2017 Requirements for Wayland's Electronic Voting System

1. Proposal

- a. Propose full-service "cost-per-session" pricing parameterized by the maximum number of voters that must be accommodated and the number of Check-in Stations required
- b. Survive any single-point failure
- c. Support multi-venue meetings (within a quarter-mile radius)
- d. Utilize handsets that can
 - Display votes and error messages
 - Operate for at least 6 hours on a fully charged battery
 - Communicate with a transceiver within a 300 foot radius using low power

2. Security

- a. Deploy without connection to the internet
- b. Employ VPN to encrypt messages carried over inter-room cables
- c. While the voting window is open, display each voter's most recent choice on the voter's handset; when the voting window closes, continue to display each voter's most recent choice until the Moderator declares the vote to be final
- d. Provide a demonstrable means of verifying the integrity of the vote, e.g. a random audit
- 3. Installation
 - a. Install and test all required electronic voting equipment, including each handset's batteries
 - b. Conduct a full-dress rehearsal no later than six hours before the first session
 - c. Provision ready-to-issue replacement handsets
 - d. Enable the Moderator to specify the duration of the voting window to be 30 seconds or less
- 4. Check-In
 - a. Maintain a **voting roster** and **voter-handset list** by scanning each voter's Massachusetts State barcode and assigned handset code, automating the Town Meeting voter check-in procedure without creating a backup in the check-in process, and providing the Town Clerk with Massachusetts State-required attendance list after each Session.
 - b. Permit voters to check-in after the meeting has started, and to check-in after having checked-out
 - c. "Nice-to-have" functionality
 - i. the State-required attendance list is generated in a form that can be electronically conveyed to the Massachusetts State Voter Registration Information System.
 - ii. the welcome station functionality is implemented on Wayland's existing iPad-based Poll Pad tablets

5. Voting

- a. In preparation for a vote, be able to update the **voting roster** in 10 seconds or less
- b. Provide each voter with a voting handset having buttons for voting Yes, No, and Clear
- c. While the voting window is open, display acknowledgement of the receipt of each voter's most recent choice on the voting handset; specify and explain the worst-case response times for populations of 400, 800, and 1200 voters
- d. When the voting window closes, continue to display each voter's most recent choice until the Moderator declares the vote to be final
- e. If during the voting window a voter presses buttons on the voting handset other than Yes, No, and Clear, display "invalid entry" in the voting handset display
- f. If a voter whose voting handset is not in the **voting roster** attempts to vote, display "can't vote yet" in the voting handset display
- g. If an error occurs when a voter attempts to vote, display "get Help N" in the voting handset display, where N is an error code; provide a list of all valid error codes and an explanation and recommended corrective action for each
- h. Accept manually-counted votes
- i. Generate video output that shows the final vote, including manually-counted votes (Yes, No, Clear) and percentages (Yes/(Yes+No), No/(Yes+No))
- j. Expunge handset voting records after each vote

6. Check-out

- a. Recover handsets from voters leaving during a session and remove them from the **voting roster** within 10 minutes
- b. Recover handsets from voters leaving at the end of a session without creating a backup in voter departure

c. Provide a list of all voters that did not return their assigned handset

7. De-installation

a. Remove all electronic voting equipment