U.S. Elections and Voting Landscape Study Highlights/Observations
November 2018[1]

The key of objectives of U.S. Voting Landscape Study were to 1) generate an assessment of the elections voting landscape in the U.S., and 2) identify key issues of concern to election officials. A review of the pertinent academic and industry literature was conducted in January and February of 2018, and identified several key election issues: security, accessibility, usability, cost and adaptability, as background for developing interview protocols. Monitoring of voting related activities has been maintained on an ongoing basis.

Drawing on an stratified list of representative jurisdictions, 10 interviews were conducted with election officials from the target jurisdictions. Highlights of the interviews are presented below followed by a set of overall observations and suggestions for more in-depth research that captures market specific information as well as which can inform general understanding of the current, highly changing, election landscape.

Key Emergent Themes

- **Aging machines:** Electronic voting machines purchased at 2000 election have reached functional end of life. Need for modernization coupled with cybersecurity and accessibility are of concern for the public and election officials, and can be assumed to be a factor in replacement solicitations (GAO, 2018). This particular issue is somewhat problematic as it is frequently conflated with issues of hacking, cybersecurity and accessibility

- **Funding factors**: The Consolidated Appropriations Act of 2018 (March 23, 2018), included $380 million in grants, made available to states to improve the administration of elections for Federal office, enhance technology and make certain election security improvements. In addition, as of 2015, 14 states had less that 50% of the original HAVA funding left, 36 had less that 10% of allocated funding left. HAVA originally provided 3Billion in 2002. Some states are in the process of allocating additional funding for technology replacement/modernization.

- **Impact of regulatory environment**: 37 states and D.C. use some aspects of the federal testing and certification program designed by the Elections Advisory Commission. The remaining states use their own standards. This saves money in some cases, but acts as a barrier to innovation and system updates.

- **Certification cost** for vendors can run over $1 or $2 million. As in any other industry, "certification processes raise barriers of entry for competitors and favors incumbents" (Penn, 2017). This reduces the opportunity for start-ups or other innovative alternatives to existing options.

- **Voter concerns**: Trustworthiness of the electoral system (Pew, 2018), as well as a range of underlying themes (e.g. technology security and accuracy, fairness of process, accessibility), all of which can be addressed in as part of informed research and messaging. This raises the question of how officials can engage, and take into account stakeholder perspectives, broadly?

- **Voting officials expertise**: One of the observations that can be made based on the interviews is based on the fact that officials acknowledge that they may lack expertise and/or resources to adequately

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specify and evaluate vendor solutions. This suggests that there is a need for developing thought leadership in terms of the "big" issues facing election officials. (Penn, 2017). Dimensions that could be addressed include development of best practices, technology and management "primers" or even online assessment tools.

- **Role of procurements process**. Interrelated with the issue of election official technical knowledge of voting machine technology/processes is the issue of whether election officials have enough knowledge of technological processes to be able to specify RFPs? A valuable exercise would be to obtain and conduct an analysis of voting RFP to discern common requirements and or problems that occur as a result of the way in which RFPs have been developed.

- **Competing stakeholder needs**: Aside from the election officials, it is important to address the various involved stakeholders. Business and political interests, people with disabilities, social and language related groups and the aging have a vested interest in inclusive, accessible transparent elections. To some extent addressing these concerns has focused on accessibility, but shifting the conversation to one that addresses issues of usability in a larger sense of effective elections could be a competitive advantage.

- **Key areas of interest include security, customizability, innovation, accessibility, and sustainability** (Penn, 2017).What are (or should) be reasonable cycles for replacement/upgrade for digital systems? Security must be balanced against other criteria. Not easy – even the Elections Assistance Commission was hacked in Dec. 2016. Several recent GAO reports (GAO, 2018; GAO, 2017) have done solid jobs of delineating some of these concerns

- **Lack of competition** - three vendors control 92% of the market.

- **Highly fragmented customer base.** Individual states and counties have relative independence to decide on voting systems. The smaller size of these clients, in addition to the certification processes needed, and the substantial investments in direct marketing, lobbying and other political activity, further complicate market innovation**.** There are about 10,300 electoral jurisdictions nationally (GAO, 2018)

- **Four factors jurisdictions consider in equipment replacement:**

  o Need for voting equipment to meet federal, state, and local system standards and requirements,

  o Cost to acquire new equipment and availability of funding,

  o Ability to maintain equipment and timely vendor support,

  o Overall performance/features including usability and longevity of voting equipment (GAO, 2018).

Interview Highlights

- **Factor Ranking:** A commonly repeated observation was that "all of the [identified] factors are important" and hence, difficult to rank. Pressing a bit harder, 70% of the respondents indicated security is the most important elements, with 60% stressing that accessibility/usability was the second most important element. The third most important element based on ranking, was sustainability (30%).

- **Common Themes:**

  o **Importance of voting/voter experience beyond accessibilit**y: DREs were mentioned as increasingly popular with voters and frequently cited as increasing accessibility. Across the interviews, there is a heightened awareness of a need of "voting experience" usability for all. Broadly, this includes poll workers, election officials, operational staff. This also suggest an expanded outreach opportunity

for officials to help reeducate how voters perceive of "access" to one of functionality and great usability and ease of voting.

- **Vote By Mail as an option:** Officials mention Oregon as a meaningful case of vote by mail implementation. "Baby steps" include use of electronic (or fax) return of VBM ballots, though usually in exceptional or unusual cases (e.g. UOCAVA).

- **Hybrid systems:** Increasing interest was mentioned in hybrid systems as a solution – paper and electronic, that also combine security with administration efficiency.

- **Greater impact of design that utilizes advances in voting technology:** *Process usability,* (In addition to technological accessibility*)* is needed in terms of personalizing a voting experience, font, languages, colors, multichannel/mode of delivering an equivalent experience

- **Bottlenecks:** While voters complain about "voting back-ups" in the interviews, officials seldom observed problems with *machines*, but rather, with voter *check-in and accommodations*. Voter verification often is a bottleneck, less so as electronic pollbook are implmented. The corollary – lines are less a problem that media coverage and public perception of problems.

- **From Vendors:** Officials expressed a desire for greater vendor flexibility, responsiveness, system updates, ease of maintenance, and systems which make it easy to train pollworkers and election staff.

- **Dimensions of Sustainability:** Given officials understanding of system operation and characteristics, better articulation of the dimensions of longevity of technologies, that is, address types and tradeoffs of sustainability of technology and voting systems.

- **Thought leadership:** Considerable need for education and outreach materials and best practices on security, accessibility, hacking – for both voters / officials. This might also take the form of on going dialogues across the different stakeholder groups.

General Observations

- **Alternative voting strategies:** Nontraditional possibilities include buyer coalitions or aggregations of election (or perhaps competitive processes sponsored by professional/governmental associations), and open source ("do it yourself") approaches. Other non-technological possibilities are return to paper voting systems, and digital absentee and vote by mail systems. These have the disadvantages of being slower and more labor intensive, and present other security problems.

- **Monitoring points:** Given the rapidly changing political environment, and system replacement timing in advance of the 2020 Presidential elections, any alternative voting and election solutions need to be developed taking onto account a number of dimensions: **regulatory/legislative** factors, not just the Federal regulatory environment, but state and local government activity, **political environment and election optics** influence election official response when in reactive modes, **stakeholder concerns** such as security and accessibility on all three levels as these can be key supporters or opponents, and **media reported technological change.** The latter is important in that it may influence public opinion.

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- **Resources:** Needed – **'**Best practices' toolkits, stakeholder engagement (especially disability community, aging, social media platforms) tools including interactive training and gamification activities.

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