President Beverly Hills/Hollywood NAACP

Mr. Hasson leads the Beverly Hills/Hollywood branch of the National Association for the Advancement of Colored People, the nation's largest and oldest civil rights organization. He also chairs the California State Conference Branch Development Committee and serves as Southwest Area Director.

Ron Hasson is a retired Human Resource Manager. During his years of employment in HR his responsibilities included traveling across the United States monitoring Government Affirmative Action requirements He also coordinated training to educate the workforce on Valuing and Managing Diversity.

Mr. Hasson continues to consult and speak in Cultural and Diversity events. Ron spends much of his NAACP time fund raising and implementing educational and advocacy programs for the Beverly Hills/Hollywood Branch of the NAACP, which has over 300 members. He is serving his fifth term as president of the Branch. Mr. Hasson continues to address issues concerning people of color in Southern California and the Hollywood Industry. He leads a team of volunteers who work many hours on branch committees implementing and designing events which address Youth Development, Education, Veterans, Women of Excellence, and Performing Arts Events. During his tenure, as President, he has overseen the production of nine NAACP Theatre Awards which acknowledges the best of the best in theatre. In addition to The Award Show, the Beverly Hills Hollywood Branch coordinates a theatre festival.

Ron is a native of Tallahassee, Florida and long-time resident of California; he graduated from California Polytechnic University in San Luis Obispo with a B.A. in Business Administration and graduate work in Guidance and Counseling.



### Jaclyn Tilley Hill Chair Emeritus Quality and Productivity Commission, County of Los Angeles

Commissioner Hill's County career began in 1993 as Foreman of the Grand Jury. She was the first woman to Chair the Economy and Efficiency Commission and the Quality and Productivity Commission. She chaired the Countywide Communications Team and Productivity Investment Board. Ms. Hill championed the Commissioner's Leadership Conference, Plain Language Initiative, and presented "Plain Speak" at the Clarity Conference, Lisbon in 2010. She is a former member of the Whittier Area Literacy Council Advisory Board and former Chair of the Whittier Social Services Commission. She serves on the Board of Governors of Long Beach City College Foundation. Ms. Hill has extensive experience in local elections serving as a voting inspector in Whittier and Long Beach. Commissioner Hill is a successful fundraiser and event organizer. She attended California Western University and University of Southern California.



### Mimi Kennedy Board Chair Progressive Democrats of America

Ms. Kennedy is an actress ("MOM" "Dharma & Greg") and author who has been Advisory Board Chair of Progressive Democrats of America since PDA's founding in 2004. She is a founding member of California Election Protection Network and has been an LA County Poll Inspector and member of the Registrar's Community Voter Outreach Committee since 2005.



### Deanna Kitamura Senior Staff Attorney Asian Americans Advancing Justice

Deanna Kitamura is the Voting Rights Project Director at Advancing Justice-LA. She works on issues related to language access and voter protection and co-authored Voices of Democracy: Asian Americans and Language Access During the 2012 Elections. Deanna serves on the California Secretary of State's Language Accessibility Advisory Committee, Los Angeles County's Voting System Assessment Project and the Community Voter Outreach Committee, and Orange County's Community Election Working Group. From 2009-2012, Deanna was the Statewide Redistricting Manager at Advancing Justice-LA and advocated to keep AA&NHPI communities whole during the Los Angeles City and statewide redistricting processes. Deanna previously worked for the City of LA, Western Center on Law & Poverty, California Rural Legal Assistance, National Consumer Law Center, and a civil rights firm. She graduated from Pomona College and UCLA School of Law.



### Terri Lantz Client Rights Advocate United Cerebral Palsy of Los Angeles

Terri Lantz has worked at United Cerebral Palsy of Los Angeles, Ventura & Santa Barbara Counties (UCP) for more than 42 years. During her first 28 years, as Director of the UCP Westside Activities Center, she developed and implemented a wide range of programs including an afterschool Program for children with disabilities; adult advocacy and activities programs; and LA's first supportive employment program for adults with cerebral palsy and other developmental disabilities.

For the past 15 years, as UCP's Client Rights' Advocate, Terri has developed and facilitated UCP client advocacy groups and a UCP Parent Support Group, coordinated grass roots and legislative advocacy and provided information, resources and referrals to UCP's community. Terri serves on several Access Services advisory committees, L. A. County voter education committees and an L.A. Emergency Management Advisory Committee.

Terri is an alumna of SMC, CSULA, and UCLA. Her family includes her husband of 42 years, a son, a daughter, and a large rescue dog.



### Ofelia M. Medina Director of State Civic Engagement Policy NALEO Educational Fund

Ofelia M. Medina is the Director of State Civic Engagement Policy for the National Association of Latino Elected and Appointed Officials (NALEO) Educational Fund. In her role, Ms. Medina is responsible for implementing the organization's technical assistance and professional development program activities on a broad range of efforts related to state voting and civic engagement policy, including language assistance, online voter registration and NVRA compliance. Prior to joining the NALEO Educational Fund, Ms. Medina was a Policy Director at the Alliance for a Better Community (ABC) where she analyzed and advanced local and state birthto-college education policies and initiatives that were culturally and linguistically relevant for Latino children and their families. Ms. Medina completed her undergraduate career at Loyola Marymount University double majoring in Political Science and Chicana/o Studies and received a Master's of Public Policy from the University of Southern California.



### Mark Vafiades Chair Republican Party Los Angeles County

Mark Vafiades is an actor, producer, reserve LA County Sheriff's Deputy, and hospital administrator. He also serves as the Chair of the Republican Party of Los Angeles oversees an area with 26 Assembly Districts and dozens of other local offices for the Republican Party of Los Angeles County.



### Holly L. Wolcott City Clerk City of Los Angeles

Holly L. Wolcott is the City Clerk for the City of Los Angeles. She has worked for the City of Los Angeles for 26 years and served in the Office of the City Clerk for 13 of those years as Management Analyst, Chief Management Analyst, and Executive Officer. Serving one of the largest voting jurisdictions in terms of population, during her tenure, Ms. Wolcott has managed the City Clerk's office with unprecedented reduced funds. Among her many accomplishments are, assisting with the development of the Department's Five Year Plan, leading the Election Division to successfully conduct its Municipal, Special, and Neighborhood Council elections and working closely with the Department's five Division's to modernize and systemize its procedures to carry out its work serving as the official secretary for the Los Angeles City Council, providing administrative, fiscal and personnel services to the Mayor and City Council, managing the City's Business Improvement District (BID) program, and maintaining the City's records management services and official archives.

Ms. Wolcott earned two Bachelor of Arts Degrees from UCLA; one in Communications and the other in Sociology.



### **Bryce Yokomizo**

### Adjunct Faculty, School of Public Administration California State University, Northridge

Bryce Yokomizo formerly served as Director of the Los Angeles County Department of Public Social Services, managing public welfare services with a budget of \$3 billion, and staff of over 14,000. Bryce Yokomizo also served as Deputy Chief Executive Officer for Los Angeles County, and has served on Governing Boards of numerous management and non-profit human services organizations.

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#### **2016**

August 16, 2016 – Voting Accessibility Advisory Committee (VAAC) Meeting VSAP team members presented the most recent voting system prototype, accessibility features of the system and the next phase of the project. The members were given the opportunity to experience the touch screen, audio user interface and the interactive sample ballot.

August 9, 2016 – National Conference of State Legislatures (NCSL) Legislative Summit Jeramy Gray, Principal Project Manager and Assistant Registrar-Recorder/County Clerk for Information Technology, was invited to the NCSL Summit in Chicago, IL. He was a speaker for the "Technology: Improving Elections One Bit or Byte at a Time?" panel where he discussed LA County's efforts at modernizing the voting process to provide a more accessible service to its electorate.

August 5, 2016 - Voting System Demonstration at United Cerebral Palsy of Los Angeles UCPLA invited the VSAP team to conduct a demo of the touch screen and audio interface of the latest prototype at their Culver City location. Their clients and staff interacted with the prototype and gave their feedback.

July 27, 2016 - Quality & Productivity Commission of Los Angeles County Meeting The VSAP team gave a status update and presented the latest prototype to the members of the Commission.

July 27, 2016 – Community and Voter Outreach Committee (CVOC) Meeting VSAP team members introduced the latest voting system prototype and the different components of the new voting experience to the members of the CVOC. We also update the committee on the next steps in the project and encouraged their continued involvement in the project. The members interacted with the prototype and gave their feedback.

July 22, 2016 - 2016 National Association of Counties (NACo) Conference and Exposition We shared the VSAP's collaborative and participative approach in designing the new voting system to the different representatives from various jurisdictions across the nation at the NACo Conference in Long Beach, CA. The attendees interacted with the prototype to experience the new voting experience.

July 21, 2016 - Los Angeles Votes Committee Meeting

The VSAP team presented a project update, and gave a demonstration of the voting system prototype to members of the LA Votes Committee and staff of the Los Angeles City Clerk.

July 13-14, 2016 - California Association of Clerks and Election Officials (CACEO) Annual Conference The VSAP team displayed two prototypes at the CACEO conference in Redondo Beach, CA. Election officials from different jurisdictions across the state interacted with the prototypes and provided their feedback.

May 24, 2016 - Voting Accessibility Advisory Committee (VAAC)

VSAP team members updated the VAAC on project developments including design updates that provide for universal accessibility and usability, committee activities, and upcoming events. Members who had the opportunity to interact with the latest prototype shared their feedback and provided an overview of the experience with the group.

May 11, 2016 – Community and Voter Outreach Committee (CVOC) VSAP team members provided CVOC members an update on the project including latest milestones and upcoming project activities.

February 29, 2016 – Voting Accessibility Advisory Committee (VAAC) VSAP team members met with the VAAC to provide a project update. The VSAP team presented a brief overview of the Vote by Mail user testing and an update on engaging various voting accessibility organizations. An open invitation was extended to members to observe the upcoming Advisory Committee Meeting on March 16, 2016.

January 27, 2016 - Community and Voter Outreach Committee (CVOC) VSAP team members met with the CVOC to provide a project update. This included sharing the findings from the Vote By Mail user testing, a summary of community engagement efforts and other on-going activities. The members were also informed that the most recent reports and newsletters are available on the VSAP website.

January 25, 2016 - Los Angeles County Quality & Productivity Commission Jeramy Gray, Assistant Registrar-Recorder/County Clerk for Information Technology and Principal Project Manager, presented an update on the BMD design, extensive qualitative research, user testing, community engagement activities and the latest images of the voting system prototype to the Quality & Productivity Commission. This generated positive responses and continued support from the Commission.

#### 2015

November 20, 2015 - United Cerebral Palsy of Los Angeles (UCPLA)

UCPLA members were invited to participate in the Vote By Mail user testing. The participants interacted with the proposed Vote by Mail ballot and were asked to rate its usability and accessibility. A focus group discussion was also conducted where the members provided significant feedback on the proposed Vote by Mail ballot design.

November 18, 2015 - Kiwanis Club of Downey

The VSAP team was invited by the Downey City Clerk's Office to give a project overview to the members of the Kiwanis Club of Downey. The VSAP team presented the appearance model and explained the process of the proposed new voting experience.

October 28, 2015 - Civic Tech Showcase

The VSAP was invited to conduct a presentation at the Civic Tech Showcase at Draper University in San Mateo, California. The showcase was coordinated by "Innovate Your State", a non-profit organization that is dedicated to educating and encouraging public participation to fundamentally improve government. The presentation's focus was on the unique partnership between the public and private sector.

October 22-24, 2015 - National Conference of State Legislatures Forum (NCSL) The VSAP was invited to a meeting in Boulder, Colorado hosted by the NCSL to discuss election funding for election-related technology. In attendance were legislators, professionals and experts in the field of election administration. Participants shared their experiences, challenges, and recommendations as the NCSL shapes a two-year program to address election funding concerns.

October 10, 2015 - California Council of the Blind

The VSAP team presented the current state of the project and conducted a demonstration of the audio features of the latest prototype model. The members of the organization interacted with the BMD prototype and provided their feedback.

October 5, 2015 South by Southwest Eco (SXSW Eco)

The VSAP was featured in a session "Creating the Voting Experience of the Future" at the SXSW Eco Convention in Austin, Texas. The presentation showcased the collaboration between the Department and IDEO, and how technology and innovation is used to design the new voting system that will serve the large and complex LA County electorate.

September 29, 2015 – Voting Accessibility Advisory Committee (VAAC)

VSAP team members met with the VAAC to provide a status update. The VSAP team presented the updated BMD prototype and discussed the results of the May user testing sessions. The members were also informed that the most recent reports may be accessed on the VSAP website. Requests from committee members for prototype demonstrations were noted and will be followed-up when the final design prototype is available.

#### September 4-27, 2015 - Los Angeles County Fair

The prototype appearance model was on display at the LA County Fair from September 4-27, 2015. The display allowed visitors to learn about our past through the history of the Voting Rights Act of 1965, and look into the future of voting.

September 16, 2015 – Community and Voter Outreach Committee (CVOC) VSAP team members met with the CVOC to provide a project update. This included showing the updated Ballot Marking Device prototype, the findings from the May user testing sessions, and other project activities. The members were also informed that the most recent reports are available on the VSAP website.

June 18, 2015 – Voting Accessibility Advisory Committee (VAAC) VSAP team members met with VAAC to provide a status update. The VSAP team presented the updated prototype Ballot Marking Device and discussed the results of the user testing sessions that occurred in previous months.

June 13, 2015 – Native American Veterans Association (NAVA) VSAP team members met with NAVA to provide a status update. The VSAP team presented the updated prototype Ballot Marking Device and discussed the results of the user testing sessions that occurred in previous months.

June 10, 2015 – Community and Voter Outreach Committee (CVOC) VSAP team members met with CVOC to provide a status update. The VSAP team presented the updated prototype Ballot Marking Device and discussed the results of the user testing sessions that occurred in previous months.

May 30, 2015 –User Testing Session for Korean speakers and Young Voters We met with 35 voters at the Korean Resource Center in downtown Los Angeles. Focus for this session included young voters and voters whose primary language is Korean. Voters provided feedback on the systems Korean language user interface and audio ballot as well as general system usability, accessibility, and privacy.

May 30, 2015 – User Testing Session for a Mixed Demographic

We met with 39 voters of varying demographics at the Registrar-Recorder/County Clerk's office in Norwalk. Users in this session included a diverse group of individuals representing various age groups, literacy levels, cognitive disabilities and ethnic groups. During this session, participants provided feedback on the system's usability, accessibility, privacy and overall experience.

May 28, 2015 – User Testing Session for Military Veterans and Individuals with Disabilities We engaged 40 veterans and individuals with disabilities at the Bob Hope Patriotic Hall in downtown Los Angeles. During this session, participants provided feedback on the system's accessibility features and overall usability and privacy of the experience.

#### May 28, 2015 - User Testing Session for Spanish-speakers

We met with 39 voters in Huntington Park at the Old Timers Foundation to test the latest prototype iteration with a focus on individuals whose primary language is Spanish. During this session, participants provided feedback on the system's Spanish language user interface and audio ballot as well as general system usability, accessibility, and privacy.

#### May 26, 2015 - User Testing Session for Seniors

We engaged 27 voters from Los Angeles County at the Altadena Senior Center to test the latest version of the ballot marking device. During this session, participants provided feedback on the system's usability, accessibility, privacy and overall experience.

May 7, 2015 – Meeting with Supervisor Hilda Solis

VSAP team members met with Supervisor Hilda Solis to provide an executive overview of the VSAP and demonstrate an early generation prototype of the ballot marking device.

May 6, 2015 - Meeting with Supervisor Sheila Kuehl

VSAP team members met with Supervisor Sheila Kuehl to provide an executive overview of the VSAP and demonstrate an early generation prototype of the ballot marking device.

#### April 29, 2015 – User Testing Session for Election Staff

We conducted three user testing sessions. One session with each of the following groups: Los Angeles County poll workers, poll worker trainers, and election operations staff. The feedback received was used to further refine the design of the system. These sessions focused on the storage, transportation, set up and break down of the devices. Once finalized, a full report of research findings will be posted on the Department website.

March 26, 2015 - IDEO Inspiration Research: visually-impaired

We engaged 5 participants with varying degrees of visual impairments (from low vision to completely blind) and varying levels of proficiency with technology to further refine and expand on usability and accessibility of the device. Participants engaged with an early prototype of the audio user interface and various tactile key pads. A full report of research findings is available on our website.

March 9, 2015 – User Testing Sessions for Seniors and Spanish-speakers

We engaged 57 participants using three voting systems, two experimental prototypes, and one comparison system (InkaVote). Participants included a range of individuals varying in age, ethnicity, and language capabilities with a focus on senior citizens and voters whose primary language was Spanish. A full report of research findings is available on our website.

February 27, 2015- User Testing Session

A full-day of user sessions to test the usability and accessibility of the latest versions of the ballot marking device prototype was conducted in IDEO's Palo Alto office in January. Approximately 50 voters representing older voters, Spanish-speaking voters, new voters, and long-time voters were invited to participate in the study.

#### **2014**

December 11, 2014 New Law Conference Presentation VSAP staff discussed vote center research at the New Law Conference in Sacramento. This conference engages both elected official and election administrators.

October 21, 2014 Board of Supervisors Meeting Los Angeles County Registrar-Recorder County Clerk staff and IDEO presented their proposal to the Board of Supervisors at their meeting. Board approved contract.

October 17, 2014 Meeting with the Long Beach Election Oversight Commission Dean Logan met with the Long Beach Election Oversight Commission and discussed the Voting Systems Assessment Project

October 8, 2014 Community Voter Outreach Meeting (CVOC) VSAP staff provided an update at our quarterly CVOC meeting in order to keep the public up to date with our project.

October 4, 2014 Voting Modernization Board Meeting VSAP staff met with Michael Bustamante of the Voting Modernization Board to discuss the progress of our project.

October 2, 2014 Presentation at Empowerment Congress RR/CC executive staff discussed the Voting Systems Assessment Project and answered questions related to the project.

September 30, 2014- Presentation to the Industry Hills Rotary Club RR/CC staff presented our prototype device to the local Industry Hills Rotary Club and discussed our project. Participants were enthusiastic and interested in our progress.

September 29, 2014- Meeting with 1st District Supervisor Gloria Molina VSAP staff presented our prototype device to the district supervisor and provided a project progress update.

September 25, 2014- Board of Supervisors Operations Cluster VSAP team members attended the Board of Supervisors' Operational Cluster meeting to discuss our contract with IDEO and the proposed Statement of Work for the next phase of the project.

September 25, 2014- Presentation at the Conditional Voter Registration Subcommittee of the California Association of Clerks and Elected Officials

VSAP team members gave a presentation concerning the research conducted on Vote Centers. Questions were answered about how vote centers can assist in same-day voter registration.

September 24, 2014 - VSAP Advisory Committee Meeting

The VSAP team hosted our Advisory Committee members for a half-day long meeting to bring them up to date on our project status, as well as where it is heading in the next few months. The VSAP team answered any and all questions related to our project.

September 23, 2014 - Voting Accessibility Advisory Committee Meeting VSAP staff attended the VAAC meeting to inform members of the committee about the status of our project.

September 22, 2014 - Meeting with 3rd District Supervisor Zev Yaroslavsky VSAP staff presented our prototype to the third district supervisor and provided an update on our project.

September 20, 2014 - Tri-League of Women Voters Los Angeles Chapter Presentation Outreach staff presented the ballot marking device prototype to the local Tri-League of Women Voters chapter in Los Angeles.

September 3, 2014 - EAC Roundtable Discussion -Expanding the Body of Knowledge of Election Administration

Presentation to EAC about Election Administration, highlights included the Voting Systems Assessment Project's approach to having a human-centered design, and the importance of voters.

August 21-22, 2014 - Election Center Conference

Dean Logan gave a presentation on the VSAP and our innovative approach to creating a voter-centered design.

August 19, 2014 - USINEX Electronic Voting Technology Workshop/Workshop on Trustworthy Elections Dean Logan led a workshop concerning security and technology and our approach with the VSAP.

August 14, 2014 - Presentation to the Quality and Productivity Commission VSAP staff presented our current prototype device to the Quality and Productivity Commission, as well as updated them on the status of our project and what we expect in the future.

July 31, 2014 - Presentation to RR/CC Elections Operation Command staff VSAP team members gave a demo with our current prototype device, informed staff of future changes, and answered questions relating to our project and its developmental phases.

July 30, 2014 - Community Voter Outreach Committee Meeting (CVOC) VSAP staff attended the CVOC meeting and gave a brief update on the status of our project.

July 14-18, 2014 - California Association of Clerks and Election Officials Conference VSAP staff attended the CACEO conference and attended several breakout sessions.

June 23, 2014 - Meeting with 2nd District Supervisor Mark Ridley Thomas VSAP staff met with office staff representatives to demonstrate the current prototype device and inform him of our project's goals and status.

June 12, 2014 - Election Assistance Commission Webinar- Reforming the Testing and Certification Process

VSAP staff viewed webinar to keep informed of the changes that may take place in the testing and certification processes of new voting systems.

June 10, 2014 - Clemson University Conference Call with Juan Gilbert VSAP staff met with Clemson University personnel to discuss their work on voting systems.

May 29, 2014 - Meeting with 4th District Supervisor Don Knabe VSAP staff met with district supervisor Don Knabe to demonstrate the current prototype device and inform him of our project's goals and status.

May 19, 2014 - University of Chicago School of Public Policy: Blueprint to Implementation Dean Logan delivered a presentation on the status of the VSAP. Dean discussed the VSAP's progress towards transforming the voting experience for LA County voters. Dean answered questions about the VSAP design process and overall plan for system development and implementation.

May 15, 2014 - Webinar: STAR-Vote: A Secure, Transparent, Auditable and Reliable Voting System Staff participated in a webinar presented by Dan Wallach which concerned the STAR vote system in Travis County, Texas. This meeting provided an overview of Travis County's STAR project, which aims to develop and implement a new voting system for Travis County voters. The Department will continue to follow Travis County's journey to implement a publicly-owned voting system.

#### May 8, 2014 - Board of Supervisors Operations Cluster

Members of the Department's Executive management team met Board of Supervisor Deputies to provide a status update on the VSAP and an overview of the upcoming system refinement and engineering, including the intent to sole source for consulting services to lead the department through that process.

#### April 17, 2014 - Community Voter Outreach Committee (CVOC)

Department staff attended the quarterly CVOC meeting. At this meeting, staff brought the prototype device so meeting participants could interact with it and learn more about its features. Staff also answered questions and concerns that were brought up by the committee members.

April 15, 2014 - Voting Accessibility Advisory Committee (VAAC) Department staff attended the VAAC meeting to provide an update of the VSAP. Department staff also set up the looks-like prototype so members of the committee could both view and interact with it.

#### March 13, 2014 - City of Los Angeles Presentation and Updates

Department staff provided an update on the VSAP and presented the looks-like prototype of the proposed ballot marking device to approximately 25 City of Los Angeles' election staff. This hour long presentation provided an update on the recent system design efforts of the VSAP and its focus on a human-centered design process. This meeting allowed the Department to continue to foster positive relations with the City of Los Angeles.

March 5-7, 2014 - Election Verification Network (EVN) Conference

Department staff presented an overview of the VSAP at the EVN Conference in San Diego. The conference was attended by academics, advocates, and subject matter experts. Staff displayed and demonstrated the features of the looks-like prototype of the proposed ballot marking device.

February 25, 2014 - Voting Accessibility Advisory Committee Meeting VSAP staff attended the VAAC meeting and presented progress updates to the committee. Particular attention was paid to our work with individuals with cerebral palsy and our continued commitment to accessibility for people with disabilities as our program progresses towards implementation.

January 27, 2014 - Quality and Productivity Commission

Executive and VSAP staff met with the Commission to provide an update on the progress of the project and present the system prototype. In August 2012, the Q&P provided the VSAP program with \$470k in funding (\$235k loan/ \$235 grant) to begin the development and system design phase.

January 15, 2014 - Community Voter Outreach Committee (CVOC) VSAP staff attended the quarterly CVOC meeting. At this meeting, staff provided a status update on VSAP efforts and invited members to visit our website for more detailed information on the project.

#### 2013

November 7, 2013 - United Cerebral Palsy Los Angeles (UCPLA) VSAP staff and IDEO project team met with members of UCPLA to gather feedback on a preliminary voting system prototype. VSAP and IDEO staff gathered feedback regarding the needs and desires in a voting system from voters with a wide-range and degree of disabilities.

October 29, 2013 - Voting Accessibility Advisory Committee (VAAC) VSAP staff and IDEO project team met with the VAAC to provide an update on the VSAP and answer member questions.

October 15, 2013 - Clemson University

VSAP staff met with Clemson University to update each other on the progress of their work around voting system design and development.

October 2, 2013 - Community Voter Outreach Committee (CVOC) VSAP staff met with the CVOC to provide an update on the VSAP and answer member questions.

September 9, 2013 - Georgia Tech Research Institute (GTRI) VSAP staff met with GTRI to provide a VSAP status update and to discuss how the projects align and may support each other.

August 1, 2013 - Chief Executive Office and Chief Information Office The VSAP and IDEO Project Teams met with the County's Chief Executive Officer, Chief Information Officer and some of their key staff to present the three initial design concepts and gather initial feedback from this group.

July 31, 2013 - VSAP Advisory Committee Meeting The VSAP and IDEO Project Teams met with the VSAP Advisory Committee to present the three initial design concepts and gather initial feedback from Committee members. Members were presented the concepts and information on how the concepts were derived, and provided initial feedback.

#### July 30, 2013 - VSAP Technical Advisory Committee Meeting

The VSAP and IDEO Project Teams met with the VSAP Technical Advisory Committee to present the three initial design concepts and gather initial feedback from Committee members. Members were presented the concepts and information on how the concepts were derived, and provided initial feedback.

#### July 23, 2013 - Voting Accessibility Advisory Committee (VAAC)

VSAP staff met with the VAAC to provide an update on the VSAP. Members were informed that initial design concepts would be shared at the next VAAC meeting.

#### May 29, 2013 - VSAP Advisory Committee Meeting

The VSAP Advisory Committee met via conference call to discuss current VSAP activities related to the voting system related legislation, the VSAP design phase, and the VSAP Technical Advisory Committee.

#### February 26-28, 2013 - Future of Voting Systems Symposium

Department staff engaged in a three day symposium with academics, researchers, election officials, and other stakeholders to discuss the future of the voting system market and regulatory environment. During this symposium, I participated in a panel discussion with other election officials to discuss voting system modernization efforts being led by election jurisdictions.

#### January 28-29, 2013 - GTRI Meeting

Brad Fein, Principal Research Scientist and his team presented to and met with department staff and VSAP Advisory Committee members. The GTRI team presented initial findings of their work on usability and accessibility, and discussed how their continued research may align and help support VSAP efforts.

#### January 28-29, 2013 - NIST Meeting

John Wack and Mary Brady from NIST visited RR/CC headquarters to learn more about LA County's election operations and the VSAP. The VSAP Advisory Committee and Department staff met with the NIST representatives to discuss the role of NIST in the voting system certification process and LA County's election process and voting system modernization efforts.

#### 2012

November 9, 2012 - Chief Executive Office, Chief Information Office and County Counsel The Department has been working closely with staff from the Chief Executive Office, Chief Information Office and County Counsel in preparing the Statement of Work for the development of system design options. Constant communication has been maintained with these departments following an initial conference call on November 9, 2012.

#### October 30, 2012 - VSAP Advisory Committee

The VSAP Advisory Committee met on October 30, 2012 to discuss VSAP funding, the upcoming design phase, and the plan to establish a VSAP Technical Advisory Committee.

The VSAP Advisory Committee continues to provide the Department guidance as the VSAP moves from conceptualizing to designing and prototyping. The VSAP Advisory Committee is composed of experts, stakeholders, and community leaders from critical constituency groups and communities of interest. The Committee was established in response to a motion adopted by your Board in September 2010, establishing a platform for continued citizen participation and transparency.

August 28, 2012 - Voting Accessibility Advisory Committee VSAP staff provided VAAC members an update on VSAP activities.

August 8, 2012 - Chief Executive Office and Board of Supervisor Deputies CEO, William T Fujioka hosted a meeting to provide Board of Supervisors staff an update on the VSAP. The RR/CC presented an overview of VSAP accomplishments, next steps, and challenges.

July 30, 2012 - Chief Information Office The RR/CC met with CIO Richard Sanchez and Henry Balta with the purpose of discussing next steps for the VSAP and a strategy for continued collaboration.

July 16, 2012 - CEO, Governmental and Legislative Affairs The RR/CC met with CEO Intergovernmental and External Relations (IGEA) staff to provide an overview

of VSAP legislative/regulatory hurdles and discuss what support will be need from IGEA to address those hurdles.

June 14, 2012 - Chief Executive Office The RR/CC met with CEO William T Fujioka, and staff to provide an overview of VSAP accomplishments, next steps, and challenges.

# **Exhibit E: Internal Project Team**



Dean Logan

Registrar-Recorder/County Clerk Executive Sponsor



Debbie Martin

Chief Deputy Project Advisor



Jeramy Gray

Assistant Registrar-Recorder/County Clerk, Information Technology Principal Project Manager



### **Kenneth Bennett**

Information Technology Manager Project Manager - Technology



Monica Flores

Executive Assistant Project Manager – Administration and Public Engagement



### Aaron Nevarez

Government and Legislative Affairs Manager Project Advisor



### **Rita Figueroa**

Assistant Registrar-Recorder/County Clerk, Administration Project Advisor

# **Exhibit E: Internal Project Team**



### Tim McNamara

Assistant Registrar-Recorder/County Clerk, Election Operations Project Advisor



Adrian Avelar

VSAP Research and Legislation Project Assistant



Kenny Ling

VSAP Contract Management and Budget Project Assistant



Marianne Felix

VSAP Public Relations Project Assistant



Oscar Olmos

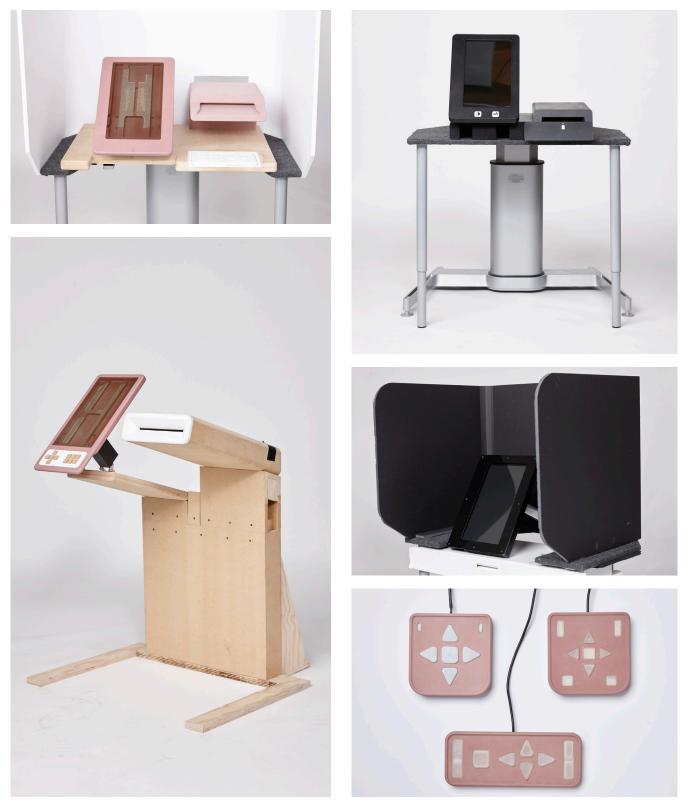
VSAP Business Processes and Facilities, Vote Centers Project Assistant



Vinh Do

VSAP Business Processes and Facilities, Vote by Mail Project Assistant

# **Exhibit F: Design Evolution**



### **Stay Connected**

For more information on the Voting Systems Assessment Project, visit our website at VSAP.lavote.net.

For inquiries, please email vsap@rrcc.lacounty.gov.







VSAP.lavote.net