



DEAN C. LOGAN
Registrar-Recorder/County Clerk

Testimony to the Presidential Commission on Election Administration

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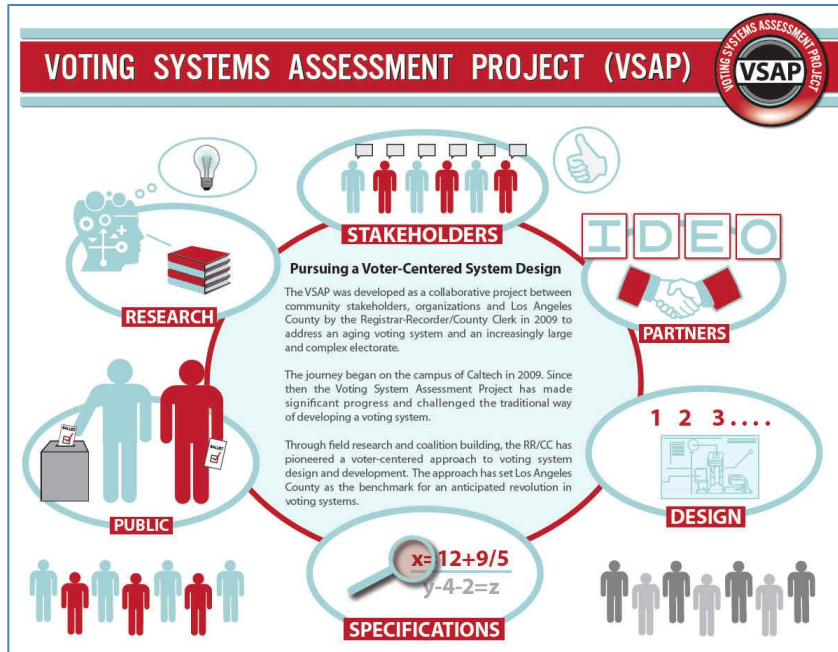
GIS, Ballot Management, and Election Tally Systems Division

Los Angeles County Registrar-Recorder/County Clerk

Esteemed members of the Commission, on behalf of Dean Logan, Los Angeles County's Registrar of Voters, I want to thank you for again inviting our County to participate in the Commission's important work to improve the voting experience in our nation. On August 8, 2013, Dean Logan gave testimony before the Commission at the Denver, Colorado hearing, in which he maintained that the key to improving the voting experience is an innovative, voter-centered approach to designing and validating that experience. My testimony to you today seeks to further elaborate on this concept by highlighting technology-driven trends influencing the culture in which we conduct elections, and delving into some details about the design approach and methodologies of our Voting Systems Assessment Project (VSAP).

Why the Voting Systems Assessment Project?

From the outset, the VSAP has been much more than a voting technology implementation project (see figure below). It involves research, collaboration, stakeholder engagement, public outreach, partnership building, and innovative design methodologies.



The story of how we took this approach to voting system design dates back several years, during a time when we saw too many things on the elections landscape that didn't seem to be working. We saw that the way we live our lives and the way elections are administered were going in different directions. We saw a dysfunctional regulatory environment. We saw a voting systems market that was not offering products that would support our elections. We saw trust and confidence in voting systems eroding, and we saw elections administration becoming a highly politicized and polarized process. In this environment, we realized that modernizing our voting system was not simply a matter of rolling out new hardware and software. It was much more than that. To better understand how to proceed, we felt the need to take a step back and look around, take a deep breath, and to start to think about what elections are really about. They are about the voters.

Technology-Driven Trends in The Culture

It is interesting to note that early applications of technology in elections, occurring between the 1850's and 1950's were directed at solving the problem of precinct-level election fraud. Electro-mechanical devices were viewed by technologists and the public as a panacea for ballot box stuffing, vote buying,

and other forms of corruption, and gave greater central control of elections to city and county administrators.¹ In the decades following the 1960's, as computing and networking technology advanced and ushered in the Information Age, technology has come to dominate almost every facet of elections, and has had a profound impact on voters' views and expectations about the voting experience and elections in general.

In this new millennium, technology has become an inseparable part of our everyday lives. Mobile devices, wireless networks, cloud computing, content management software, social networking, and the seemingly boundless resources of the Internet are transforming the way we learn, think, behave, communicate, and interact. According to Pew Research Center's Internet Project, 85% of adults in America are connected to the Internet, and of those, 72% are social network users. 56% of adults use smart phones, and of those, 62% rely on their mobile devices for just-in-time information. With one in four teens being "cell mostly" Internet users, mobile Internet usage is even more pronounced among the young, so these numbers will only continue to grow in the future. Mary Madden, Senior Researcher at Pew, recently observed that

"The nature of teens' internet use has transformed dramatically — from stationary connections tied to shared desktops in the home to always-on connections that move with them throughout the day...In many ways, teens represent the leading edge of mobile connectivity, and the patterns of their technology use often signal future changes in the adult population."²

With technology an ever-present aspect of daily life, being tech savvy is an attribute no longer limited to computer geeks and IT professionals. The ability to manage databases and file storage, host websites and blogs, process online transactions, configure home networks, build user profiles, and set up firewalls and other security tools, have become common skills sets.

In light of these trends in the general population, future voters are increasingly more likely to be engaged and interconnected technologically, communicating and collaborating using an array of website and social networking tools, and relying on mobile technology devices for instant, just-in-time

knowledge and decision-making. They will expect technology to be a ubiquitous utility, available whenever and wherever they need it to answer a question, solve a problem or make an appointment. They will expect technology to be interactive, communicating with them in a smart, visual, intuitive, and sometimes even a personal, way. They will expect devices in their lives to be integrated, not just the smart phone with the PC or tablet, but also the gaming system, the home entertainment system, and even automobiles and home appliances.

This dominance and ubiquity of technology in our lives is not all good news, however. The rapid rise of computers and the Internet has occurred hand-in-hand with a worldwide explosion in cybercrime. From hacked email accounts, malware, phishing, and botnets, to online identity theft, denial of service attacks and hacktivism, to cyber espionage and cyber warfare, the risks of a technology-dependent world and corresponding financial and security threats have become increasingly evident in recent years, and public awareness and alarm is mounting. Interestingly enough, the growing knowledge and acceptance of technology in our lives is also contributing to our awareness of the dangers of a digital world and making us more sophisticated in our thinking about how to protect ourselves. According to another recent Pew Research report, 86% of internet users have taken steps to shield their personal information, protect their identity, or otherwise maintain some level of anonymity, and this tendency is strongest among tech savvy young people.

With these prevailing attitudes of the general population reflected in the voting population, it is understandable that technology has become a sort of wedge issue in the world of elections. On the one hand, we find voters who expect technology to improve the voting experience and improve the administration of elections, by making it more efficient, convenient, informative, and accessible. On the other hand, there are voters who feel threatened by technology's lack of transparency, and the vulnerability to manipulation or attack that a centralized, digitally-controlled elections process seems to display. Unfortunately, election administrators at all levels of government have all too often reacted to this wedge issue by taking a stand on one side of technology or the other. Technology is either good

or bad. It can be trusted or it cannot be trusted. It either has a place in the voting experience or it doesn't. The problem with this approach is that it completely misses the essential element of the voter experience – the voter.

Transforming the Voting Systems Implementation Process

Historically, the voting systems implementation process has been systems and operations driven. From the earliest applications of technology to voting, the central focus has been on how it could meet the needs of those administering the elections, whether for the prevention of precinct-level fraud, making tabulation more efficient, or other process improvements. Little or no thought was given to how the voter might experience the voting process. To a certain extent, this tendency has been nurtured not just by government's historically paternalist relationship to its constituency, but also by rigid procurement and budgetary processes that view voting systems as commodities to be purchased according to election administrators' specifications at the lowest price, while the money is available. The Help America Vote Act of 2002 (HAVA) offers us a great case study as to why this "specify-procure-deploy" model of voting system procurement has often failed in the new millennium.

In reaction to certain voting irregularities encountered in the controversial 2000 Presidential General Election, Congress recognized a need to modernize the voting systems used around the nation and passed HAVA, which distributed large amounts of federal dollars to the states for the purchase of new voting systems. Prodded by federal deadlines to spend the funds, and a public expectation that older voting technology would be replaced before the next major election cycle, many state and local governments felt compelled to spend their allocations as quickly as possible. Using the traditional procurement model, and with scant input from voters, many jurisdictions hurriedly began purchasing and deploying new touchscreen voting technology being rolled out by voting system vendors. The allure of touchscreen voting made perfect sense in a new millennium driven by technology and its promises for better features and greater efficiency. The problem was, in failing to consult the voters,

many election administrators failed to hear the concerns being raised about the need for more comprehensive testing of the technology and to foresee the backlash that would emerge from an electorate that was, at the same time, becoming increasingly suspicious of a digital world. The lesson here is not that electronic voting technology is universally or inherently bad, but that the voter was left out of the dialog and decision-making during the implementation process. Without bringing them in as genuine participants and stakeholders, any hope of understanding their needs and concerns and what steps might be taken to gain their trust and confidence in the new technology was lost from the outset.

Fortunately, our Registrar Dean Logan had the foresight to see that in a County with the size, complexity, and diversity of Los Angeles, even a well thought-out voting system solution could very likely fail if the process of implementing it did not understand or involve the people it was intended to serve. In the early beginnings of the VSAP, as several of us managers were documenting system and operational requirements and other critical factors for a new voting system, Dean made it clear that the project was going to follow a trajectory very different from the traditional “specify-procure-deploy” model. The motto was to break down the walls around us and open up the project to the bright light of transparency, engagement, collaboration, and thinking outside of the box. We had been serving our voters for over four decades with a voting system that, while best-of-class technology back in the 1960’s when it was first developed, was now outmoded and at the end of life. To be able to serve the voters for another four decades, and more importantly to keep them engaged in the democratic process in a rapidly changing technology culture, it was essential to be innovative and forward-thinking in our design requirements for a new voting system and the experience it would afford all types of voters.

Given the technological sophistication of the modern constituency, their expectations about what technology should be able to do, as well as their concerns about the risks and threats of technology dependence, it is no longer wise or appropriate to assume that simply being advanced or best-of-class is sufficient justification for implementing any new technology solution. Technology innovation today is

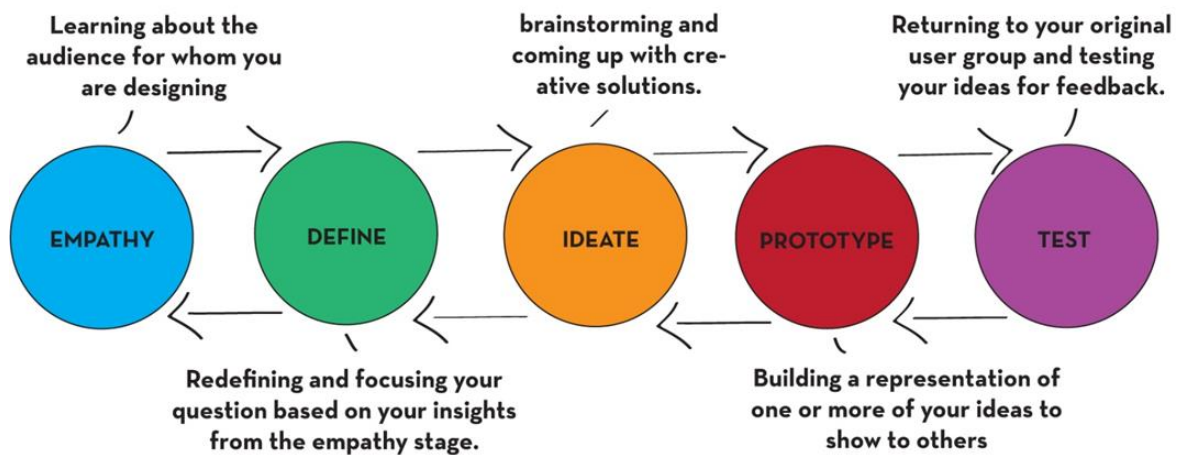
no longer grounded solely in advances in computer components and networks. Rather, modern product and process design, both in theory and in practice, has shown that human factors, empathy and behavioral analysis are as critical to successful innovation, if not more so, than the technology itself, because ultimately success is defined by the perceived value and use of the technology by the intended audience.

This fundamental paradigm shift in how to think about voting technology led Los Angeles County early on to assess our voters before even beginning to assess voting systems. We started to ask simple but important questions. Who are the voters we are trying to serve? What do they need or value? What do they want to know? How do they interact with each other and with their environment? More specifically, how do they interact with technology? How does technology shape their attitudes and behavior? What kind of voting experience builds their confidence and trust in the technology and the process? We held a symposium of voters in September 2009, followed by a broad mail survey and a series of demographically targeted voter focus groups, in which we simply listened to their thoughts and feelings about integrity, security, accessibility, and flexibility, and how they assessed our current voting system. We formed the VSAP Advisory Committee, a body of community leaders representing the diversity of Los Angeles County voters, and through them adopted a declaration of values called the General Voting Systems Principles, which would guide the design and implementation of the voting system solution.

IDEO and Empathetic Design

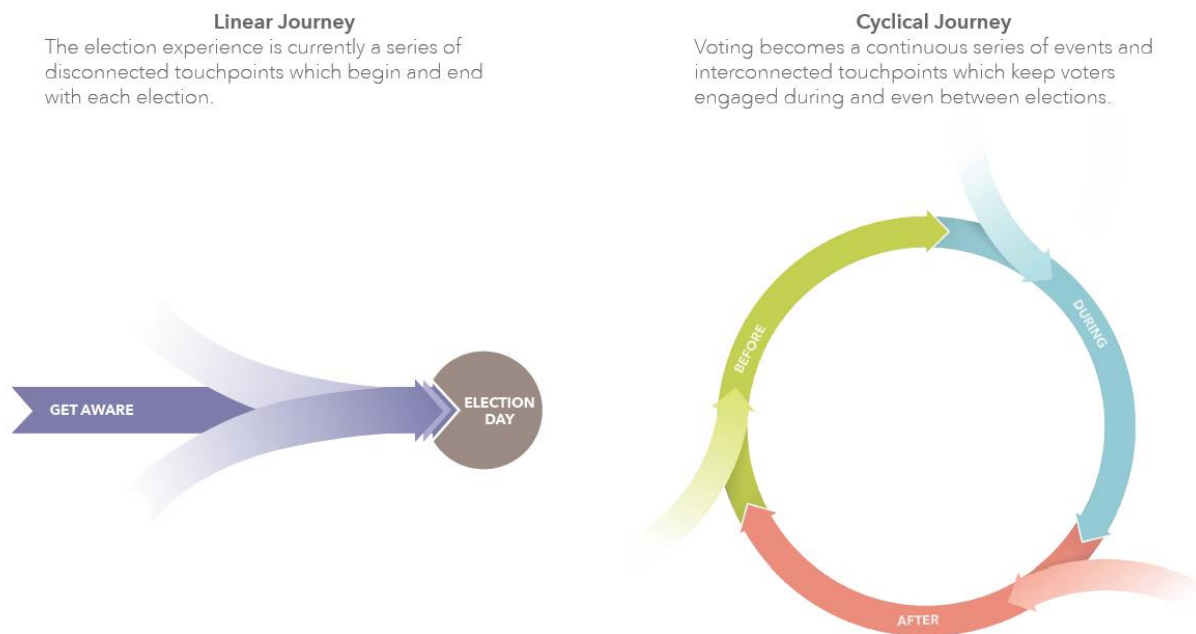
Having laid this research foundation it was clear that we were at a point in the VSAP where we needed outside professional and independent expertise to envision new approaches to voter experience and voting system design. We deliberately avoided engaging established firms in the elections industry, in keeping with the spirit of VSAP of thinking outside the box and seeking new perspectives. Based on a review of potential firms and our experience with an online design

crowdsourcing project sponsored by the EAC, we determined that IDEO, a global design firm and innovation consultancy, was ideally suited to help us synthesize what we had learned, to deepen our understanding of our voters, and to brainstorm voter experience design concepts based on human factors. Headquartered in the San Francisco Bay Area, IDEO has many years of experience specializing in the design of products, services, environments, and digital experiences using empathetic design as the primary approach to innovation. Empathetic design is a human-centered theory of design that begins with “day in the life” interviews that define touch points and reveal insights around users’ relationships with a product or process. These touch points and insights in turn drive an iterative process of ideation, rapid prototyping, and user testing that ultimately leads to a design that meets the needs of the intended audience (see figure below). With its central focus on the human factor in design, IDEO was the perfect partner for helping Los Angeles County to rethink the voter experience and the technology that could support it.



One of the first insights that emerged from IDEO’s study of voters had to do with how we defined the voting experience, both for ourselves as election administrators, and for the voters. Traditional thinking viewed the experience as a disconnected linear journey, in which election administrators engage the voter at a certain point before the election, the voter votes, and then quickly disappears.

The voter's experience of voting abruptly ends until the next election comes along, at which point the voter must be reengaged in the process. From insights learned in interviews with numerous voters, IDEO envisioned a different way of thinking about the voter experience as a cyclical journey, in which the voter is continually engaged in the democratic experience, not just during the election but throughout interval between elections (see figure below³).

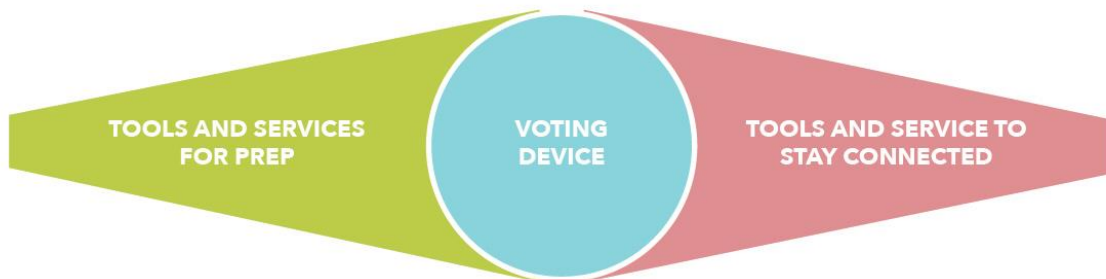


IDEO's field research also revealed three general archetypes of voters:

1. Community Voters. Voters who view the voting experience as a community-building activity, or as an opportunity to interact or bond with family, neighbors, and friends.
2. Impact Voters. Voters who are motivated by a desire to have an impact on society, and to know that their vote counts, and their participation in the democratic process is meaningful.
3. Convenience Voters. Voters who, due to work, lifestyle, or other personal needs, seek convenience and flexibility in when, where, and how they vote.

Crystalizing the core needs of voters around these archetypical concepts enabled us to humanize the voter, and to think more profoundly about their voting experience, and especially to see it as something much more than a voting device in a polling place.

These concepts of the cyclical journey and voter archetypes inspired a development of a design blueprint that serves as a foundational element in visualizing and designing a more comprehensive voter experience and the systems that could support. It also helps to identify touch points in the process where the different archetypes of voters could be more strongly engaged (see figure below³).



Technology tools and services for convenience voters might cluster along the preparatory spectrum of the voting experience, and might include concepts such as voting early, voting anywhere or pre-marking the ballot prior to going to the polling place. Those for impact voters, on the other hand, might cluster along the stay connected spectrum of the voting experience, and might include concepts such as online tracking of the anonymous ballot as it goes through the tally process, real-time precinct voting results, or open and transparent audit results for confirmation of election integrity. For community voters, concepts that cluster around Election Day in the polling place might include sharing where and when one is voting or publishing an electronic “I Voted” sticker in social media, and even rethinking the layout and flow of the voter experience within the poll.

Looking Ahead Toward a Voting Device Solution

As we look ahead toward the inevitable necessity of implementing a new voting device, we have learned that it is important not to become overly focused on the big blue dot in the blueprint. It is true that a big part of the project is about implementing technology, but the design effort we have undertaken with IDEO continually reminds us that it is the voter experience, as validated through an empathetic, iterative and voter-oriented design methodology, that will drive the direction of the VSAP. This includes not only what the voting device looks like and how it functions, but also when and where and how the voter votes. Our design effort might ultimately suggest a voter-validated solution that only works if the regulatory or legal framework of elections administration also changes, and if that turns out to be the case, then the VSAP may also involve a policy or legislative agenda. Because in the end, if we let technology or government or existing legal frameworks drive the solution at the risk of alienating the voter, then we have done a great disservice to our profession and to the role of participatory democracy in legitimizing those who govern.

For these reasons, the VSAP was deliberately structured as a comprehensive, multi-faceted effort, involving research, collaboration, stakeholder engagement, public outreach, partnership building, and innovative design methodologies, and lastly, and only lastly, do we get to the technical specifications of the system. As Dean emphasized in his earlier testimony to the Commission, “Good governance begins with good elections.” We believe the VSAP represents the best voting systems implementation model to lead us in that direction.

REFERENCE MATERIAL

1. Jones, Douglas W., ***Technologists as Political Reformers: Lessons from the Early History of Voting Machines***, University of Iowa, October 13, 2006. To access the paper visit, <http://homepage.cs.uiowa.edu/~jones/voting/SHOTpaper.pdf>
2. Pew Research's Pew Internet and American Life Project is continually conducting surveys of American's use of the internet and computing technologies as part of its ongoing research. For the latest statistics, analysis, and reporting, visit their website at <http://www.pewinternet.org/>
3. These concepts are products of our engagement with IDEO for the VSAP project. For more about IDEO, visit <http://www.ideo.com/>