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TO: Dr. Carol Kelley, Superintendent

FROM: Michael Arensdorff, Senior Director of Technology

SUBJECT: Teacher Device Refresh - Portion of Technology Plan

DATE: February 13, 2018

Names of presenters: Michael Arensdorff

Type of report: Technology plan review and update

Report format: Report and recommendations

Preview of purpose and content of report: Partial teacher device refresh as it relates to the upcoming technology plan. Bringing to the board to take advantage of a discount provided by Apple in an earlier time frame that will provide at least \$52,000 in savings if we waited till April for the overall technology plan recommendations

Budgetary Impact: Lease of three years totaling \$486,850 (Macbook Airs) and \$80,550 (Apple TVs); Will sell back devices and expect to receive up to \$221,000 back. Year 1 of lease is \$194,440.51 - \$221,000= up to **\$26,559.49 in revenue** for next year's budget

Data to be presented: February 13, 2018

District Goals: Known, Nurtured, and Celebrated Learner; Creative Critical Thinker and Global Citizen

Core Pillars: Equitable Access to Rigorous, Responsive Instruction; Strong Relationships with Families and Community

During the past three years, I have used these reports to provide the board with information about the technology department's vision, and also share our plans and recommendations for supporting the work of the district. Much of our time and resources during that time period was invested in improving our network infrastructure. With the help of the district's Technology Advisory Committee, we determined that our focus this coming year should be on refreshing devices for our staff and classrooms and our infrastructure.

A recommendation for a new three-year technology plan will be presented to the board in April 2018. However, I am bringing a portion of that plan to the board early in order to take advantage of a significant discount on a device that was recently presented by Apple.

This portion is tied directly to the staff device refresh plan that we forecasted for this time period during our last three-year technology plan. This refresh will include a teacher laptop, iPad and the learning space interactive mirroring tool (Apple TV). In this report, we will only be bringing a recommendation to refresh the laptop and Apple TV for our teachers/certified staff and learning spaces, respectively. I will be sharing the process and data collected to support this recommendation and why we will be bringing a recommendation regarding the secondary teacher device (iPad) in April with the full technology plan.

Before I share the department's recommendation for this portion of the technology plan, I want to provide an overview of the work that will come in April in the three-year technology plan:

- An update on the current year and the end of the three-year technology plan (financial and successes).
- A review of the last three years of the entire technology plan, including what was included in the referendum that supported the plan.
- Data and process work that led our Technology Advisory Committee to bring a recommendation to the board for a new three-year technology plan.
- A comprehensive three-year technology plan recommendation.

Teacher Device Refresh

Over the last three months, I have been working with a group of 13 teacher volunteers on a subcommittee that was charged with developing a recommendation for teacher devices. Our work has focused on discussing and sharing out regarding the learning environment for our students and how the technology enhances learning for all. The group shared ideas and plans for future learning experiences for District 97 students. As part of this work, the members of the team designed an ideal learning space, including the layout and all of the necessary tools, and shared details with the group.

During this planning, we developed a survey to gather information and feedback from our subcommittee and all teachers/certified staff regarding teacher device(s) and the use of Apple TVs in learning spaces/classrooms. Attached is a link to the summary details of the data collected. Some of the highlights that have led to the recommendation are:

- 94% of staff prefer the Macbook Air and support the refresh of this device over other options
- 78% of teachers/certified staff use the Apple TV technology everyday
 - 12% use it at least once a week
- 90% of teachers/certified staff say that not having a wireless mirroring technology in the classroom would definitely to possibly impact instruction for them and their students

- Of this group, 54% said definitely and 37% possibly
- To the question, “Do you believe that a secondary device is needed for classroom teachers?” 63% of teachers/certified staff said yes, 23% said maybe, and 14% said no

Some of the anecdotal data and comments in this survey were:

- Shared feedback on the reliability and continuity of the Macbook Air is a positive.
- Macbook Air is user friendly and has endless possibilities.
- The ports of the device are needed and useful for the necessary hardware for our instructional practices (hard drive, flash drives, etc.).
- It’s great to have the iPad, especially as it mirrors the elementary students and use it for a document camera.
- An iPad is needed for the BAS app.
- Teacher should have access to the same type of device as students
- “MS and ES teachers have different needs. What might be beneficial to a MS teacher may not be for an ES teacher. I think it is important to find out what works best for each group.”

Based on these results and our collaboration with the Technology Advisory Committee and the teacher subcommittee, the recommendation is to refresh our Macbook Airs and Apple TVs. We would like to gather additional information regarding the iPad or another secondary device through focus groups and planning with staff.

Apple is currently providing a discount of approximately \$100 per device, which would save the district about \$52,000 on MacBook Airs. We have weighed all of our options and determined that this would be a great step for our district. This refresh would be the same recommendation included in the three-year technology plan in April, but it would cost approximately \$100 more per device if we wait to purchase (if nothing changes in their fleet or announcements).

By purchasing the devices, we are also ensuring that all of our current adapters, plugs, etc. will continue to work and not require a large purchase to switch these all to another format. Additionally, I have been tracking the repairs and expenses we have put into these devices over the last year and found that there are five factors that support the refresh of the devices now.

For the Macbook Air:

- Age of device: Age affects the device’s value for resale (up to \$360 to sell now, but would expect to lose up to \$100 if we wait a year).
- Processing power: Our current fleet has 4GB of RAM (memory). We are more digitally focused each day and upgrading to the 8GB of RAM will support our needs.
- Charging cables: The cables are aging and we have to replace more every year (cost is \$50 per cable). Getting new devices will give us all new chargers.
- Battery capacity: Replacement batteries cost \$96.75 each and every device has a maximum of 999 charges until it says a replacement battery is needed and stops holding a charge, which forces staff to stay connected to their charger and

takes away mobility during instruction. Currently, we have 13 staff members at full capacity and 31 who are less than 200 charges away, which would require us to replace them in the next year. This replacement would come to a total cost of \$4,257.

Considering all of these factors, for every device that would require a charger and battery—combined with loss of value—it would total about \$246.75 to keep for another year. For each of those devices, it would be cheaper to purchase new rather than fix/repair.

For the Apple TVs: We have not been able to update our current fleet of Apple TVs for two years, which impacts new features and the consistency of mirroring, as Macbooks and iPads work optimally on updated versions.

As part of my work with our Technology Advisory Committee, I had the opportunity to talk more in depth with one of our parent members who works for the technology company CDW-G and has expertise in classroom learning technology that focuses on audiovisual transformation. During our conversation, he shared the other options to Apple TV that are available. Although these devices offer some additional features compared to the Apple TV, they all cost two to four times more than the Apple TV. This parent also mentioned that Apple TVs can now be managed through our mobile device management system, JAMF, which will allow us to be much more efficient with our deployment and management.

This expertise and feedback provided further support for our refresh of this technology, along with the feedback from teachers who are leveraging this technology to transform their classroom. The device enables them to be completely mobile in their rooms, so they are no longer tied to a specific teaching space or classroom layout. One teacher stated in our survey, “To remove the Apple TV would revert my classroom back 15 years. To not be wired/connected to the wall provides me the flexibility to move about the classroom with my device and easily move from room to room.” Another teacher said, “I frequently cast to the board for part of my class while using my device with a small group in another part of the room. It means I can split my screen and use my computer simultaneously for multiple purposes. If I had to plug in my computer every time I wanted to project it would make me have to rethink and likely limit my use of technology in ways that currently helpful to the running and teaching of my classroom.”

[Attached are the lease documents](#) that have been provided by Apple for both the Macbook Air and Apple TV. In regards to timeline of this project, we would seeking board approval of the refresh of Macbook Airs for teachers/certified staff and Apple TVs for our learning spaces on March 13. If the Board of Education approves this lease, then we would finalize the lease with the district attorney and Apple prior to March 20. The devices would ship by the end of March. Once received, we would store them and plan to deploy until after July 1, per the deferred lease agreement that would be part of the next three year technology plan starting in the 2018-19 school year. In July, we would begin deploying the devices to staff following a schedule that would be shared in advance. Once we are able to deploy all new devices, we would collaborate with the

third-party vendor to sell the old devices, which we would expect to cover year one of this refresh for the Macbook Air lease and most, if not all, of the cost for the first year of the Apple TV lease.