



# Oak Park Elementary School District 97

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TO: Dr. Griff Powell & Dr. Patricia Wernet, Interim Co-Superintendent

FROM: Michael Arensdorff, Senior Director of Technology

SUBJECT: Year 2 Technology Plan Update from 3 Year Tech Plan (2021-2024)

DATE: March 15, 2022

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**Names of Presenters:** Michael Arensdorff

**Type of Report:** Year 1 Overview/Update & Year 2 Plan for Approval

**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 \$1,149,298.92. Please note below on page 5 a further breakdown of savings, revenues, grants and total impact to district funds for each year of the three-year technology plan. Specifically, for 2022-23, we are once again projecting a large amount of revenues, savings and grant dollars to offset the majority of the \$1,149,298.92. The total request has increased (but was projected with the staff and design refresh/upgrade without exact budget numbers when presented last year), however, with the additional savings/revenues there will continue to be an overall positive budget impact to the three-year technology plan.

### **Year 1 - 2021-2022 Technology Plan Update**

Most of the 2021-22 tech plan has been funded and/or in progress to be completed. Below you will see a breakdown of the line items and the current status. Appendix 1 provides an overview of the work in greater detail.

Over the last year I projected a total savings/revenue of \$418,603 through the following project/contract negotiations. In addition, the district received revenues through the sale of the student iPads that was projected at \$469,000, with an actual revenue of **\$308,291.80**. We ended up not selling all of the student devices, as we leveraged them for our CNAs, day-to-day subs, permanent sub positions and various other district needs. Another revenue that we did not project, but applied for in the summer of 2021, was funding from the Emergency Connectivity Fund (ECF) grant for the purchase of student and instructional teaching staff devices. District 97 was awarded the grant and is set to receive **\$1,055,118** for the cost of student and teacher assistant devices (ipads, chromebooks and hotspots) for the 2021-2022 school year.

### **2021-22 – Updated 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 - <i>in progress</i>
Student/Teacher Assistant Device Refresh	\$1,055,118 - <i>completed</i>
Innovation Research & Development	\$ 10,000 - <i>partially, &amp; in progress</i>
Internet Equity	\$ 15,000 - <i>completed - partially funded by ECF grant</i>
Subtotal	\$ 1,090,118 - <i>actual</i>
Revenues (from device sale)	-\$ 308,291.80 (estimated)
<b><u>Additional ECF Revenues</u></b>	<b><u>-\$1,055,118</u></b>
District budget savings	-\$418,603
<b>Total Net Expense</b>	<b>Savings of \$691,994 (carried to Year 2)</b>

### **2022-23 – 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/Teacher Assistant Device Refresh	\$300,025.96 - Less due to payment - ECF paid - board approved 3/23/2021
Innovation Research & Development	\$ 10,000 -
Internet for All Equity	\$ 15,000 -
Teacher Macbook Air Refresh	\$ 688,350 -
Middle School Design Program Update	\$ 125,922.96 -
Subtotal	\$1,149,298.92 - budgeted
Revenues (from device sale & ECF Grant)	-\$346,600 - estimated
District Budget Savings	-\$418,243

Year 1 Savings carrier over	-\$691,994
<b>Total Net Expense/Impact</b>	<b>Savings of \$307,538.08 (carried to year 3)</b>

As part of the 2022-2023 plan, there are two adjustments from what was initially presented one year ago: 1) movement of the staff device refresh to the summer of 2022 (rather than the summer of 2023) due to higher rate of repairs/failures, as well as, to leverage the Emergency Connectivity Fund Grant (ECF) grant to cover \$203,600 of the purchase; and 2) updated information/budget for the middle school Project Lead The Way program (redesign/refresh of equipment).

**Staff Device Macbook Air Refresh**

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 Macbook Air laptop. With the current trends, research and our lived experience we will be able to wait one to two more years before refreshing staff iPads and the learning space interactive mirroring tool (Apple TV).

As we continue to plan our refresh cycles, we typically look to get four to five years of use from our staff devices. Our last refresh was in the summer of 2018, bringing us to four years of use by the end of the 2021-2022 school year.

Four years ago we opted for the lower price, more familiar Macbook Air that had all of the same technical specs (with the new chipsets), but that model was already close to a year old (mid-2017) when purchased. Bringing this recommendation at this time is due to a few factors that have been similar to our standard measurements of ROI (cost to repair/replace, number of repairs, number of replacements, battery cycles, battery replacements, age of devices, technology advancements, and any financially beneficial offerings to refresh). From this list, we are seeing a larger number of battery replacements, device replacements, and a higher number of projected battery replacements due to battery cycles over the next year.

We have the ability to refresh now using about \$203,600 from the ECF grant to cover approximately one-third of the refresh cost. Additionally, as we have done in the past, we plan to sell our current fleet to add \$143,000 in revenue to offset the overall purchase price. This would not only cut the repair costs for the next year to essentially zero, but also allow the district to significantly lower the total cost to District 97 budget. Between the ECF grant and projected sales amount, I estimate that the district would get \$346,600 in revenue and/or grant dollars to cover about 50% of the \$688,350 for the staff device refresh cost. Also, by having these revenue/grant dollars, I would be recommending that the district purchase the devices and not incur additional financing charges that we have in the past (estimated of about \$10,000-15,000 of savings). Based on these numbers, I am projecting the total cost to District 97 to be **\$341,750** for the purchase of the 650 Macbook Airs. By completing this approval and order in early/mid April we will be able to receive these devices in early July and begin swapping devices out for our teaching staff throughout July and as needed in August. Following our last refresh cycle, our team completed an after-action review process in which our

team has retained protocols/procedures that worked well and what could be improved for the projected refresh in the summer 2022.

### **Middle School Project Lead the Way (PLTW) Program Redesign/Tech Refresh**

Over the last two years the District 97 Design Department has been evaluating the current design program and equipment to ensure it is meeting the goals for student learning. The pandemic was an accelerant for this deep dive and forced the team to think outside the box and find ways to deliver content for student learning in a different way. The adaptations and redesign of instructional practices in the last two years have led the design team to the current proposal. We have reimagined student learning in the design curriculum and are extremely excited for the next adaptation and the impact it will have for our students now and in the future.

The Design Department, in collaboration with the Technology Department, is requesting an upgrade from the original VEX cortexes and motor systems purchased in 2015 to the VEX Robotics V5 system. When the PLTW/Design program began they estimated a five-year lifespan of the technological equipment. With the help of teacher repairs to motors and replacements of batteries/sensors through our department budget, they were able to stretch the life of this equipment to seven years. Unfortunately, VEX is no longer supporting the software utilized by the technology in the cortexes and our current cortexes have reached their end of life. Furthermore, the transition to V5 would allow our students to explore the new coding platform on their Chromebooks, extending the learning outside of the walls of our classrooms, something we are unable to do with the current platform. The V5 platform on the Chromebooks will also allow for us to reduce our reliance on expensive computers, which also currently would need a refresh (if we do not switch to the V5 system, estimated at \$180,000). Switching to a web-based software with the new VEX equipment will offset most of the upfront cost for the platform switch. Another benefit of staying with the VEX platform is that it is backwards compatible with the remaining sensors and structural pieces from our current platform, resulting in significant cost savings over moving to a different manufacturer. This proposal would provide cortexes and motors for five sections per trimester at each school, ensuring access for all eighth-graders at both Julian and Brooks Middle School to the Robotics Curriculum.

To ensure our design department is equipped with the most up to date training on the V5 platform teachers would participate in a week long intensive training created by Carnegie Mellon which would provide our staff with a deeper understanding of the programming, computational thinking, pedagogical concepts, robot hardware, and troubleshooting techniques. An upgrade to V5 would ultimately ensure that our students are being taught on the most current and stable learning platform available for Robotics. We believe this is the best option for students to extend their learning and do so in the most cost effective way possible.

In addition, as part of the proposed \$125,922.96 for the proposal, all five staff will receive an updated Macbook device. This will also align with the refresh for all other teaching staff that is being proposed at this time.

**Year 2 (2022-2023) - Savings and Revenues**

During this upcoming school year we anticipated savings and revenues that would total \$401,803 (savings from current contracts or projects that lead to ongoing budget cuts) and with an update to our E-Rate proposals for Internet access (additional savings of \$16,4400). Through the ECF grant and sale of teacher devices, I am projecting an additional \$346,600 for the 2022-2023 school year. **The total savings/revenues for 2022-2023 School Year are \$764,843.**

**Updated Chart of Three-Year Tech Plan Costs, Revenues, Savings and Total Cost of Ownership**

<b>Proposed \$</b>	<b>Revenues (anticipated)</b>	<b>Savings (anticipated)</b>	<b>Grants</b>	<b>Net Budget Impact (year 1 and 2 have carry over savings)</b>
2021-2022 - \$ 1,090,118	\$308,391	\$418,603	\$1,055,118	+\$691,994
2022-2023 - \$1,149,298.92	\$143,000*	\$418,243	\$203,600	+\$307,538
2023-2024 - \$713,780.98	\$TBD	\$408,283	TBD	<b>+\$2,040</b>

**Total Proposed - \$2,953,197.90 Board Approved to date - \$2,036,342.94 Total Revenue - \$451,391\* Total Estimated Savings - \$1,245,129 Total Grants - \$1,258,718 Net Budget Impact - +\$2,040**

**\*2022-2023 - Estimated revenues**

## Appendix 1

### Reference from report in March 2021 for the approval of the current three year technology plan.

#### 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 6,000-plus students the opportunities to direct their own learning now and in the future to make an impact on this world.

During the last three years, we have carried out a 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. Three years ago our team could not have predicted the global pandemic would completely alter how students engage in learning and how teachers provide instruction. However, we were able to provide a close to seamless transition to remote learning thanks to the systems, devices and resources we had in place. we had in place, as well as our access to devices and resources for students, staff and families. This allowed our teams to focus their energy on designing, curating and delivering professional learning in order to provide the best learning experiences for all of our students (both synchronously and asynchronously). We were also able to provide a database of resources for our staff to access the training materials. The resources we developed will continue to be available to our staff moving forward.

Before I share the department's recommendations for the 2021-22 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 staff 650 Macbooks, 600 iPads and 600 Apple TVs;
- Continued and expanded Internet for All program;
- Negotiated and implemented a joint fiber project with the Village of Oak Park that will bring millions of dollars in savings to the district over the next two decades and beyond;

- Refresh of all administrative assistant devices;
- Refresh of all 550 wireless access points;
- Designed and implemented transformational learning spaces in six elementary school remodels (with two more this summer), three of which included large-scale renovations. Included renovations to all media centers and 39 classrooms to transform them into state-of-the-art learning spaces.
- Complete redesign and configuration of all network switches at all 10 schools, the administration office and warehouse (over 100 switches);
- Development and implementation of multiple cohorts of consistent year-long professional learning offerings;
- Reimagined methodologies of professional learning offerings focused on providing staff with live and asynchronous learning to be accessed 24/7;
- Developed, managed and implemented an organization-wide model for new EdTech tools to be vetted (for data practices and alignment to district goals), implemented, and reviewed through a data analytics tool to determine effectiveness.

#### Areas for Continuous Improvement

- Continue to provide professional learning for staff to build upon some of the ideal learning experiences with instructional technology.
- 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.
- Build upon work during the 2020-2021 school year on building dashboards and student, class, building and district data tools.
- Build and implement a comprehensive repository of instructional resources for staff and students.

Our iLearn Advisory Committee has reviewed many data points over the past couple of years, including ThoughtExchange (February 2021), in order to make recommendations for the next-three year plan. Here are the top items from this feedback that the plan will work to address over the next three years:

#### **Top Items to Be Accomplished In the 2021-2024 Tech Plan**

1. Leverage technology to create a repository of teacher created videos (UDL) to ensure forever access for all students.
2. Create and deliver professional learning for teachers.
3. Add Hapara/some other management system.
  - a. Lock Zoom to the screen.
4. Refresh devices w/ better specs and make keyboards more readily available.
5. Improve experience for K-2 (parents).
  - a. Lock down iPads heavily.

- b. More parent control, give parents access to iPad parental controls.
  - c. Revisit how teaching should look for K-2 teachers.
  - d. Zoom-only on iPad if the teacher wants to use paper and pencil for activities.
6. Continued professional development to ensure teachers are comfortable and expert with learning technologies.
  7. Consider making technology an academic area (coding, etc.) to ensure that all kids learn tech skills and it doesn't vary by individual teachers' comfort with tech.
  8. Ensure teachers know how to most effectively share content with students and limit distractions (e.g., ensuring K-2 teachers know there are safe YouTube links that don't take you down the YouTube rabbit hole).

### 2021-22 – 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 - in progress
Student/Teacher Assistant Device Refresh	\$1,055,118 - completed
Innovation Research & Development	\$ 10,000 - partially, & in progress
Internet Equity	\$ 15,000 - completed
Subtotal	\$713,780.98 - budgeted
Revenues (from device sale)	-\$469,000 (estimated)
Emergency Connectivity Fund Grant revenues	-\$1,055,118 + sales - actual
District budget savings	-\$418,603
<b>Total Net Expense</b>	<b>Savings of \$173,822.02 (carried to year 2)</b>

### 2022-23 – 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/Teacher Assistant Device Refresh	\$XXX Less due to payment -
ECF paid - board approved 3/23/2021	
Innovation Research & Development	\$ 10,000 -
Internet for All Equity	\$ 15,000 -
Teacher Macbook Air Refresh (cover the rest)	\$ TBD - ECF and Device Sale
Middle School Design Student Refresh	\$ TBD (following redesign and review process through January 2022)
Subtotal	\$1,305,130.98 - budgeted
Revenues (from device sale & ECF Grant)	-\$346,600
	-\$TBD - actual revenues
District Budget Savings	-\$401,803
Year 1 Savings carrier over	-\$958,530.98
<b>Total Net Expense/Impact</b>	<b>\$556,727.98</b>



**2023-24 – 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/Teacher Assistant Device Refresh 3/23/2021	\$678,780.98 - approved
Innovation Research & Development	\$ 10,000 -
Internet For All - Equity	\$ 15,000 -
Subtotal	\$713,780.98 - budgeted
Revenues (from device sale)	-\$TBD - (estimated)
	-\$TBD - actual revenues
District budget savings	-\$401,803
<b>Total Net Expense</b>	<b>\$311,977.98</b>

Proposed \$	Revenues (anticipated)	Savings (anticipated)	Net Expense
2021-2022 - \$713,780.98	\$469,000	\$418,603	+\$173,822.02
2022-2023 - \$713,780.98*	\$0*	\$401,803	\$138,155.96
2023-2024 - \$713,780.98**	\$TBD**	\$401,803	\$311,977.98

**Total Proposed - \$2,141,342.94 Board Approved to date - \$0 Total Revenue - \$469,000\* Total Estimated Savings - \$1,222,209 Net Expense - \$450,133.94**

\*Dependent on Middle School Design device Refresh

\*\*Dependent on staff device refresh (most of first year covered from sale)

**Three-Year Technology (2021-2024) - Planning and Recommendation**

In this section of the report, you will receive the following information:

- How we arrived at our recommendations for the 2021-2024 3-Year Technology Plan
- Recommendations
- Reasons for the recommendations
- What the recommendations will cost
- Anticipated/projected budget through 2021-2024

**iLearn Advisory Committee**

During the 2020-21 school year, the committee continued to build upon this work and showed the importance of our areas of focus during the changing landscape of education in a pandemic. Our team met monthly starting in October 2020, with the first three meetings centered on continuing the work from the previous year. This naturally led into conversations and planning for the upcoming tech plan that is part of this report.

The committee also collaborated with Special Education, Teaching and Learning, and our Business Department, as they project potential financial positions over the next few years.

In January, our team discussed ways to engage our community in new ways since we could not continue similar face-to-face focus groups and interviews. On February 17, 2021, we launched a ThoughtExchange to gather feedback from students (4th-8th grade), families and staff around our student device refresh. The exchange asked, “As you reflect on your students’ experience with technology in District 97, what has worked well and what are some things for the district to consider to further enhance the learning experience for all students?” For the exchange we had 1246 participants, 1330 thoughts, and 14,377 ratings. [Here is a link](#) to the slide summary. Also, following the closing of the exchange, the iLearn Advisory reviewed the data and put together some celebrations from the work our district has done around the technology plan. [Here is a link](#) of that summary from the iLearn Advisory committee where we focused on celebrations, opportunities and key items to include in this technology plan.

Over the last two years the committee has done a ton of work to learn together, review multiple forms of data, plan, advise on direction/vision and help to bring this plan to fruition. I want to thank each of the members for their dedication and collaboration for their time on the iLearn Advisory. Here is a list of those members:

- **D97 Staff:** Ebony Lofton, Tawanda Lawrence, Marvin Childress, Jamie Winchell, Erin Woodson, Angelica Love, Parisa Asgharzadeh, William Brackett
- **D97 Parents/Community Members:** Toni McGee, Nancy Ross Dribin, Dan Wolman
- **D97 Students:** Ahmad Mahrous, Owen Kelly, Colby McGee, Hattie Mae, Jayden Newell, Maxwell Armstrong
- **D200 Students/Former D97 Students:** Noah Oxer and Jacob Drews.

### **Explanation of Recommended Expenditures for Year 1, 2 and 3 of the Technology Plan**

This recommendation includes:

- A full refresh of all student iPad (2,100) and Chromebook (2,200) devices. We estimate that we will be able to realize about \$469,000 in revenue for the sale of previous end-of-life student devices;
- An anticipated refresh of all staff/teacher Macbook Airs (650) and iPads (550);
- Review and determination of hardware to support the Middle School Design Department (Year 2 or 3);
- 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.

In addition, as referenced above, [here is a summary](#) from our iLearn Advisory on the

main areas we will be focusing our efforts on around professional learning

### **Oak Park Joint Fiber Project**

In Spring 2020, the Village of Oak Park and District 97 agreed to a contract for fiber services for the upcoming future. We will continue to review the contract every 10 years to agree on ongoing renewals. The current contract can run for two consecutive 10-year terms and then review for future extensions. This project will provide access and bandwidth needs for decades to come for both the village and District 97.

In addition, this will provide District 97 significant cost savings from the previous E-Rate proposal and much greater capacity to support the ever-changing needs of our students and staff. Currently, the Village of Oak Park and the construction company are in the final stages of the project and testing at all of the district sites. We expect to be fully switched over to the new system prior to the end of the two-year agreement with the DOIT Consortium for fiber services.

### **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 to assess and evaluate the success of the program to determine renewal of the program on an annual basis.

During the pandemic, the number of families that were in need of the Internet for All program increased. We currently have deployed 116 hotspots. In addition, we have partnered with Comcast as another solution to support families and have provided home access to four families with the sponsored Comcast Essentials program.

### **Rapid Pilot Program/Innovation Research and Development**

This year there have been many innovative practice changes, which have been supported mainly through professional development. At this time, while the year is not over, we have not received any additional applications. However, we have a few staff that have shared they plan to submit soon. One supported innovative practice this year took place during the summer of 2020, when the Design Department completely revamped part of their program, as their core program would not be able to be used with

the support of on-site resources and materials. This required immense vision, planning, innovation, flexibility and thinking outside of the box to implement a successful program for students. In the end, the students were able to leverage micro bit kits to continue to learn and work through their coding/programming.

Following this success we have included \$10,000 in our proposal to continue the program for the upcoming school year. Our iLearn Advisory Committee believes it is still very important to promote and support staff to think innovatively and how they can meet student needs differently.

## **Professional Learning**

For 2021-2024 we plan to continue to build upon the collaborations that are mentioned below in the past work with the Professional Learning Committee, which includes representation from buildings, all district departments and unions. Our work will be centered on supporting our students in their learning and teachers in the highest leverage teaching practices, which will include the use of technology in a purposeful way to enhance the learning experience. [Here is a link](#) to a detailed plan of professional learning that began last year and will continue to be refined for the next three years of this technology plan. We will be focused on supporting the efforts of teaching and learning and providing learning for a more consistent level of expertise and purposeful use for leveraging technology.

## **Student and Staff Feedback**

In January, our team discussed ways to engage our community in new ways since we could not continue similar face-to-face focus groups and interviews. On February 17, 2021, we launched a ThoughtExchange to gather feedback from students (4th-8th grade), families and staff around our student device refresh. The exchange asked, “As you reflect on your students’ experience with technology in District 97, what has worked well and what are some things for the district to consider to further enhance the learning experience for all students?” For the exchange we had 1,246 participants, 1,330 thoughts, and 14,377 ratings. [Here is a link](#) to the slide summary. Also, following the closing of the exchange, the iLearn Advisory reviewed the data and put together some celebrations from the work our district has done around the technology plan. [Here is a link](#) of that summary from the iLearn Advisory committee where we focused on celebrations, opportunities and key items to include in this technology plan.

In addition, Michael has connected with other stakeholders to gather feedback around the work of the technology team and in regards to the technology plan. Due to the timing of the many of the conversations, there was significant feedback around the current hybrid and remote learning environments. Here are some highlights in addition to the ThoughtExchange feedback that was shared:

- “Even the most hesitant staff have had to jump in - the pandemic was/is horrible,

but there have been huge enhancements and improvements.” (This was in reference to what has been working with technology and the support for staff.)

- “Kids that are so much better at typing than they were able to write. Writing was so much of a task when just asking to get ideas and out it has forced us to do it and it has changed my perspective in how to use technology and when we are back in person it will change how we do things for the better.” (This is one example shared about how they believe the technology can support our students. The staff member shared that this has opened up their eyes for other ways to do things and to ensure students have the other opportunities/ways to demonstrate their learning.)

### **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 in 3rd-5th grade and Seesaw in kindergarten through second grade 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 2021-2022 and building from the work during the 2020-2021 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 role on the Technology Advisory Team the following plans were provided directly from the department highlighting how the learning tools will support for the next couple years for students and staff.

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.

- [Student Led Technology Team](#) - Creation, development, editing, script writing and production (all done remotely)
  - [Lincoln Tech Club website](#)
- [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. Especially, as we are planning for the 2021-22 school year, we will have a heightened focus on being purposeful and provide professional learning opportunities around the best and highest leverage practices to use technology in the classroom.

### **Special Education**

In collaboration with the 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.

### **2021-2022 - 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** – As we reviewed the proposal for our voice system, we identified that with our current staff expertise we could extend the life of some of the hardware being proposed by Cisco for the next three years. This totaled **\$80,000**, for a total of \$26,667 each year of the proposed tech plan. **The total savings for next year will be \$26,667.**
- **Joint Village Fiber Project** - **\$145,940** annual savings each year based on the need of an upgrade to the current system to meet similar access levels needed to support our students and staff. Total of **\$437,820** over the next three years. The savings will continue for the next 10 years (\$1,459,400), with a joint renewal for 10 additional years (20 years - \$2,918,800), as well as, with joint interest to extend for an additional 20 years for a total of 40+ years.
- **State Consortium DOIT Contract** - **\$125,196** for Internet services for each year for the next four years. The total of **\$375,588** over the next three years. The savings will continue through the 2024-2025 school year for a total of \$625,980 for five years.
- **Printer System Upgrade** – During the spring of 2021, we are going through a review of our current contract and reviewing the consortium pricing and potential in house bid process. From our estimates, we anticipate savings from our current costs to be about **\$56,000 each year** for the next five years. During this technology plan there will be an estimated total of **\$168,000**. The savings will continue through the 2025-2026 school year.  
In 2016, our streamlined printer solution saved and will continue to 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. While these savings continue to be realized, we are not citing these as new savings as they have become part of our usual practice and expectations of our services.

- **E-Rate** - This year, we will only leverage the past contracts with our Internet access and have one year left on the contract. In addition, we have partnered with the DOIT Consortium who have provided contracts for D97 to have fiber as a bridge to the joint fiber project and dedicated internet access (10 gb) for no cost. We will be seeking 40% reimbursement through E-Rate for the contracts with Comcast of dedicated internet and if granted would receive about **\$16,800** back for this project.
- **Refresh of Devices** – Our current fleet of student 1:1 and shared devices are iPads, Chromebooks and Macbook Airs has value despite being at the end of their cycle. These devices have been used for the last 4+ 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 four 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 of the cost for the first year of our three-year lease for the iPads and Chromebooks. For next year, we are estimated to receive **\$469,000** in trade for our iPads, Chromebooks and Macbook Airs. The recommendation is to enter a three-year lease, with the opportunity to keep the devices for one additional year. At that time, we will calculate the cost associated with maintaining the devices or refreshing them during our typical four-year refresh cycle for student devices.
- **Smartnet removal of licenses** - For this year, with having an IT Infrastructure Manager with a high level of expertise and skill with our Cisco hardware we have been able to cut the majority of Smartnet licensing. For the last two years and for the 2021-2022 school year we are saving **\$48,000**. This savings will continue as we have a staff member that has the expertise for the support of our infrastructure. For the next three years this will be a total savings of **\$144,000**.

<b>Proposed \$</b>	<b>Revenues (anticipated)</b>	<b>Savings (anticipated)</b>	<b>Net Expense</b>
2021-2022 - \$713,780.98	\$469,000	\$418,603	<b>+\$173,822.02</b>
2022-2023 - \$713,780.98*	\$0*	\$401,803	<b>\$138,155.96</b>
2023-2024 - \$713,780.98**	\$TBD**	\$401,803	<b>\$311,977.98</b>



**Total Proposed - \$2,141,342.94 Board Approved to date - \$0 Total Revenue - \$469,000\* Total Estimated Savings - \$1,222,209 Net Expense - \$450,133.94**  
\*Dependent on Middle School Design device Refresh  
\*\*Dependent on staff device refresh (most of first year covered from sale)

## Appendix 2 - Review of 2018-2021 Technology Plan

### 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	\$ 10,000 -
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
<b>Total Net Expense</b>	<b>\$502,342.27</b>

### 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	\$ 10,000 -
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
<b>Total Net Expense</b>	<b>\$689,517.27</b>

### 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
<b>Total Net Expense</b>	<b>\$39,310.97</b>

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**

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

<b>Proposed \$</b>	<b>Revenues (anticipated)</b>	<b>Savings (anticipated)</b>	<b>Net Expense</b>
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**

### **Past iLearn/Technology Advisory Committee Details**

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.

Following the completion of the 2017-2018 school year and planning with the Technology Advisory Committee, one output from the team was to have the committee be more closely aligned and collaborative with Teaching and Learning. During the summer of 2018, the technology department and teaching and learning department met to discuss how to bring this work together. From there, we reimagined the iLearn Committee to be centered on student learning experiences, and sought out different voices to join our team.

We issued a call in July 2018 for volunteers to serve on the committee, and we received 63 applications for the 15 available spots. We selected five students, five

parents/community members and five staff members to serve on the committee, and had our first meeting in October 2018. The meeting consisted of grounding the team in its purpose, starting with the district vision and goals, and sharing the departments' focus around student learning experiences (including ways technology is leveraged to enhance the learning environment and how we are seeking to use them in the future). We also discussed how education and career paths are rapidly changing for our students.

Our second meeting in January 2019 was focused on hearing from the committee in a focus group setting. The committee members answered and reflected on specific questions centered on student learning and their beliefs, desires and values. Our final meeting for the 2018-2019 school year was organized for the committee members to review the previous meeting focus group data to identify the main trends from each group. Then the team worked through a protocol to identify the key trends and work through a voting structure to come to a consensus on three main next steps. Those next steps are: consistent professional learning for staff, leveraging technology as a means and not an end and student choice and voice in learning experiences. The group also shared in the importance to approach all three of these areas from the equity lens. We concluded the session discussing what will need to be done to accomplish this work going into the next year, which included the group agreeing to reconvene for the upcoming school year. This also included connecting with Eboney Lofton to bring her up to speed and get her thoughts on ways to support this work.

During the 2019-2020 school year Eboney Lofton and I have continued to work with our iLearn Advisory Committee. We have been meeting on a consistent basis during the school year, until March 2020, when we closed the district due to COVID-19. Our work this year has focused on collecting feedback and planning around our teams three main goals. Those goals are: consistent professional learning for staff, leveraging technology as a means and not an end and student choice and voice in learning experiences. The group also shared in the importance to approach all three of these areas from the equity lens.

### **Professional Learning - 2018-2021 - Tech Plan - For Reference**

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 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 in 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 training 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 training, 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.

### **Details from Previous Staff Engagement**

In April 2018, I 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.

### **Past Rapid Pilot Program/Innovation Research & 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 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.

### **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 to 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.

To date, we have worked closely with the school buildings, teachers, teacher librarians, buildings and grounds (Jeanne Keane), STR, and Bulley and Andrews to design for renovations for all eight elementary schools. Specifically, we have renovated and created additions to 39 classrooms and designed all eight media centers (Beye and Whittier to be completed summer of 2021) with state-of-the-art technology and furniture that is flexible and adaptive to support our instructional pedagogy.

### **Update from 2019 Regarding Planning for the Joint Fiber Project**

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 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.

## Appendix 3 - 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.**

<b>2016-2017 Budget</b>	<b>2016-2017 Savings</b>	<b>Actual Expense</b>
<b>\$406,755</b>	<b>\$289,175.93</b>	<b>\$117,579.07</b>

### 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

**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	\$188,000 – Complete
Servers, Switches, Routers	
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
<b>Total Net Expense</b>	<b>-\$3,197.93 (This is net positive)</b>

Here is a review of the accomplishments during the 2015-2018 technology plan. 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, 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.



#### **Appendix 4 – 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 5 – Supplement and Support Details for Department Practices and Procedures**

### **Data Privacy & Security**

Prior to the 2018-2021 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 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.

Starting July 2021, the new SOPPA law will come into effect for school districts and vendors to ensure all are being transparent and compliant with the requirements of the new law. [Here is a link](#) to an executive summary of the SOPPA law. For each of these items District 97 is in a great place and are currently already doing the majority of these items. At the start of each year, we provide notifications to families during the registration process to notify and share with all families the applications and systems are being used that include student data. [Here is a link](#) to the public database of our resources that we continue to update.

Prior to any new application being added, we go through a two-step vetting process. First, when a new application comes in from staff, we will work with the Teaching and Learning Department to ensure the program supports the instructional goals and district vision/mission. Second, we will connect with the vendor to review their data security practices. After both of those meet the standards, we will notify families of the new tools if they require student login information/data. Next, if they include paid contracts and student data, we ensure we have a data services agreement with each vendor. This agreement was worked on with our district attorney to meet the state and federal requirements/laws. After that, we work with our staff for professional learning as needed for new tools. Finally, we will communicate to students and families of the new tools and be transparent about the data components.

With the new SOPPA law coming into effect, many districts in Illinois have been working through these requirements and were searching for better and more consistent ways for all districts to do this. This has led to a national data privacy agreement (NDPA) for Illinois that can be and should be used by all districts. Then the agreements that are unedited can be shared with other districts to piggyback and share in the standard agreements. This process would still include the district vetting process shared above. As we move forward, the state of Illinois and currently more than 200 districts are using the SDPC website to facilitate this process for districts to work together to meet the requirements.

### **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.

## **Securly**

With the addition of Securly, students will now need their Google username and password to access the Internet or any Internet-based app when using their district device on a non-district network. For example, if students need to work in Google docs via a WiFi connection while outside the district, they will need to go to Safari first. From there, they will be prompted to login to Securly with their Google username and password. They will need to type in their entire email address, including the @students.op97.org. Once they do this, they will be able to use Safari or any Internet-based apps on that network on a daily basis. Each day, they will need to login again through Safari to regain access to the network. They will also need to complete the login process if they switch at any point to another non-district network. Please email [technology@op97.org](mailto:technology@op97.org) if you have any questions.

This year will be the fourth year we have offered the Securly Parent Portal to families. We have piloted with a handful of families over the last two years and received positive feedback. Here is a link to more information about the Parent Portal. If you are interested in using the Securly Parent Portal please complete this form. More information to come to staff and families in the coming weeks.

## **Apple - Screen Time Filtering and Device Management**

In addition to Securly management on all student devices onsite and offsite, on iPads families can manage the student devices K-5. Apple has created a tool called Screen Time that is local to the student devices and can also be managed by families. Here is a tutorial video that reviews the different settings and features available and how to manage the settings. This is also a tool that can be used for personal Apple devices that families may have at home.

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.

## **Data and Security Audit**

In January and February 2020, we completed an audit to review the work that our team completed following our initial audit in December 2016. That audit led to a three-year

plan and all of our work showed in the outcomes of the most recent audit. Following the audit in February 2020, we developed a new three-year security plan and have started the first year of our work to help make our district more secure.

### **Past Data Security Audit Details**

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 2021 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 are the most recent](#) results from the 2020 data from our BrightBytes survey. [Here is an overview](#) of results from May 2017.

### **E-Rate**

This year, we will only leverage the past contracts with our Internet access and have one year left on the contract. In addition, we have partnered with the DOIT Consortium who have provided contracts for D97 to have fiber as a bridge to the joint fiber project and dedicated internet access (10 gb) for no cost. We will be seeking 40% reimbursement through E-Rate for the contracts with Comcast of dedicated internet and if granted would receive about \$16,800 back for this project.