

# CUYAHOGA COUNTY TABULATION VENDOR – ADDITIONAL QUESTION SURVEY

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Hart  
Intercivic



## Cuyahoga County Tabulation Vendor – Additional Question Survey Responses

**1. Are there any RFP's you did not win outside of Ohio? If so, please provide the name of the election jurisdiction and the date the RFP was released.**

Outside of Ohio, Hart has participated in RFPs nationwide. In some jurisdictions, the RFP process is the preferred method of procurement. On occasion we are not the chosen vendor, and some examples include: Cook County, Illinois RFP 1718-16167 (May 2017); Caldwell County, Texas RFP #2 (February 2018); City of Philadelphia, Pennsylvania RFP Election System (November 2018).

**2. Have you been party to any litigation regarding any of your voting system (past or present)? Are there any lawsuits currently still outstanding? If yes, please provide the details.**

No. Hart has not been involved in any litigation regarding our voting system and we do not have any lawsuits.

**3. Are there any known anomalies with your system?**

We have reported three issues to the EAC, none of which impact the version of software that we are bringing to Ohio and Cuyahoga County.

**4. What is your timeline from signing the contract to full implementation? What is your timeline for the delivery of all voting equipment? What is your timeline for staff training?**

Our timelines for implementation of the Cuyahoga County project are presently estimated as noted below:

Signing to full implementation: 43 days  
Delivery of equipment: 13 days  
Staff training: 25 days

We propose a phased implementation approach and introduced this in response to the County survey in October 2018. This approach minimizes risk and positions your jurisdiction for a trouble-free Verity implementation.

We manage projects in four overlapping phases:

- Phase I: Planning
- Phase II: Implementation
- Phase III: Go-Live
- Phase IV: Support



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### **5. What is your testing process in addition to EAC testing requirements?**

At Hart, we test our systems against the rigors of a well-defined Quality Management and Quality Assurance program. Our custom Quality Assurance methodology enables fast iterative development, while ensuring that a rigorous system integration is performed on the complete final product. These practices are embedded in a best-in-class quality management tool enabling Hart's processes to be efficient and traceable from requirements through test execution and defect management.

We have provided detail on our Quality Management System in an attached file. In addition to the EAC testing process, Verity is put through state testing in order to achieve certification. We have successfully achieved certification of our Verity Voting system in 14 states to date

### **6. How do we import election information from our VR system (DIMs) to the tabulation system (Districts, Precincts, Offices, Candidates, Issues, Locations, etc.)?**

This is a customer by customer integration. Verity Data supports importing all breakdowns noted, and we typically build middleware to convert the VR system format into a format for Verity Data. We have done this with our legacy HVS product and are prepared to support Cuyahoga County.

### **7. Are you willing to work with CCBOE to create a tool to import data from our voter registration system into your election system (if there is not one available currently)?**

Yes. This is part of our typical project management plan and part of the scope of the project.

### **8. Is there an option to proof all Spanish data in reports prior to the ballot layout?**

Yes. Multi-languages ballots can be output for proof.

The ballot layout is available before entering any translations and throughout the translation process. We recommend using ballot previews to see the translation in the context of the ballot. However, if you prefer working off of a list you can do that using the translation interface or an export from the system.



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### **9. Do you keep your software current with Microsoft Operating System changes?**

Verity's uses a version of Windows (Windows Embedded 7) that is different in many ways to standard Windows OS. Hart is a licensee of the Windows Embedded 7 operating system and builds the minimally required operating systems components in house needed to operate the voting system (a small subset of Windows components). Referred to as "surface attack reduction," in which only the minimally required components are utilized, and no more (all superfluous components are removed, Internet Explorer for example). This reduces the attack footprint and maintenance footprint required, and dramatically reduces the rate of necessary updates. If any important updates to the components in use by Hart InterCivic are released by Microsoft, they will be incorporated into the next system release.

### **10. How frequent is the release of software updates/upgrades? Is there a cost for this service?**

Upgrades are not performed to a schedule; we upgrade based on need. There is no cost for upgrades unless the customer requests that Hart be on site to provide support during the upgrade. We provide instruction and all upgrades can be done independently of the vendor.

### **11. How long would preventative maintenance take on the precinct scanner, ADA device and central scanner?**

Preventative maintenance is defined in a minimal set of operations that we recommend you work into your standard process. Hart trains local jurisdiction technical staff to perform these simple, routine maintenance tasks, and we provide step-by-step instructions as part of your Verity documentation. If you elect to perform all tasks, we estimate it will take approximately 20 minutes per Verity unit, per year.

Maintenance tasks for Hart-manufactured Verity components include:

- As needed - Clean display.
- Periodically between elections - Inspect and clean scanner (Verity Scan only).
- Recommended annually - Calibrate touchscreen.
- Annually - If installed, check condition of screen protector.
- Annually - Perform scanner calibration diagnostic procedure (Verity Scan only).
- Every 3 years - Replace coin battery in tablet.
- Every 4 years - Replace rechargeable backup battery in tablet.



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### **12. Would we be able to create election media for each of our polling locations in the county, run test ballots, and upload results using limited scanners (reusing the same scanners) for the different polling locations?**

Yes. Verity supports this process. A polling place can be configured so that all of the ballot styles in your election can be supported on a single device. Additionally, a single device can be configured to test a specific polling place and later used to test a different polling place in the test process.

### **13. What are the security environments offered with the Tabulation Server and Workstations?**

Multiple security mechanisms prevent the modification of software or internal configurations at all times, and all Verity Voting software applications are installed in a secure “kiosk” mode that disallows user access to the operating system of the workstation on which the application is installed.

Verity user roles adhere to the principle of least privilege. Verity requires that all users have unique login credentials including but not limited to a unique username and unique password. Verity password complexity and login rules are configurable by the election official administering the system.

Verity employs powerful whitelisting technology to protect against malware and viruses. Typical anti-virus/malware solutions use “black listing” which checks applications against a list of known threats but cannot protect against unknown threats. Verity’s whitelisting approach only allows pre-approved software to run, which provides full protection against both known and unknown threats.

Verity’s best practices for security include:

- All applications are whitelisted and protect against both known and unknown threats.
- Secure BIOS (“verified boot software”) on devices.
- Only verified components can be executed.
- Intrusion detection – physical and application security.
- Flexible, strong role management.
- Data is signed to verify source.
- Two-factor authentication.
- NIST-validated encryption.
- Redundancy, randomization of cast vote records.



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### **14. Do you have a Disaster Recovery Plan for the Tabulation Server/Workstations without interruption?**

We have established best practices for disaster recovery and will work with you to establish a disaster recovery plan that works for you.

PC workstations include RAID drives which provide continuous backup and redundancy for all data and recovery capabilities in the event of a hardware failure.

Backup is accomplished by copying election data and audit logs to a portable hard drive, which uploads the data to a storage array at the County office. Restore functions are built in to the applications.

### **15. What is the standard capacity of one memory stick? Are there memory sticks with a higher capacity?**

The capacity of a Verity vDrive portable flash media device is 8GB. Higher capacity vDrives are not necessary. We selected the 8GB size in order to support the largest elections in the nation.

### **16. Are memory sticks only able to be uploaded into one results category?**

Yes. Each memory stick has a Unique Identifier and cannot be read more than once in a tabulation task.

### **17. Does the system provide election results in Excel format?**

Verity Count produces reports in PDF, CSV and XLSX formats. Additionally, Verity Count produces certain results reports (cumulative, canvassing, precinct) in HTML format.

### **18. What methods are available to transfer the data from high speed scanners? (Network/USB stick/other)**

Verity vDrives are used in the Verity Voting system. These are portable flash memory drives.

Cast vote records and other election data are recorded on a portable vDrive flash memory device and digitally signed using FIPS 140-2 SHA-2 NIST-validated methods to ensure non-repudiation. At close of polls, the vDrive is removed from Verity Central by an authorized election official and delivered to the Verity Count tabulation workstation.



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**19. What reports and formats (XML/txt) are available for the election results during the upload process? Can these be generated without stopping the upload process?**

You can run reports while other stations continue to read-in vDrives (i.e., upload results).

**20. Do you have a dashboard to see the status of the tabulation process (Number of sticks uploaded, Number of sticks not uploaded, Number of precincts)?**

Yes. We have a user friendly dashboard that is visible while you are reading in vDrives and displays data to inform the user of progress, such as vDrives loaded and remaining, and precincts reported.

**21. Does your system have page counters i.e. will it tell us how many pg. 1's, pg. 2's, etc. have been scanned for each precinct?**

Verity has sheet counters that record the total number of sheets and we would consider enhancing our page counters based on your input in future updates.

**22. How long would it take to backup/clear/restore 1,000,000 images?**

As a working estimate, in the configuration proposed for Cuyahoga County, it will take approximately 4 hours to backup, clear or restore a quantity of 1,000,000 images. This number is achieved base on our proposed configuration for Verity Central for the County, which calls for 2 central scan servers.

There are several factors that can impact the length of time for these actions, including complexity and length of the ballot. Our best practice recommendations for the County are to archive, or backup, periodically, such as at the end of the day; and write cast vote records to a vDrive throughout the scanning process, which will serve as an additional incremental backup.

**23. Is there a way to tabulate new ballots and then bring in Absentee results which have already been tabulated?**

We reviewed Section 1.04 Official Canvass, which was provided by email on March 25, 2019, and we are confident that our system supports the process. Our tabulation system allows you to set up multiple tabulation tasks in a single election allowing you to tabulate new ballots and bring in your Absentee results which have been tabulated.



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**24. Does the tabulation system provide a Location based/City based test deck?  
We would like to generate our own test decks, what options are available to  
export data?**

Yes, with Verity Build, you will be able to produce your own test decks.

Verity Build, Verity's software application for election definition and ballot printing, enables the production of pre-marked, test decks for logic and accuracy testing. As an alternative to manually selecting desired precinct styles and quantities from the graphic user interface, Verity Build enables users to automate the printing process by importing a print queue file, which specifies ballots to be printed in batches. The print queue file can accommodate user-specified marking patterns for each contest on the ballots included in the print job.

**25. How many days will be needed for Project Management and Training during  
and after the implementation period?**

We presently estimate 43 days for the implementation period. We will provide a complete draft project schedule within two weeks.

**26. Is there a plan for a new ballot box?**

The current ballot box is certified at the federal and state level; we are evaluating options and seeking an optimal solution.

**27. Can Hart Intercivic fabricate a ballot box similar to the one we currently  
use?**

Yes. We understand options are under evaluation for the County for an enhanced ballot box. Hart would be pleased to engage with the County on this and review alternative, optimal solutions for Cuyahoga County.

**28. What counties currently use Unique ID? Was it available in previous  
versions of your system?**

Yes, Unique ID was available in previous version of the voting system, but serialized. Today the Unique ID is non-serialized. Use of Unique ID is a customer-level choice that we do not track. The Unique IDs is a security feature of the system that keep the voter's identity secret while preventing multiple scans of the same ballot image.



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### **29. Is there a different ADA controller? Is a backup battery needed for the ADA printer?**

The Verity ADA controller is our Audio Tactile Interface (ATI), certified for use with voting on Verity devices. Our ATI conforms with the requirements of the Americans with Disabilities Act and features: tactile buttons, a headphone jack for headphones, a jack for audio-tactile interfaces such as jelly switches and sip-and-puff interfaces.

A UPS is used to back up power on the printer.

### **30. If we chose a different high speed scanner would you be able to certify it to work with your system?**

Hart regularly reviews COTS scanning solutions. A different high speed scanner would have to be certified with the voting system. Hart is interested in reviewing any comparable scanner identified by Cuyahoga County to assess for potential inclusion with the product in the future.

### **31. What criteria would a scanner need to become certified with your system?**

We would need the time to certify a scanner should you determine that you have a preference for replacing the Canon DRG1130 Central Scanner proposed by Hart. Once the scanner is identified, Hart's QA team would need to qualify the scanner for use with the Verity Voting System and determine the requirements for supporting the scanner (driver, software changes, etc.). Once that process has been completed, the additional scanner would need to be approved by the EAC and by the State of Ohio.

### **32. Will there be a new version of your system that alerts the voter of indeterminate marks? If so, when?**

Yes, our latest version of Verity that just completed certification (2.3) has the ability to turn on indeterminate marks. It is undetermined at this point when we will take it to Ohio for certification, but we will keep you informed.

### **33. Is Hart planning to allow more than 5 election results categories in the future?**

If Cuyahoga County would like to use more than 5 election results types in Verity, we would be pleased to work with you to gather requirements and get this on our product roadmap.