

# Distribution of Chromebook Process Audit

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**Prepared by**

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## EXECUTIVE SUMMARY

As part of the FY2022 Audit Work Plan, the Office of Internal Audit (Audit) has performed a Distribution of Chromebooks Process Audit. Technology Services (Technology) is responsible for implementing the Guidelines for Richmond Public School Division's 1:1 Distance Learning Program for students.

On March 13, 2020 Richmond Public Schools' School Board and Administration (RPS) decided to close the schools as a precaution to protect the students from the Coronavirus (COVID-19) Pandemic. As a result of the school closures, RPS decided it was necessary to distribute Chromebooks, (laptops) to students as a contingency plan to ensure all students were able to complete the 2019/2020 academic school year. Following the closure of schools, the School Board approved the purchase of Chromebooks. Additionally in fiscal year 2020 the RPS Administration decided that it would adopt a distant learning model for the 2020/2021 school year. The 1:1 program is currently underwritten by funds received from the Coronavirus Aid, Relief, and Economic, Security Act (CARES) Funding. Subsequently, the 2020/2021 school year was a 100% distant learning for a majority of the school year.

The audit included all Chromebooks recorded in Tempest as of March 14, 2022. The audit period covered disbursements to students between July 1, 2019 – September 30, 2021, and inventory on hand as of March 14, 2022. The emphasis of the audit was on the Chromebooks distributed to Students for the 1:1 Program. Examination of documents and data, as well as interviews and walk-throughs of processes, were the methods of reviewing internal controls. This audit was performed to:

- Confirm the inventory of Chromebooks on hand.
- Determine if the process/program controls established policies and procedures governed by Technology Services are operating as intended to mitigate risks associated with the RPS distant learning program.

As a result of this audit, we identified three findings. Technology concurs with the findings and recommendations included in this report. A summary of the findings and recommendations are provided below:

- **Finding 1: Managing and Overseeing the 1:1 Program:** Technology does not have a comprehensive procedure manual that details various processes such as periodic inventory reporting from schools to Technology to ensure Schools are managing its Chromebook inventory properly. We also noted instances where gaps in program monitoring caused inaccuracies within the Chromebook inventory; students not being assigned Chromebooks in Tempest at the time of distribution to the students. Examples include:
  - Inactive students still have Chromebooks assigned to them in Tempest.
  - Students listed as active in Tempest have not been assigned a Chromebook.
  - An excessive number of devices are unassigned

- Active students are assigned multiple Chromebooks
- **Finding 2: Chromebooks Collected and Delivered to/from the Schools:** We found a gap in the process related to collecting excess, aging, and/or damaged Chromebooks from the schools. The current process of Chromebooks being removed from RPS Schools by TIG is manual and lends itself to miscommunication and mismanagement of inventory.
- **Finding 3: School Level Processes:** We noted through interviews and observations with School Teams and Technology staff that schools do not have a consistent process in place or are not following certain procedures as they relate to Chromebooks.

The Internal Audit department appreciates the cooperation of Technology and School staff members during our Audit.

## **BACKGROUND**

On March 13, 2020 Richmond Public Schools' School Board and Administration (RPS) decided to close the schools as a precaution to protect the students from the Coronavirus (COVID-19) Pandemic. As a result of the school closures, RPS decided it was necessary to distribute Chromebooks, (laptops) to students as a contingency plan to ensure all students were able to complete the 2019/2020 academic school year. Following the closure of schools, the School Board approved the purchase of Chromebooks. Additionally in fiscal year 2020 the RPS Administration decided that it would adopt a distant learning model for the 2020/2021 school year. The 1:1 program is currently underwritten by funds received from the Coronavirus Aid, Relief, and Economic Security Act (CARES) Funding. Subsequently, the 2020/2021 school year was a 100% distant learning for a majority of the school year.

RPS's Asset Management Team within Technology Services is responsible for the overall distribution process of Chromebooks to the RPS student body. RPS uses the Technology Integrated Group (TIG) to manage purchasing and deployment to schools. To ensure the Chromebooks are properly accounted for, the Asset Management Team utilizes the Tempest asset management software. The Tempest asset management and repair ticketing application is a proprietary application of the Technology Integration Group (TIG). Within the entire Distribution Process there are three major phases, purchasing, deployment to schools; and distribution and collection to and from students. Each Chromebook runs on the Google Chrome Operating System is managed by the Google Administrative Console (GAC). The GAC maintains certain data, including when the device was last used and by whom.

### **Chromebook Purchases:**

The Chromebook Distribution Process begins with Chromebook purchasing. RPS has contracted with TIG as the initial staging location prior to deployment of Chromebooks to the Schools for distribution to students. TIG reviews all Chromebooks upon receipt from the manufacturer, compares the receiving documentation to the RPS Purchase Order, tags the Chromebook with a RPS Asset Tag, and logs the Chromebook's asset tag, serial number into the Tempest to ensure all Chromebooks that were ordered are

properly accounted for.

### **Deployment to Schools:**

In order to accurately deploy the correct number of Chromebooks and chargers to the schools, the Asset Management Team gets a count of the anticipated Student Enrollment at each school from the RPS Enrollment application, Aspen in August prior to the start of school in September. Additionally, Aspen is integrated with Tempest for student counts and to ensure Student's Records (Student ID's, Names, Grade Level, and School) are accurately recorded into the Asset Management System. When the computers are deployed to Schools, Schools are given a 10% surplus (referred to as spares) over the enrollment to cover any additional students that may have enrolled after August 31<sup>st</sup> and for replacements.

### **Student Distribution and Collection:**

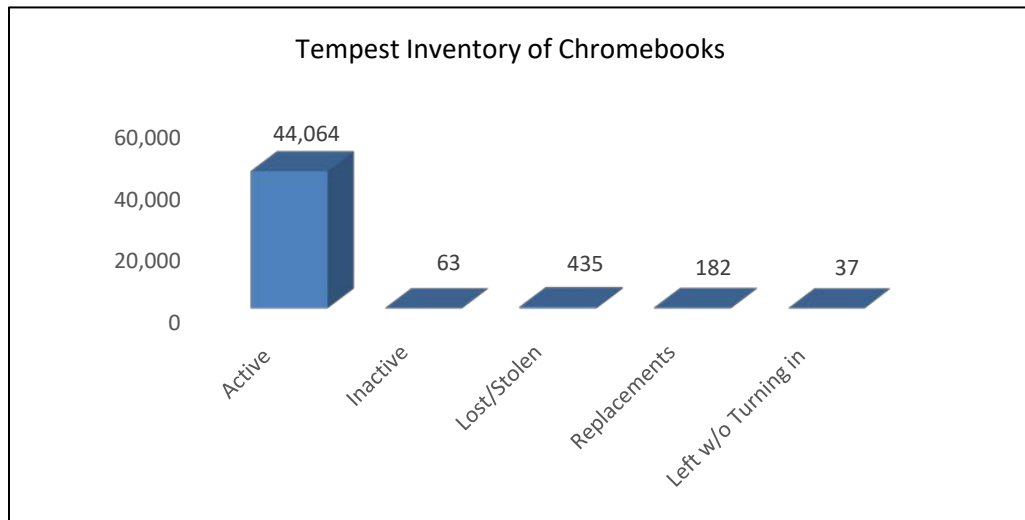
In order to properly distribute Chromebooks to Students each school designates a team to assign Chromebooks to students. The Asset Management Team developed a Standard Operating Procedure (SOP), **RPS 1-1 Student Chromebook Procedures** that serves as a guideline for all schools. However, schools have the autonomy to develop a customized plan for distribution and collection that is specific to the school. As a part of the distribution and collection to the students each school is responsible for the following:

- Ensuring students/parents have properly completed the Chromebook usage agreement prior to issuing a Chromebook to Students.
- Ensuring each student has been assigned a Chromebook using Tempest.
- Ensuring the school's Chromebook inventory including spares are accurate.
- Collection of all assigned Chromebooks on or before July 1<sup>st</sup>.

### **Other Processes:**

- If a Chromebook is damaged, the School Designee (Designee) requests repairs from Technology. After the Designee collects the broken Chromebook from the student, they issue a new Chromebook to the student using the school's spares inventory. Chromebooks that are not able to be repaired are marked as whole unit replacement in Tempest by Technology. Depending on the damage, the designee coordinates with the school's office staff to assess a damage fee to the student. The fee schedule is listed in the **RPS 1-1 Student Chromebook Procedures**.
- Technology created a Lost or Stolen Chromebook Procedure to assist the Schools with properly handling instances where Chromebooks are lost or stolen. If a Chromebook is lost or stolen, the student notifies the designee who will mark the asset as such in Tempest and contact Technology to disable the Chromebook. A disabled device cannot be turned on or operated. The Designee coordinates with the school's office staff to assess a lost device fee to the student. Students are not assessed a fee when their device is stolen, but a police report must be provided. The fee schedule is listed in

the RPS 1-1 Student Chromebook Procedures. Tempest maintains data for all Chromebooks since its inception, including retired or lost devices. These Chromebooks fall into the following categories:



Tempest contains 44,781 Chromebooks with an estimated value of \$12.6 mill, \$282.51 per each as of March 14, 2022.<sup>1</sup> We compared an Aspen file with a Tempest file noting several discrepancies between the two source files. As a result, if data from Aspen and Tempest were needed for testwork. We only sampled tested the 44,781 Chromebooks that were distributed to students and logged in Tempest.

### **AUDIT OBJECTIVES**

This audit was performed to:

- Confirm the inventory of Chromebooks on hand.
- Determine if the process/program controls established policies and procedures governed by Technology Services are operating as intended to mitigate risks associated with the RPS distant learning program.

### **AUDIT SCOPE AND METHODOLOGY**

The audit included all Chromebooks recorded in Tempest as of March 14, 2022. The audit period covered disbursements to students between July 1, 2019 – September 30, 2021, and inventory on hand as of March 14, 2022. The emphasis of the audit was on the Chromebooks distributed to Students for the 1:1 Program. Examination of documents and data, as well as interviews and walk-throughs of processes, were the methods of reviewing internal controls.

We gained an understanding of the process used to determine how many new Chromebooks are ordered each year by interviewing staff members and reviewing

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<sup>1</sup> Cost of Chromebooks, \$282.51 was taken from the device replacement fee listed in the RPS-1 Chromebook Distribution Procedures.

supporting documentation.

We reviewed payment documentation for Chromebook purchases made during the audit period. We audited these payments by performing the following testwork:

- Compiled a list of all purchase orders and payments made in AS400, the RPS financial system, for all Chromebook purchases.
- Reviewed purchasing documentation and contracts to determine if the Chromebook purchases were properly procured and approved by the signature authority;
- Compared the dollar amount and quantity receipted in AS400, the RPS purchasing/payment system, to the invoices and the related contracts to ensure the proper amount was paid and quantity received was accurate; and
- Traced the devices purchased to additions in Tempest.

We reviewed data in Tempest and performed the following testwork:

- For all devices assigned to a student, we compared the assigned student member in Tempest and ASPEN, the RPS student information system, to determine if the Chromebooks were assigned to students.
- Analyzed the Tempest data to determine how many active Chromebooks were not assigned to students. This number was compared with the recommended excess Chromebooks, 10% to be held at each school to determine if RPS has an appropriate number of Chromebooks.
- We reviewed the data to determine if students had more than one Chromebook assigned to them.

We also obtained a list of Chromebooks that had a lost or damaged status in Tempest and traced to the corresponding assessments in EPES to ascertain whether the appropriate fees were charged to the students. Finally, we analyzed Tempest data to identify trends of lost or damaged devices at the school level.

We conducted this performance audit in accordance with generally accepted government auditing standards. The standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

## **AUDIT FINDINGS, RESULTS, AND MANAGEMENT RESPONSES**

### **Commendations:**

- The Technology Team held a formal training with all Schools prior to the beginning of the 1:1 Program. Additionally, the Technology Team is available for Tempest training upon request.
- Technology purchases additional accidental insurance to cover for certain occurrences beyond the warranty coverage.
- Technology does attempt to replace Chromebooks as fast as possible to ensure there is a limited loss of learning due to Chromebook replacement needs.

- TIG has a consistent weekly schedule to pick-up aged, damaged, and/or excess Chromebooks.
- Several School Teams communicate and collaborate as peers to create or implement the same processes with a goal of creating a uniformed process amongst the schools.
- Several School Teams have a mechanism in place using Google Sheets to monitor its inventory levels at the school and classroom level.
- School Teams have a personal interest in ensuring the Chromebook Program is run efficiently and cost-effective.
- Technology does attempt to find and/or deactivate Chromebooks as expeditiously as possible when notified by the School Designee of Lost/Stolen devices.

### **Findings, Recommendations and Management Responses:**

#### **Finding No. 1: Managing and Overseeing the 1:1 Program**

Technology did provide schools with the RPS 1-1 Student Chromebook Procedures initially for managing and overseeing the 1:1 Program as it relates to student distributions, collections, and incidents of lost/stolen Chromebooks within Tempest. However, Technology does not have a comprehensive procedure manual that details various processes such as periodic inventory reporting from schools to Technology to ensure Schools are managing its Chromebook inventory properly. We also noted instances where gaps in program monitoring caused inaccuracies within the Chromebook inventory; students not being assigned Chromebooks in Tempest at the time of distribution to the students. Examples include:

- Inactive students still have Chromebooks assigned to them in Tempest. Details shown are approximate numbers:
  - Tempest shows 1,750 inactive students still having a Chromebook(s) assigned to them. Out of 1,750 inactive students 63 of them have two to three Chromebooks. Per Tempest there are approximately 1,816 Chromebooks worth \$513k still assigned to former/inactive RPS students.
  - There does not appear to be a formal process in place to monitor the collection of Chromebooks when students leave RPS. Additionally, there is no formal process in place to ensure Chromebooks are returned to RPS by June 30<sup>th</sup> following the closing of schools for summer break.
- Students listed as active in Tempest have not been assigned a Chromebook.
  - Approximately 10,435 Students with an active status in Tempest have not been assigned a Chromebook.
  - During our visits to schools we observed and reviewed several instances and documents respectively where School designees maintained Chromebook inventory on local school based google sheets (such as Chromebook assignments, classroom assignments, cart assignments, etc.).
  - Lack of a formal inventory process makes it difficult to determine



current inventory levels when Tempest is not being used as the single system of record for Chromebook distributions.

- An excessive number of devices are unassigned.
  - Approximately 20,672 active and available spare Chromebooks with a value of \$5.8 million are not assigned to students per Tempest. This number does not include the Chromebooks that have a category of collected, inactive, issued, or repaired.
  - Per Technology's guidance the number of unassigned Chromebooks, or spares should not exceed 10% of the enrollment. Currently, the unassigned for active and available Chromebooks was approximately 98% over the entire RPS enrollment, 21,179 as of September 30, 2021.
  - Technology does not have a formal process to reconcile the Tempest Data with actual Chromebooks deployed to schools. In fact, we observed some schools that use the various reporting functionalities in Tempest to assist with the monitoring of its Chromebook inventory.
- Active students are assigned multiple Chromebooks.
  - Tempest shows that approximately 2,072 active students had between two and five Chromebooks assigned to them with an aggregate value of \$585K.
  - During our meetings with School Designees we were informed that there were no formal procedures for retrieval of Chromebooks from students who had not returned their previously issued Chromebooks. While Chromebooks can be turned off to prevent harmful use, it is important that all efforts are made to collect currently possessed Chromebooks from Students prior to being issued a new Chromebook for their possession.

The 1:1 Distant Learning Program was started as a result of the unexpected virtual learning that abruptly began in early 2020 due to COVID-19. Since inception Technology's focus had been on getting the devices to the students during the pandemic and ensuring these devices can function to reduce learning loss. Now that sometime after the initial pandemic emergency has lapsed, Technology is currently reevaluating some of their day-to-day program management functions. It is important to ensure the 1:1 Program is well managed to reduce unnecessary costs, such as purchasing too many devices and retrieving as many devices as possible. Refining these procedures will allow RPS to continue to provide a 1:1 Program and maintain devices in a cost - effective manner for all students.

***Recommendations:***

We recommend that Technology refine their procedures as it relates to the management of the 1:1 Program including the following:

- Consider placing a Technology Support Technician (TST) in each middle and high school. Their responsibility would be focusing on all things technology to include the management of the 1:1 Program at the School and staff technology issues.

- The Information Technology Resource Teacher (ITRT) should not be responsible for the management and troubleshooting of technology hardware
- In several schools the 1:1 Program Manager is the Media Specialist or the Assistant Principal. While they have performed the 1:1 Program Manager duties many of them do not have the bandwidth to manage the Program.
- Develop and document a centralized process to identify students with more than one Chromebook assigned to them. Implement procedures for School Designees to contact families to obtain the duplicate device(s) initially if applicable.
- Develop and document a centralized process to identify devices that are assigned to students that are no longer active with RPS, and implement procedures to contact families initially to obtain the missing devices.
- Work with TIG to correct the errors/inconsistencies Tempest.
- Monitor Chromebook usage to identify unassigned and underutilized devices prior to purchasing new devices.

***Management’s Response:***

The 1:1 Chromebook program was implemented in RPS to quickly adapt to the demands of the virtual school environment thrust on districts with the onset of COVID-19 to ensure all RPS students had an appropriate device to access instructional resources. Now that students and staff have returned to our school buildings, Technology Services is reviewing all of our current procedures to ensure learning remains as unfettered as possible by the internal processes necessary to maintain our student computer inventory.

The following table provides current inventory for all RPS Chromebooks as of May 10, 2022. There are a total of 21,953 RPS Chromebooks that are active, available, and unassigned, consisting of 7,113 Chromebooks at the TIG depot and 12,998 Chromebooks in schools for student spares. Devices currently at the TIG depot will be assigned to summer school locations allowing RPS to continue reconciling our current Chromebook inventory. Schools are currently working to reconcile counts for students assigned multiple Chromebooks and students who withdrew from RPS without returning their device.

Richmond Public Schools Chromebook Inventory<sup>2</sup>

<b>Current Status</b>	<b>Count</b>
Active, Available, Unassigned Chromebooks - Schools	12,998
Active, Available, Unassigned Chromebooks - TIG Depot	7,113
<b>Total Active, Available, Unassigned Chromebooks</b>	<b>20,111</b>

<sup>2</sup> May 10, 2022 Tempest Inventory.

Active, Issued, Student Assigned Chromebooks	21,953
Active, Issued, Cart Assigned Chromebooks	97
Active, Issued, Staff Assigned Chromebooks	116
<b>Total Active, Issued Assigned Chromebooks</b>	<b>22,166</b>
<b>Grand Total Active, Issued, and Unassigned Chromebooks</b>	<b>42,227</b>
Chromebooks Labeled Withdrew/No Return	36
Chromebooks Labeled Lost	453
Chromebooks Labeled Inactive	51
Chromebooks Labeled Stolen	53
Chromebooks Labeled Whole Unit Replacement	150
<b>Total Inactive Devices</b>	<b>743</b>
<b>Grand Total All Devices</b>	<b>42,970</b>

*Maintenance and Support of Technology Assets*

The on-site program, as highlighted in the Distribution of Chromebook Process Audit, requires a fresh outlook for the most successful management practices. One critical component, identified under Recommendation #1 is the placement of Technology Support Technicians in each middle and high school. Currently RPS has a total of 9 technicians who support the technology needs of all of our school and administrative sites. Each technician supports approximately 7 schools with a total RPS count of 21,000 devices - not counting our student Chromebooks. Current staffing levels do not make it possible to have one technician dedicated to each secondary school as it would directly impede the support provided to our other instructional sites. As we move into our second year of on-site learning post COVID-19, a thorough review of our staffing levels will be considered in how we manage our existing and future technology resources. While it may not be possible to completely eliminate the partnership that exists between school staff and Technology Services when it comes to putting a device in the hands of students, Technology Services believes that many of the procedures and processes that are under development or refinement will greatly assist to minimize the impact the 1:1 program has

on all staff.

Technology Services is currently working on processes that will provide regular reporting for new and active students who are not assigned a Chromebook, active students assigned multiple devices, and unassigned devices. These reports will be finalized on June 20, 2022. Knowledge of these reports with direct guidance on how to access them in Tempest, our Chromebook management system, will allow our schools to begin working with currently enrolled students as our Chromebook collection begins with schools for the 2021-2022 school year.

### *Procedural Changes with TIG*

In order to manage our Chromebook fleet, Technology Services partners with the Technology Integration Group (TIG) to deploy, service, and store computers when not in use by students. New procedural changes are in development for how TIG works with RPS. One process that is most challenging for staff involvement outside of Technology Services is the initial assignment of devices to students and how devices are managed in TIG's proprietary warehousing system Tempest. We intend to pilot these changes with our summer school sites and then full implementation at the beginning of the 2022-2023 school year.

Changes Technology Services are developing will reimagine how assets are initially assigned to schools and streamline the processes of pick-up and delivery during the school year. Instead of assigning devices to schools, Technology Services feels that assigning devices directly to students will have an immediate impact to alleviate many of the record keeping challenges and manual effort identified as key stressors in the process. Students will then take their device with them if they transfer to a new RPS school, greatly streamlining the collection and distribution process and reducing manual effort. This will include Technology Services staff being on-site to ensure the initial delivery and collection of assets from TIG. These procedural changes will eliminate the need for students to turn in devices during the school year and address the challenges facing our transfer students as highlighted in Finding No. 3: School Level Processes.

### *Communication*

Gathering feedback from our Academic Services team is paramount to the success of any 1:1 program. Technology Services is starting with two changes in communications strategies for the 2022-2023 school year. (These changes will help to address the challenges outlined in Recommendation #3.). First, a program calendar for the 2022-2023 school year is being drafted with important dates for the 1:1 program during the school year. This will include initial delivery dates for schools, highlight procedures and training provided to address specific tasks taking place at the beginning, during, and end of the school year. An initial calendar will be provided to Academic Services for review and finalized August 15, 2022. Second, Technology Services is reviewing all process documents including those that are not currently hyperlinked in the RPS 1:1 Student Chromebook Procedures. Technology Services acknowledges that simply having these documents available is insufficient in itself to help streamline the work underway in schools. Our planned communication strategy will help keep these process and training resources in front of our work to ensure our computer assets are managed with minimal

manual effort.

In conclusion, Technology Services is working proactively on two fronts. First, we are working to use the reports described above to help finalize our current inventory with all currently enrolled students while creating a process to help schools reach out to families of students who may have not returned a device before withdrawing. Second, Technology Services is streamlining many of the technology management issues identified under Recommendation #1. This includes re-envisioning the process of assigning devices to students rather than schools, developing procedure documents in a just-in-time manner depending on the school calendar (Fall, Spring, Summer, and during the school year) to keep procedures in the forefront of all RPS staff involved in the 1:1 program, and developing new communication and training opportunities that staff can take advantage of when needed.

### Finding No. 2: Chromebooks Collected and Delivered to/from the Schools

We found a gap in the process related to collecting excess, aging, and/or damaged Chromebooks from the schools. The current process of Chromebooks being removed from RPS Schools by TIG is manual and lends itself to miscommunication and mismanagement of inventory. The following is a general description of the process and areas where additional controls are needed to improve the process:

- Technology and/or the School Designees determine which devices need to be pulled from schools via TIG whether due to aging, excess number of Chromebooks and/or damage replacements. However, the TIG representative has no knowledge of what needs to be picked up prior to arriving at the school. Likewise, the School Designee has no knowledge of what is being delivered prior to TIG's arrival.
- Technology notifies the School Designee of how many Chromebooks need to be picked up by TIG in certain instances.
- Technology via TIG sends Chromebook replacements to the School when devices are replaced for damages or operational issues. However, replacements are not sent on a 1:1 basis. Example:
  - We observed a TIG Pickup for several computers. But a drop off of only one replacement computer. This caused the school to have a reduced Chromebook inventory. However, the Tempest System does not have a real time indicator for Chromebook inventory when this occurs. This leads to a risk(s) associated with inconsistency inventory management at both the district level and the school level.
- The School Designee collects the devices to be returned to Technology via TIG and completes an Asset Transfer Form when the TIG Representative arrives at the school for scheduled weekly visit. Tempest is updated by the School Designee.
- The TIG Representative writes the actual amount of devices received from the school on the Asset Transfer Form to confirm the quantity matches. However, there is no formal reconciliation process to confirm the number of devices picked up match the amounts delivered to Technology.

- This increases the risk of Chromebooks being removed from the RPS inventory system without detection.

There is a gap in the coordination between Technology's Asset Team and TIG who perform the roles mentioned above, the Asset Team, and the School Designees. Confirming the quantity of devices picked and returned to Technology via TIG provides accountability for the School Designee and confirming that the school's Chromebook inventory is properly accounted for. Safeguarding assets is a key internal control to ensure assets do not get stolen, lost, and RPS is using being efficient and cost-effective.

***Recommendations:***

We recommend, Technology refine their process to move to a more automated based solution versus the current manual process to ensure the number of Chromebooks that the schools return and receive via TIG are accurate. We also recommend a reconciliation process be developed, documented, and implemented to appropriately account for returns and deliveries in a timely manner to ensure School inventory levels are consistent with the 10% spares over student enrollment.

***Management's Response:***

Technology Services response to Recommendation #1 highlighted a significant change in how Chromebooks will be assigned in 2022-2023. No longer will devices be assigned to schools. This resulted in a great deal of manual effort to collect and redistribute devices, and ultimately led to issues in successfully maintaining the district's inventory. Technology Services will provide enrollment counts to TIG at the beginning of the school year. TIG will provide sufficient devices to ensure a 1:1 environment including 10% spares. All devices will be entered into the system by TIG and/or Technology Services. These counts will be monitored by the RPS Asset Manager at the beginning of the school year who will then coordinate with other members of Technology Services to ensure schools have the appropriate number of Chromebooks. If students transfer to another RPS school, the device will move with the student, ensuring that our inventory remains constant based on student enrollment.

Technology Services is also reviewing how to streamline our processes for the collection of devices by TIG during the year. This process is more challenging given the timing of events that occur from the time a ticket is entered into the support system and when a TIG driver is dispatched. TIG drivers will be instructed to only pick-up devices that are on their current manifest. This will help ensure that devices coming into the school mirror those that are being returned to TIG. Monthly reports of inventory by our Asset Manager will allow help desk technicians to supply additional devices during their regular support routes to maintain inventory. Principals and school staff can take next steps to communicate with families if assistance is needed to disseminate or collect an RPS device. Principal Directors will be included as necessary to help schools who may need additional assistance working with families.

Technology Services will be working with Procurement on a new request for proposals for other possible vendors. Technology Services acknowledges that the Tempest system has many shortcomings and a more robust system may be needed for our entire computer inventory.

### Finding No. 3: School Level Processes

We noted through interviews and observations with School Teams and Technology staff that schools do not have a consistent process in place or are not following certain procedures as they relate to Chromebooks. Examples include the following:

- Schools are not consistently having parents complete and sign Chromebook Device User Agreements.
  - We visited 44 schools as a part of our review, of the 44 schools visited eight schools did not have any Chromebook Device Usage Agreements available for our review. The School Teams stated, they did not know the agreements needed to be retained after the Chromebooks had been assigned in Tempest. Therefore they discarded the Agreements.
  - Several Schools were not able to obtain a signed agreement from parents prior to the Distribution of the Chromebook to the students due to the manual nature of the process. The Chromebook Device Usage Agreement only comes in paper format. The agreement serves as the Contract between the Student's (Parent/Guardian) and the School System, that the student/family will assume full responsibility of the RPS device while in the student's possession.
- Technology does have procedures for distribution, assignment, and collection in Tempest but the procedures lack various guidance to the School Teams of how to manage various aspects of Chromebook distribution and collection.
  - RPS has a very active Transient student population. Students may or may not keep devices while moving between schools within the division.  
However, there is no process in place to confirm whether the student should or should not return his/her computer prior to receiving a new computer at his/her new school.
  - During interviews several Schools stated they were directed to issue Chromebooks to students regardless of whether or not they had turned in their previous Chromebooks.
  - While several schools held Chromebook collection events at their End of Year celebrations for students, many of them did not have any procedures in place to follow-up with families who had not turned in a Chromebook subsequent the End of Year events. Additionally, several schools received Chromebooks from students at the beginning of the current 2021/22 School Year. However, RPS has an agreement with TIG to collect Chromebooks by July 1<sup>st</sup> so that TIG can refresh computers in a timely manner for the upcoming school year.
  - As described in Finding No. 1, approximately 2,072 active students have more than one Chromebook assigned to them in Tempest.
- Schools are not assessing fees for lost or damaged Chromebooks.
  - At the direction of the Division's leadership schools do not assess fees

in accordance with the guidelines, including sending a letter for the first occurrence of accidental damage. The guidelines state that assessments fees should be charged for damaged devices due to negligence or intentional damage except in the instance of extenuating circumstances as approved by the principal. There were a few schools who assessed fees initially but stopped as they were directed to not charge students in accordance with the Chromebook Device Usage Agreement.

- Finance proactively created a mechanism to assess student fees for lost, stolen and damaged Chromebooks through the Student Activity Fund Program when deemed necessary.

The division faced multiple challenges to quickly adapt to the demands of the virtual school environment. As a result, some established procedures were not being followed, while others were not updated to address COVID-19 changes. Following established procedures and updating procedures will give schools the tools to safeguard assets and to assist in the proper distribution and collection of Chromebooks. In addition, these procedures will help ensure that RPS has a sufficient inventory of Chromebooks to meet the needs of the division. Refining these procedures will allow RPS to continue to provide a 1:1 Program and maintain devices in a cost - effective manner for all students.

***Recommendations:***

We recommend that Technology work in collaboration with the Academics Office, Principal Directors in particular to refine the procedures for schools to verify their Chromebook inventory and develop a Chromebook 1:1 Program Manual that will provide uniformed guidance for Schools to operate their 1:1 Programs efficiently. In addition, we recommend that Technology work with the Academics Office, School Administrators, and the School Designees to ensure that schools are documenting and following its process. Additionally, we also recommend the Academic Office works with Technology to develop an electronic Chromebook Device Usage Agreement that can be completed online.

***Management's Response:***

Technology Services is in absolute agreement with the importance of working in collaboration with the Academics Office. Principal Directors provide a critical viewpoint in understanding the problems schools are working to solve with technology and solidifying the processes and procedures necessary to manage a 1:1 Chromebook Program. Having buy in from all parties will help cement these practices into our normal, daily operations. A collaborative calendar, regular feedback regarding the reports highlighted under Recommendation #1, and input into our policies and procedures will be important precursors for the establishment of a revamped RPS Technology Committee to build a unified vision for our technology resources in support of our strategic instructional plan.

In the short term here are the next steps that the Principal Directors will take to support Principals with this process.



- We will ensure that principals understand that Tempest is the sole source of truth for data around the Chromebooks for RPS. Each school leader is responsible for ensuring that Tempest is the only database used to assign, reassign, and input device information. No other spreadsheets should be utilized for recording information related to Chromebooks.
- We will ensure that each school has an airtight collection plan for Chromebook collection for the 21-22 school year that is created in collaboration with their school based Technology Teams. These plans should include clear steps involved in the process with owners and time frames. The goal of this plan is to collect all assigned Chromebooks including the devices of students who are attending summer school. We have recommended that summer school sites have their own allocations of devices for accountability purposes and to ensure the other devices are collected so they can be refreshed/reconfigured by TIG.
- Over the next few weeks we will partner with our new Director of Technology to provide feedback to the draft process documents that pertain to Chromebook distribution, device damage, digital citizenship practices and scholar accountability.