

# Planning Tomorrow's Technology

**Empowering Education Through  
Technology:  
Connecting the 21st Century Dots**

**FY14-16  
District Technology Plan**



# FINAL

*THIS PRINTED VERSION CONTAINS ONLY THE TECHNOLOGY PLAN CONTENTS AND MAY OMIT PRESENTATION GRAPHICS AND PICTURES AVAILABLE IN THE ON-LINE VERSION.*

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## Introduction



## Introduction

### **Leadership's Vision for the Future of Technology**

#### **Chuck Shaw, Board Chair**



In the New York Times on August 17, 2011, Pulitzer Prize winner, Thomas L. Friedman, said, *"...globalization and the information technology revolution have gone to a whole new level. Thanks to cloud computing, robotics, 3G wireless connectivity, Skype, Facebook, Google, LinkedIn, Twitter, the iPad, and cheap Internet-enabled smartphones, the world has gone from connected to hyper-connected. This is the single most important trend in the world today. And it is a critical reason why, to get into the middle class now, you have to study harder, work smarter, and adapt quicker than ever before. All this technology and globalization are eliminating more and more 'routine' work — the sort of work that once sustained a lot of middle-class lifestyles."*

District technology thinking and planning must embrace world-class proficiencies and the Technology Plan 2014-2016 does this by advancing and joining the District's Strategic Plan. The Tech Plan positions the District to engage, empower, and challenge our students, via the same technology that has changed the world, to become innovative thinkers who can resiliently adapt in an ever-changing world and become the creators of tomorrow's trailblazing technologies and initiatives.

**Roy Amara**, (a researcher, scientist, and past-president of the Institute for the Future) *said*, *"We tend to overestimate the effect of a technology in the short-run and underestimate the effect in the long-run."* The School District of Palm Beach County is in it for the long-run, as will be our students with technology. Accordingly, our commitment is to provide the best of modern technology to reach our students and accomplish our mission by positioning technology in students' hands and empowering them to learn with it.

The District accepts that technology is at the core of virtually every aspect of our students' daily lives and we must leverage it to provide engagement and create powerful learning experiences and content for them. Additionally, we must use technology to deliver educational resources and assessments that measure student achievement in more complete, authentic, and meaningful ways. Every student must have dependable and equivalent access to all of our learning resources, both virtual and physical.

Our technical infrastructure must be flexible to accommodate initiatives brought on by rapid technological changes, revolutions in curriculum delivery, and state mandates. Our technology must deliver information to students and all stakeholders in a safe and secure environment where consistent access and equity are ensured. Our teachers and staff must be educated, coached, and supported to integrate technology into the hands of our students for learning.

We are very proud of our Division of Information Technology and its very able leadership who championed this Tech Plan, through a collaboration of our vision for the next three years, addressing students as its priority.

## ***E. Wayne Gent, Superintendent***



Literacy in the 21st century requires more than the ability to read, write, and compute. We, at the School District of Palm Beach County, believe that every student must develop strong technological skills and continually use them in order to function successfully in our 21st century world. As educators, we not only face the constant challenge to uphold educational standards, but also with the rapid changes in technology. Our District must ensure that technology resources are integrated across the curriculum and become part of the fabric of instruction. Students must use appropriate technologies to access worldwide resources in order to become more productive learners as part of their regular classroom routine. They must be able to use the many forms of technology to access, understand, manage, interpret, evaluate, and create information. They also must be able to analyze information for content, relevancy, and accuracy and be able to present that information in a variety of formats, including those with technology platforms.

Our District is united in its technology vision. Our highest priority is our students' success. To achieve this mission, we must ensure that all teachers and principals have the skills and knowledge to deliver quality curriculum and instruction to meet the varied needs of all students. To align ourselves with the 21st century learning, we must empower our educators and students to be ready for innovations in the digital content creation, virtual collaboration, and mobile learning. With the influx of modern technology choices in education, we will require a robust infrastructure that supports high-speed networks and usage of smart devices for mobile learning.

This is an exciting time in education, where there are so many options and extensions for learning that students and teachers are many times learning together. Students are looking for the classrooms that are most "enhanced", where they feel comfortable engaging, and where they can learn in multiple ways including using technology found in their daily lives. Our classrooms are 21st century-ready, equipped with a variety of technology tools including computers, digital media, smart devices, instructional applications, and classroom management software. We continue to foster an environment to ensure that our schools are safe, welcoming, and working collaboratively with parents and community to support student success.

A technology-rich education produces students with the tools, competencies, and level of sophistication necessary to be successfully employed in an ever-changing global economy. Such an education enables all students to understand and use current and emerging technologies in their personal academic and work environments.

The 2014-2016 Technology Plan addresses the current state of technology in the District and defines the strategies for successful technology innovation, system implementations, support, and professional development. This plan also addresses the state mandates that require a shift to a local instruction improvement system (LIIS), online testing, and digital curriculum which would require additional financial resources during these challenging times. We have many

priorities to address; however, we are confident that the Plan will guide us to stay focused on technology initiatives that support our core mission of student achievement.

I would like to thank our students, teachers, principals, employees, parents, and everyone who provided their valuable input to the technology survey, for the development of the plan.



## **Mike Burke, Chief Operating Officer**



The Technology Plan recognizes that technology is at the core of virtually every aspect of our daily lives and work, and we must leverage it to provide engaging and powerful learning experiences and educational content. At The School District of Palm Beach County (SDPBC), technology is an integral component for delivering education that drives student achievement and teacher effectiveness, and helps improve operational efficiencies.

In recent years, great efforts have been made to ensure that technology is used effectively in support of our core mission, that of successfully educating children. Technology decisions are made collaboratively with input from schools and key stakeholders. Operationally, there is greater focus on implementing best practices to streamline our systems and processes for cost efficiency.

Our District continues to be committed to the implementation of 21<sup>st</sup> century learning for students to reach their highest potential and succeed in this global economy. The current challenge within our available resources is to leverage the learning sciences and modern technology to create engaging, relevant, and personalized learning experiences that mirror students' daily lives and the reality of their futures. A robust and reliable technology infrastructure is required to support these newer educational technologies and their integration into the classroom,

With the onset of teacher evaluation, end-of-course exams, assessments, and testing, our immediate focus has been to improve our technology infrastructure to support the increasing use of internet and network bandwidth at our schools. With new state-mandated initiatives looming in the horizon, such as Local Instructional Improvement System (LIIS) (as discussed later on in this plan) along with Digital learning, it is imperative that we continue to collaborate and compile a vision for the next three years. The plan outlines the technology system and processes, both academically and operationally, that are required to uphold exceptional educational standards for student achievement and college readiness.



The Technology Plan for 2014 – 2016 focuses on empowering education through technology and provides cost-effective technologies that enhance learning vital to preparing students for lifelong learning and workforce readiness. The Plan outlines the strategic alignment of technology systems and functions with the District’s mission and vision, and the effective and efficient management of technology resources. The Plan also addresses the District’s goals, objectives, and key results, and dovetails with the District Strategic Plan for student achievement through technology. It is also in alignment with the National Educational Technology Plan and the Florida State Board of Education Technology Plan.

When we compare this technology plan from the previous technology plan vision, we have fundamentally changed our views. Previously, technology was considered a tool to help educate students. Now, we consider technology an integral part of students and their professional lives – not just the “tools”, but with technology acting as a change agent that is shaping the culture and the ways of everyone’s lives. In our technology plan, we recognize that our education system needs to take a key and active role in helping shape student access, knowledge, and use of technology as part of their lifelong learning.

We believe that there are five elements to this new vision as laid out in our plan:

- Integrating technology and curriculum: Integrate technology and curriculum to inspire a collaborative learning community that can effectively find, evaluate, use, and create content. This encompasses 21<sup>st</sup> century learning skills that will use technologies to achieve their professional or personal goals. This will also promote dynamic teaming and interactive collaboration.
- Identify and utilize existing, emerging, and cost-efficient technologies that enhance learning: We need to continue to stay up-to-date on technology. We need to have a forward-looking element in our technology vision as technology is changing rapidly, and our students are usually among leading-edge users. Also, the fundamental capital expense equation is changing, as technologies follow the commoditization curve, and as software as-a-service and cloud-computing create new paradigms (e.g., email services, editing services, or collaboration tools). With the advent of more online technologies than ever at our District, we have to continue to take an active role in promoting safe and ethical use of technologies.
- Ensure equitable access to technology: this is a huge challenge. We are currently upgrading our wireless and LAN infrastructure. Our next task is to look at how we can work toward implementing technologies and strategies that help us fill the gap to provide equitable access.
- Provide professional development and technologies that are necessary to deliver curriculum, communicate, access, manage, and evaluate student-related information. We need to work toward integrating our instructional systems into an LIIS as required by the Florida Department of Education (FLDOE).

- We will need to work toward the FLDOE mandate of providing our students access to Digital learning. The District hopes to get appropriate funding and resources to achieve this challenging goal of providing high-quality access to digital content for our students and teachers. This will be a fundamental change to the existing work-flow and infrastructure.

The Technology Plan was developed with consideration of our budgetary constraints. During this economic downturn, we are taking active measures to decrease our technology-related expenses by exploring and implementing cost-cutting alternatives to traditional processes and systems. Through the implementation of a shared-services model, we are consolidating our systems and personnel and investigating opportunities to improve operational efficiencies in supporting our schools and departments.

The 2014 – 2016 Technology Plan provides the roadmap and direction for the District's technology initiatives. Successful implementation of the Plan will require clear definition of goals and objectives. The Plan will be reviewed periodically to ensure that we are achieving our goals within the defined targets.

## ***School District of Palm Beach County General Information***

### ***School Board Members***



#### **Standing left to right:**

- DISTRICT 1 Mike Murgio
- DISTRICT 3 Karen M. Brill
- DISTRICT 7 Debra Robinson, M.D., Vice Chairman
- DISTRICT 2 Chuck Shaw, Chairman
- DISTRICT 6 Marcia Andrews
- DISTRICT 4 Jennifer Prior Brown, Esq.
- DISTRICT 5 Frank A. Barbieri, Jr., Esq.

### ***School District Vision***

The School District of Palm Beach County (SDPBC) envisions a dynamic collaborative multicultural community where education and lifelong learning are valued and supported, and all learners reach their highest potential and succeed in the global economy.

### ***School District Mission***

The SDPBC is committed to providing a world-class education with excellence and equity to empower each student to reach his or her highest potential with the most effective staff to foster the knowledge, skills, and ethics required for responsible citizenship and productive careers.

## ***School District Core Principles***

The SDPBC values the following principles as demonstrated through its operations, instruction, and learning environment.

- Community
- Cultural Sensitivity
- Diversity
- Equity
- Ethics
- Excellence
- Family
- Honesty
- Inclusion
- Knowledge
- Parity
- Professional Development
- Professionalism
- Respect
- Skill-Building
- Social and Emotional Development
- Trustworthiness

## ***School District Goals***

### **Goal 1: Student-First Philosophy**

- Implement research-based fully enriched instructional models that enable students to develop the critical-thinking and analytical skills necessary to succeed academically.
- Support each student, not as a collective unit, but with individualized educational plans.
- Provide meaningful follow-up, monitoring, and mentorships that provide support necessary to succeed.
- Develop age-appropriate life skills training programs for students and families that cultivate soft skills including self-determination and self-advocacy.
- Seek equitable outcomes for all student groups that help each student achieve the greatest success possible.
- Continue and strengthen choice programs, career academies, and other career/technical curricula that meet the needs of our students while supporting the economic development goals of the community.
- Implement methods to identify learning styles and match them with appropriate teaching methods.

## **Goal 2: Family Matters**

- Create policies and programs that proactively engage all parents, caregivers, and families as the primary partners in the education of students.
- Implement new policies, procedures, and processes to make schools more family-friendly so that the school encourages parent/caregiver participation by providing: an inviting campus, a welcoming atmosphere, and mutually-beneficial opportunities to interact with teachers and administrators.
- Train principals and teachers on how to maximize interactive opportunities with families/caregivers via face-to face meetings, as well as communication through technology.
- Engage partners to empower families/caregivers.
- Hold teachers/administrators accountable to families/caregivers for parental involvement efforts.
- Create, recruit, and implement on-campus volunteer opportunities in all aspects of school life for families' caregivers and community partners.
- Examine opportunities to improve adult literacy skills, and career/technical training offered to families/caregivers.
- Encourage parental accountability for school readiness with support mechanisms that bolster families/caregivers.

## **Goal 3: Qualified and Highly Effective Workforce**

- Cultivate a fluid leadership development succession planning program that keeps good teachers teaching, strengthens classroom management efforts, and produces highly-effective academic leaders, assistant principals, principals, and administrators.
- Conduct a resource allocation study evaluating socio-economic factors in the School District to identify shortfalls and inconsistencies between schools within the District, and reassign resources, including the workforce, to address equity in a *Student-First Philosophy*.
- Enact a professional development program that is coupled with a system that ensures adequate pay for a well-trained workforce.
- Ensure that professional development supports and strengthens choice programs, career academies, and other career/technical curricula to meet the needs of our students while supporting the economic development goals of the community.
- Provide intrinsic incentives to encourage the reassignment of the best teachers (as measured by student performance and acceleration data) to underperforming classes, schools, and student populations as demonstrated by need.

#### **Goal 4: Efficiency and Accountability**

- Streamline and reduce the levels of bureaucracy.
- Redistribute savings and maximize limited financial resources to be applied to a *Student-First Philosophy*.
- Conduct a functional audit of the District to enable the implementation of the *Student-First philosophy* and *Family Matters* initiatives. Assess each department and its purpose, expenses, and how it serves and meets student needs.
- Strengthen the balance between academic achievement and a robust student services program that will support the social, emotional, and career/technical/vocational needs of students through guidance programs following the National School Counseling Model.
- Develop and report on efforts to provide students and teachers with up-to-date technology and wireless connectivity at each school campus to ensure the ability to perform and compete successfully in the global knowledge economy.
- Enhance the learning environment of each campus to ensure top-notch facilities that are safe and encourage increased learning opportunities, which will lead to achievement.
- Seek parity in funding and resources among schools throughout the District with a focus on strengthening schools.
- Develop a *School Facilities Improvement Plan* that will outline campus improvements, renovations, upgrades, and more.
- Create a transparent, online reporting tool that tracks District-wide and school expenditures and performances measures.

#### **Goal 5: Community Engagement**

- Develop a robust *Community Engagement and Empowerment* effort that provides meaningful opportunities for volunteers from stakeholder groups (including business, civic, and social organizations) to support the *Student-First Philosophy* and *Family Matters* efforts.
- Create a multi-year, multi-faceted campaign to engage partners in creating a world-class education system; demonstrate the return-on-investment economically and socially to partner organizations.
- Regularly acknowledge and reward the participation of volunteers and partner organizations.
- Ensure that there are role models and mentors who represent the diverse student body and relate to the students and families with whom they are working.
- Ensure that principals, administrators, and teachers have professional support from the community to assist with professional development, management skills, and the *Student-First Philosophy*.
- Continually reach out to community organizations (social, civic, business, faith-based, and others) to inform and recruit assistance for students and school personnel.
- Explore ways to develop mutually beneficial opportunities that support community efforts such as the *Six Pillars of Florida's Future Economy* from the Economic Council of Palm Beach County.



- Create and maintain an advisory council to provide advice and counsel in support of choice programs, career academies, and other career/technical curricula that meet the needs of our students, while supporting the economic development goals of the community.

## **Goal 6: Communications Campaign**

- Commence with a communications strategy that targets students and families, the District workforce, external stakeholder groups, and the public.
- Outline the efforts underway to create a *Student-First Philosophy* and *Family Matters* initiative and the resources available to students and families.
- Highlight the best managerial practices implemented and reward staff in order to help build morale and demonstrate a commitment to the new initiatives.
- Illustrate the successes of the District, as well as recognize the performance gap and unmet needs within the District.
- Promote a message of success and continued efforts to achieve the District's mission to attain its vision.
- Ensure that the campaign includes efforts for principals, teachers, administrators, and others to become regularly engaged in social, civic, business, and faith-based organizations.

## **School District Key Results**

- **K-2 LITERACY** - All students of each racial/ethnic group will read independently on grade level by the end of 2<sup>nd</sup> grade.
- **ALGEBRA I** - All students of each racial/ethnic group will successfully complete Algebra I prior to 10<sup>th</sup> grade.
- **PROFICIENCY IN READING, WRITING AND MATH** - All students of each racial/ethnic group will be proficient in mathematics, reading, and writing as measured by FCAT and FCAT Writes.
- **SCHOOL GRADE CRITERIA** - All schools will meet or exceed a school grade of B as measured by the Florida accountability system.
- **UPPER-LEVEL MATH AND SCIENCE COURSES** - All schools will increase enrollment and performance of each racial/ethnic group in upper-level mathematics and science courses, with a particular emphasis on underrepresented populations.
- **SAT** - All schools will increase participation and performance of students of each racial/ethnic group taking the SAT, with a particular emphasis on underrepresented populations.
- **ADVANCED PROGRAMS** - All schools will increase enrollment and performance of each racial/ethnic group in gifted, honors, advanced placement, IB, and other advanced programs, with a particular emphasis on underrepresented populations.
- **DROPOUT AND GRADUATION RATES** - All schools will decrease dropout rates and increase graduation rates for students of each racial/ethnic group.



- **SUSPENSIONS** - All schools will reduce suspensions and eliminate disproportionate suspension rates among student groups.
- **RESOURCES** - All District and system offices will align efforts and resources to accomplish Key Results.

### ***School District Demographic Data***

The SDPBC is the 11th largest in the continental US and the 5th largest in the state of Florida with 185 schools, serving 176,724 (*Total K-12*) students who speak 150 languages/dialects.

Our 2012-13 total budget is \$2.37 billion serving 20,810 employees including 12,480 teachers. Over 38,256 community volunteers provide academic assistance to students through the Volunteers in Public Schools (VIPS) Program.

Our school grades are among the highest in the state with 86 schools earning A's, 28 schools earning B's, 24 schools earning C's, 10 schools earning D's and 3 incompletes (excluding Alternative Schools, Charter Schools, and High Schools).

The School District of Palm Beach County has earned an "A" rating from the Florida Department of Education for the eighth consecutive year, based on student performance on the FCAT.

Additionally, approximately 1,200 business partners provide between \$3 - \$4 million per year (in cash and other resources) to support increased student achievement. As our District grows more diverse, the task of providing effective learning experiences for every child in every classroom becomes increasingly more challenging. The District recognizes this challenge and is determined to identify and eliminate obstacles that may exist within the structure of the schools and the school system.

The District has continually improved its graduation rate to 79.8% and has closed the gap between white and minority students in both graduation rate and academic performance.

Palm Beach ranks among the "best" in the state and nation in return on investment (ROI) as found in a national 2011 study by the Center for American Progress, for its high student achievement and low cost.

The District is accredited by the Southern Association of Colleges and Schools (SACS).

The District was established in 1909 and was formally known as the Palm Beach County Board of Public Instruction until the mid-1980s.

The District has 41 Charter schools as of July 1, 2012.

The Home Education Office registered and ensured statutory compliance for 5,000 students in FY12. Our program, considered a model by FLDOE, continues to lead the state in size and students qualifying for Bright Futures scholarships.

There are 227 Choice Programs that include a variety of academic/career and technical education related programs of study in 71 elementary, middle, and high schools throughout the county. Over 35,000 students participate yearly.

The Department of Exceptional Student Education (ESE) assists the schools by providing a free and appropriate public education for all students with disabilities, ages 3-21. There are 37,241 students in all ESE programs. This includes 9,000 students in the Gifted program. Many of these ESE students are mainstreamed into regular classes.

The District has built 85 new schools in the past 12 years, winning national design and construction awards.

Our District has 78,326 computers available to teachers and students arranged in a combination of networked computer labs, distributed workstations, and stand-alone computers.

There are 27 community schools, which includes a Virtual Community School providing on-line instruction. Adult and Community Education programs provide opportunities to thousands of students and county residents each year.

Currently approximately 24,921 students are in English for Speakers of Other Languages (ESOL) classes. There are 150 languages and dialects spoken; ESOL classes are also held for adults.

After School Enrichment Programs are provided for 19,500 students in 97 of our schools. Summer Camps are provided in over 50 of our schools during the summer months.

737 National Board Certified teachers, six District Schools earned Newsweek's and U.S. News Magazine's Best High Schools in America 2012.

## ***Division of Technology General Information***

### **Technology Mission**

District Technology Services will directly support, enhance, and encourage the execution of the SDPBC mission statement.

### **Technology Vision**

The Technology Vision of the SDPBC is to provide enterprise-wide innovative Technology environments and information access that empowers teachers, students, administrators, and community to make well informed decisions, to share knowledge and collaborate, and to drive business process efficiencies. This vision will enable SDPBC students, employees, and the community to become lifelong, independent, productive learners, and caring contributors to their communities.

## Technology Key Findings/Plan Alignment and Guiding Principles

### ***Planning for Success***

This plan's development was led by the Division of Information Technology (IT). It builds on the insights and recommendations of a working group of other divisions and departments<sup>1</sup>. Broad outreach efforts enabled thousands of others to have the opportunity to contribute their ideas<sup>2</sup>. IT also engaged with and incorporated input from the [U.S. National Education Technology Plan](#),<sup>3</sup> learning and assessment experts, educators, the public and current research<sup>4</sup>. Like the National Education Technology Plan, this plan addresses the five essential components of learning powered by technology: Learning, Assessment, Teaching, Infrastructure, and Productivity.

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<sup>1</sup> Contributors included Departments of Educational Technology, IT Infrastructure, IT Applications, IT Operations, Performance and Accountability, and Professional Development.

<sup>2</sup> SDPBC Focus Group met on February 19, 2013. Participants at the SDPBC 2013 Technology Conference were invited to attend and provide input. Of the approximately 2,000 participants at the conference, 30 joined the Focus Group to contribute their experiences and ideas. Additionally, an Internet survey was publicly available on the District website from February 26, 2013 to March 15, 2013, and promoted via District website banner. Respondents were: Administrators 8%, Teacher 40%, Student 7%, Parent 25%, Community Member 4%, Non-Instructional staff 15%.

<sup>3</sup> U.S. Department of Education, Office of Educational Technology, Transforming American Education: Learning Powered by Technology, Washington, D.C. 2010

<sup>4</sup> Kristen Purcell, Alan Heaps, Judy Buchanan, and Linda Friedrich, How Teachers Are Using Technology at Home and in Their Classrooms, Pew Internet & American Life Project, February 28, 2013 <http://pewinternet.org/Reports/2013/Teachers-and-technology/Summary-of-Findings.aspx>, and Janna Anderson, Lee Rainie, The Future of Cloud Computing, Pew Internet & American Life Project, Jun 11, 2010 <http://pewinternet.org/Reports/2010/The-future-of-cloud-computing/Overview.aspx>.

<sup>5</sup> The District Strategic Plan 2014 - 2019 reflects the six "Essentials: The six "Essentials" are aligned to our School Board Goals and other District initiatives and plans. The six "Essentials" are: Rigorous Standards and Effective Instruction, Student work and Data, Positive Learning Environment, Families and Communities, Share Leadership and Resources and Operations. Within the plan, the "Essentials" have specific objectives that must be met. These objectives are aligned with the District plan.

## Technology Plan 2014-2016: Key Findings and Plan Alignments

This plan is aligned with the District Essentials and Objectives of the District Strategic Plan.<sup>5</sup>

NATIONAL Goal	District Essential	District and Technology Objectives	Technology Key Findings	Technology Plan Reference
<p><b>Learning: Engage and Empower</b> All learners will have engaging and empowering learning experiences both in and out of school that prepare them to be active, creative, knowledgeable, and ethical participants in our globally networked society.</p>	Families and Community	<p><b>District Strategic Objective:</b> Increase family engagement in meaningful ways in their children's education by reviewing, refining, and expanding practices and programs</p> <p><b>Technology Plan objective:</b></p> <ul style="list-style-type: none"> <li>Continue to develop standards for classroom technologies, configuration, and infrastructure for optimum functionality</li> <li>Research and develop guidelines and support the use for web 2.0 technologies for communication and collaboration</li> <li>Examine state of technology at schools and develop strategy to close gaps in equity</li> <li>Provide a connected learning environment for students from schools to home to schools</li> </ul>	<ul style="list-style-type: none"> <li>More "open-source" learning is suggested.</li> <li>More than 50% of respondents to the online survey felt it was most important for students to develop ways of thinking which include: creativity, critical thinking, problem-solving, decision-making, and learning; followed by skills for living in the world which include: citizenship, life and career, and personal and social responsibility.</li> <li>98% agree that classrooms should reflect a 21st century learning environment. They also agree that all students should become proficient users of technology. Only slightly more than 50% agree the District is doing a good job of preparing today's students for jobs of tomorrow. Most agree that schools are using technology in meaningful ways.</li> <li>According to Pew Internet Research, 92% of 2,462 teachers surveyed say the internet has a "major impact" on their ability to access content, resources, and materials for their teaching. <ul style="list-style-type: none"> <li>69% say the internet has a "major impact" on their ability to share ideas with other teachers</li> <li>67% say the internet has a "major impact" on their ability to interact with parents and 57% say it has had such an impact on enabling their interaction with students.</li> </ul> </li> </ul>	<b>Chapter 1:</b> Curriculum and Learning Technologies

<sup>5</sup> At this time, the SDPBC Strategic Plan is under development. The identified District Essentials and objectives have been aligned to the Technology plan in this chart.

NATIONAL Goal	District Essential	District and Technology Objectives	Technology Key Findings	Technology Plan Reference
<p><b>Assessment: Measure What Matters</b></p> <p>Our education system at all levels will leverage the power of technology to measure what matters and use assessment data for continuous improvement.</p>	Student Work and Data	<p><b>Technology Plan objective</b></p> <ul style="list-style-type: none"> <li>Utilize the full functionality of enterprise solutions and determine strategy for single version of data</li> <li>Develop strategy for standardization of database and application platforms</li> <li>Develop an integration solution for systems that is automated and seamless</li> <li>Develop standard procedures for code versioning and source code control</li> <li>Continue to develop and support standard solution for online testing, reports, and queries</li> </ul>	<ul style="list-style-type: none"> <li>Input from stakeholders indicates there is a need for testing environments in addition to giving families access and an opportunity to engage with their children's data to help with learning and to facilitate better home/school communication. There is also a need for electronic portfolios for students to showcase their progress in formative ways.</li> <li>In 2014-15, PARCC Summative Assessments become operational</li> <li>In 2014-15, the Teacher Quality Bill requires all districts to fully implement revised salary schedules. The CCSS will be fully implemented in grades K-12, and 3,000 model lessons and lesson study toolkits on using data available. Florida students will take CCSS-aligned PARCC Summative Assessments in mathematics and ELA in grades 3 -11.</li> </ul>	<b>Chapter 2:</b> Performance and Accountability
<p><b>Teaching: Prepare and Connect</b></p> <p>Professional educators will be supported individually and in teams by technology that connects them to data, content, resources, expertise, and learning experiences that enable and inspire more effective teaching for all learners.</p>	Rigorous Standards and Effective Instruction	<p><b>District Strategic Objective:</b> Increase student use of technology for learning in the classroom (use of technologies as instructional resources and learning tools)</p> <p><b>Technology Plan objective:</b></p> <ul style="list-style-type: none"> <li>Enable effective culture change to accept and prepare for new technologies</li> <li>Implement measures to educate Stakeholders on responsible use of technology</li> <li>Research and implement mobile solutions for</li> </ul>	<ul style="list-style-type: none"> <li>When survey respondents were asked to identify the greatest barriers to using technology for teaching and learning, many felt that lack of professional development for teachers was the greatest barrier, followed by inadequate software, slow Internet access, and District policies such as filters and firewalls.</li> <li>There is a need to teach keyboarding and basic computer usage skills at the elementary level.</li> <li>Most agree that people will soon no longer do their work with software running on a general-purpose PC. Instead, they will work in Internet-based applications such as Google Drive and applications run from smartphones and devices.</li> </ul>	<p><b>Chapter 1:</b> Teaching and Learning Technologies</p> <p><b>Chapter 6:</b> Professional Development and Training</p>

NATIONAL Goal	District Essential	District and Technology Objectives	Technology Key Findings	Technology Plan Reference
		<p>computers and access to applications rather than being tied down to hardware</p> <ul style="list-style-type: none"> <li>• Develop a centralized dashboard solution to support the LIIS mandate</li> <li>• Establish mentoring and coaching to schools to support technology integration</li> <li>• Implement project-based instructional strategies to integrate technology and curriculum</li> </ul>		
<p><b>Infrastructure: Access and Enable</b></p> <p>All students and educators will have access to a comprehensive infrastructure for learning when and where they need it.</p>	Resources and Operation	<p><b>District Strategic Objective:</b> Increase alignment of District use of resources and system priorities</p> <p><b>Technology Plan objective:</b></p> <ul style="list-style-type: none"> <li>• Engage Service Desk and Educational Technology at initiation of and throughout all phases of technology projects</li> <li>• Continuously monitor the skill levels of school-based technology staff and expand opportunities for training</li> <li>• Ensure that schools have the required support technology infrastructure and instructional technologies</li> <li>• Develop strategy for role-based and self-service portal for seamless integration for system and access to data</li> </ul>	<ul style="list-style-type: none"> <li>• When survey respondents were asked to identify the greatest barriers to using technology for teaching and learning most felt that insufficient equipment was the greatest barrier, followed by insufficient technology support.</li> <li>• There is a need for 1:1 devices and a desire to allow personal devices in instructional settings.</li> <li>• Most respondents expressed a desire to use social media and text messages to facilitate communication between home and school.</li> <li>• Adults, as well as teens, have become increasingly reliant on mobile tools, particularly smartphones, to communicate and engage with online content</li> <li>• Both teens and adults are heavily engaged in consuming and curating online video and pictures, and remixing the content available online into their own creations</li> </ul>	<p><b>Chapter 3:</b> Information Technology Infrastructure</p> <p><b>Chapter 4:</b> Business Systems and Processes</p> <p><b>Chapter 7:</b> Technology Support Processes</p> <p><b>Chapter 8:</b> Technology Governance, Policies and Project Management</p> <p><b>Chapter 10:</b> Technology Budget</p>

NATIONAL Goal	District Essential	District and Technology Objectives	Technology Key Findings	Technology Plan Reference
		<ul style="list-style-type: none"> <li>• Development of maintenance and replacement procedures for peripheral devices</li> <li>• Expand and support the Network Operation Center to continually monitor system performance to ensure optimum uptimes and service levels to schools and departments</li> <li>• Develop a centralized dashboard solution to support LIIS mandates</li> <li>• Improve disaster recovery processes for mission critical systems and processes including teaching children</li> <li>• Continue to proactively monitor computer updates and develop compatibility matrix</li> <li>• Develop solutions and more efficient processes that prevent interruptions in the core mission</li> <li>• Expand Cloud computing and software as a service solutions</li> </ul>	<ul style="list-style-type: none"> <li>• Technology experts and stakeholders say they expect they will 'live mostly in the cloud' in 2020 and not on the desktop, working mostly through cyberspace-based applications accessed through networked devices. This will substantially advance mobile connectivity through smartphones and other internet appliances.</li> </ul>	

NATIONAL Goal	District Essential	District and Technology Objectives	Technology Key Findings	Technology Plan Reference
<p><b>Productivity: Redesign and Transform</b></p> <p>Our education system at all levels will redesign processes and structures to take advantage of the power of technology to improve learning outcomes while making more efficient use of time, money, and staff.</p>	<p>Resources and Operations</p> <p>Student Work and Data</p>	<p><b>District Strategic Objective:</b> Increase alignment of District use of resources and system priorities</p> <p><b>Strategic Plan objective:</b></p> <ul style="list-style-type: none"> <li>• Redefine the training process to ensure that training is relevant, designed to meet the needs of the trainee, and delivered just-in-time</li> <li>• Expand the existing training catalog of all courses, and applicable In-Service points</li> </ul>	<ul style="list-style-type: none"> <li>• Most respondents agreed that the state-mandated LIIS is important and should be top priority in the technology plan. Most also indicated that the LIIS initiative is most important for the classroom and school with 30% responding that it is most important for research or the operation of the District.</li> <li>• Most teachers and administrators who responded to the survey agreed they have access to the necessary technology to accomplish their goals. Student respondents also indicated satisfaction with their access to technology at school. However, 100% of those students who responded agree that it is important for them to use their own devices at school.</li> <li>• There is a need for an electronic delivery system between students and teachers (e.g., email and file storage such as Dropbox) that works well on all platforms (including proprietary devices and apps).</li> <li>• There is a desire for schools to have more flexibility for using technology with less "red tape."</li> <li>• Digital tools are being used by students to conduct research, download and submit assignments, edit work, and collaborate with each other.</li> </ul>	<p><b>Chapter 4:</b> Business Systems and Processes</p>



## Technology Plan Executive Summary



### Executive Summary

#### ***Empowering Education through Technology: Connecting the 21st Century Dots***

As we reflect on the last technology plan, it was clear that while we set out to create a roadmap for the future, it developed into so much more. It provided the SDPBC with a vision for how technology needs to meet the growing need to support schools and ultimately impact student achievement. The plan helped to shape the District's future and provide the strategy to get us there.

As we embark on a new plan, the focus is the same: What do we see in the future? How should this new plan develop into the roadmap of success? What was discovered is the same priorities: A technological classroom, with every student and teacher having a smart device (whether it was a laptop or a handheld), learning from students around the world, virtually visiting places they had never seen, and coming together to share their experiences, with the teacher creating a unique learning adventure for each and every student. The new plan will continue to support the vision to the next level. Our mission continues to ensure that technology, processes, and people are aligned to provide teachers and students with the tools to be successful. The plan must also provide technology to support and incorporate initiatives to meet the state-required LIIS mandate. Through Florida's Race to the Top award by the U.S Department of Education (USDOE), a goal was established to equip every district in the state with an LIIS that meets stakeholder needs for access to and use of data to inform instruction in the classroom, operations at the school and district, and research by June 2014<sup>6</sup>.

We took an extra step of having the plan reviewed by the Gartner Research Director for K-12. Gartner found that the plan contained all the required technology elements for the near future (next three years) and recommended that, in addition to summative testing, the District's long-term Online Testing strategy must include Formative student testing. Gartner also suggested that the plan address the District's Teacher Performance/Evaluation requirements for alignment with State and National Requirements.

Our District's guiding principles for the future of technology continues to be no different than those at the National and State levels. The National Educational Technology Plan, released in March 2010, states:

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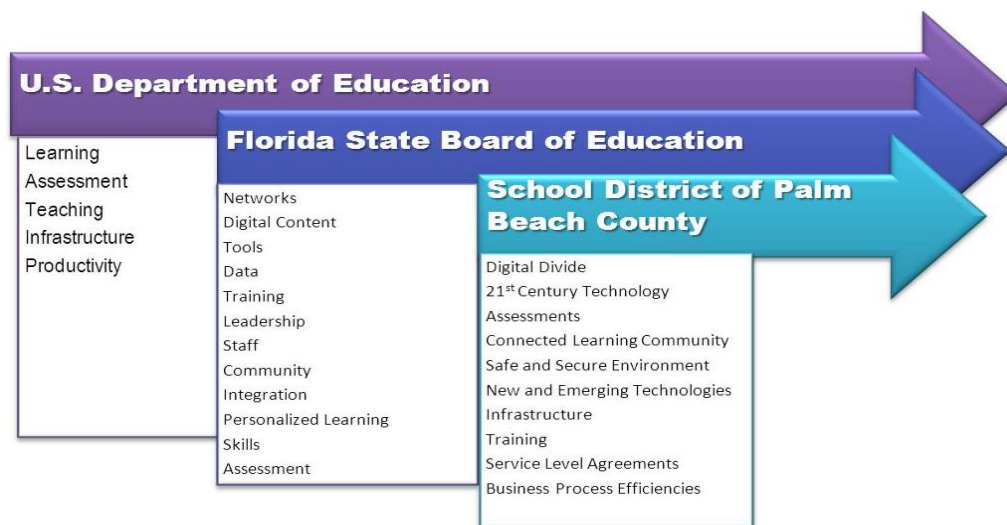
<sup>6</sup> <https://www.fldoe.org/arra/LIISMS.asp>

***“ ...National Educational Technology Plan (NETP) calls for revolutionary transformation rather than evolutionary tinkering. It urges our education system at all levels to:***

- Be clear about the outcomes we seek.***
- Collaborate to redesign structures and processes for effectiveness, efficiency, and flexibility.***
- Continually monitor and measure our performance.***
- Hold ourselves accountable for progress and results every step of the way.”***

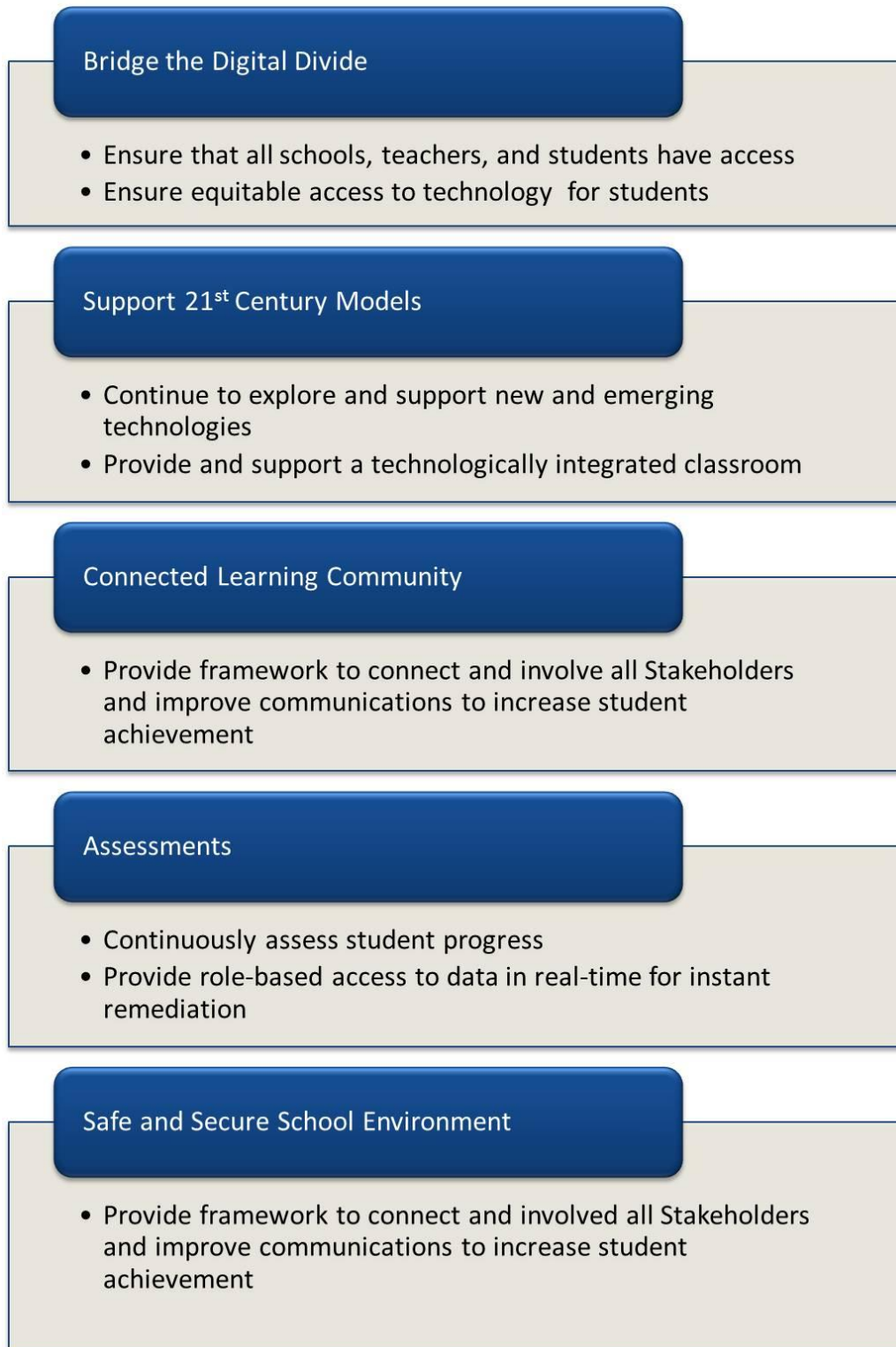
These guiding principles continue to form the foundation for the District’s Technology Plan. We have taken successful measures to establish a robust technology infrastructure at our schools to support the multitude of tools and applications. This effort will continue in the new plan. Again, at the top of our list of priorities is to ensure that technology is readily available and seamlessly integrated into the instructional process, including the necessary training for teachers and school administrators.

The diagram below illustrates the priorities for technology planning at the National and State levels, as well as at our District.



The objectives of each plan are consistent and support each other. Additionally, the new District plan will support the SDPBC District Superintendent strategic plan. A summary of the plan focus and priorities are outlined below:

Figure 1 - Summary of Priorities



### New and Emerging Technologies

- Continue to explore opportunities for operational cost savings with new technologies
- Re-direct savings to curriculum and instructional programs

### Infrastructure

- Provide a robust and flexible infrastructure to support academic and operational initiatives
- Support the increasing wireless access at school centers

### Technology Training

- Provide required technology training to teachers and other Stakeholders
- Ensure training is ongoing and readily available

### Service Level Agreements

- Deliver world-class technology services to schools and departments
- Refine and optimize Service Level Agreements with Stakeholders

### Business Process Efficiencies

- Continuously improve business processes for efficiencies and savings
- Investigate replacement options for mainframe and legacy systems

### Governance

- Continue to adopt best practices and implement standards and procedures technology initiatives and projects
- Continue to develop tactical technology policies

## Chapter 1 – Curriculum, Teaching, and Learning Technologies



### Chapter 1

### Curriculum, Teaching, and Learning Technologies

#### **Executive Overview**

While there have been many societal, cultural, technological, and educational shifts over the past decade, many of the same methods and tools used are still being employed in the majority of K-12 classrooms today. *“The reality is that we are already almost a decade into this century and our grandparents would still recognize most of our classrooms.”* (David D. Thornburg, PhD).

The SDPBC, in an effort to transform the classroom and school learning environment into a connected learning community, is implementing this plan as a means to identify, develop, and provide access to the digital tools, devices, and support that will expand visionary administrative leadership, improve teacher effectiveness and raise student achievement.

#### **21st Century Technology Standards for Teachers, Students, and Administrators**

The District, through a common focus on raising student achievement, is committed to ensure that all students are equipped with the knowledge and skills necessary to achieve success in the 21st century. The ability to effectively apply digital tools to gather, evaluate, and use information is essential for success. By effectively engaging learning through technology, teachers can demonstrate the relevance of 21st century education, keeping more children engaged as they pursue a rigorous, interesting, and relevant K-12 education. Technology can serve as a primary driver for systemic school improvement, including school leadership, an improved learning culture, and excellence in professional practice. Just as we prioritize reading and math experts, so too must we place a premium on technology experts who can help the entire school maximize its resources and opportunities. To support these experts, as well as all educators who integrate technology into the overall curriculum, we must provide for on-going professional development, implementation of data-driven decision-making, personalized learning opportunities, and increased parental involvement.

Therefore, the District is expanding an existing initiative to implement the National Educational Technology Standards (NETS) for administrators, teachers, and students.



These standards identify higher-order thinking skills and digital citizenship as critical components to learn and live productively in our evolving global society.



## ***Curriculum, Educational Tools, Applications, and Achievement of Equity***

The District recognizes the fundamental need to provide equitable access to technology for all students and staff in several areas, including:

- curriculum, via interactive online services, and virtual learning
- environments and software available at school and at home
- interactive learning material through on-line discussion groups
- interactive conferences and tutorials
- people (through electronic mail, discussion groups, weblogs, and other social networking tools appropriate to the District's mission)
- information (through online databases and subscription services)

- their own electronic files for the continuation of learning after the work day and school day has ended

In addition, the District will promote the integration of technology as a digital resource into curricula and aims to increase the number of educators effectively using technology by providing:

- digitally-rich model lessons in core content areas
- aligned and searchable digital resources
- technical guidance and training on content and tools necessary to implement the curriculum

### ***Digital Divide***

Palm Beach County students and parents, without access to District online resources, are at an academic disadvantage. Technology offers a unique opportunity to extend learning support beyond the classroom.

Without access, students cannot complete technology assignments at home, cannot access the Internet for research, and parents cannot effectively communicate with the school regarding student progress and activities.

The Digital Divide is a program that provides technology resources to parents and students. It aims to:

- develop partnerships with communities and businesses
- provide organizations, and post-secondary institutions with technical training
- technical support, logistics, supplies and manpower
- expand school-based and community-based refurbishment and distribution programs
- develop standards for hardware, software, training, distribution, and curriculum within programs to promote and collaborate with community-based training and support
- increases access to District resources for families working in partnership with Palm Beach Broadband to increase free internet access to high poverty neighborhoods and advocate broadband access for all students

The District will immediately perform a District-wide assessment of technology at the schools, and prioritize those schools that are not equal in technology.

### ***Classroom Management Applications***

Understanding that classroom management begins before the students arrive on campus with a well-thought out lesson plan, the District will provide teachers with a variety of applications to prepare and plan for the school day. The District will also provide teachers

with applications to manage the classroom. Applications to be provided will include, but not be limited to:

- a digital repository of lesson plans, activities, multi-media, and resources for the purpose of planning and implementing engaging and effective classroom instruction
- a comprehensive online suite of productivity tools (word processor, e-mail, spreadsheets, presentation maker, form maker, etc.) that can be accessed anywhere and anytime for the purpose of creating effective lesson plans, assignments, and assessments
- assessment software where teachers can create tests, quizzes, and surveys which can be disseminated to students via LAN, Internet, and wireless-based technologies
- electronic whiteboard software to engage students in lessons, to record lessons, prepare lessons in advance, share lessons with other teachers and students, and for use as a self-evaluation tool
- software for digitally capturing, editing, and storing documents and images
- lab management software for the purpose of monitoring and controlling of student computers by the teacher
- an application for collecting and reporting of attendance in secondary schools
- an electronic grade book for calculation, storage, and reporting of grades in secondary schools
- an application for monitoring and reporting of progress towards meeting grade level standards in elementary schools

### ***Technology Enhanced Learning Environments***

The majority of classrooms are ready for 21st century instruction. They have been outfitted as complete multimedia classrooms including ceiling mounted digital projector, sound-field enhancement system, document camera, large projector screen, DVD/VCR with tuner, multimedia cabinet, modern computer, and printer. Additionally, all new construction and many existing classrooms also include a wireless tablet and student response system, creating an interactive classroom. Ultimately all District classrooms will be interactive multimedia classrooms.

In order to deliver engaging digital content for whole group, small group, and individual learning, the following enhancements will be made to the interactive classroom:

- increase mobile interactive wireless devices for teachers and students
- implement high-definition audio-visual capabilities in the classroom
- migration of tuner from DVD/VCR to computer

### ***Standards for Facilities Technology Infrastructure***

In order to meet the needs of the interactive classroom described in the previous section, facility technology infrastructure upgrades are imperative.

Specific demands driving these needs are:

- video-based instruction, conferencing, and collaboration



- to provide increased wired and wireless capacity in classrooms
- Computer Based Assessments, EOC Exams
- instructional content in digital format
- implementation of mobile computing carts

### ***Virtual Education***

Beginning in 2004, the District opened the Palm Beach Virtual School; a full-time district supported virtual school for students in grades K-12. This progressive program provides expanded educational services to a wider student community for anywhere, anytime learning. Palm Beach Virtual School now provides part-time and full-time virtual school opportunities for grades K-12 and a high school diploma.

Palm Beach Virtual provides rigorous, highly customized learning environments for our students, promoting development of the skills, attitudes, and self-discipline necessary to achieve success in future educational endeavors and in the workplace. The virtual instructional program includes various assessment techniques that address diverse learning styles, accommodating student needs. As a routine part of Palm Beach Virtual, student performance data is be used to assess the effectiveness of lessons. Key practices include monitoring the pace of each student to enable teachers to provide help, examining student performance on state measures of learning, collecting satisfaction data from parents and students, and monitoring teacher progress toward course completion goals and student outcomes.

Additionally, the District now provides virtual coursework for credit recovery in secondary schools. Online credit recovery programs offer academic credit support toward receiving a high school diploma. The focus is to help students stay in school and graduate on time. The credit recovery programs use a "blended learning" model. The blended approach incorporates the best features of online coursework and face-to-face educational support.

### ***Connecting School, Home, and Community***

Connecting school, home, and community is an important component of building a connected learning community. To accomplish this task, the District will develop and encourage the use of technological tools such as email, web pages, wikis, and social networking pages to share and collaborate on different activities in the community. This will provide:

- greater parent/family participation in the child's educational program
- online data access/storage for employees and students for anytime, anywhere learning
- continuity and availability of professional development for staff
- extend and connect learning communities

Edline has been provided to share school information as well as classroom grades with parents and to offer them immediate feedback on their child's progress. A new District webpage is available to the community to access information and stay abreast of upcoming events. Community training will be made available upon request.

### ***Exceptional Student Education***

Reauthorization of IDEA mandates equal access to curriculum for all students. Technology for students with exceptional needs goes beyond a computer. Technology, for any student, is any assistive, adaptive, or augmentative devices that allows a student to access education.

As the learning environment becomes increasingly more technology dependent, Universally Designed Learning (UDL) needs to be a primary function of the classroom through availability of modern hardware and software.

Technology should be universally available to students in the classroom. Only when not available universally should access of education through technology be prescriptive or IEP-driven.

The introduction of web-based instruction began several years ago. Implementation of the Next Generation State Standards (NGSS) saw an increase in web-based instruction and the Common Core State Standards (CCSS) are following. Across all subject areas and grade levels, web-based instruction is actively being utilized in the classroom to instruct students with disabilities. Web-based instruction, as well as software, has enabled the teachers to differentiate instruction with a wide variety of students.

The need to prescribe specific equipment to exceptional students should be only after attempts to provide UDL have been fully exhausted. Over the next three to five years, technology funds should address the following for exceptional student education classrooms and teachers:

#### **Classrooms:**

- Modern hardware
- Document cameras, LCD projectors;
- At least one modern computer for every five students
- Equipped with interactive technology in which lessons can be delivered to large and small group configurations
- Equipped with wireless technology

**Teachers:**

- Professional Development for ESE teachers to become proficient with technology designed to meet the unique needs of special needs students.
- Allocation of Professional Development funds disseminated to enable teachers of students with disabilities to attend face-to-face and distance learning opportunities.

***No Child Left Behind (NCLB): Enhancing Education Through Technology (EETT) Initiatives***

The NCLB: EETT Initiatives of Palm Beach County consist of three separate, but parallel projects; Tech Ambassadors, Project SMaRT (Science, Math, and Reading Technology), and Team TLC (Technology Leadership Collaboration). These projects include elementary, middle, and high school representatives from public, private, and charter schools located in the District. The primary goal of these projects is to improve student academic achievement through the use of technology at all levels. We strive to ensure every student is technologically literate and has equal access to modern technology tools for creative thinking, the construction of knowledge, and the development of innovative products and processes.

The projects encourage the effective integration of technology resources by providing high-quality professional development using proven instructional methods needed to assist our “digital immigrant” teachers. The teachers involved in these projects learn District standard software, digital storytelling, and technology integration strategies. Program facilitators obtain information on emerging trends and innovative methods of instruction, communication, and collaboration to share with the project participants.

## Chapter 2 – Performance and Accountability



### Chapter 2 *Performance and Accountability*

#### ***Executive Overview***

The Division of Quality Assurance serves school District personnel, families, and representatives from business and the community by facilitating the continuation of a research-based data-driven school district.

The Division establishes performance standards; develops and deploys a comprehensive assessment system; oversees administration of state and District assessments and surveys; implements an educational data warehouse; provides systematic training on accessing, interpreting and applying data; and identifies successful programs and practices to improve the achievement of all students.

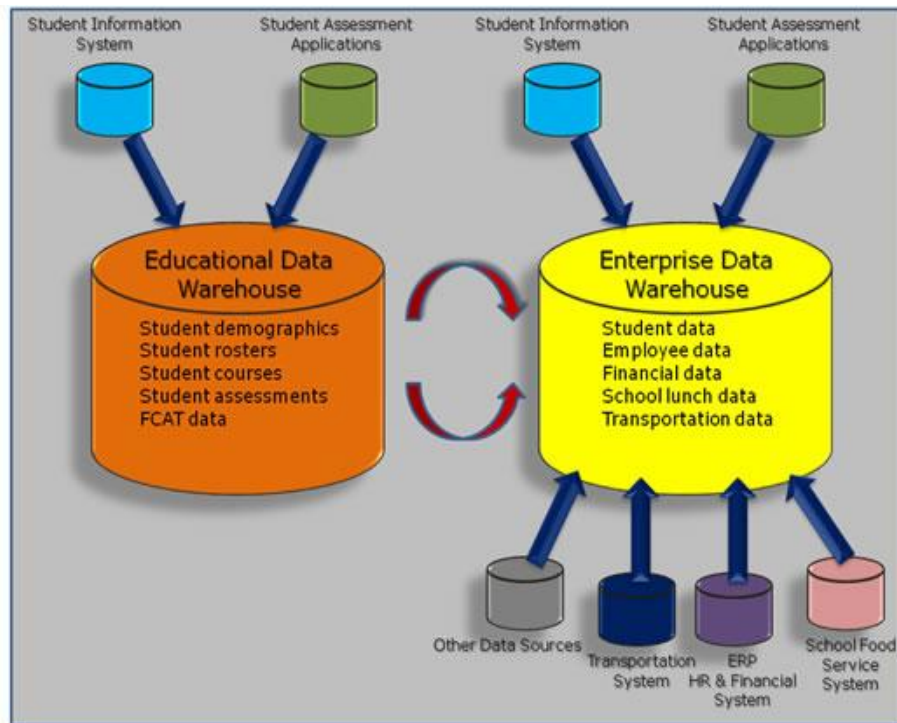
#### ***Educational Data Warehouse***

The Educational Data Warehouse (EDW) is the District's central repository for data for 176,000 students, including rosters, demographics, and assessments. Primary functions of the EDW are to develop, maintain, and distribute web-based reports and graphs that enable 100% of the District's teachers and administrators to have just-in-time access to student assessment, demographic, and academic data. The EDW also generates and transfers data files to business partners, including the Palm Beach County Healthcare District and other agencies, to fulfill their data requirements.

Additionally, EDW specialists provide professional development sessions for users in the areas of awareness and quality assurance in accessing and interpreting the student listing reports, graphs, summary tables, management matrices, and data panels. Data from the EDW enables users to make well-informed decisions leading to improvements in student achievement and performance.

The EDW has developed and hosts more than 400 reports. One of the immediate priorities of the EDW team is to develop a new Key Performance Indicator dashboard to align with the new District strategic plan. In addition, the development of a College and Career Readiness reports at the District, school, and student level will be developed over the next three years. Finally, the development of student learning growth reports that will enable schools and leaders to understand the relationship between the FLDOE's Value-Added Model scores and student performance will be another key priority.

The EDW has set the framework in place for scaling to a robust Enterprise Data Warehouse. In addition to student data, the Enterprise Data Warehouse will incorporate other data sources such as HR, financial, school transportation, and school food service. Seamless integration processes will enable more frequent loading of transactional data into the Enterprise Data Warehouse. Responsibilities of the EDW specialists will expand to create reports with the new data and provide professional development to users.



Data needs to be in the hands of all stakeholders including educators, students, parents, school principals, and administrators who have the ability to make decisions regarding student progress and achievement. Parents are stakeholders who currently have access to EDW individual student reports through the parent portal (Edline) and conferences with school-based personnel. The EDW team will investigate methods to allow parents to access an expanded array of reports specific to individual students. To provide access, the EDW team will partner with IT to address hardware, software, security, and Service Desk support processes and functions.

## ***Research and Evaluation***

The Department of Research and Evaluation serves students, families, District personnel, and the community by:

- Coordinating the analysis and reporting of state and District survey and testing programs
- Ensuring assessments are valid and reliable and that leading indicators are predictive of the Key Results
- Conducting evaluations of programs related to the Key Results
- Assisting District and school-based personnel in the interpretation of data and reports

Data and reports are prepared using the SAS statistical analysis package. Applications are developed in the .net framework for data analysis, document checking, and file checking. One area this impacts is increasing the accuracy of the matching process of external files for testing programs such as PSAT, SAT and ACT, and Advanced Placement (AP). Additional .net applications will be used for developing and processing the Sunshine State Standards Diagnostic Tests.

Some known requirements for success for meeting these priorities are collaborating with IT in the following areas:

- .net application development
- Accessing critical internet applications through the firewall
- Developing a plan to review permissions and provide consistent single sign-on access to personnel

## ***Assessments***

The Department of Assessment creates, publishes, delivers, and scans assessments which are aligned to The NGSSS and FCAT 2.0 Item Specifications, as well as overseeing the administration of district (e.g., NGSSS/EOC Diagnostic), state (e.g., FCAT 2.0/EOC), and national (e.g., NAEP) assessments. The department provides professional development to District staff related to understanding state and federal accountability and assessment rules; writing assessments aligned with NGSSS or state standards; and using assessment results to improve instruction and organizational practices, including how to involve students in the assessment process.

In addition to delivering training and professional development, technology support is provided during the course of developing and distributing assessments. To meet these varied responsibilities, utilization of the following equipment will continue:

- eInstruction Clickers
- NCS Pearson OpScan 3, 4, 4u, and iNsight Scanners

- Microsoft 7 Suite
- Adobe Professional Suite
- Internet Explorer
- ScanGear Tool
- Adobe Master Collection CS4
- Adobe Acrobat 9 Pro Extended
- Adobe Presenter

The model for 21st century learning requires that student performance be measured when there is still time to take action to improve. Instant feedback on assessments can assist educators to make decisions on what is best for each student individually in a real-time environment. Technology-based assessments can deliver this functionality to drive continuous improvement. The District is now completing an upgrade to both the wired and wireless infrastructure to support on-line testing and digital content for learning in the classroom.

### ***Common Core***

A major challenge faced by the District is the shift from the NGSS standards to the CCSS in 2015. These new standards will require updated formative and diagnostic assessments, potentially from multiple sources (both in-house and from various vendors). An assessment platform that is web-based, flexible, available 24/7, and linked to targeted best-practice resources for teachers and students.

The Division of Quality Assurance will collaborate with K12 Curriculum, Professional Development, and IT to implement a system of teaching and formative assessment to increase the ability of teachers to support the learning of students during instruction and to facilitate the ability of students to monitor their own learning.

### ***PARCC***

In the next three years, the District will transition to the Partnership for Assessment of Readiness for College and Careers (PARCC) computer-based assessments in grade 3-11 in reading and mathematics. The PARCC computer-based assessments will be comprised of a mix of constructed response items, performance-based tasks, and computer-enhanced, computer-scored items. In addition, the District will administer EOC assessments in Algebra, Geometry, Biology, US History, and Civics.

To support this landmark shift from paper and pencil to online assessments, the Department of Assessment will work closely with IT to improve communication with schools, provide training to end-users, ensure that schools maintain their computers, keep up with the latest versions of required software, and understand the need for maintaining a technological environment that is consistent with District mandates, goals, and specifications.



## Chapter 3 – Information Technology Infrastructure



### **Executive Overview**

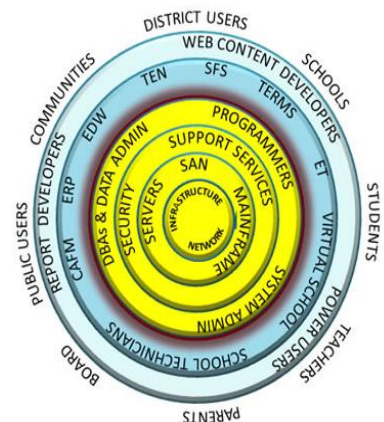
The infrastructure at the District will provide the underpinnings necessary to drive technology for the next few years. The infrastructure, both wired and wireless, must be robust to support increased utilization, yet flexible for a paradigm shift toward cloud computing solutions. With the increased dependency on technology, the network infrastructure must facilitate the requirements necessary for success. The architecture must be adaptable, scalable, secure, and manageable. The network, including all voice, data, and digital video communications, will require the bandwidth capacity, flexibility, mobility, and security to meet the needs of the schools in real time. Communications must be possible beyond a school to home environment, learning centers, state, country, and world.

### **Technology Convergence**

With reduced operating and capital budgets and the need for cost savings, the District will continue to consolidate all technology functions including personnel, procurement, services, policies, operating procedures, and budgets where feasible. To improve customer service, technology services will be centralized to eliminate organizational fragmentation of resources, facilitate knowledge transfer, and will have cross functional support. Processes will continue to standardize platforms for software, hardware, databases, as well as reporting and monitoring applications.

The diagram illustrates technology convergence, with the outermost ring depicting the primary technology Stakeholders.

The consolidation will leverage economies of scale to eliminate redundant resources and duplication of efforts across the enterprise. Centralization of infrastructure management will result in performance efficiencies, flexible application architecture, and efficient workflows through integration and automation.





## ***Network and Performance Efficiencies***

To provide optimum service to schools and departments, a proactive (rather than reactive) approach to problem solving is required. With the increased dependency on network access for instruction and mission critical business functions, it is imperative that system failures are minimized. The District has implemented a Network Operations Center (NOC) to be the catalyst for performance improvements on the network. The NOC is the District's main center for network, applications, and systems performance monitoring and dashboards. The NOC is performing end-to-end network and systems management, including the more routine tasks of ensuring connectivity from all District locations. Most importantly, the NOC provides application response metrics to enhance the user experience.

Amongst the many tasks to be performed by the NOC within the next three years, stress-testing will be one of the major focal points. Stress-testing will be performed on all District wide applications in order to anticipate down time and project scalability. Anticipating failures on critical systems will ensure that teachers, students, and employees have dependable systems they can count on for their work. Continuous monitoring of improvements over the next three years will limit service downtimes and reduce time to recovery. Over the next three years, the District will invest in the network backbone, create the foundation, and exceed the requirements for all current and future applications. The District has replaced the switches at all schools and all network needs for the classroom have been met. The older infrastructure lacked the robustness to handle resource-intensive applications. As new applications and requirements push the IT backbone to meet demands, IT will upgrade circuits for the schools to exceed the demand.

## ***Voice Over Internet Protocol (VoIP)***

Internet Telephony is transport of telephone calls over the Internet. Also known as VoIP, it has grown to become one of the most used and cost-effective ways to communicate today. The most significant benefit of IP Telephony is money-saving and easy implementation of innovative services. IP Telephony solutions make use of packet-switched connections from the Internet for the exchange of voice, fax, and other data forms instead of using the traditional dedicated circuit-switched connections from Public Service Telephone Networks (PSTN). Benefits including cost savings, improved productivity, flexibility, and advanced features make IP telephony an appealing technology.

The phone system is over five years old and over the next three years a feasibility study will be done to evaluate the next steps of enhancements or replacement with our current phone system.

## ***Wi-Fi / Wireless Strategy***

Due to the increased need for wireless coverage, the District is in the process of providing a wireless umbrella at every location which can facilitate the use of a wide assortment of mobile computing devices. The solution must be vendor agnostic and provide coverage for multiple platforms.

In our current environment, wireless is primarily concentrated near media centers at school sites and the strategic direction of our District is to have wireless available throughout the campuses. Schools are depending more and more on mobile devices and our goal is to eliminate the confines of only certain areas of a campus. Over the next three years, wireless coverage will be in place to entertain new technologies and support more network related initiatives.

## ***Disaster Recovery (DR)***

The District's computer systems are backed up on tapes and sent to an offsite professional storage facility, where they can be retrieved in case of a disaster. The backup tapes follow a standard schedule to ensure that both full and differential information can be retrieved.

Additionally, the District maintains two remote alternate DR sites where critical business can be resumed in the event of a disaster. The Northwest Regional Data Center (NWRDC) site in Tallahassee, FL hosts mission critical systems such as ERP, EDW, and critical infrastructure systems for a failover, if necessary. The other alternate recovery site, SunGard, is based in Philadelphia. This site is used for mainframe disaster recover only, including TERMS Student Information System.

Over the next three years, the District will complete a Continuity of Operations Plan (COOP) in compliance with state and federal guidelines. This effort will identify mission essential functions which will, in turn, dictate the additional technology systems that must be accommodated at the DR sites. These functions will then require continuity plans, backup/recovery plans, and testing plans to ensure the survival of the District's business during and after an emergency. Lastly, to ensure that backup systems are functional and available, the District will finalize a full DR test plan cycle, so that DR facilities and systems are tested on a reoccurring periodic basis. Additionally, begin an investigation into the DR requirements for students work and textbooks in the new digital age.

## ***Data Center Efficiencies***

As new applications are implemented, there is an increased need for storage and servers. However, installing servers without an overall strategy can quickly lead to inefficiencies related to costs, server usage, power consumption, and creation of multiple data silos.

To help improve power and storage efficiencies, the District's data center will move toward a more flexible and scalable architecture, where servers, storage, and network bandwidth are not permanently allocated to each application. Through virtualization, resources are dynamically allocated based on need and priority of application, with the

highest priority applications always having the necessary resources, thus eliminating excess hardware and associated costs.

By leveraging cloud computing technologies, storage can be transformed as a service. An automated data center can incrementally increase storage as demands increase. Implementation of virtualization and cloud computing solutions will also reduce the overall physical server hardware footprint and decrease power consumption.

### ***Information Security Policy and Access***

The District's Information Security strategy is based on the increasing data-driven, decision-making need for teachers and employees to access data and applications irrelevant of location. The most effective instructional programs provide instantaneous feedback on student progress, allowing for remediation, if necessary. Over the next three years, the District will enhance IT Security policies as the overarching framework for all access within the organization. The goal of the District is to have over 80% of security requests automated within an identity management system which pulls the authoritative source data and grants requests by way of role-based-access-control. Over the next three years, the District will work toward automating security exceptions through access privilege management solution. This will provide an audit trail for elevated privilege use. The District will create a tactical security plan, to ensure controls are in place to enforce, monitor, and audit policies. The District will pay special attention to intrusion prevention and detection from both internal and external unauthorized activity. The main focus areas are as follows:

- Physical security
- Network security
- Application security
- Wireless security
- Endpoint security
- Data security

The District will also research and implement less restrictive, differentiated access policies that provide greater consistency and logic in how filtering is applied to all users. The access policy will be consistent with U.S. laws and School Board policies. The District will continue to develop differentiated access policies that allow greater access to teachers and staff, and increased access based on student age.

### ***Content Management – Collaboration, Storage, and Access***

In a world of 24/7 access and around the clock workplaces, the District will continue to face increased demands for online storage and ubiquitous access to files by students, teachers, and staff. In the next three years, the District will explore reduced cost solutions to these storage needs through off-site (cloud) storage solutions and the use of content management systems that are tied to student and staff user accounts. Collaboration

platforms that allow users to access and share knowledge and information and collaborate real-time will be instituted.

### ***Green Technology Initiatives***

IT has several green technology initiatives in the next three years to reduce environmental impacts of the infrastructure and operations. Server virtualization will not only decrease the physical footprint in our data center, but also decrease the power consumed by having less physical machines performing the same functions. All school servers have been virtualized and three-fourths of District servers in the Data Center are now in a virtualized environment, as well. For cooling and power efficiency, part of the District's Data Center has been converted to a hot and cold isle configuration which reduces cooling and electrical costs. The new environment is 30% more efficient than our legacy rack configuration.

The District Data Center has replaced the HALON fire-suppression system to the NOVEC 1230 fire-suppression system which is environmentally friendly and safe. Over the next three years, we will be installing APC (American Power Conversion) racks and air conditioning units in the Data Center to institute a green Data Center, as we have reduced the power consumption within the Data Center by using this product.

We have one more phase to implement before this project is completed. IT will continue to institute computer shutdowns during non-business usage to decrease the power consumption within the organization.

### ***End-User Computing Maintenance Model***

With the implementation of a client management system, IT will put in place procedures for managing end-user systems and computers, including procurement and retirement.

The benefits include:

- Inventory of all computing assets and end-user devices
- Secured and managed end points
- Reduction in software licensing costs (no longer have to pay for licenses installed on retired computers)
- Enhanced end- user experience
- Ensure that computers are properly configured with the correct images
- Notification on assets that have not been on network for a specified time period
- Centrally deploy OS patches
- Increased security
- Trend analysis and report generation

## ***Leveraging Partnerships in Palm Beach County and State of Florida***

By partnering with local and state agencies, IT will investigate cost-effective opportunities to leverage existing technologies, reduce operating and support costs, improve service delivery, and lay the foundation for future demands. Additionally, IT will continue setting higher standards of performance in technology infrastructure, support, systems, and to drive solutions to achieve these standards.

One example of District partnering is with the Palm Beach Broadband Coalition. This effort will upgrade the western communities to a Coalition-owned high speed fiber connection and is a cost-effective solution to reduce the gap in the digital divide.

## ***District Technology Use Policies***

### ***School Board Policy 3.29 (Special Note: This policy is under revision)***

#### ***ACCEPTABLE USE OF TECHNOLOGY BY EMPLOYEES***

1. ***Purpose.*** -- *The purpose of this Policy is to set forth terms and conditions as well as standards and guidelines for the acceptable uses by District employees and School Board Members (hereinafter collectively referred to as employees) of Palm Beach County School District technology resources and other technology when conducting District business. The Policy also provides for employee use of e-signatures and electronic notarizations when authorized. This Policy does not prohibit or restrict public access to inspect data and information on publicly available District technology resources.*
2. ***General Standards of Appropriateness.***
  - a. *When using District technology resources, applications, databases, and supplies, District employees shall adhere to the standards established by this Policy, all applicable laws, regulations, rules, School Board Policy [2.501](#) and the District's Information Technology (IT) [User Standards and Guidelines Manual](#) ("Manual"). This Manual is specifically incorporated by reference into this Policy and is located on the District's IT Security web site.*
  - b. *Except as stated within Section 7 of this Policy, District technology resources, including, but not limited to the use of computers, networks, copiers, biometric record readers, and communication devices such as cellular and office phones, personal digital assistants (PDAs) and facsimile machines, shall not be used for a private business or for the benefit of "for profit," or "not for profit" organizations unless the use of the technology will benefit the District or, as to "not for profit" organizations, if the organization benefits the children, schools or community and is not for religious or political purposes.*
3. *Any employee using the Internet in any form through the District's network must submit to his/her supervisor (or, if the form is available and can be transmitted electronically, submit to the District) a completed and signed Employee Internet/Intranet Services Acknowledgement and Consent form (PBSD [1664](#)). The employee shall sign and submit this form shortly after the School Board's adoption*

of this Policy, after any revisions to this policy, and upon initial employment by the District.

- a. The consent form shall state and the employee shall acknowledge that there is only a limited expectation of privacy to the extent required by law for the employee related to his/her use of District technology resources. The District may monitor an employee's use of District technology for good cause, such as for educational purposes, responding to a records request, ensuring that their use is authorized; for management of the system; to facilitate protection against unauthorized access; verifying security procedures, survivability and operational security; compliance with School Board policies, a possible security incident, routine maintenance or computer performance.
  - b. The consent form shall further reflect that before using the District's technology resources, employees shall become familiar with the District's employee code of conduct (School Board Policy [3.02](#)) as well as Fla. Admin. Code Sections [6B-1.001](#) and [6B-1.006](#), including the provisions prohibiting harassment and discrimination, defamation, use of institutional privileges for personal gain, and improper disclosure of confidential information; Fla. Stat. § [112.313](#), including the duty to avoid improper use or disclosure of "information not available to members of the general public and gained by reason of [their] official position for [their] personal gain or benefit or for the personal gain or benefit of any other person or business entity", and School Board Policy [8.121](#) on the use of copyrighted materials. All employees shall abide by these provisions when using the District's technology resources.
4. The District authorizes employees to use District technology resources, applications, and databases for the employees' assigned responsibilities when allowed by an appropriate District representative. Employees shall use these resources to enhance job productivity in performance of District business. Principals and department heads are to follow District standards to ensure accountability of their staff's use of these resources to support academic and business functions.
  - a. Creation by an employee of any District blogs and/or social networking sites must be authorized by the Superintendent/designee and be for a public purpose. The use of the blog must be compliant with District policies, including but not limited to those involving public records retention, student privacy, and copyright laws.
  - b. Employees are advised that many District technology resources, including but not limited to laptops and desktops, may contain input systems such as web cameras and microphones which can be remotely controlled to turn them on and off. The District will not utilize any such input systems remotely unless consistent with the law.
5. Examples of utilizing employee user account/passwords can include:
  - a. Electronically sign District documents by e-signature.
  - b. Provide access to the employee's personal information.
  - c. Make binding legal obligations, if the employee is authorized.
  - d. Access District files or records to the extent the employee is authorized.
6. All passwords are to be treated as sensitive and confidential information and shall not be shared with anyone but the employee to whom they were assigned. Employees are responsible for all activity that occurs for user accounts that have



been assigned to them as well as any e-signatures that are attributed to their account.

7. An employee may utilize District technology resources (except for cellular devices) outside of the employee's paid duty hours to use the Internet for the employee's personal and professional growth provided no additional costs are incurred to the District, the District's Internet and network resources are not negatively impacted, and firewall and network configurations are not altered to allow different services that are not usually allowed during the employee's paid duty hours.

*This provision is not intended to restrict or limit an employee's ability to utilize District technology during the employee's paid duty hours for professional development when the professional development is related to the employee's responsibilities for the District, certification, or license, such as District or professional organization training vodcasts; power points or breeze presentations related to one's duties.*

*Employees are encouraged to use these facilities for personal and professional growth, which must not be confused with financial gain, and engaging in activities seeking financial gain is prohibited. Examples of "financial gain" include offering products or services for sale and soliciting for an advertiser or sponsor for the benefit of any enterprise other than the District.*

8. **Cellular Devices** -- Consistent with the goal of expending public funds in the most economical manner, the following standards shall apply to use of District-issued cellular devices, which include but are not limited to cellular phones, cellular radios, PDAs, air cards, and any other portable communications devices that can transmit voice and/or cellular data signals through wireless technology, all of which are referred to in this policy as "cellular devices":
  - a. Cellular devices purchased or leased with District or Internal Account funds are for District business use only.
  - b. District employees will limit cell phone usage; whenever possible, calls will be made on a conventional land line telephone if one is reasonably available. Employees should be aware that when using cellular devices they are subject to outsider's viewing or hearing the communications through spy ware.
  - c. A centralized, standardized, and cost-effective wireless services contract shall be established through a competitive procurement process. All cellular devices paid for with District funds, or internal accounts, must be obtained and operated under the standard contract approved by the School Board. Cellular devices purchased prior to the adoption of this Policy and under existing contracts may remain under that contract until the existing term expires, and then the number will be ported to the District carrier.
  - d. Every cellular device issued in the District must be approved in writing on District Cellular Device Request Form [PBSB 2317](#) by the employee's Chief, Director, Area Superintendent or Principal and justified as reasonably necessary for carrying out the employee's responsibilities for the District. In an effort to reduce the number of cellular devices, the District limits the use



- of cellular telephones, personal digital assistants (PDAs), and other cellular devices to only those employees who, as part of their official assigned duties:*
- i. must routinely be immediately available to citizens, supervisors, or subordinates;*
  - ii. be available to respond to emergency situations;*
  - iii. be available to calls outside of regular working hours;*
  - iv. have access to the technology in order to productively perform job duties in the field; or*
  - v. have limited or no access to a standard phone, or have no ability to use a personal cell phone, if needed.*
- e. Each District cellular device must be placed on the most cost-effective plan under the District's contract to satisfy the work-related needs of the particular employee. Each school/department is responsible for the cost of the cellular devices and monthly service.*
- i. Orders for new cellular devices must be made through a District Purchase Order that includes a name, school/department and funding strip or internal account number for monthly service. P-Cards cannot be used for a cellular device purchases or monthly service, per Purchasing Manual chapter 24-7-C. The [Purchasing Manual](#) can be found at: <http://www.palmbeachschools.org/purchasing/bids/purch/manual/index.asp>.*
  - ii. Transfers and Cancellations - If an employee with a cellular device transfers to another school/department or terminates employment, the supervisor must immediately submit a written or email request to the District's wireless contract designee to cancel, suspend or transfer the service.*
  - iii. The employee must immediately report lost, stolen or damaged cellular devices to the Supervisor and the Service Desk to suspend or cancel service. If the cellular device contains District data, such as email, the employee must immediately inform the Service Desk so that the information will be deleted remotely from the device in a manner consistent with public records retention requirements. The Supervisor needs to complete the Plant Security report (PBSD [0766](#)) and submit the report to School Police. The school/department using the cellular device is responsible for all charges up to the time the loss is reported to the cellular carrier. If a replacement cellular device is required, District Cellular Device Request Form PBSD [2317](#) will be used and the purchase price will be charged to that school/department. Employees must exercise due care to prevent loss or theft of the cellular device. If it is determined that a District cellular device is lost, stolen or damaged through carelessness, the Supervisor may exercise reasonable discretion, considering the circumstances, in deciding whether to provide a replacement or, through District procedures, request reimbursement to the District from the employee.*
  - iv. Cellular plan features, such as roaming, anytime minutes, nights and weekends, free long distance, text messages, instant messages (IM),*

*and directory assistance are for District use only. If these features are an additional charge to the plan, they would need to be cost effective, approved and justified by the Supervisor as in the best interests of the District.*

- f. Monitoring Bills: the Director, Principal or Area Superintendent of an employee with a District cellular device shall monitor and approve the bills and call details generated by the employee's usage.*

- i. Personal Calls*

- A. Personal calls on District cellular devices are prohibited.*
- B. A "personal call" means communication for purposes other than furtherance of the employee's public duties for the District. This includes, but is not limited to incoming calls, outgoing calls and night and weekend calls.*
- C. If an employee is found to be using the cellular device for personal reasons, the Supervisor may take disciplinary action, up to and including termination. If the use, however, was due to a bona fide emergency (which is defined as an imminent threat to the health, safety, or welfare of an individual), discipline would not be warranted. The District would request reimbursement for personal use through District procedures. Reimbursement would be accomplished by the employee paying legal tender to the District immediately, although in cases hardship, the employee may be allowed, at the discretion of the Supervisor and the IT cell phone contract manager, to make payments over time not to exceed a year and the payment terms could also be spelled out. If the employee does not make payment, the School Board may institute a civil action for damages to hold the employee liable. Any Internal Revenue Service (IRS) fees or penalties resulting from the benefits of "personal use" are the responsibility of the employee.*

- ii. District/Business Calls*

- A. Based on a monthly review of the cellular device use for each employee, the Director, Principal or Area Superintendent or designee, shall consider altering or terminating the employee's plan by contacting the cellular contract designee to request modification to a more economical plan or termination.*
- g. Subject to any prohibitions within this Policy or federal or state law or local ordinances, as applicable, the following shall apply to employees using cellular devices or data devices (i.e. laptops, blackberries, smart phones, etc.) while driving a vehicle:*
    - i. Texting, instant messaging, and composing or reading written messages or emails are prohibited.*
    - ii. Employees issued a District cellular device shall not use the device for any purpose while driving any vehicle, unless using the device hands-free.*

- iii. *Employees are not authorized while driving a vehicle to use any cellular devices, including cellular phones, to communicate regarding District related matters, unless using the device hands-free.*
  - iv. *Employees are not authorized, while driving a vehicle on any District authorized business, to use any cellular device, including cellular phones, for any purpose, unless using the device hands-free.*
  - v. *Employees are not authorized, while driving a District owned or leased vehicle, to use any cellular device, including cellular phones, for any purpose, unless using the device hands-free. This does not prohibit the use for legitimate District business of the two-way radio installed in District vehicles.*
  - vi. *Bus drivers, while operating a District vehicle, are prohibited from using any cellular or data devices even if a hands-free device is available. This does not prohibit the use for legitimate District business of the two-way radio installed in District vehicles.*
  - vii. *Other persons driving students on District business are prohibited from using any cellular or data devices, while operating the vehicle, even if a hands-free device is available.*
  - viii. *School police would be exempt from these Policy restrictions if the cellular or data device is being used for District business, and exceptions to the Policy would be made for all employees when responding to health and safety emergencies.*
  - ix. *Nothing contained within this provision obligates the District to provide an employee with a hands-free cellular device.*
  - h. *Wireless internet access on wireless devices, such as PDAs or Air Cards, that use a cellular network, is to be used for District business use only. This includes connecting the device to any computer/laptop. Employee users must restrict their usage to sites consistent with School Board site restrictions stated within Policy [8.125](#) District Review and Filtering of Web Sites and CIPA and be knowledgeable as to the categories of these restrictions.*
  - i. *An employee is prohibited from sending or receiving his/her personal email on a District cellular device.*
  - j. *Third party services enabled on accounts must be pre-approved in writing on PBSD [2317](#) by the Supervisor who will then notify the IT cell phone contract manager. If third party charges appear on the monthly bill that have not been authorized (i. e. ring tones, games), the employee shall cancel that service and reimburse the District for the cost of that service.*
  - k. **GPS Tracking.** *The District has the right to track the location of any District cellular device at any time without further notification to the employee beyond the statements within this Policy. Reasons include proper allocation of resources, monitoring employee's job performance and efficiency, consideration of disciplinary action or other good cause.*
9. *As set forth in the Manual, employees may use electronic signatures through their District account for certain forms and documents as approved by the Superintendent/designee.*

**10. Compliance.** -- When using District technology resources, applications, databases, and supplies, in addition to adhering to the standards set forth above in Sections 2 and 3, District employees must observe that:

- a. Any information generated through a computer, electronic device, stored on electronic storage media, electronically mailed, including but not limited to text messaging, instant messaging, tweets, and similar instantaneous methods of communication, or handled as e-mail, if it meets the definition of a public record, is subject to the District's [Retention Schedule](#), records holds, and Florida law concerning public records, as explained in School Board Policy [2.041](#). The District's Retention Schedule can be found at: <http://www.palmbeachschools.org/records/RecordsRetention.asp>. Employees are allowed to communicate by e-mails through services provided by the District but are prohibited from engaging in text messaging, instant messaging, tweeting and other methods of instant electronic communication if the messages must be retained as public records in accordance with the District's Retention Schedule.
- b. The willful and knowing unauthorized use, modification, alteration, dissemination, or destruction of District information technology resources or databases is considered a violation of this Policy and the District may impose discipline, up to and including termination. The Supervisor, including through District procedures as stated above in Section 7(f) (i) (c), may request reimbursement to the District for the actual cost of damages from the employee. If the employee does not make payment, the School Board may institute a civil action for damages to hold the employee liable. Moreover, this conduct may constitute a computer-related crime punishable under Fla. Stat. Ch. [815](#).
- c. All employees who have access to or may have access to personally identifiable student information shall adhere to all standards included in the Family Educational Rights and Privacy Act (FERPA), [20 U. S.C. § 1232g](#); the IDEA and its regulations at [20 U. S.C. § 1417\(c\)](#) and [34 C.F.R. § 300.623](#); Fla. Stat. §§ [1002.22](#) and [1002.221](#); School Board Policy [5.50](#); and other applicable laws, rules, and regulations, as they relate to the release of student information. Employees shall not use access to student records information for personal gain and shall use and release student information only as authorized by law.
- d. Intranet and Internet Resources, phones, voice mails, text messaging, instant messaging, tweets, and e-mail, when utilized, shall be used in performance of District business and shall not be used to send abusive, threatening, or harassing messages. Employees shall not send communications where the meaning of the message, or its transmission or distribution, would be illegal under state or federal statutes, federal regulations, or state rules or unethical under or violative of Fla. Stat. Ch. [112](#), [Chapter 6B-1](#) of the State Board of Education rules, or School Board Policies, including Policies [5.001](#), [5.002](#), [5.81](#) and [3.02](#).
- e. Users shall utilize only hardware and licensed software and that has been approved by the Superintendent/designee after submission to the Technology Clearinghouse Committee (TCC). Software and hardware installed prior to

- July 1, 2009 are grandfathered in but subject to approval by the Superintendent/designee following submission to the TCC before they are upgraded or replaced. Employees are responsible for using software in compliance with restrictions that apply to those licensing agreements.
- f. All devices that are connected to a School District of Palm Beach County (SDPBC) network must be approved by the District's Director of IT Infrastructure, or designee. These devices include, but are not limited to, servers, workstations, modems, wireless access points, routers, switches or hubs. Any unauthorized devices will be immediately disconnected from the District network.
  - g. Employees shall not make or facilitate the distribution of unauthorized copies of software. Modifications cannot be made to any software without the authorization of the copyright holder. The copyright legend or notice shall not be removed from the software or any of its documentation.
11. **Forms:** The PBSB forms mentioned within this Policy or within the Manual are incorporated herein by reference, as part of this Policy and can be found on the District's Records Management [Web site for forms](#).
12. **Implementation.** -- The Superintendent or designee is authorized to issue bulletins and administer procedures regarding the use of information technology in the District in accordance with the standards set forth in this Policy including the Manual. The Superintendent will direct compliance training for employees who use District technology. The training will be provided and designed to promote the District's commitment to the standards as set forth within this Policy and the Manual.
13. **Enforcement.** -- Any employee failing to comply with this Policy or its implementing procedures and standards may be subject to disciplinary action up to and including termination. Moreover, the Supervisor, including through District procedures as stated above in Section 7(f) (i) (c), may request reimbursement to the District for the actual cost of damages from the employee. If the employee does not make payment, the School Board may institute a civil action for damages to hold the employee liable. Depending on the misconduct, the employee may also face criminal liability. Additionally, IT has the authority to take reasonably necessary immediate actions to protect District technology resources.

**School Board Policy -8.123(Special Note: This policy is under consideration for revision)**

**TECHNOLOGY ACCEPTABLE USE POLICY FOR STUDENTS**

- 1. **Purpose.** -- The purpose of this Policy is to set forth terms and conditions as well as standards and guidelines for the acceptable uses by students of Palm Beach County School District technology resources. This policy does not prohibit or restrict public access to inspect data and information on publically available District technology resources.
- 2. Student access to District technology resources is authorized exclusively for academic purposes as stated below.



- a. District technology resources include, but are not limited to, electronic mail, Internet access, electronic records and databases, and computer software and hardware, including biometric record readers. Students may be provided or have access to electronic mail if authorized by the Superintendent/designee for educational or learning purposes.
  - b. Students shall not use any such resource for private business, personal use or gain, and student use must be related to the curriculum, the academic development of the student, or a school extracurricular activity, as defined in Fla. Stat. § [1006.15 \(2\)](#) and as provided within School Board Policy [5.60](#).
  - c. Students shall not use District technology resources for hacking, cheating, criminal activity, vandalism, sexting, cyber bullying, circumventing of District proxies or security policies, violating any state or federal laws or School Board policies, or violating third-party providers' acceptable use policies or terms and conditions of use.
  - d. Students are required to keep their passwords confidential, and they are not allowed to disclose them to any other person, except that the principal and teacher may allow for relaxed standards as to passwords for students in lower grades or of younger ages only, or if certain students require a reasonable accommodation based on impaired cognitive or processing ability, or other recognized comprehension deficit, due to disability.
  - e. Students will have a unique user id, except IT may approve in certain situations a generic user id. The principal and teacher may request that IT provide shortened or simplified user ids for students in lower grades or of younger ages only, or if certain students require a reasonable accommodation based on impaired cognitive or processing ability, or other recognized comprehension deficit, due to disability.
3. The Superintendent has established the accepted network user standards of behavior, as well as guidelines, which apply to students using District technology resources. These standards and guidelines are found within this Policy and within the District's Information Technology (IT) [User Standards and Guidelines Manual](#) ("Manual"). This Manual is specifically incorporated herein by reference as part of this Policy and is located on the District's Information Technology Security web site.
  4. When a student uses District technology resources, the student is subject to and is required to abide by the provisions, terms, conditions and standards within this Policy and the Manual as well as other applicable policies.
  5. Students using District wireless devices, including but not limited to cell phones, are also subject to the provisions within School Board Policy [5.183](#).
  6. The student registration form, [PBSD 0636](#), which is required to be reviewed, completed and signed by the parent/legal guardian/emancipated student annually, will contain language providing Notice of this Policy and will state:

**"NOTICE OF TECHNOLOGY ACCEPTABLE USE POLICY FOR STUDENTS**

Your child's school's access to the Internet is filtered to comply with the Children's Internet Protection Act and School Board Policy 8.125. Your child will be required to follow the acceptable use standards and guidelines that are stated in Policy 8.123,

*the referenced Manual, and the Notice of Conditions for Student Use of District Technology and be bound by their terms. There is only a limited expectation of privacy to the extent required by law related to a student's use of these technology resources. Before your child uses these District resources, he/she will read, be read to, and/or explained these documents and will electronically acknowledge that he/she understands, and agrees to follow, them.*

*You are invited to read this Policy, Manual and Notice. If you need assistance reading the documents, you may ask the school for assistance. The policy is available at: <http://www.palmbeachschools.org/policies/> under chapter 8—Policy 8.123.”*

- 7. There is only a limited expectation of privacy to the extent required by law for the student related to his/her use of these technology resources. The District may monitor a student's use of District technology for good cause, such as educational purposes, responding to a records request, compliance with School Board policies, compliance with the [Children's Internet Protection Act](#) (CIPA), to investigate a possible security incident, as part of the District's routine maintenance of its technology resources, or to analyze computer performance. This provision shall be interpreted and implemented in conformance with [FERPA \(20 U. S.C. § 1232g\)](#); [34 C. F.R. Part 99](#); and Fla. Stat. §§ [1002.22](#) and [1002.221](#). Students are advised that many District technology resources, including but not limited to laptops and desktops, may contain input systems such as web cameras and microphones which can be remotely controlled to turn them on and off. The District will not utilize any such input systems remotely unless consistent with the law.*
- 8. As set forth in the Manual, students may use electronic acknowledgements through their District account for certain forms and documents as approved by the Superintendent/designee.*
- 9. Violation of this Policy or the standards required by this Policy may result in disciplinary action as set forth in School Board policies [5.1812](#) and [5.1813](#). IT has the authority to take reasonably necessary immediate actions to protect District technology resources.*
- 10. The Superintendent/designee will direct age appropriate training for students who use District technology. The training will be provided and designed to promote the District's commitment to:*
  - a. the standards and acceptable use of District technology as set forth in the Manual and this Policy;*
  - b. Student safety and meeting any E-rate requirements by teaching children:*
    - i. about safety on the internet,*
    - ii. appropriate behavior while on online, on social networking websites and in chat rooms, and*
    - iii. increasing cyber bullying awareness and response.*

*During the training, students will be allowed to ask questions. Following receipt of this training, the student will acknowledge electronically that he/she viewed the training and understood it and will follow the provisions of the Policy and Manual.*



## **School Board Policy 2.501**

### **Information Security - Access Control Policy**

1. **Purpose:** To control access to information. Access to information systems and services should be controlled on the basis of business and information security requirements as well as to meet any requirements of state or federal law. This Policy does not prohibit or restrict public access to inspect data and information on publicly available District technology resources.
2. **Definitions:** The [IT User Standards and Guidelines Manual](#) provides definitions of terms used within this Policy. This Manual is incorporated herein by reference as part of this Policy and can be located on the District's IT Security web site.
3. **Policy:**
  - a. User Access Management.
    - i. All users, except third party users and as stated below, will be automatically assigned a unique User ID for their use only. As to third party users, they will be assigned a User ID, on request by their District contact/coordinator, when in the best interest of the District. Further, all users will have a password. Yet, as to students, see School Board Policy [8.123](#), sub-paragraphs (2) (d) & (e), relating to passwords and User ID's.
    - ii. Access to the network/servers and information systems will be by User ID and password and, in appropriate cases, a secondary authentication method may be necessary, such as a smartcard, PIN number or biometric data.
    - iii. IT shall utilize appropriate information system controls to enforce the password standards defined in the IT User Standards and Guidelines Manual.
    - iv. Users will only be given sufficient rights to all systems they have been specifically approved and authorized to use based on the District's business and information security requirements, as well as to meet any requirements of state or federal law. Access is also controlled by the District's web site filtering policy--School Board Policy [8.125](#).
    - v. User rights will be kept to a minimum at all times. Employees shall be given, by default, basic access to e-mail and calendaring services and appropriate self-service HR services, such as eBenefits and ePay.
    - vi. Users requiring access, other than basic, to information systems must make the requests for access according to processes defined by each information system owner.
    - vii. The information system owner shall be identified and will determine user access rights for their systems. Information system owners shall consider separation of duties when determining user access rights.
    - viii. System administration rights to information systems, including network devices, shall be restricted to the appropriate users based on the District's business and information security requirements.

- ix. *The user's User ID shall be immediately disabled when a resignation or termination change in his/her status occurs in PeopleSoft the District's Human Resource system.*
- x. *User's access rights shall be periodically reviewed to make sure the access is approved and authorized based on the District's business and information security requirements.*
- b. *Physical Access Management.*
  - i. *Users must not leave their computer or other access unit unattended during normal work hours without first logging off or invoking a password protected screen saver.*
  - ii. *Users must turn off their computers or other access units at the end of normal work hours. If a computer or other access unit must stay on after normal work hours, precautions shall be taken to prevent unauthorized use.*
  - iii. *Physical access into facilities that contain information systems, such as computer rooms and data storage areas, shall be restricted to those people that are approved and authorized based on the District's business and information security requirements. Physical access shall be controlled using methods such as walls, locks, key card systems, and biometric readers.*
  - iv. *Physical access into controlled facilities shall be logged and monitored.*

## Chapter 4 - Business Systems and Processes



### Chapter 4 Business Systems and Processes

#### ***Executive Overview***

The District's mission-critical operations are managed by various enterprise systems and custom applications. These systems support student data management, transportation and fleet management, school food service operations, facilities operations, work order management, HR functions, and financial management. Some are legacy systems that are cost-intensive because the skills needed to support them are obsolete and difficult to acquire. The newer systems, such as the PeopleSoft ERP or the Tririga Integrated Workplace System, are web based and are built on new technologies that are efficient, high performing, and easily supported. Additionally, there are a multitude of in-house developed distributed custom applications using various languages such as java, ColdFusion, and the .net framework. There is no commonality in platforms, thus making integration more complex and difficult. The result is a distributed technology environment where data is stored on numerous incompatible systems.

#### ***Enterprise Architecture (EA)***

EA is a blueprint that systematically and completely defines the District's current and desired state that will achieve optimum performance of core business processes within an efficient technology environment. The Enterprise Architecture can be defined in four domains: Business and functional processes; Information and data architecture; Applications and interfaces; and Technology infrastructure.

#### ***Software as a Service (SaaS, Cloud Computing)***

SaaS is an effective software delivery mechanism that will enable the District's technology specialists to change their focus from deploying and supporting applications to managing the services and alignment with the business functions. Infrastructure and maintenance costs are reduced and application uptimes are increased.

#### ***Service Oriented Architecture (SOA)***

SOA is based on flexible design principles that provide loosely integrated and repeatable services that can be used in multiple business processes. SOA defines functions as services, which are accessible over a network and can be combined and reused in developing applications. These services communicate with each other by passing data in a well-defined shared format. SOA provides an agile environment and reduces the effort and

time needed to change business processes and the application systems that support those processes.

### ***Enterprise Application Integration (EAI)***

EAI is an integration framework that will enable seamless integration between diverse business systems and applications. It eliminates the point-to-point integrations through a middleware integration platform. Data integrity is increased by having consistent data across all enterprise systems.

### ***Platform Standardization***

Optimize standardization of platforms including operating systems, databases, and application development environments. A common platform will improve maintenance and support, as well as reduce costs. Standardization can also occur by reducing the development of custom applications and integrating functionality into an enterprise system.

### ***Enterprise Resource Planning, PeopleSoft ERP***

The PeopleSoft ERP is the District's enterprise system for Human Capital Management (HCM) and Financial (FIN) applications. With approximately 1,000 daily users and 25,000 casual users, these applications provide for accurate and timely transactional processing and delivery of HCM and Financial information to the District, government agencies, bargaining unions, third party vendors, and the general community.

FIN (Financial) Modules	HCM (Human Capital Management ) Modules
Asset Management	Human Resources
Billing	Benefits Administration
Contracts	Time and Labor
Expenses	Absence Management
eProcurement	Payroll
General Ledger	Candidate Gateway and Recruit Workforce
Inventory	Employee and Manager Self Service <ul style="list-style-type: none"><li>• eBenefits</li><li>• eCompensation</li><li>• ePay</li><li>• eProfile</li></ul>
Payables	
Project Costing	
Purchasing	
Receivables	
Commitment Control (Budget)	

The goals for the PeopleSoft ERP for the next three years are:

### ***People***

- The ERP Department has been successful in building a strong team of PeopleSoft professionals to deliver, support, maintain, and enhance the applications. It is critical to continue to maintain this high level of expertise in-house to provide consistent availability and delivery of the system that now is depended upon for business success. Due to mobility of PeopleSoft specialists, it is important to continue to hire the right personnel and provide training and continuous education to maintain this knowledge. Employee performance will continue to be measured against high standards to maintain the performance level that exists today in the team.
- Use of internal resources to keep the application up-to-date lowers overall cost of ownership.
- Training of customers is key in utilizing the system to increase efficiencies across the organization and will continue to be expanded to this end.
- Continue to follow the priority process to ensure that resources (people) are working on the projects most important to the organization.

### ***Process***

- Continue to adhere to Software Design Lifecycle Methodology aligned with ITIL Standards.
- Business process redesign is a continuous improvement program which brings efficiencies through the use of technology. Additional functionality will be added for self-service modules to all casual and daily users as well as business users, with implementation of new modules toward the goal of reducing overall costs to the District.
- Incorporate into the enterprise issue tracking, work order, and resolution system.
- Standardize documentation across all technology areas.

### ***Technology***

- Upgrade the PeopleSoft HCM and FIN applications as needed in order to maintain vendor support, stay current with statutory and regulatory requirements, and provide for new functionality.
- Some legacy applications continue to be supported and run on the mainframe. ERP specialists will support migrating applications from the mainframe to house the appropriate data within the PeopleSoft applications, thereby eliminating redundant data, improving accuracy, and reducing the costs of maintaining multiple hardware and software.
- Perform appropriate data management to maintain efficiencies in table sizes and to optimize speed of processing.
- Continue to provide technical Disaster Recovery solutions and work with the business to test Business Continuity.

## ***School Food Service***

<b>School Food Service Quick Facts (FY12)</b>	
<b>Meals Served Daily</b>	<b>148,000</b>
<b>Number of Nutrition Sites</b>	<b>203</b>
<b>Number of After-Care Snacks</b>	<b>1,077,485</b>
<b>Meals Provided in FY12</b>	<b>28,100,000</b>

In order to remain efficient and to continue providing the best possible service to customers, School Food Service will utilize various technology platforms over the next few years. Among these will be communications, training, support, business operations, and project management.

Technology has enabled effective communications with Stakeholders. School Food Service will continue to use SharePoint for document collaboration, staff meeting communications, strategic business plan, time-task calendar, work orders, inventory, performance summary tracking, and storage of documents, along with many other features. ParentLink will also continue to be used for weekly account balance updates to parents as well as other calls regarding the services available through School Food Service. Mobile devices will continue to be used to allow for timely communication amongst team members.

School Food Service provides annual training to employees, as well as training throughout the year. Technologies such as TrainU will be utilized to provide a more cost-effective and beneficial form of training. School Food Service will also begin utilizing the ExamView software for classroom training and testing.

The changing technologies allow for analysis and adjustments to current business practices. School Food Service will be utilizing the following software and hardware throughout the next three years to enhance business operations: WebSmartt, eForms, Tablet and Touch Screen Computers, SchoolCashOnLine.com, All-in-one printer/scanner units, SharePoint, RocketScan, PeopleSoft, LANDesk, Google, Social Media, and other advancements that become available through the District. Physical and virtual servers will be used in conjunction to remain efficient and within District guidelines.

Technology will also be looked to in order to manage the various projects in School Food Service over the next few years. A SharePoint site was utilized for the implementation of the Back-of-the-House module of the WebSmartt project and additional projects will be managed through SharePoint in the future.

New technologies are being developed every day and School Food Service welcomes the opportunity to benefit from this ever changing environment. Becoming more efficient and having better communication methods available allows School Food Service to provide better service to customers.

## ***School Transportation System***

Transportation Services Quick Facts (FY13)	
<b>Number of Buses in Fleet</b>	<b>830</b>
<b>Number of Buses used Daily</b>	<b>629</b>
<b>Number of Students Transported</b>	<b>57,200</b>
<b>Number of Daily Bus Routes</b>	<b>629</b>

The Transportation Department is always trying to take advantage of the fast-growing technology and in order to stay on track; as such a three year technology plan has been created based on the analysis of the department's needs. After a detailed study of the systems now being used by the employees, the IT team discovered new ways to improve current operations. Since the Transportation Department consists of two sub-departments (operations and maintenance) the technology strategic initiatives are divided into two parts.

On the operations side, the routing software is being considered the core of all processes. For that reason, an upgrade from a desktop application to a web-based routing system is essential at this time. Currently, coordinators cannot all work at the same pace because their productivity depends on each individual machine and the main map (used for routing) is only being updated once every two years. On the other side, the web-based routing system will have much faster speed since it depends on one powerful server instead of a regular desktop computer, as well as a frequently updated map provided free by Google.

After experiencing severe budget cuts, management is looking forward by eliminating all paper use throughout the department. In order to achieve this goal, fax machines will be replaced with fax-modem hardware installed on Desktops for secretaries, area managers, and senior coordinators.

A complete upgrade of the computer lab at the East Administrative Facility is also considered necessary as the need for training and presentations is increasing. Another use for the lab will be to introduce the Transportation Department users to new software being adopted by the District, as well as test taking.

On the maintenance side, a major upgrade to the fuel dispensing system is a high priority. A thorough review of the fuel system currently in place has shown plenty of weaknesses. Transactions are being transferred to the server once daily instead of a live feed from fuel terminals to the server. Employees still use manual methods to measure the amount of fuel in the tanks versus the use of sensors to continuously show the fuel level. Another



disadvantage to the current system is the age of the system itself, which is causing a lot of problems with the hardware. Parts are scarce and expensive.

In order to avoid a major and costly upgrade to the Fleet Maintenance system, yearly software updates will be performed to stay current with new technology. In addition, special heavy-duty laptops will be purchased for the mechanics in order for them to diagnose problems using manufacturer software. Mechanics will save time by using software to tackle specific electronic breakdowns instead of spending hours trying to troubleshoot breakdowns.

A modern updated Global Positioning System (GPS) will be implemented to manage school buses for safe and efficient student transport. This will provide the ability to route buses more efficiently and track buses throughout the county and state.

In conclusion, the Transportation Department hopes to accomplish all of the above referenced upgrades in order to maintain continuous operations and transport students in the most safe, effective, and economical way.

### ***Integrated Workplace Management System – Tririga***

The vision of the Facilities Management Division is “to provide world-class, high-performance facilities that support and enhance the learning process and lead to greater student achievement.” The effective management of over 1,400 buildings (over 28 million GSF of space) and other assets would be challenging without the use of information technology. The Division currently utilizes Tririga, an Integrated Workplace Management System (IWMS). This system provides a solution that effectively manages the work of all departments within the Division of Facilities Management (Project Controls, Planning Department, Facilities Services, Program Management, Building Department, Real Estate Services, Environmental Control Office, and Continuous Improvement). The Tririga IWMS software is a fully-integrated, 100% web-based enterprise suite of applications that support the entire workplace lifecycle from planning to utilization and eventual disposal of District assets.

Tririga IWMS system provides the District with a very flexible and robust platform that enables better management and governance across the Facilities Division which includes Procurement, Work Management, Inventory Management and Control, Service and Warranty Management, Space and Room Reservations, and Lease Administration and Management. The Tririga solution also provides powerful analytical and effective performance management tools to track and measure progress toward District and Division strategic objectives.

## ***Local Instructional Improvement Systems (LIIS)***

Providing centralized professional development and technologies that is necessary to deliver curriculum, communicate, and access, manage, and evaluate student-related information is the focus. The following instructional systems will be defined under the LIIS requirements, as outlined by the FLDOE.

### **Enterprise Portal**

The District's data is stored in many diverse environments, or disparate "islands", leading to a lack of correlation of information. Stakeholders require access to data and many other applications to effectively perform their job functions. Currently, user access to the information is cumbersome or not available. Users log in and out of applications, each with a different username and password. User access is manually managed by technology specialists and therefore is not consistent across the enterprise. The environment does not support the newer technologies that provide a rich collaborative experience. Oftentimes, it is a frustrating experience for the end-user. The District will continue to develop business systems that support the educational objectives of the organization. This includes services that incorporate export and integration of student and teacher accounts and the seamless integration of single sign-on protocols.

The intent of a portal is to bring everything of interest to an individual in one place. It also can avoid the need for broad-based, "shotgun" communications that are of interest to only a small portion of the recipients. By better targeting information, the communications are more likely to be read and the number of irrelevant communications one must wade through can be reduced, thereby improving both productivity and communications. The portal provides a single, integrated, ubiquitous, point of access to information and applications, delivered in a highly personalized and customized manner.

An enterprise portal can also improve organizational efficiencies by streamlining the District's operations by improving communications, collaboration, and providing easier access to vital information, regardless of where the data is stored. The benefit to the end-user is simplicity and speed of information access, saving time and increasing productivity. Portals also allow for the centralization of information, making it easier to maintain and to keep it up-to-date.

### **Student Information System (SIS)**

The TERMS SIS is a mission critical system that manages the District's school-related data including students, teachers, classrooms, and courses. The primary function of TERMS SIS is to aggregate the data and generate reports as mandated by the FLDOE for the Survey Periods. The District's annual funding from the DOE is based on this data. Additionally, TERMS SIS supports ancillary processes, including school field trips application, Out of

Field/In- Service application, data feeds to instructional applications and the EDW, and is a repository for historical data.

The TERMS SIS is a mainframe legacy system implemented two decades ago. The application runs on the IBM ZOS platform, with VSAM data files, and is programmed using COBOL and CICS languages. Over the years, the system has been heavily customized to meet the growing demands for new functionality and the constantly changing legislative requirements, leading to inconsistent and challenges to documented code development. Although the system serves its function, it is becoming more costly and difficult to support due to the technology limitations. Due to platform incompatibility, integration of TERMS SIS with other enterprise systems is restrictive, thereby maintaining many manual data transfers.

With the advent of new technologies and improvements in enterprise SIS applications, it is prudent that the District evaluate the migration of SIS to a modern and easily supported solution. Firstly, the District will form an SIS Steering Committee to perform a needs analysis, based on the as-is and to-be requirements for a SIS. The analysis will take into account new technologies, functionality, maintenance, support, training, and costs. The migration and replacement of the TERMS SIS will be dependent on this analysis.

In the meantime, the District has developed and delivered a mobile app called “MySIS”. This app pulls student data from TERMS and displays it for a limited user base of principals, assistant principals, and guidance counselors. The provided data includes most demographics such as parent contact information, student schedule, exceptionalities, health information, and attendance.

### ***System / Application Development Standards***

The District has implemented and maintains over 400 systems and applications. They are a hybrid of prepackaged off-the-shelf software, (both enterprise level and desktop) and custom developed applications. The development of these applications has not been restricted to technical specialists. Many of them have been implemented outside the technical area of responsibility and without assistance from the technical specialists. As such, it has been difficult to establish standardized Software Development Lifecycle (SDLC) methodologies and Quality Assurance (QA) processes. Many systems are designed and implemented without formalized processes resulting in lack of required documentation, inadequate testing and user acceptance processes, inconsistent code versioning and control, lack of naming conventions, and lack of seamless migration to production environments.

Standards and consistent approaches to application development can result in significant savings in time, resources, and costs. Developers will work collaboratively with the business owners to clearly define the requirements, resulting in fewer iterations and defects. With proper documentation, code versioning processes, and standard naming conventions, development is not restricted to any one individual. Opportunities now exist for increased support. Following best practices in testing and user acceptance can minimize defects and shorten times to production. Furthermore, consistent migration and change management processes will ensure that the system or application has gone through a rigorous QA process.

### ***eForms and Document Management***

The District's business processes include extensive use of electronic document management tools such as eForms / Web forms, document imaging systems, document repositories, and document scanning with optical character recognition.

All 20,000+ District employees use the eForms solution to complete and submit their Requests for Leave. All Individual Education Plans (IEPs) are completed, submitted and stored online using the eForms and document imaging systems. In fact, Palm Beach County is the only known district in Florida to build and deliver an automated IEP with zero cost outlay and no outside professional services. In all, over 200 District forms are available as eForms. And, over 5.5 million mission-critical District documents are stored within the document imaging system. Those documents include all personnel files, litigation case files, inactive student records, IEPs, architectural drawings, and construction project files. Within the next three years, these systems will be upgraded, enhanced, and expanded in use.

### ***Volunteer and Visitor Tracking***

Several years ago, the District built and delivered a custom web application to track volunteers and visitors to our many facilities. The system underwent a complete overhaul during 2011. All those who wish to volunteer in any of our schools must first apply in our Volunteers in Public Schools (VIPS) system. Applicants automatically under-go a criminal background check and are "cleared" to become a volunteer. Visitors to any District facility must first sign-in using the system before gaining access into a school or other facility. Within the next year, the system will be modified to revamp and enhance its security module.

## Chapter 5 – Communications and Collaboration



### ***Executive Overview***

Effective communications and collaboration amongst District Stakeholders, including teachers, students, administrators, and parents is the key to achieving success. The advent of online and virtual collaboration technologies presents a multitude of options to stay connected. Increasingly, Stakeholders are using digital media and environments to communicate and work in collaboration. In order to support individual learning, contribute to the learning of others, and participate in team meetings, Stakeholders will:

- interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media;
- communicate information and ideas effectively to multiple audiences using a variety of media and formats;
- develop cultural understanding and global awareness by engaging with learners of other cultures; and
- contribute to project teams to produce original works or solve problems.

### ***Distance Communications and Virtual Meetings***

To extend and expand the in-depth usage of information and collaboration tools in teaching and learning, Unified Communication and Collaboration technology (including IP telephony and IP video conferencing) is required. Consolidation of the infrastructure will provide true convergence between the worlds of voice and data. Until now, these have traditionally been designed and implemented as isolated technological solutions.

The District will continue to provide access and support to all staff for Adobe Acrobat Connect Pro as its standard web-based solution for collaboration, communication, and training. Future enhancements to the Adobe Connect platform include integration with the District's telephony systems to provide better experiences to all users. Additionally, the District will expand use of its H.323, standards based, high-definition Polycom video conferencing infrastructure in both the academic and operating areas. Recent upgrades to this system will allow significantly greater access to this technology and will result in improved meeting communications while reducing travel costs. As Session Initiation Protocol (SIP) standards become better defined and emerging technologies allow, the District will continue to prioritize unification of previously disparate conferencing solutions.

Ultimately, no matter what video conference solution an outside user has access to, they should be able to collaborate with District staff.

### ***Distance Learning***

Much of the research is no longer asking if distance education courses can be as effective as conventional classroom instruction, but rather, who learns best in distance learning settings and why. Whether the students learn or not depends less on the medium than on the characteristics of the learners and on numerous other variables of program design, instruction, and administration, as well as content variables. Distance Learning enables transformative pedagogical methodologies via:

- A range of technology-oriented tools and services to enhance the receipt and delivery of instruction
- Differentiated content delivery for School Support Organizations, networks, schools, teachers, students, and parents without the logistical confines of 20<sup>th</sup> century traditional methodologies
- Curriculum development as a means for delivery of courses that do not require the physical presence of students at school
- Availability of advanced placement courses and flexibility for high school students, scheduling and classroom flexibility, and extending student and teacher mobility
- Robust Learning Management Systems that take advantage of emerging technologies that track learner engagement and suggest learning pathways
- Integration of LMS with existing tools and District infrastructure to improve efficiency and District investments

### ***21st Century Learning***

- The District has made great strides in providing for, and allowing the use of, emerging 21st century classroom strategies. As new developments occur, our students and teachers must keep pace with peers from across the globe. Cloud-based communication services, as well as storage and management of portfolios will allow for anywhere, anytime learning with the potential for infinite life. Using online cloud-based services (such as Google Docs or Office 365), students and teachers will collaboratively create, write, study, research, and make substantial decisions together in order to solve real-world problems.
- Classrooms, schools, and District will engage in safe social networking for the purpose of furthering instructional and marketing strategies.
- Students and teachers will publish online. Classroom and individual blogs will allow for online publishing of student work resulting in greater awareness of purpose and audience.
- Personal devices will be welcome on school campuses. Students and teachers will appropriately and instructionally interact using personal and District devices regardless of manufacturer or operating system.

## ***School and Classroom Websites***

Parents and guardians expect to have quick access via the Web to information about their child's school and classroom. Palm Beach County Schools will continue to provide website services to all schools and to every classroom teacher via contracted services (currently Edline / Blackboard Engage). This system of classroom websites provides the school and individual teachers with the ability to post news items, maintain a calendar of events and assignments, provide links to instructional resources, post documents of interest to parents and students, and push notifications to parents and students via email, texting, and other digital processes to mobile devices as well as customized reports.

The District will continue to strengthen these services provided through development of new features, reports, and online collaboration tools; i.e. interactive quizzes and direct sign-on to electronic instructional resources such as textbooks.

## ***Mass Notification System***

The District utilizes a hosted mass notification system to send robo-calls to student and employee homes. Individual schools use the system to send calls to their student homes specific to their school events and important messages. The system automatically calls parents when their child is absent from school. The Superintendent uses the system to reach all parents and employees as it relates to emergencies, start of school, important testing dates, etc. The Food Service Department uses the system to automatically contact parents when their child's lunch account balance reaches below a threshold. The District is currently preparing to add text messaging capabilities in addition to phone calls.

## ***Vodcast and Vodcast Mobile***

Many teachers understand the power of video to deliver instruction. The District has a custom-built web application (Vodcast) that houses thousands of in-house created and approved videos. Teachers and other school staff can upload their own in-house videos and create a playlist to easily access their videos in the future. It also is the means for the public to watch live broadcasts including School Board meetings. Recently, Vodcast Mobile was released for iOS. Within the next year, plans are to design and deliver an Android and Windows 8 version of the iOS app.

## ***Portal***

This is an integral part of the LIIS initiative and the intent of a portal is to bring everything of interest to an individual in one place. It also can avoid the need for broad-based, "shotgun" communications that are of interest to only a small portion of the recipients. By better targeting information, the communications are more likely to be read and the number of irrelevant communications one must wade through can be reduced, thereby improving both productivity and communications. The portal provides a single,



integrated, ubiquitous, point of access to information and applications, delivered in a highly personalized and customized manner.

An enterprise portal can also improve organizational efficiencies by streamlining the District's operations by improving communications, collaboration, and providing easier access to vital information regardless of where the data is stored. The benefit to the end-user is simplicity and speed of information access, saving time, and increasing productivity. Portals also allow for the centralization of information, making it easier to maintain and to keep it up-to-date.

### ***SharePoint***

Microsoft SharePoint is a collaboration and content management solution used to support District projects, business processes, and daily work, as well as online document storage, sharing, and maintenance. It is used by administrators, departments, teams, and teachers, many in which have multiple SharePoint sites. SharePoint sites offer advanced (i.e. granular document or list level) site security when necessary. Usage of metadata (tagging) of documents is possible to assist in organization and future retrieval. It also provides compliance to document retention policies and advanced data types such as multiple choice, calculations, currency, or database lookups. Another key advantage is the incorporation of automated tasks or workflows and provides site integration with other District systems or applications.

### ***Google Docs***

The District current uses the Google Apps suite of products that provide a variety of online documents, work on them in real time with other people, and store documents and other files all online. Google Apps currently available to District staff are: Document, Presentation, Spreadsheet, Form (surveys), Drawing and Site. Google Apps provide staff with controlling access and security to documents and allow accessibility to the public when necessary. Another key feature is the ability to have multiple people editing a document simultaneously in real-time.

## Chapter 6 – Technology Training



### Chapter 6 Technology Training

#### **Executive Overview**

Currently, training management information, functions, and delivery are dispersed across many systems and applications. The lack of integration amongst these systems requires manual processes to transfer data and keep training records up-to-date. Training is offered by many departments using many different models such as virtual or online, lecture/demo, video on-demand, and video conferencing. Currently, all training offerings are not listed in one central repository, resulting in stakeholders having to search many locations to find the desired training.

High-quality professional development will be offered to all educational stakeholders to improve their mastery and integration of educational technology that will enhance instruction leading to increased student achievement and performance. Professional Development will be created in alignment with the National Educational Technology Standards (NETS), State Goals and Priorities, School District Goals, and School District Key Results. A pre-assessment will take place linking the participants pre-existing knowledge and skills with their individual professional growth goals.

The delivery will be offered in several modalities including face-to-face workshops, electronic interactive, electronic non-interactive, study group/learning community, action research, and independent study. Participants will implement the content learned during the delivery in the following way(s):

- Structured mentor/coaching program
- Results from action research
- Collaborative planning related to training
- Creation of a product related to training
- Study group participation
- Electronic interactive
- Electronic non-interactive

The measure of impact to job performance will be measured based on the mastery of implementation.

## ***Centralized Training Management***

To increase efficiencies in the training process, a centralized training management system that will provide an integrated environment for business processes (including, but not limited to the management of in-service records in a manner which fulfills state protocol requirements), content development, and training delivery is essential. Centralizing these functions will not only improve tracking and recording of training data, but also will be easier for stakeholders to seek out the training they need and register for it. Training management will also require the development of a training catalog of all courses targeted for certification updates, course descriptions, targeted audience, dates, locations, and applicable professional development points.

## ***Professional Development Strategies for Teachers and School-Based and District Stakeholders***

Our professional development strategy for teachers and school-based and District stakeholders include the utilization of successful schools and programs as “best practice” models.

- Provide adequate training on District standard technology tools.
- Provide adequate on-site support for technology integration to all our schools and departments.
- Continue to align the School Improvement Plan with technology integration to decrease the Digital Divide.
- Develop partnerships for professional development opportunities which will enable us to produce productive citizens in the workforce.
- Ensure the District provides every opportunity for teachers and school-based, and District stakeholders to improve their technical proficiency and ability to integrate the technology into the curriculum.
- Offer every teacher the opportunity to participate in e-learning professional development for their convenience.
- Participate in professional development opportunities in order to assist our employees and stakeholders in obtaining the knowledge and skills necessary to incorporate technology into the classroom/work place. The incorporation of this technology will assist us in serving our students and prepare them for entrance into the global workforce.
- Expand online professional learning opportunities to parents through the use of various formats (e.g. Vodcasts, etc.).

## ***Professional Development for Functional and Technical Specialists, End Users, and Non-Instructional Employees***

With the constant and rapid changes in technology, it is prudent that technical and functional specialists acquire the training needed to be effective and efficient in their functions. As older systems are replaced, training needs to be provided on the newer systems. Training should not be a one-time occurrence, but acquired progressively as skill

sets are needed. Appropriate user-based training ensures that technology is used effectively to improve business process efficiencies. Additionally, technical training and high-level technical skills are required to support and maintain technology to minimize downtime and increase performance. Through dedicated technical support, specialists will be able to provide increased support to end-users.

The professional development strategies for functional and technical specialists include the appropriate and timely technical support to achieve effective integration of educational technology.

- Monitor, develop, and/or provide technology certification programs and continuing professional development to support these positions to serve our stakeholders in the best capacity.
- Continuously monitor, assess and modify professional development as new technologies emerge.
- Professional development will ensure that the functional and technical specialists will have the knowledge, skills, and dispositions that will enable them to support technology applications, demonstrate the effective use of technology to end-users and provide professional development, mentoring, and basic technical assistance for others.

## Chapter 7 – Technology Support Processes



### Chapter 7 Technology Support Processes

#### **Executive Overview**

Technology support is provided by the IT Service Desk and the IT specialists to schools and departments on a wide array of technical issues including infrastructure, applications, telecommunications, mobile devices, desktops/laptops, peripheral devices, and software.

Technology support is organized into the following three tiers to efficiently support all District stakeholders:

#### **Tier 1 Support**

**School-Based Support:** A technician, located at each school is the first level of support for school-based employees and students. If the school technicians cannot resolve the issue, they escalate the issue (either by phone or the online ticket submission system) to the Service Desk.

**Service Desk:** Employees (both administrative and school based) contact the IT Service Desk via phone, Monday through Friday, from 6:30 am to 5:00 pm. Most issues are resolved quickly by the phone agents and the others are assigned to Tier 2 or 3 support within IT.

All employees can submit tickets via the Internet to report an incident or request service. The IT Service Desk staff processes all requests and, if not resolved within Tier I, escalated to the appropriate Tier 2 or 3 groups.

#### **Tier 2 Support**

**Field Support Group:** Handles desktop, audio visual, printer, and other peripheral device support as assigned either remotely or at the customer's location.

Field Support may assign tickets to Third-party Vendors as needed, to assist with various desktop, laptop, and printer warranty work.

Telecommunications Group: Handle both phone and network infrastructure issues. They troubleshoot switches, network drops, routers, and other network hardware, both wired and wireless.

If any incident is not resolved within Tier 2, the issue is escalated to the appropriate Tier 3 support group.

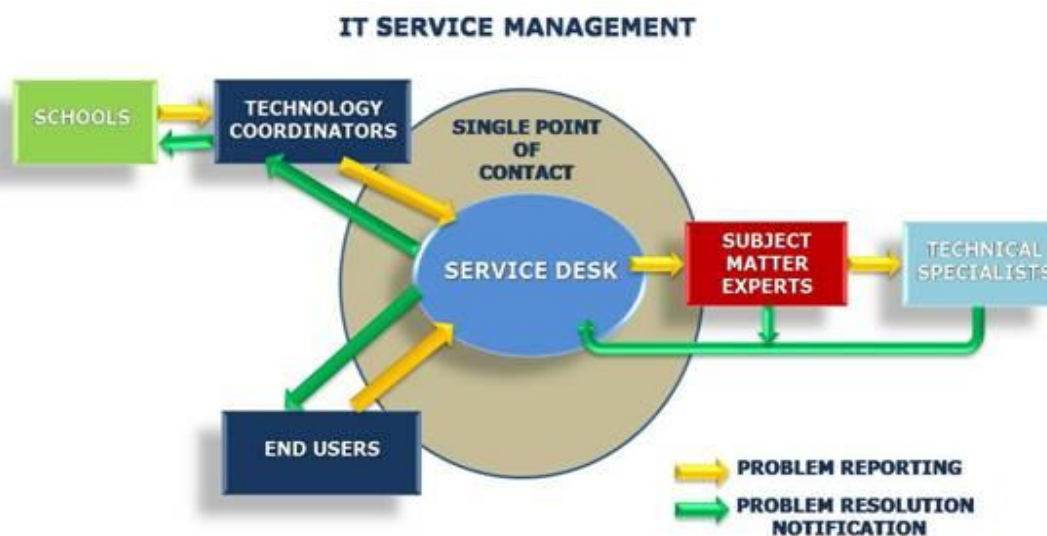
### ***Tier 3 Support***

Subject Matter Experts: Handle Tier 3 incidents, which include server, security, and applications support. Application support includes ERP, EDW, SIS, School Food Service application, Facilities applications, and custom applications.

### ***Unified Support Strategy***

The District's IT Service Desk is the hub of support for technology-related issues. However, there are areas within the District that maintain their own technical support specialists. These specialists often resolve issues independent of the IT Service Desk. This has resulted in disparate work order systems, and decentralized support processes. There is a need for continuous process improvement to unify the support architecture that will identify the support areas with a consistent processes for support/service requests, clearly defined responsibilities of support specialists, centralized catalog of technology services, and standard escalation processes.

The transition to a unified support strategy will require the implementation of a centralized IT Service Management System (ITSM), with the IT Service Desk as the Single Point of Contact for all technical issues. District employees will use the ITSM system to route incident or service requests directly to the appropriate support group.





With increased participation in the centralized ITSM system, improvements can be made in incident tracking. Capturing metrics on incidents can transition support from reactive to proactive. Integrating the ITSM system with the Incident, Problem, and Change Management systems (the foundation of the District's ITIL initiative) can result in increased efficiencies in issue resolution.

A centralized Service Catalog will specify the technology services that are available to customers, how to request those services, the associated Service Level Agreement, and other relevant information.

Ongoing professional development for Technical Support Specialists and Subject Matter Expert (SME) is critical for successful support processes. Support systems must be agile to adapt to new technologies and ever-increasing demands for support. The IT Service Desk and school-based Technical Support Specialists (TSS) require training in new technologies and applications as they are introduced into the District. The skills of all school-based TSS staff will be assessed prior to employment, as is done in the secondary schools.

### ***Network Management and Improved Support for End-users in Classrooms***

Support of end-users in the classroom will be improved over the next three years by leveraging the IT Network Operations Center. New monitoring procedures will allow correlation between network, internet, applications, and other systems to expedite resolution time for network issues. Active monitoring of the quality of service at each site will provide proactive alerts for technology issues in the classroom, before impacting instruction. Examples of new monitoring will include:

- Monitoring all internet access on a per site basis that will incorporate applications listening for connections on designated ports and monitoring available drive space.
- Application transaction monitoring running timed synthetic transactions to various applications to identify performance issues before noticed by the end-user.

### ***District Technical Support Options for Equipment Maintenance and Replacement***

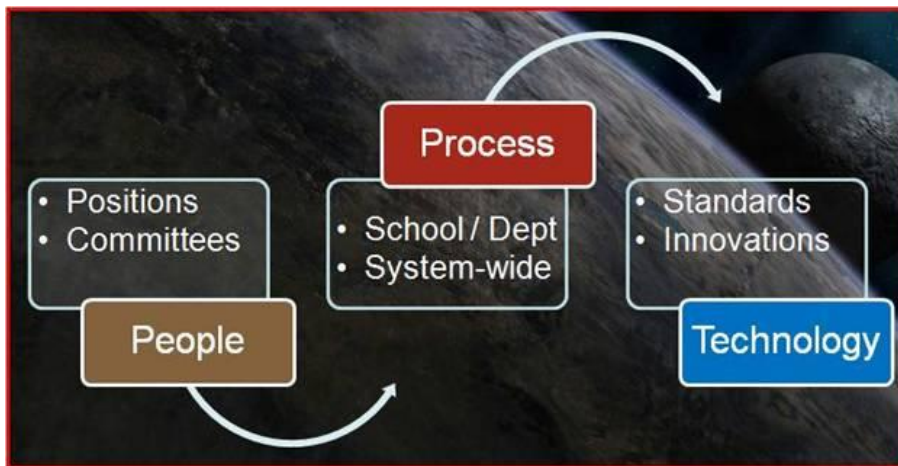
District technology equipment is standardized to minimize support complexity. A new desktop support tool will also provide proactive alerts on detectable hardware failures such as failing hard drives, CPU Fans, and CMOS Batteries. Also, the new tool will provide an enhanced method to centralize desktop and software inventory to globally manage software and hardware updates, patches, and overall fleet management.

## Chapter 8 – Technology Governance, Policies, and Project Management



### **Executive Overview**

Technology is the indispensable foundation for academic and operational activities in the SDPBC. This foundation is comprised of People, Processes, and Technology and is the essential tool in the execution of the responsibilities and services provided to students, staff, employees, and the community.



Technology Governance has these major responsibilities:

- Championing the alignment of Technology with the District's Mission, Goals, and Key Results.
- Advocating maximum student achievement using technology in schools and classrooms.
- Guarding the responsible use of Technology and minimizing related risks.

IT Governance's (ITG) mission is institutionalizing processes that ensure effective and efficient uses of Technology while achieving the District's Mission and Goals. ITG ensures a framework through which decisions are made, standards and policies are defined, and processes implemented in the best interest of the District, often through a representative series of structures. MIT-Sloan's Weill and Ross conclude that "effective IT governance is the single most important predictor of the value an organization generates from IT."<sup>7</sup>

<sup>7</sup> Peter Weill and Jeanne W. Ross, IT Governance: How top performers manage IT decision rights for superior results, Harvard Business School Press, 2004

## ***ITIL<sup>8</sup> and Technology Governance Principles***

Governance is a process which ensures the effective and efficient use of IT in enabling the achievement of District goals. Information Technology Infrastructure Library (ITIL) is the most widely accepted approach to IT service management in the world. It provides a cohesive set of best practices, drawn internationally from the public and private sectors, along with a systematic and professional framework to manage IT services. Benefits of following the ITIL framework include:

- Reduced costs
- Improved IT services
- Improved customer satisfaction
- Standards and guidance
- Improved productivity
- Improved use of skills and experience
- Improved delivery of third party services

## ***Technology Process Structure***

Technology-guiding direction operates within the checks and balances of three committees.

- First, the Technology Advisory Committee (TAC) serves as an advisory committee to the Board and is comprised of District leadership and Board appointed community members with technology expertise. TAC is governed by School Board Policies 1.09 and 1.096. Its mission is to provide expert knowledge and guidance, and to bring industry best practices to decisions regarding technology infrastructure and strategy.
- Second, the Superintendent Technology Committee (STC), comprised of the highest level District leadership including Academic leadership and Chiefs, meets regularly to review, discuss, and set direction for all technologies in the District. The role of the STC is to promote an environment that leverages technology tools and resources to achieve the District's mission and goals. The STC reviews and provides comprehensive institutional-based recommendations to District stakeholders on technology plans, projects, and acquisitions that have a significant impact on the



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<sup>8</sup> ITIL® is a Registered Trademark, and a Registered Community Trade Mark of the Office of Government Commerce in the United Kingdom, and is registered in the U.S. Patent and Trademark Office

District's operations. The STC encourages and provides guidance in establishing technology standards and policies.

- Third, the Technology Clearinghouse Committee (TCC) comprised of Assistant Superintendents, Chiefs, Principals, and representatives from the Academic and Business segments of Administration, including IT. The committee meets regularly to review all proposed non-standard technologies prior to purchases and then recommends action to the CIO. The review examines the product from two distinct perspectives: function and technology. The academic and business representatives make certain the proposed technology serves the function intended, without duplication, and IT determines the technical aspects for integration, compatibility, scalability, support requirements, bandwidth, Total Cost of Ownership (TCO), training, and support.

### ***Technology Purchases and Acquisitions***

The District is very focused on innovations which support (both directly and indirectly) student achievement. The Purchasing Department works in harmony with IT to ensure that only approved standards and new technologies are acquired. The STC established the TCC and charged them with unifying schools and departments' technology purchasing decisions, therefore, reducing duplication, incompatibility, and unnecessary expenditures. The TCC reviews proposed technology to ensure alignment with the District's mission and goals.

### ***Technology Policies and Procedures***

Currently, there are nine policies addressing technologies from various perspectives. The latest revisions occurred 2010, making them no more than three years old. Knowing that the technology life-cycle is measured in months (not years) there is a critical need to continually adjust policies and updated manuals to better align the power of today's technology with the District's mission. Technology has never been a more valuable asset which must be managed efficiently and economically while being positioned strategically, operationally, and tactically to propel the District. This can only be accomplished by current policies continually ensuring that they reflect the latest technical innovation that support the District's mission.



### ***The Future of Technology Governance and Policies***

The Technology Governance process will be supported in the Departments within IT, and during the life of this plan, the following will be accomplished:

- The continued Implementation and refinement of the ITIL framework of best practices.
- Continue to adjust and support of the TCC review process which ensure solid, reliable, and cost-effective technology for Curriculum and Business needs in support of student success.
- The STC will continue developing the technology direction through deeper strategic discussions, planning, and training while the TAC advances and integrates the technical communication flow with the School Board.
- Technology Policies will be reviewed and updated ensuring the District's guiding tenets, modern technology, and the Board's technology vision all align. These policies will continue the movement toward institutionalization of best practices, reduction of technology risks, maximization of technology in support of student achievement, and technology's alignment with the District's Mission, Goals, and Key Results.

### ***Project Management***

The IT Division will incorporate project management methodologies to ensure that the technology projects selected are aligned with the District planned priorities. The following evaluation process will be used to develop the blueprint of technology projects.

The District will continue to support and implement monitoring practices for the successful execution of technology initiatives. The monitoring processes will be flexible and accommodate unanticipated shifts in priorities and needs. As new needs arise and requirements change, the strategic priorities will be updated, and projects will be routed through the vetting or project selection process.

## Chapter 9 – Plan Implementation



### ***Executive Overview***

The Technology Plan for the School District of Palm Beach County outlines the priorities for the years FY14 to FY16:

- Establish technology framework for 21st Century Learning
- Bridge gaps in equity, access, and Digital Divide
- Increase infrastructure performance for schools
- Provide training for teachers and specialists in using technology to engage students and deliver curriculum
- Business process re-engineering to drive down total cost of ownership
- Align IT service delivery to support schools and business processes
- Establish centralized support processes
- Strengthen IT governance and project management standards

### ***Plan Implementation***

The FY14 to FY16 Technology Plan will provide the foundation for technology initiatives. During the next three years, the District will use the Plan to establish priorities, portfolio of projects, and budgets. Each year, a blueprint of technology initiatives will be developed.

### ***Plan Monitoring and Evaluation***

As a continuous improvement process, the Technology Plan will be reviewed annually by technology leadership to ensure that initiatives are aligned with the Plan objectives, as well as to evaluate the quality and effectiveness of the initiatives. The Plan may be adjusted and budget and priorities may also change due to legislative mandates, District programs, and technology budget. To successfully implement the priorities of increased teacher effectiveness and student achievement, the District will follow a four step process:

- Define priorities and strategic requirements
- Define blueprint of projects that are in direct alignment with District's priorities
- Continuously monitor the implementation
- Develop balanced scorecard for evaluation of quality and effectiveness



## Chapter 10 – Technology Initiatives Budget



### ***Technology Funding***

The District recognizes the value of embracing new technologies that support the 21st century learner. Newer, easily-supported enterprise systems can deliver improvements and process efficiencies, cost savings, and ease of use. However, the recent economic conditions have forced the District to have a heightened awareness of how dollars are being spent. The focus is on initiatives and programs that have a direct impact on student achievement and produce positive outcomes. During the next few years, it is expected that the technology budgets will be reduced. As a result, technology initiatives will be selected in alignment with District's priorities and available budget.

### ***E-Rate Compliance***

The District receives E-Rate funds from the Federal Communication Commission (FCC) which is administrated by the Universal Service Administrative Company for the Schools and Libraries Program. Funds are available to eligible schools and libraries for telecommunication services, Internet access, and internal connections. The program is intended to ensure that schools and libraries have access to affordable telecommunications and information services. Under the program, discounts ranging from 20% - 90% on Telecommunications Services, Internet Access, and Internal Connections are provided to eligible schools and libraries, subject to a \$2.25 billion annual cap.

For eligibility, the District must have an FLDOE approved Technology Plan, and must contain the following components:

- Goals and realistic strategy for using telecommunications and information technology
- A professional development strategy
- An assessment of telecommunication services, hardware, software, and other services needed
- Budget resources
- Ongoing evaluation process



These components have been addressed in various sections of this Technology Plan. As required for E-Rate funds, the following table is the **tentative** technology budget<sup>9</sup>.

INFRASTRUCTURE, TELECOMMUNICATIONS, HARDWARE, INSTRUCTIONAL TECHNOLOGIES			
Initiative	FY14	FY15	FY16
<b>Instructional Software Maintenance and Renewals</b>	\$2,700,000	\$2,700,000	\$2,700,000
<b>Technology Tools Project Peripheral Tools for Instructional Computers</b>	5,500,000	5,500,000	5,500,000
<b>Local Instructional Improvement Systems (LIIS) : Portal, Student Information System, Professional Development, Learning Management System</b>	500,000	800,000	7,750,000
<b>Storage Infrastructure - Electronic and disk storage</b>	1,650,000	665,000	731,500
<b>Server &amp; Backup Infrastructure</b>	751,126	603,339	2,171,000
<b>Security Infrastructure</b>	1,715,700	1,802,270	1,897,497
<b>LAN/Wireless &amp; Telephony Infrastructure for 187 schools and Admin sites</b>	1,021,000	1,500,000	1,800,000
<b>Computer Refresh – 187 schools and Admin sites</b>	5,000,000 <sup>10</sup>	7,960,000	8,686,000
<b>School technology efficiency initiatives: Bring Your Own Device (BYOD) Infrastructure</b>	420,000	2,070,000	2,070,000
<b>Microsoft Products Licensing for the District</b>	1,250,000	1,430,000	1,637,000
<b>Internet / Network &amp; Communication Circuits: For all 187 schools and Admin sites</b>	5,014,000	5,265,000	5,528,000
<b>Total</b>	\$25,521,826	\$30,295,609	\$40,470,997

<sup>9</sup> During the next few years, it is expected that the technology budgets will be reduced. As a result, technology initiatives will be selected in alignment with District's priorities and available budget.

<sup>10</sup> FY14 funds were combined with FY13 and a computer grant to purchase 25,000 PARCC computer deployment project

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May 1, 2013

School District of Palm Beach County  
Fulton-Holland Educational Services Center  
Attn: Ms. Natasha Bell-Hayden  
3300 Forest Hill Boulevard  
West Palm Beach, FL 33406


Dear Ms. Bell-Hayden:

The Florida Department of Education has completed its review of Palm Beach County's Instructional Technology Plan for the designated period of approval: July 1, 2014 to June 30, 2016. It is my pleasure to inform you that your school plan has been approved and meets the requirements for participation in the Federal E-Rate Program as understood by the Department from the Universal Service Administrative Company/ Schools and Libraries (USAC/SL). I recommend you look at the most recent guidance on technology planning at the USAC/SL website on an annual basis and update your technology plan with an addendum if necessary for each Funding Year to remain compliant with Federal E-Rate policy. If you are filing 470s for new services, an addendum to your existing approved plan must be approved. This addendum must be accompanied by a cover letter submitted by the superintendent or agency head certifying that any new services are formally incorporated in the technology plan. Please visit the above-referenced website at <http://www.usac.org/sl/applicants/step02/>

Children's Internet Protection Act (CIPA) compliance is now required in order for schools to receive E-Rate funding for Internet Access and Internal Connections as of Year 4 of the E-Rate program. However, the Department of Education cannot certify your school as being CIPA compliant; we have only approved your technology plan. Each entity is responsible for its own certification of CIPA compliance. You can find more information regarding CIPA by visiting the USAC/SL website at <http://www.usac.org/sl/applicants/step06/cipa.aspx>.

If you have questions regarding E-Rate, please contact me at (850) 245-0510 or through email at [ted.duncan@fldoe.org](mailto:ted.duncan@fldoe.org)

Sincerely,

  
Ted Duncan  
Deputy Chief Information Officer