Oak Park Elementary School District 97

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TO: Dr. Carol Kelley, Superintendent

FROM: Michael Arensdorff, Senior Director of Technology

SUBJECT: Technology Plan Update

DATE: May 10, 2018

Names of presenters: Michael Arensdorff

Type of report: 3 Year Technology Plan & Past 3 Year Overview

Report format: Report and Recommendations

Preview of purpose and content of report: Update on past three-year technology plan; recommendations for the new three-year technology plan

Budgetary impact: Seeking approval of $86,688.46. To date, $935,700.54 has been approved by Board in past projects (student devices in 2017, staff Macbooks/classroom Apple TVs in March 2018, wireless upgrade in April 2018). The 2018-19 total expenditure will be $1,022,389. The revenue generated from selling our current fleet of devices is estimated to be $200,000. When budget cuts are considered, the overall impact will be **$501,992.77**, since cuts and savings total $320,046.73.

Data to be presented: May 10, 2018

District Goals: Known, Nurtured, & Celebrated Learners & Creative Critical Thinker & Global Citizen

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

During the last three years, we have carried out a three-year technology plan that has been flexible and responsive to our changing needs, while remaining solid on the goals and focus of our vision to support all students in District 97 and provide learning experiences that are equitable, inclusive and focused on the whole child.

Before I share the department's recommendations for the 2018-19 school year, I want to provide a brief update on the work we completed over the last three years. This work included:

- Successful refresh of all 5,100 students devices K-8 (1:1 and shared);
- Refresh of 130 Project Lead the Way devices (through a donation from SalesForce that saved the district $200,000);
- Upgrade of all core switches;
- Collaboration with the Village of Oak Park with an ongoing joint fiber project that will greatly benefit both organizations financially, as well bandwidth capacity;
- Successful implementation of the Internet for All program;
- Refresh of all administrative assistant and administrative PC laptops;
- Infrastructure upgrades: servers for backups, file server server, core switch upgrade at all buildings, layer 3 switch upgrade all buildings;
- Implementation of program to drive and support innovation in District 97 (Innovation Grant);
- Collaboration around vision planning with our teacher librarians.

<u>Areas for Continuous Improvement</u>

- Ongoing professional learning for staff to build upon some of the ideal learning experiences with instructional technology (practices are not yet consistent in all buildings and classrooms);
- Provide support and clarity for key levers of success: principals and instructional coaches;
- Collaborate with Teaching and Learning and the Professional Learning Committee to identify ways to ensure professional learning opportunities for staff on the ongoing use of technology is provided in a way that enhances the learning for;
- Ongoing support for teachers and student with management tools that support the instructional practices and assists with student engagement;
- Collaborate with Teaching and Learning to provide guidance to staff around effective use of technology to enhance the learning environment, as well as times when it may not be the best fit based on instructional best practices;
- Events to support and educate families about the digital transformation in schools.
    - Community conversations about the shift in educational experience to prepare our students for college and careers of the future.
- Building partnerships for student and staff access to experts and to collaborate on with physical resources or funding opportunities

Summary of 2015-2018 Technology Plan Net Impact to Budget

Proposed $	Revenues	Savings	Net Expense
2015-2016 - $281,047	$0	$60,000	$221,047
2016-2017 - $406,755 ($396,755)	$0	$289,175.93	$107,579.07
2017-2018 - $739,757 ($661,213)	$273,035	$391,375.93	-$3,197.93

Total Proposed - $1,427,559 **Total Revenue -** $269,335 & $3700 (sale of old devices and Acer repair reimbursement) **Total Saved** - $740,551.86 **Actual Expense** - $329,128.14

2015-2016 – Expenditures for Year 1 of the Technology Plan

Infrastructure Enhancements	$170,792 - complete
iMac Lab Replacement (Chromebooks)	$ 84,000 - complete
Admin/Admin Assistant Device Lease	$ 26,255 - complete
Total	**$281,047 - Complete**

2016-2017 – Expenditures for Year 2 of the Technology Plan

Infrastructure Upgrades Servers, Switches, Routers	$188,000 – Complete
Kindergarten/PE Teacher iPad Refresh	$134,000 – Complete
Disaster Recovery Site	$38,000 – Complete
Fiber move to new admin	$10,500 – Complete
Oak Park Fiber Design Planning	$10,000 – Incomplete ($0)
Admin/Admin Assistant Device Lease	$26,255 – Complete
Total	**$406,755**
Actual Total	**$396,755**

2017-2018 – Expenditures for Year 3 of the Technology Plan

Below is a summary, total cost and brief explanation of each line item for year three of the technology plan.

Professional Learning	$ 20,000 - partially complete ($10,000)
Student Device Refresh	$590,981 - complete
Innovation Research & Development	$ 20,000 - partially complete ($15,000)
Innovation Design Spaces	$ 40,000 - incomplete (planning - $0)
Internet Equity	$ 28,776 - partial ($5,232)
Fiber Design Consultant	$ 10,000 - complete
PLTW Refresh	$ 30,000 - complete
Subtotal	$739,757 - budgeted $661,213 - actual expenditure
Revenues (from device sale)	-$273,035 - Sale of old devices & Acer -$391,375.93 - actual savings
Total Net Expense	**-$3,197.93 (This is net positive)**

Three-Year Technology (2018-2021) - Planning and Recommendation
In this section of the report, you will receive the following information:

- How we arrived at our recommendations for the 2018-19 school year
- Recommendations
- Reasons for the recommendations
- What the recommendations will cost
- Anticipated/projected budget through 2021

Technology Advisory Committee
We issued a call in June 2016 for volunteers to serve on the Technology Advisory Committee. We received a total of 28 applications for the 14 available spots. The team, which was finalized in September 2016, included five students, four building/district office administrators, two teachers, four parents/guardians and one community member. The following members have devoted a significant amount of time and dedication to District 97, which we are grateful for their thoughtful insight and valuable role in the development of this plan/work the past two years: Aidan Green, Xiomara Grachan, Sara Flynn, William Endres, Noah Oxer (students); Mike Peters, Steve Shea (parents); Anne Bensfield (community member); April Capuder, Amy Warke, Jen Nelson, Laurie Conley, Will Brackett (staff). These individuals represented eight of our 10 school buildings. We have leveraged other avenues to get voice from all ten buildings through our focus groups, surveys and vision planning session.

The committee met 15 times between October 2016 and May 2018. During these meetings, we were able to:

- Root our work in the district vision and the Education Reimagined article;
- Participate in a brainstorming activity that was focused on solutions and 10X thinking;
- Discuss, review and select focus areas for the committee that included personalization and learning spaces;
- Compile questions and organize a total of 30 focus groups for students and staff;
- Analyze and synthesize the focus group data into the enclosed one-page output and compare to 2018 focus group data to further identify trends;
- Use the available data from the focus groups, BrightBytes survey and learning walks to develop recommendations for the third year of the technology plan and new three year technology plan (2018-2021).

In addition to the core Technology Advisory Committee, we collaborated with a subcommittee of 12 teachers during the 2017-18 school year for five meetings. Those meetings were focused on the instructional learning process and learning environment. We then put together a survey and collected data around the teacher tools that will support the learning in our classrooms. This led to the decision to refresh our teacher/staff Macbook Airs and the learning space Apple TVs. Through the survey, we identified that additional data needed to be collected around the use of the teacher iPad (secondary device). From there, focus groups were held at the school buildings for staff.

We found that some staff members were not able to attend during the focus group times and some did not want to provide feedback in that forum, so we decided to create a questionnaire that would allow everyone to share input on their own time. We have received feedback from more than 20 staff members through the questionnaire.

Following the committee meetings, similar to 2015, we organized a vision/design planning session from 9 a.m. to 3 p.m. on Saturday, April 21, 2018, and included 16 stakeholders who represented all 10 school buildings and the district office. Alan Randolph and I (Michael Arensdorff) led this vision session for the following members: Karen Thomas (Hatch, third-grade teacher), Linda Chrystall (Mann, gifted teacher), Mike Peters (Julian, parent), Donna Middleton (District Office, director of special education), April Capuder (Brooks, principal), Paula Spring (Whittier, instructional coach), Kali Williams (Holmes, fourth-grade student), Merryl Brownlow (Lincoln, parent), Ashley Kannan (Julian, eighth-grade teacher), Rob Breit (Lincoln, fifth-grade teacher), Arlo Hamer (Lincoln, fifth-grade student), Sabrena Robinson (Mann, teacher librarian), Miles Lee (Brooks, seventh-grade teacher), Jonathan Ellwanger (Beye, principal), Hannah Tatro (Longfellow, kindergarten teacher) and Sarah Kaufman (Brooks, sixth-grade student).

At the start of the session, the group was asked to imagine themselves accepting an award in 2021 for the district's achievements in the area of technology. They were then divided into four teams and asked to work together on a backward design activity that told the story of our achievements through pictures. The teams spent the afternoon collaborating to imagine our future successes, obstacles and solutions to overcoming those obstacles. They mapped out these stories visually, then shared with the larger group.

At the end of the session, we compiled the key items and takeaways, and began creating actionable items that were divided into three areas: process, technology and people. The big takeaway from this vision session versus the one held three years ago was the change in the outcomes. Three years ago, the focus was much more on infrastructure, while this time the outcomes were about changes and/or additions to district structures, supports (time) and deeper collaboration with all departments in an effort to provide professional learning that embeds the use of technology. While structures/process are sometimes that much harder to execute, the process items are where the rubber hits the road with instruction. Click here to view the images of the design stories, as well as the roadmap output from process, technology and people. Some of the specific action steps that have come out of this work are:

- Clearly define what student choice and voice is and looks like;
- Define instructional best practices, the alignment to instructional technology standards and tools that can be leveraged to enhance learning, all of which is centered on student voice and choice;
- Training on crucial classroom management feedback (for teachers and parents);
- Increase interdisciplinary learning opportunities;
- Define consistent feedback channels by grade bands. (ex: Seesaw for K-2, Seesaw or Google Classroom for 3-5, Canvas for 6-8);

- More objective feedback to teachers on the effect of student outcomes
- More video for individual and peer feedback for teachers;
- Video use for student and parent feedback (ex: students could record presentations and then watch to reflect and self-evaluate for future growth);
- Functional central repository of student, staff and parent resources.

As mentioned, there was a shift in emphasis during this vision planning from infrastructure in our last technology plan to now refining and enhancing structures to make a greater impact on instructional technology best practices and support structures to execute for all of our student experiences.

Why?
Instructional Technology Vision is to ...

- Transform student learning by providing equitable access to technology, leveraging the 4Cs (collaboration, communication, creativity, critical thinking), and encouraging students to take ownership/agency by developing their voice to share their learning and creations globally.

In order to accomplish this, we strive to have clear, consistent standards to measure success for students and staff (in all roles). We utilize the ISTE standards, which are personalized for various groups. It is also important to be able to show what success outcomes would look like and this video created by ISTE provides the practical and clear outcomes for what student use of technology can/should look like in education. All of these outcomes are to provide our students with the skills to think critically and solve local and/or global problems in a manner that is driven by the students and guided by educators (whether that be teachers in Oak Park, experts across the world, families, friends, peers, etc). The sky's the limit and the technology tools we have purposefully provided have afforded all 6,200-plus students the opportunities to direct their own learning now and in the future to make an impact on this world.

Equity of access is one of the key principles/goals that is guiding the ongoing implementation of our technology plan. Below are examples of how our teachers and students are currently using technology to achieve this principle/goal and support learning both in and out of the classroom.

- Iteration/prototyping – Second-grade class inventing, prototyping and documenting
- Leap Innovations - Personalized learning, student choice and voice
- Student Choice Menus - Middle School teachers giving students choice in their learning - Ancient Egypt Menu
- Student TedTalks - Students choice project and experience for them to share that voice through a TedTalk with their classes and virtually. Here are three examples of those TedTalks (Artificial Intelligence, 3-D Printing, Dogs)
- Flipped Classroom - Students talking about this strategy and what they like about it for them and their learning. "I like how I can pause or relisten to the content again."

- Innovative practices - Kid Cam – Staff member reflecting on practice and student learning through the eyes of the students
- Business creation/entrepreneur/engineering - Students working through development of a business (marketing, ideating, sales, operations, collaboration)
- Science – Engineering – Rube Goldberg
- PLTW – Student innovation
- Music – Student-led collaboration
- Art – Student animations
- Social Studies/Humanities - Mystery Skype – Geography lesson; student collaboration to research, critical thinking, communicate, decision-making, global connections and learning
- Student Voice & Feedback/Communication to Peers
- Global Collaboration – Global Virtual Classroom
- Digital Citizenship – Cyberbullying scenarios

With that said, I also believe we must maintain a balance in terms of the tools and methods we use to deliver instruction. By doing so, we can effectively leverage the various resources we have at our disposal to provide the children we serve with a well-rounded educational experience.

2018-19 – Recommended Expenditures for Year 1 of the Technology Plan
Below is a summary, total cost and brief explanation of each line item for year three of the technology plan.

Professional Learning	$ 10,000 -
Student Device Refresh	$590,981 - Board approved 2017
Innovation Research & Development	$ 15,000 -
Internet Equity	$ 10,000 -
Staff Device Refresh (Macbooks & Learning Space Apple TV refresh	$194,370.04 - Board approved 3/14/18
Staff Device Refresh (iPads & cases)	$ 61,958.50 -
Infrastructure Enhancements	$150,349.50 - Board approved 4/10/18
Subtotal	$1,022,389 - budgeted
Revenues (from device sale)	-$200,000 (estimated) -$TBD - actual revenues
District budget savings	-320,046.73
Total Net Expense	**$502,342.27**

2019-20 – Recommended Expenditures for Year 2 of the Technology Plan
Below is a summary, total cost and brief explanation of each line item for year three of the technology plan.

Professional Learning	$ 10,000 -
Student Device Refresh	$590,981 - Board approved 2017
Innovation Research & Development	$ 15,000 -
Internet Equity	$ 10,000 -

Staff Device Refresh (Macbooks & Learning Space Apple TV refresh	$194,370.04 - Board approved 3/14/18
Staff Device Refresh (iPads & cases)	$ 49,483.50 -
Infrastructure Enhancements (other half of access points)	$150,000 -
Subtotal	$1,009,564 - budgeted
Revenues (from device sale)	-$ 5,000 (estimated)
	-$TBD - actual revenues
District Budget Savings	-$320,046.73
Total Net Expense	**$689,517.27**

2020-21 – Recommended Expenditures for Year 3 of the Technology Plan
Below is a summary, total cost and brief explanation of each line item for year three of the technology plan.

Professional Learning	$ 10,000 -
Student Device Refresh	$ 0 -
Innovation Research & Development	$ 10,000 -
Internet For All - Equity	$ 15,000 -
Staff Device Refresh (Macbooks & Learning Space Apple TV refresh	$194,370.04 - Board approved 3/14/18
Staff Device Refresh (iPads & cases)	$ 49,483.50 -
Subtotal	$278,853 - budgeted
Revenues (from device sale)	-$ 5,000 - (estimated)
	-$TBD - actual revenues
District budget savings	-$234,542.03
Total Net Expense	**$39,310.97**

Proposed $	Revenues (anticipated)	Savings (anticipated)	Net Expense
2018-2019 - $1,022,389	$200,000	$320,046.73	$502,342.27
2019-2020 - $1,009,564	$5000	$320,046.73	$689,517.27
2020-2021 - $278,853	$5000	$234,542.03	$39,310.97

Total Proposed - $2,310,806 **Board Approved to date** - $1,915,421.62 **Total Revenue -** $210,000 **Total Saved** - $874,635.49 **Actual Expense** - $1,231,170.51

Explanation of Recommended Expenditures for Year 1, 2 & 3 of the Technology Plan
This recommendation includes:

- A full refresh of all staff/teacher Macbook Airs (650), which was approved at the board meeting held March 13, 2018. We were able to realize $52,000 savings over three years by bringing the refresh to the board in February/March;
- A refresh of teacher iPads (up to 500), as seen in this recommendation. This came from data collected by staff through a survey and focus groups;
- Year 2 & 3 payments of the student iPad lease and Chromebook lease as approved in February 2017;

- Infrastructure enhancements, including a refresh of 270 access points through E-rate, as presented on March 13, 2018, and approved on April 10, 2018. We plan to refresh the other half of the access points during Year 2 of the technology plan;
- Continuation of the Internet For All program based on need;
- Continuation and support for innovation grant;
- Ongoing professional learning support for staff to progress the use of instructional technology goals around the usage of devices for the desired outcomes as described in this plan.

Internet for All – Mobile Hotspots

The Internet for All program that District 97 launched in November 2017 has been very successful. We initially budgeted for 220 hotspots based on some data collected through our social workers and buildings. Through the Mobile Beacon and Digital Wish partners, we are able to purchase the hotspots and access as needed for the year, which resulted in 40 hotspots being utilized by 49 students to gain access to the Internet at home. We have heard great feedback from families via email and voicemails in support of the program. Additionally, we have collected feedback from the families that have participated and received very positive responses from the users about the quality of the service provided and the process to get the hotspots.

My recommendation is to move forward with a renewal of Mobile Beacon/Digital Wish solution for the upcoming school year with the budget of $10,000, which would allow us to expand the program to an additional 40 families (for a total of 80). We will continue assess and evaluate the success of the program to determine renewal of the program on an annual basis.

Rapid Pilot Program/Innovation Research and Development

As we reflect on this year and identify successes and areas for improvement, this addition to the technology plan has been one of the best over the last three years and may prove to be the most impactful. We have a district of very smart and innovative stakeholders, but what we found is that innovation can be halted if there isn't adequate financial support. This year we received a few applications, one of which was awarded and we are anticipating a second. Here is a link to the one awarded application for two laser cutters to be purchased and installed in our two middle schools. Their application outlines the details and connection to the district goals, and, most importantly, provides the measures of success in detail. As part of the success measures, it is important to note the depth and intersection that they seek in other academic areas through the use of this tool. The other grant awarded came from our instructional coaches, which included the use of video to be used in coaching cycles and/or for staff to record themselves teaching. They will then use the recordings to reflect in their instructional practices to identify ways they are most effective through student learning and/or can be more effective. This will also support some of the outcomes that came out of our vision planning process. These Swivl robots will provide our staff with the tools to reflect on their practices. Through the innovation grants, we are looking to find the ideas that are truly innovative and will be impactful for all District 97 students. Without the addition of

this item for the technology plan this year we would have completely lost out on one or two instructional tools and practices that could greatly impact teaching and learning for years to come.

In addition, our rapid pilot program continues to grow with staff identifying new tools and and programs that could be beneficial for all students and that they are willing to test out. The next step in the pilot program is to solidify and expedite the process so we are still addressing all data and network security concerns, validating instructional benefit reviewing, streamlining the evaluation process, and promoting the program through a clear, accessible layout on our website for our staff.

During the first year of our current three-year technology plan, the output of the planning process included the establishment of a rapid pilot program. The purpose of the program is to promote innovation and encourage staff to take risks and we believe this has been a great success over the last three years.

Following this success we have included $10,000 in our proposal to continue the program for the upcoming school year.

Innovative Learning Spaces: Media Centers

One of the areas the Technology Advisory Committee explored this year was how we could transform learning spaces, more specifically our media centers, to better support innovative practices. We believe that through purposeful planning, creative designing and collaboration with our teacher librarians, we can have a positive and profound impact on the functionality of the space. We also believe that making some initial investments in this work next year will provide the individuals we will be asking to help guide our efforts (students, staff, parents/guardians, community members, etc.) with a better sense/understanding of what we mean by the modernization of learning spaces.

During the 2017-18 school year we worked to identify a time and direction for setting a common vision and direction with the teacher librarians, which took place in the early spring of 2018. Since the vision planning took place later in the year, we were not able move to the next step of allocating resources toward a redesign of a library space or two. Additionally, with Holmes being in the process of redesigning their library, it was decided that we would benefit greatly from seeing their space and learn from the work that was devoted to their redesign. We would use Holmes as prototype #1, along with the learning we have gathered from our vision planning session with the teacher librarians and the more informal low budget changes that our media centers have started in the past 12 to 18 months.

Professional Learning

During the 2017-18 school year, I have worked closely with the teaching and learning department, which has included Emily Fenske, our director of organizational learning, as well the Professional Learning Committee, to identify opportunities that will aid staff development. For this past year, we were able to align professional learning opportunities within instructional technology for our new staff as part of new staff

orientation, provide 10 choice-based sessions during the February institute day with sessions led by Apple Professional Learning around collaboration and creativity, and two sessions with a Nearpod trainer who provided staff with beginner- and advanced-level training in using the content delivery and feedback tool Nearpod. In addition, I scheduled and administered Lunch 'n' Learn sessions at all 10 buildings during the months of December, January, February, March and April around a variety of instructional technology tools that came through staff feedback in BrightBytes surveys, feedback through informal conversations and requests from buildings. In all of these sessions I had 107 number of staff participate in the 40-45 minute sessions that ended with staff being able to implement the tools in their class immediately. The tools that I provided training on were: Hapara, Google Classroom, Apple Classroom and WeVideo.

This school year (2017-2018), the two middle schools have transformed the structure and function of how they operate the majority of their staff meetings. Staff members have selected work groups that have different purposes and priorities tied to buildings goals, in which they have directed their own learning and developed professional learning sessions for their peers. One of the teams at both buildings was an instructional technology team. This team has developed a group of local experts and champions at the building level to provide training formally during a staff meeting, but also informally as staff seeks to implement practices they learn from connecting with their peers in their buildings.

During the summer of 2018, the technology department and teaching learning department developed an application for staff to have the opportunity to attend the ISTE conference that will be held Chicago to extend learning into the summer with an international audience. This conference has not been in Chicago for many years and will not be back for at least another decade. Through the application process we have sought out staff that are not only interested in the conference, but also seeking leadership opportunities to extend and share their learning in the district during the 2018-19 school year and beyond. This learning ties into multiple areas as we explore and identify what success looks like with the use of instructional technology, as ISTE has developed standards for students, educators, administrators, coaches and STEM educators. These are standards that we have used during our instructional learning walks and will be focusing our efforts on for the 2018-19 school year when measuring success with our instructional technology. We have also been collaborating with the ISTE as they are offering ongoing professional learning opportunities through memberships which provide access to learning for all district staff. By joining as a district, not only will all of our staff be able to leverage a list of resources (see overview of the offerings), they provide free admission to three staff members to the conference this year. We are currently exploring these resources to identify ways we could leverage them with the members attending the conference and other key stakeholders as we work to enhance learning through the use of technology. Here is a video that ISTE has put together that defines what success would look like for students across the world and what I strive for all of our students' learning experiences.

For 2018-19, Emily Fenske, the teaching and learning department and I have already started to plan out ways to embed the use of technology into trainings throughout the year to ensure we are providing staff with practical and effective tools that can support the implementation of instructional practices. Time is a commodity and we are working to find ways to collaborate and incorporate technology trainings, rather than only planning stand-alone sessions, which will be more effective for staff when applied/demonstrated with the instructional practice or resources. With our preliminary planning, we will be looking to continue to work with Apple Professional Learning on consistent and ongoing training opportunities for staff this year through some of the choice-based institute days where one session can build off another. This cohesive planning will also provide the opportunity to include the Google certification training for a cohort of 25 staff that was provided by Google this past year, but required two days of full-day training. With the schedule for the last year complete, there was not an opportunity to complete this training during the year without pulling 25 staff members out of the classroom twice during the year. Doing this would have added to the need for additional subs and costs to the district, which is why we have planned for the 2018-19 school year.

Student and Staff Feedback

In April 2018, I have held focus groups for staff at their buildings. During this time I have collected feedback on the following questions (similar to last year) in order to identify areas of success, areas for continuous improvement opportunities, trends in feedback with students and staff, and trends in feedback from year to year. I will be holding student focus groups in May 2018 to gain similar insight to help improve our service and support moving forward. Here is the trend feedback that was compiled from last year. The Technology Advisory Committee is in the process of compiling the feedback received this year.

Over the last year I have also collected feedback from staff, students and families through our Technology Advisory Committee (TAC) meetings, our teacher subcommittee of the TAC, and the vision planning session on April 21 that included 11 staff members (eight teachers and three administrators), three students and two parents that were represented by all ten school buildings and the district office.

I have also heard from staff through a survey collected around the use of the teacher tools (Macbook Air, Apple TV and iPad) to help determine instructional practices and feedback on the refresh of these devices. This survey garnered 270 teacher responses that were in support and provided detailed feedback on how the devices greatly enhance the learning and work they do in District 97. Here is a link to the memo regarding the recommendation and support for the refresh of the Macbook Air and Apple TVs. In addition, for the recommendation of the iPad, feedback that we have received to support this includes (focus group(s) that included feedback from 39 teachers - to date) :

- Use of the device is cost effective tool for a document camera in all rooms;
- Use of the iPad is crucial for the mobility of staff in the classroom during instruction;

- Use of tablet to record teaching practices to reflect upon for themselves and/or colleagues;
- Use for student assessment documentation (i.e. BAS testing);
- Teacher tool to demonstrate with for students;
- Leverage to manage student devices, distribute content to them and monitor (elementary can only currently be done via the iPad);
- Leverage to document and communicate via pictures and videos to families through numerous communication channels;

These recommendations were reviewed/discussed by the Technology Advisory Committee (including teacher subcommittee), cabinet, principals, Ed Council, teaching and learning department and special education department to ensure that everyone is on the same page and in agreement with how the devices will be used next year to continue to support student learning and staff development.

Teaching and Learning

District 97 continues to create the environment to promote innovation, be flexible and support the students and staff with the instructional technology resources that have become ubiquitous in their everyday learning. Current reality, all of our students now, have equitable access to devices when they need them to support/enhance their learning. The Google Suite has transformed the way our students create content and collaborate with students and staff, they track and monitor their progress through the PowerSchool app daily/weekly, leverage Canvas learning management/organizational tool in the Middle Schools, use tools like Google Classroom and Seesaw to compile their work and communicate their learning to the teacher and their families, have access to accessibility features within all devices that are available whether through Apple accessibility or Google Chrome extensions (more in-depth in this area to come) and demonstrate their learning in a variety of ways using the tools they have.

During the upcoming school year, the teaching and learning and the technology departments will be increasing their collaboration to further support and build capacity of staff (principals, instructional coaches and teacher librarians, innovators/champions) who are key levers to the work with instructional best practices in a digital world, with building leadership and collective efficacy (effect size 1.57, Hattie, 2016) with teacher teams. This work will be focused on supporting our staff and students with the use of the 4 C's and leveraging the ISTE standards to measure success. We will also be developing more guidance for staff around classroom management and professional learning that provides practical and embedded use of technology through modeling.

As I have connected with Teaching & Learning through multiple conversations and within their roll on the Technology Advisory Team the following plans were provided directly from the department highlighting how the learning tools with support for the next couple years for students and staff.

- Leap Innovation pilots (starting now and over the next three years)
    - Cycles of innovation
    - Personalized programs to assist learning

- MTSS
    - Online intervention tools
        - AIMSWEB (online)
            - Progress Monitoring
            - Universal Screener
        - Branching Minds
            - Database for intervention plan
- Science, Social Science (Humanities) & ELA (Language A) (2018-2019)
    - TechBook online resource with a review process over the next year
- Writing
    - Blogging in addition to writing

Special Education
In collaboration with Special Education department, they have provided the below regarding the integration of instructional technology for their program.

There are myriad technology tools that are used to support our students with disabilities. Most importantly, we've been able to realize savings by using apps that serve as augmentative communication supports that literally give students a voice. There are also specific apps that support writing (CoWriter), reading comprehension (Learning Ally), auditory memory and discrimination (HearBuilder) as well as apps that support students with disabilities who require visual schedules (ChoiceWorks). These are just a few in the wide array of supports that are provided via these vehicles. I think one of the most important benefits of 1:1 devices, however, is the fact that they essentially make the need for these supports invisible. All children are able to access what they require to be successful without a stigma attached to the use of a device in a classroom where this is not common practice.

I will continue to collaborate with both departments to identify additional instructional technology tools and strategies to support the learning environment for our students and staff. This will include planning for professional learning opportunities.

2018-2019 - Budget Savings/Cuts
Based on our district's commitment to fiscal stewardship, and knowing that we are striving to balance our budget and stretch the money from the recent referenda as much as possible, our department has identified a number of reductions and efficiencies that will help offset the cost of the expenditures we are recommending for next year. These reductions and efficiencies include:

- Cisco Phone System Upgrade – This is the final year of our three-year lease payment to Cisco that enabled us to replace our expensive and antiquated system with a new Voice Over IP system. **The total savings for next year will be $83,700**.

- Printer System Upgrade – As shared prior, our streamlined printer solution will **save an estimated total of $172,506.93** through the consolidation of contracts and the utilization of our in-house resources to print instructional materials (which

was not an option prior to the implementation of this solution). For example, we now are able to print our math workbooks and other instructional resources when we would have had to purchase them from the vendor for significantly higher costs.

- eRate - As shared in the previously approved eRate project on April 10 for our wireless access point upgrade, we will be seeking a 40% reimbursement for this project through the federal eRate program. This will come in at **$60,139.80** pending approval from eRate.

- Acer Repair Program - During the first year we identified **$3700** in reimbursements from Acer from completing accidental damage repairs in house through May 1, 2018. We are aware of some additional funding that will come through other repairs with Acer that we estimate will be about $8000 but will not come in until the 2018-2019 school year due to timing of the completion for this project. I would estimate receiving about $5000 in reimbursements annually from Acer.

- Refresh of Devices – Our current fleet of teacher Macbook Airs and iPads has value despite being at the end of their cycle. These devices have been used for the last five years. We have been tracking repair costs and battery life, both of which have weighed into the recommendation to refresh. The cost to keep the fleet serviceable, in addition to the decreasing equity value and the staff time for repairs, is to the point that it will cost the district more over the next five years to keep existing devices. We have quotes from multiple companies to purchase all of the Mac items we are refreshing, which will offset most, if not all, of the cost for the first year of our three-year lease for the Macbook Airs, Apple TVs and iPads. I am also exploring options for a public sale of all the devices. For next year, we are estimated to receive **$200,000-225,000** in trade for our Macbook Airs, Apple TVs and iPad 4s, which is estimated to cover almost all of the first year payment for these devices (total first year payment is $243,853.54). The cost for the following two years of the refresh will be $243,853.54 per year. The recommendation is to enter a three-year lease, with the opportunity to keep the devices for two additional years. At that time, we will calculate the cost associated with maintaining the devices or refreshing them during our typical five-year refresh cycle for staff devices.

Proposed $	Revenues (anticipated)	Savings (anticipated)	Net Expense
2018-2019 - $1,022,389	$200,000	$320,046.73	$502,342.27
2019-2020 - $1,009,564	$5000	$320,046.73	$689,517.27
2020-2021 - $278,853	$5000	$234,542.03	$39,310.97

Total Proposed - $2,310,806 **Board Approved to Date** - $1,915,421.62 **Total Revenue -** $210,000 **Total Saved** - $874,635.49 **Actual Expense** - $1,231,170.51

Appendix 1 - 2015-2018 – Budget Savings/Cuts

Year 1 of Technology Plan Budget Impact – (2015-2016)

2015-2016 Proposed $	2015-2016 Savings	Actual Expense
$281,047	$60,000	$221,047

Comcast WAN/Internet transition – In the contract switch to Comcast from AT&T, we saved $60,000.

2016-2017 – Savings for Year 2 of the Technology Plan
Below is a brief overview of the money saved this year by upgrading our systems, taking advantage of E-rate and switching providers for our WAN/Internet service.

- Printer System Upgrade – We will save an estimated $60,000 by implementing a more uniform printing solution across the district. This solution also allows us to print materials in-house versus buying them from outside vendors. For example, we saved $112,506.93 by producing the Eureka math workbooks in our Print Shop. **Total savings: $172,506.93**.

- Cisco Phone System Upgrade – The district was able to continue saving money in conjunction with the transition to a new phone system. This was the second year of a three-year lease payment. **Total savings: $14,669**.

- E-rate – We save money this year via E-rate by leveraging the category 2 funding for the switches. **Total savings: $42,000**.

- Comcast WAN/Internet transition – We switched our providers for WAN/Internet service from AT&T to Comcast. **Total savings: $60,000**.

2016-2017 Budget	**2016-2017 Savings**	**Actual Expense**
$406,755	**$289,175.93**	**$117,579.07**

Detailed description of 2017-2018
Here is an in-depth review of the budget savings/revenues and cuts that were made to cut overall costs to the district to support the expenditures in the technology plan for the 2017-18 school year. These reductions and efficiencies include:

- Cisco Phone System Upgrade – This was the final year of our three-year lease payment to Cisco that enabled us to replace our expensive and antiquated system with a new Voice Over IP system. **The total savings for this year will be $14,669**.

- Printer System Upgrade – Our streamlined printer solution will **save a total of $172,506.93** through the consolidation of contracts and the utilization of our in-house resources to print instructional materials (which was not an option prior to the implementation of this solution).

- PLTW device refresh savings – SalesForce, which is an enterprise software company, donates equipment to school districts on a regular basis. After working with the company to get added to its list of partner districts, we received 101 Macbook Pros that will enable us to refresh the devices we use in conjunction with our Project Lead the Way program at Brooks and Julian, while also **saving us $200,000**.

- Comcast – We expect to reduce the Internet/WAN budget by an estimated **$4,200** due to the sale of the warehouse, which will reduce the number of district locations requiring this service.

- Acer Repair Revenues - This year we have completed the majority of the Chromebook repairs in-house. Through the Acer Service Repair Program we have signed up for, our district is reimbursed $20 for every repair during the year. To date we have received **$3700** and have an additional **$7000** in process.

- Refresh of Devices – Our current fleet of iPad Minis has value despite being at the end of their cycle. We have quotes from multiple companies to purchase all of the Mac items we are refreshing, which will offset much of the cost for the first year of our three-year lease. For this year, received $269,335 in trade for our iPad minis and iPad 2s, which will lower the total cost of refreshing for our 4450 devices. The cost for the following two years of the refresh will be $494,981 per year. The recommendation was to enter a three-year lease, with the opportunity to keep the devices for another year or refresh them after the lease term has expired. At that time, we will calculate the cost associated with maintaining the devices or refreshing them.

2017-2018 Proposed $	2017-2018 Revenues	2017-2018 Savings (anticipated)	Net Expense
$$739,757 ($661,213 - actual)	$273,035	$391,375.93	-$3,197.93

Appendix 2 – Instructional Technology Standards & 4Cs Framework

- ISTE Student Standards – This is the set of instructional technology standards that will be used to measure student experiences via learning walks (which are informal, visits to classrooms that are focused on what the students are doing/participating in). These standards are always tied directly to the Instructional Framework document that is being created by the teaching and learning department. Here is a link to a video that brings to life these seven standards for what we strive for them to look like in our classrooms.

- 4Cs (Collaboration, Communication, Creativity, Critical Thinking) – The 4Cs are focused on the types of learning experiences students are engaged in that are helping them leverage these particular skills. We are looking for students to develop and practice their collaboration skills with their peers and teachers locally and globally. We want the students to communicate with one another via a variety of avenues regardless of their location (classroom, school, district, state, country or continent). Technology enables more global communication with one another, which helps students reach critical learning targets. Creativity is something that we want kids to be able to explore in their learning. We are looking for ways to better incorporate student creation into our practices and experiences to achieve this goal. Here is a link to a video explaining the 4Cs.

Appendix 3 – Future Planning Projects
Oak Park Fiber (Potential Option for 2019-20)
We have continued to collaborate with the Village of Oak Park, districts 90 and 200, the Oak Park Public Library and the Park District of Oak Park on a possible Oak Park Fiber project. Based on conversations we have had, we will undertake the work with the village first, as we both have the largest number of sites and our sites are in close proximity. The other organizations have expressed interest and are considering participation as the project progresses.

At this point, the Village of Oak Park and District 97 have collaborated with Northern Illinois University to complete an audit of both entities to determine recommendations for future fiber needs and opportunities for collaboration. From this work they provided an executive summary that has been shared with the board in prior communication and is attached here. Following this executive summary it was decided there was a great opportunity for the village and the district to collaborate on this project and attempt to leverage the E-rate process to do so. We collaborated with our E-rate consultant to compile an Request For Proposal (RFP), held a bid meeting, and accepted and reviewed all bids. However, we did not receive any bids that met our financial expectations or our desired outcome to own the fiber. We then met with vendors to identify why they did not bid the desired option and found that it was due to not fitting their business model and because E-rate has not been approving fiber projects that would be owned by a school district in the past year. With this information, the village and district are exploring other options to put a new RFP out to vendors outside of E-rate, as we believe there are some creative options that will allow the us to meet both our desired solution and financial goals. We are still seeking to have this solution in place for the 2019-20 school year, as that is when our current Comcast contract for Wide-Area Network (WAN) would expire. This type of project would have intended goals to provide a WAN network and bandwidth capacity that will support District 97 student learning, staff support and organizational practices/systems for the next 20+ years at a cost that would be much more financially advantageous for the district and village.

I will continue to keep the board and superintendent updated on the status of this situation throughout the planning process.

Appendix 4 – Supplement and Support Details for Department Practices and Procedures

Data Privacy & Security

At the outset of our current three-year technology plan, we created processes for reviewing and vetting applications and software and their corresponding privacy policies to help preserve and protect student safety. We have continued to seek ways to stay on the forefront of best practices, which has included working with our attorneys and the CoSN organization to create a data services agreement that that is used in all contracts. We are also addressing this issue with vendors that we signed contracts with prior to the implementation of this agreement to help ensure that they fully comply with our current data privacy and security practices.

Device Filtering/Monitoring

We are providing consistent and reliable filtering on all student devices regardless of where they are being used through the tool Securly. With that said, some of the students told us during our recent building-level focus groups that the filtering was too restrictive at times, and was hindering their access to certain educational sites. Based on this feedback we will investigate how we can maintain a high level of security and protection on our devices, while also ensuring that students have access to content that will support their learning.

We have also been exploring some additional tools to help us to identify frequency of usage for online tools and applications across all district devices in order to determine return on investment and assist in professional learning plans. In addition, we are exploring what options are out there to help identify screen time data in a valid and reliable way. At this point we have only found one tool that will do this, but it is only for the Chromebooks and Macbooks and the price is about $20,000 annually.

Data and Security Audit

We completed the data and security audit of the district in December 2016. From that audit our department developed a three-year data and network security plan that is evaluated and adapted annually to meet the needs and rapidly changing cybersecurity world. In 2018-19 we will be working through year two of our plan. As part of our goals for this year, we have formed a district cybersecurity team that has members in the technology department and non-technology department members. The team will review policies and practices and make recommendations for future planning, with the end goals of seeking out levels of badging to signify a standard level of security around student/staff data practices in the district.

BrightBytes

We will be administering this survey again in May 2018 to all faculty and staff, as well as students in grades three through eight. After we receive these results, I will provide a summary of the data. West 40 has committed to supporting this tool, which means there is no cost to District 97. Here is an overview of results from the May 2017.

E-rate

This year, we will be leveraging category 2 items for E-rate, which was approved by the board on April 10. Per the information you received during your meeting on March 13, we will be refreshing 270 of our wireless access points. We will be seeking 40% reimbursement through E-rate and if granted would receive about $60,000 back for this project. You will see this in year one of the technology plan and the other half of our access points in year two of the new three year technology plan.