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Nomination for Outstanding Innovation in Election Cybersecurity and Technology
Mail-in Ballot Sorting, Scanning, and Timestamping Project

Description: Developing a process to Sort, Scan, Time stamp, and Receive ballot envelopes, using the Tritek Sorting Machine. We recognize the opportunity integrating mail sorting and scanning equipment would have on ballot security by substantially increasing the speed with which ballots are checked into MDVOTERS and voters are notified that their ballot has been received via email or text message.

- **Innovation:** When the Tritek Sorting Machine was approved for use during the 2022 Gubernatorial Election, our Vote by Mail (VBM) department decided we wanted the machine to do more tasks than just sorting and timestamping ballot envelopes. The VBM team wanted the Tritek machine to be able to upload the voter's information into the MDVOTERS database, used by the Maryland State Board of Elections (SBE) to check in voted ballots. This would save the VBM Ballot receiving team a total of 3 steps in the receiving process. Additionally, the new equipment allowed our team to increase the speed with which we notify voters their ballot has been received via email or text message.

  To accomplish this new task, the VBM team needed to collaborate with representatives from both the Maryland State Board of Elections (SBE) in Annapolis, MD and Tritek Technologies, Inc. out of Wilmington, DE. This joint effort between the three teams dedicated many hours trying to get this task completed before the 2022 Primary election, which originally was supposed to take place in June, but then moved to July. Unfortunately, the timing was too short for us to achieve this goal before the Primary Election, but we were able to complete and test this solution before the General Election. We were the only local Board in Maryland that was able to scan and upload voter ballot information into the MDVOTERS database, from the Tritek mail machine, during the lead up to the General Election, thus saving time and cost from our VBM Ballot receiving process, while substantially increasing the care, custody, and control we maintain over the voted ballots.

- **Sustainability:** In the General Election, we learned with the Tritek machine, we were able to scan "mail-in" ballots much faster and more efficiently into the MDVOTERS database compared to the Primary Election, when we scanned the ballots in by hand. During the Primary election, it would take at least two and half hours for employees to sort and scan ballots manually into the MDVOTERS database, but in the General election we were able to do this in a fraction of the time. Through usage of the Tritek Sorting machine, our future plans will lead to expanding the mail in ballot intake process. As the

popularity of mail-in voting increases, we are well positioned to meet the needs of the voting public and accommodate a 100% vote by mail election if needed.

- **Outreach Efforts**: We have reached out to our neighboring Local Boards of Elections (LBEs) in Maryland, as well as with the Maryland Association of Election Officials (MAEO) to highlight the security benefits of using this machine. Hopefully this sparks future growth and new innovations to this ballot intake process. With the shorter process time, the voter will receive confirmation that his or her ballot was received even faster, encouraging more trust in the voting system.

- **Cost-Effectiveness**: The Tritek machine automates our 3-step process for VBM Ballot Intake procedures. The VBM team uses 21 inches long mail trays to transport the ballot envelope within the facility. These mail trays can hold a variable amount of ballot envelopes and depending on thickness can generally hold 500 ballot envelopes. We use this as our unit of measure.
    - Step 1–Timestamping the Ballot Envelopes: this takes the VBM Receiving team member an average of 25 minutes to complete one tray while the Tritek machine takes 5 minutes to complete.
    - Step 2–Sorting the Ballots: grouping the ballot envelopes into 195 separate divisions based on Anne Arundel County's voting precincts. This takes the VBM Receiving team member an average of 1 hour to complete one tray, while the Tritek takes only 25 minutes.
    - Step 3–Receiving the Ballots into MDVOTERS: includes assigning a "Batch number" to all of the individual batches. This takes the VBM Receiving team member an average of 10 minutes per batch, approximately 1 hour and 40 minutes per tray. The Tritek machine can have this step done in 20 minutes. By comparison, we would need to pay an employee 3 hours 10 minutes to duplicate the same productivity as using the Tritek machine for 50 minutes. The Tritek machine uses 73% less time to equal the task of an employee.

- **Replicability**: This process can be replicated by any LBE in the United States that accepts Mail-in voting; especially those 43 states that allow "Absentee Voting for all voters" or "Ballots mailed directly to all voters". If a LBE chooses to acquire a Tritek machine, they would need to work closely with a representative from Tritek and representative(s) from the agency that oversees that jurisdiction's voter database. The team's main goal is to make sure that the Tritek machine and the voter database are able to communicate with each other, without error. Once the voter information is forwarded and received, the LBE will save time, money, and other resources to get their election goals accomplished, while substantially increasing our ballot care, custody and control. We also decrease the time to communicate with the voter in regards to their ballot status.

- **Generating Positive Results**: Prior to the full implementation of the Tritek machine, our ballot Intake process during the Primary Election resulted in the team needing to work many hours of overtime. This led to low morale and the feeling of being burned out as

we conducted the election and several days of vote by mail canvassing. As a result, it was decided that the joint VBM/SBE/Tritek team would reconcentrate its efforts in formulating the software that would work with the two separate systems, to get the machine to successfully complete uploading the voter's information into the MDVOTERS database. A deadline was set for 2 months prior to the General Election to complete the software updates and successfully conduct our proof of concept testing. Through trial and error, we finally were able to upload 2000 ballots successfully in a testing environment.

Beginning October 15th, our team started scanning ballot envelopes that were received from voters in the live environment. There were 1,811 total ballots; 1,808 were uploaded and 3 ballots were manually entered, which is a 99.83% success rate for our initial upload. Over the next 3 and half weeks, we continued using the Tritek machine daily to scan ballot envelopes. On General Election Day, November 8th, we scanned and uploaded 3,054 mail-in ballots with 99.05% success rate. Only 29 ballots had to be manually entered into the MDVOTERS database.

For the General Election, we uploaded 48,027 out of 60,088 mail-in ballots through the Tritek machine, which left us with 12,061 ballots that were manually entered into MDVOTERS. We have determined this group of ballots consists mostly of vote by mail ballots returned by voters who requested to receive their ballot via email. Through software development that is currently underway, we will solve this issue well before the 2024 Primary Election mail-in ballots begin to return.

However, the manually entered ballots from the General Election are a small quantity compared to the 32,442 mail-in ballots manually entered into MDVOTERS during the Primary Election. With the capability of uploading the voter's ballot information into the MDVOTERS database through the Tritek machine, we were able to save 500 employee work hours in the General Election than we used in the Primary Election while increasing the overall safety, security, dependability, and efficiency of the vote by mail process.