SARASOTA COUNTY SCHOOLS
DEPARTMENT OF INFORMATION TECHNOLOGY

M E M O R A N D U M

TO: Members of the School Board
Lori White, Superintendent

FROM: Joe Binswanger, Director of Information Technology

DATE: March 14, 2014

SUBJECT: UPDATE ON TECHNOLOGY PLAN

As you know, it was requested to spend some time on your March 18, 2014 Workshop Agenda to discuss the technology plan for the district moving forward. This read-ahead is intended to ensure Board Members have all appropriate background knowledge about technologies impacting our district in three primary areas: network infrastructure, computer replacement cycle, and interactive whiteboards. We'll also give you a short update on the CrossPointe/ESD Student Information System roll-out.

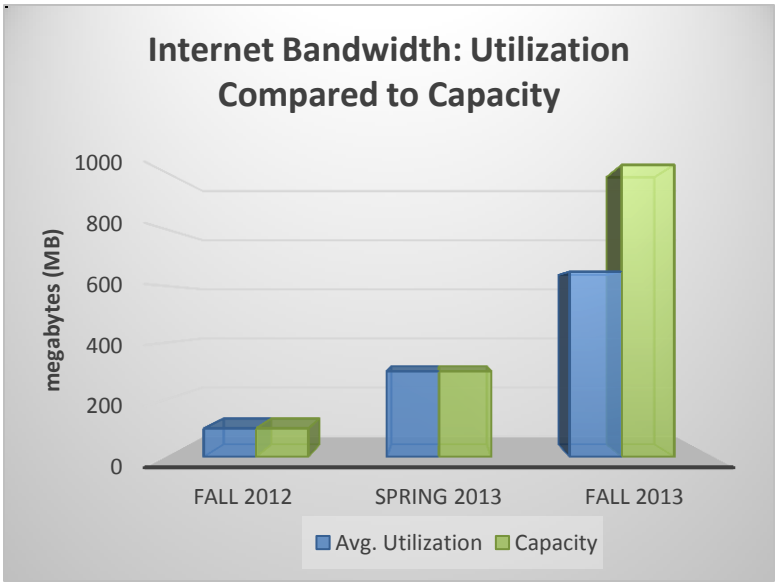
Our goal for this workshop is to educate the Board on the areas that will be of emphasis for the Information Technology Department over the next 4-5 years and begin a discussion on potential policy implications as a result of the changes in technology.

NETWORK INFRASTRUCTURE

The network is the foundation for which all information in Sarasota County Schools travels. A critical component to the success of the staff, students, and community of Sarasota Schools is to have a robust and reliable network they can depend on every day. For almost 10 years, Sarasota County Schools has been able to utilize a 10 gigabyte (GB) fiber network connecting all of our schools to our data center. During the recent MGT Audit, the Information Technology Department received commendations for both the fiber network and the data center as being one of the best MGT has ever experienced.

With the increase of high-caliber resources available to our students and staff on the network, it is imperative that the network infrastructure stay ahead of demand. By the end of

the 2013/14 school year, a wireless access point will be installed in every classroom at every school across the district. A high-density wireless access point will be installed in common areas, such as media centers, for larger numbers of students to all connect at one time. In anticipation for the greater need of internet bandwidth, an RFP for internet service was completed last year to be able to utilize the Federal Government's eRate program to receive a rebate equal to our Free and Reduced Lunch percentage for our internet service provider charges. To begin the 2012 school year, the district had a connection to the internet of 100 megabytes (MB). During spring 2013, the district was able to increase that connection to 300MB while the RFP for greater internet bandwidth was being completed. The RFP was written as such that provides the district a 1 gigabyte (GB), or 1024MB, connection that is capable of going all the way to 10GB, or 10,240MB, with a phone call to the internet service provider. The graph to the right shows the average daily utilization of internet bandwidth in comparison to the available capacity. Prior to this past Fall, every day our schools used the maximum amount of internet bandwidth available. Often times the internet resources would respond slowly because the resources were being utilized at their maximum capacity. We monitor our average daily usage of internet bandwidth to ensure we do not get to a point where we have maxed out our available resources.



The Information Technology Department will continue to expand the opportunities for access to network resources for students and staff across the district while ensuring there is enough internet bandwidth to accommodate this access. The network infrastructure will be the foundation which we build all other technologies upon and is the basis for which we use to ensure students are safe and secure while progressing through their educational experience with Sarasota County Schools.

COMPUTER REPLACEMENT CYCLE

The summer of 2009 began the 5 year computer replacement (refresh) program for all schools across the district. A standard allocation was established for the three levels of elementary, middle, and high schools. This standard reduced the number of computer models that required support on a particular campus, while ensure all students and teachers had access to the computer hardware that they needed to be able to effectively accomplish that which was

asked of them. The growing needs in computer-based assessment were addressed in this model, as well, by establishing a fixed computer lab for every 240 students enrolled at a school. The original computer replacement program concluded this past summer when all schools had their computers updated and the school allocation brought up to the standard.

During the spring of 2013, the Information Technology department met with focus groups at the Elementary, Middle, and High levels. These focus groups consisted of teachers, school support, and school administrators to discuss what worked well with the computer replacement program and what could be improved. The focus groups met six times over a 3 month period to set the parameters for the next cycle of computer replacement at the schools. The consensus across all 3 levels was two part: the current replacement program was too long at 5 years and it needed flexibility to better match the instructional design at the individual school level. During this past October Board Workshop, the results and recommendations for the computer replacement program were shared with the Board. The Information Technology department, through the approval of the Board, has been able to accommodate the recommendations of the focus groups by taking the computer replacement program down to 4 years and provide flexibility in the standard allocation to all schools. A standard is still in place that holds support costs down and ensures equity of access across all schools. The additional flexibility will allow schools to place the right technology in the hands of students and teachers at their point of need with the curriculum they are currently working with in the classroom. (As seen in the digital design classroom in the picture to the right.) The computer technology is also purchased with the thought process of what may be asked of it over the 4 year period of use at the school.

The second phase of the computer replacement program will begin this coming summer with 10 schools across the district. Computer hardware will be selected that meets the needs of the learner, both today and tomorrow. New programs, such as TechActive Classrooms of Tomorrow at the Middle Schools and TEL (Technology Enabled Learning) Studios at the High Schools, are supported by the second phase of the computer replacement program. In addition to the current programs that are supported, school leaders have enough flexibility and availability to begin to pilot new ideas that potentially impact instruction and learning in a positive way.

INTERACTIVE WHITEBOARDS

The 2006/07 school year was the mark of the first significant move toward standardization in technology equipment for Sarasota County Schools. During the prior school year, the decision was made through the guidance of the NeXt Generation Teachers in Sarasota County to use the Promethean ActiveBoard as the standard for interactive whiteboards in classrooms. Throughout the 2006/07 school year and following summer, over 3000 interactive whiteboards were installed across the district with multi-phases of professional development for staff. A standard was set both in hardware to be used by staff and an expectation that technology become part of day-to-day instruction. That standard has become the consistent expectation for our currently enrolled 7th graders because it is the only standard they have known since being enrolled in Sarasota County Schools. It is their 'normal' for how a teacher should instruct.

The Return on Investment (ROI) for the interactive whiteboards installed in Sarasota County classrooms has been a topic of great discussion over the past 8 years. Beyond the expected replacement of the projector component of the interactive whiteboard classroom configuration, the equipment has been able to adapt to changes in technologies over the years that are utilized through its interface. The ability to adapt to these changes has enabled the district to further extend the ROI on the initial purchase over 8 years ago. The K-12 Education Community has done many studies and much research on the impact of an interactive whiteboard on student achievement over the years. Sarasota County teachers have participated in several of these studies; Dr. Robert Marzano's study in 2009 most notably. The study results indicated that, in general, using interactive whiteboards was associated with a 16 percentile point gain in student achievement (see Marzano & Haystead, 2009).

As the life-cycle for the equipment originally purchased comes to its end and advances in technology continue to move forward, the next evolution of a primary instructional space enhanced through technology needs to be addressed in Sarasota County classrooms. The Information Technology department is working with teachers, school leaders, and industry experts to implement the solution that will at least maintain, if not substantially increase, our existing ROI for student achievement.

REFERENCES

Marzano, R. J., & Haystead, M. (2009). *Final report on the evaluation of the Promethean technology*. Englewood, CO: Marzano Research Laboratory.