

# Spotswood Public Schools



## District Technology Plan 2016 - 2019

NJTRAX PARCC Technology Readiness Rating: 9.0

**“Dedicated to excellence in education by inspiring and challenging our students to achieve their full potential while becoming productive citizens of the global community.”**

## District Goals & Embedded School Goals

### Goal #1

#### **Goal 1: Infrastructure**

**Maintain and improve a technology infrastructure that meets current and future connectivity needs, and prepares the district for the future demands of increased student and faculty use.**

#### **Strategies:**

- Review of all technology / data / connectivity services annually.
- Review requirements for new technology related to K-12 educational technology trends.
- Review and recommend upgrades to bandwidth based on monitoring of LAN/WAN connections.
- Upgrade Internet access for staff/student use from 300 mbps bandwidth to 1 gbps by June 2019.
- Evaluate and replace infrastructure equipment on a 5-year life cycle (i.e., firewalls, switches, fiber equipment, servers, and wireless systems).
- Upgrade all Interconnections between buildings to 10GB over the next 3 years.
- Allocate a set amount of bandwidth for each school that creates equal bandwidth to student ratio for the district.

#### **Evaluation:**

- Maintain results of New Jersey TRAX Future Readiness Report for 2016 and 2017.
- Increase results of New Jersey TRAX Future Readiness Report for 2018 and 2019 by 0.2 each year.
- Yearly reports given by Manager of Information Technology indicating progress made on 2016-2019 Technology during District Leadership meetings and annually at a Board of Education meeting in June of each year.
- Provide an annual report to the Superintendent and Business Administrator on:
  - The review of all technology / data / connectivity services annually in June of each year;
  - The requirements for new technology related to K-12 educational technology trends;
  - Recommendations on upgrades to bandwidth based on monitoring of LAN/WAN connections.
- Upgrade of Internet access for staff/student use from 300 mbps bandwidth to 1 gbps by June 2019.
- Inventory list submitted to the Business Administrator of replaced infrastructure equipment on a 5-year life cycle (i.e.; firewalls, switches, fiber equipment, servers, and wireless systems).
- Upgrade all Interconnections between buildings to 10 gbps over the by June 2019.
- Allocate a set amount of bandwidth for each school that creates equal bandwidth to student ratio for the district.

Activity/Task/Tactic	Person Responsible	Timeline	Resource	Budget Amount / Source
Review all of technology / data / connectivity services annually.	Manager of IT Business Administrator Superintendent of Schools	2016 - 2019	Provide an annual report to the Superintendent and Business Administrator.  The review of all technology / data / connectivity services annually in June of each year.  The requirements for new technology related to K-12 educational technology trends.  Recommendations on upgrades to bandwidth based on monitoring of LAN/WAN connection.	<ul style="list-style-type: none"> <li>● Local Funding <ul style="list-style-type: none"> <li>○ E-Rate</li> <li>○ Technology Budget</li> <li>○ Internet Budget</li> </ul> </li> </ul>
Review and recommend upgrades to bandwidth based on monitoring of LAN/WAN connections.	Manager of IT Business Administrator Superintendent of Schools	2016 - 2019	Based on the report given to the Superintendent of Schools, the Manager of I.T. will recommend upgrades that are needed to all LAN/WAN Connections.  Vendor/partners whitepapers/industry publications/dialogs with colleagues/peers.	<ul style="list-style-type: none"> <li>● Local Funding <ul style="list-style-type: none"> <li>○ E-Rate</li> <li>○ Technology Budget</li> </ul> </li> </ul>
Routinely review and make recommendations to district administration and the Board of Education on ways to improve/upgrade our network.	Technology Staff Manager of IT Business Administrator Superintendent of Schools	On-going including annual review with vendor/partners.	Review all network equipment on a yearly basis and recommend upgrades to the Business Administrator and Superintendent of Schools.	<ul style="list-style-type: none"> <li>● Local Funding <ul style="list-style-type: none"> <li>○ E-Rate</li> <li>○ Technology Budget</li> </ul> </li> </ul>
Upgrade WAN speed to 1gbps and allocate a set bandwidth to each school ensuring each student has the same resources available.	Manager of IT Business Administrator Superintendent of Schools	<p><u>Year 1</u>: During the 2016 - 17 SY, find the best competitive price for the upgrade in bandwidth.</p> <p><u>Year 2-3</u>: Monitor the WAN connection to ensure schools have enough bandwidth.</p>	Work with the Business Office to ensure the lowest price possible from the ISP.	<ul style="list-style-type: none"> <li>● Local Funding <ul style="list-style-type: none"> <li>○ E-Rate</li> <li>○ Internet Budget</li> </ul> </li> </ul>

<p>Maintain and train Technology Department on emergency data retrieval, off-site backups, and understand the uptime of mission critical systems.</p>	<p>Technology Department Manager of IT Business Administrator Superintendent of Schools</p>	<p><u>Year 1:</u> Evaluate and train staff in regards to off-site backups.</p> <p><u>Year 2-3:</u> After review of current system, decide if a new product is needed.</p>	<p>Training on data retrieval.</p> <p>Licensing for use of off-site backup storage.</p>	<ul style="list-style-type: none"> <li>● Local Funding</li> <li>● Technology Budget</li> </ul>
<p>Maintain and recommend upgrades that are technology related to the Security Team.</p>	<p>Technology Department Manager of IT Business Administrator SHS Vice Principal SRO Superintendent of Schools</p>	<p><u>Year 1:</u> Install new equipment and train all security personnel on the new system.</p> <p><u>Year 2-3:</u> Replace and install equipment as needed.</p>	<p>Train building personnel on camera software.</p>	<ul style="list-style-type: none"> <li>● Local Funding <ul style="list-style-type: none"> <li>○ E-Rate for cabling installations</li> </ul> </li> </ul>

## Goal #2

### **Goal 2: Curriculum and Instruction, Professional Development, and Connectivity**

**To enhance the curriculum through the embedding of educational technology into classroom instruction by providing faculty with the resources and professional development necessary to intertwine traditional instruction with digital resources and materials, and collaborate with the Spotswood community on providing connectivity outside the schools.**

#### **Strategies:**

- Design and implement a template for learning with digital content.
- Design a Software Rubric to be used by all staff to evaluate the effectiveness of educational software in respect to District curricula.
- Provide professional development for all staff on the identification, evaluation, and use of digital resources and materials in the curricula.
- Develop a list of educational technology resources per subject and grade level that can be embedded into the curricula.
- Develop a Board of Education approved model curriculum that effectively intertwines traditional instruction with digital resources and materials.
- Increased number of professional development opportunities related to the effective use of educational technology in the classroom.
- Investigate ways to provide equal access of devices and Internet for students who are economically disadvantaged.
- Develop a plan between the Spotswood Board of Education and Spotswood community on providing Internet access outside of school.
- Investigate grants to work in coordination with Spotswood Public Library for public access to the Internet for students in need.

#### **Evaluation:**

- Use of a template for learning with digital content by June 2017.
- Use of a Software Rubric, used by all staff, to evaluate the effectiveness of educational software in respect to District curricula by June 2017.
- Annual list of professional development trainings in the Spotswood PD Academy, provided for all staff, on the identification, evaluation, and use of digital resources and materials in the curricula.
- On-going list of educational technology resources per subject and grade level that can be embedded into the curricula provided to staff on the district website.
- Board of Education approved model curriculum that effectively intertwines traditional instruction with digital resources and materials by June 2018.
- Increased number of professional development opportunities related to the effective use of educational technology in the classroom by 10% over 3 years.
- A presentation will be provided to the Board of Education on a plan to provide equal access of devices and Internet for students who are economically disadvantaged by June 2019.
- At least one (1) grant submission on the ability to coordinate with the public library for opportunities for students in need economic assistance.

Activity/Task/Tactic	Person Responsible	Timeline	Resource	Budget Amount / Source
Design and implement a template for learning with digital content.	Assistant Superintendent Director of C&I Director of Special Education Manager of IT Department Chairs Superintendent of Schools	<u>Year 1:</u> Evaluate all digital tools that are used and what resources are needed in the classroom.  <u>Year 2:</u> Create a team to create a template for digital content: (i.e., videos, online curriculum, and apps).  <u>Year 3:</u> Implement template.	GAFE Plex Online Resources	<ul style="list-style-type: none"> <li>● Local Funding <ul style="list-style-type: none"> <li>○ C&amp;I Budget</li> <li>○ Technology Budget</li> </ul> </li> </ul>
Design a software rubric to be used by all staff to evaluate the effectiveness of educational software in respect to District curricula.	Assistant Superintendent Director of C&I Director of Special Education Manager of IT Department Chairs Superintendent of Schools	<u>Year 1:</u> Evaluate and inventory all software that is being used throughout the district.  <u>Year 2-3:</u> Create a rubric for staff to follow when requesting new software.	Work with the Director of C&I and use the Board approved curriculum to develop a rubric for all current and new software.	<ul style="list-style-type: none"> <li>● Local Funding <ul style="list-style-type: none"> <li>○ C&amp;I Budget</li> <li>○ Technology Budget</li> </ul> </li> </ul>
Provide professional development for all staff on the identification, evaluation, and use of digital resources and materials in the curricula.	Assistant Superintendent Director of C&I Director of Special Education Manager of IT Department Chairs Superintendent of Schools	<u>Year 1-3:</u> Continue and increase opportunities that are available through PD Academy.	PD Academy Tech Integration Videos	<ul style="list-style-type: none"> <li>● Local Funding <ul style="list-style-type: none"> <li>○ C&amp;I Budget</li> <li>○ Technology Budget</li> </ul> </li> </ul>
Develop a list of educational technology resources per subject and grade level that can be embedded into the curricula.	Assistant Superintendent Director of C&I Director of Special Education Manager of IT Department Chairs Superintendent of Schools	<u>Year 1-3:</u> On-going list of educational technology resources per subject and grade level that can be embedded into the curricula provided to staff on the district website.	District website software inventory from each building	<ul style="list-style-type: none"> <li>● Local Funding <ul style="list-style-type: none"> <li>○ C&amp;I Budget</li> </ul> </li> </ul>
Develop a Board approved model curriculum that intertwines traditional instruction with digital resources and materials.	Assistant Superintendent Director of C&I Director of Special Education Department Chairs	In 2019 after a template has been chosen, design a curriculum that is different from traditional instruction. In 2019-2020 seek Board approval of new curricula.	GAFE Genesis Online Resources	<ul style="list-style-type: none"> <li>● Local Funding <ul style="list-style-type: none"> <li>○ C&amp;I Budget</li> </ul> </li> </ul>

<p>Increased number of professional development opportunities related to the effective use of educational technology in the classroom.</p>	<p>Assistant Superintendent          Director of C&amp;I          Director of Special Education          Manager of IT          Department Chairs</p>	<p><u>Year 1-3:</u> Continue and increase opportunities that are available through PD Academy.</p>	<p>PD Academy          Tech &amp; Curriculum Informational          Video</p>	<ul style="list-style-type: none"> <li>● Local Funding             <ul style="list-style-type: none"> <li>○ C&amp;I Budget</li> <li>○ Technology Budget</li> </ul> </li> </ul>
<p>Investigate ways to provide equal access of devices and Internet for students who are economically disadvantaged.</p>	<p>Assistant Superintendent          Director of C&amp;I          Director of Special Education          Manager of IT          Department Chairs          Superintendent of Schools</p>	<p><u>Year 1:</u> Survey the community for available WiFi and useable computer access.</p> <p><u>Year 2:</u> Request Partnership with business and organizations with free WiFi or computer access.</p> <p><u>Year 3:</u> Compose a map on where students can gain access to WiFi and computer access.</p>	<p>Honeywell          Letters          Genesis</p>	<ul style="list-style-type: none"> <li>● Local Funding             <ul style="list-style-type: none"> <li>○ Technology Budget</li> </ul> </li> <li>● Federal, State, Local Grants</li> </ul>

## Goal #3

### **Goal #3: Devices and Equipment**

**Increase the number of devices and equipment within our school community to assure equitable access to educational technology for all students in our District.**

#### **Strategies:**

- Design an implementation plan that transitions from traditional table-based devices to Google Apps for Education (GAFE) enabled portable and mobile devices which:
  - Evaluates the possibility of 1 to 1 devices at Spotswood High School and Memorial Middle School during the next 3 to 5 years with the following transition:
    - 3 students to 1 device (2016 and 2017)
    - 2 students to 1 device (2018 and 2019)
    - 1 student to 1 device (2020)
  - Increases the overall number of devices at Appleby School and Schoenly School by 10% at each school by June 2019.
- Continue the 5-year device refresh program, as necessary (i.e., student devices, 21<sup>st</sup> Century Carts, and printers.)
- Continue to work with Business Office and vendors for most competitive prices.
- Investigate and implement a more centralized printing solution which reduces costs and the number of:
  - Copiers
  - Phaser printers
  - Printing supplies

#### **Evaluation:**

- Evaluate longevity of equipment from vendors and include in yearly reports given by Manager of IT at District Leadership meetings and annually at a Board of Education meeting in June of each year.
- Present to the District Leadership Team a plan that transitions from traditional table-based devices to Google Apps for Education (GAFE) enabled portable and mobile devices which:
  - Evaluates the possibility of 1-to-1 devices at Spotswood High School and Memorial Middle School during the next 3 to 5 years with the following transition:
    - 3 students to 1 device (2016 and 2017)
    - 2 students to 1 device (2018 and 2019)
    - 1 student to 1 device (2020)
  - Increases the overall number of devices at Appleby and Schoenly by 10% at each school by June 2019.
- Develop an inventory list that identifies the continuation of the 5-year device refresh program, as necessary (i.e., student devices, 21<sup>st</sup> Century Carts, and printers.)
- Include items in yearly budget proposal that indicate the continued work with Business Office and vendors for most competitive prices.
- Implement by June 2019 a more centralized printing solution which reduces costs and the number of:
  - Copiers
  - Phaser printers
  - Printing supplies



Activity/Task/Tactic	Person Responsible	Timeline	Resource	Budget Amount / Source
Design an implementation plan that transitions from traditional table-based devices to GAFE enabled portable and mobile devices which evaluates the possibility of 1-to-1 devices at Spotswood High School and Memorial Middle School during the next 3 to 5 years.	Technology Department Manager of IT Business Administrator Superintendent of Schools	<u>Year 1:</u> 3 students to 1 device. <u>Year 2:</u> 2 students to 1 device. <u>Year 3-4:</u> 1 student to 1 device.	Evaluate longevity of equipment from vendors and include a yearly report given by Manager of IT at District Leadership meetings and annually at a Board of Education meeting in June of each year.  Present to the District Leadership Team a plan that transitions from traditional table based devices to Google Apps for Education (GAFE) enabled portable and mobile devices.	<ul style="list-style-type: none"> <li>● Local Funding               <ul style="list-style-type: none"> <li>○ Technology Budget</li> </ul> </li> </ul>
Increases the overall number of devices at Appleby and Schoenly by 10% at each school by June 2019.	Manager of IT Business Administrator Superintendent of Schools	<u>Year 1:</u> Increase device count at Appleby and Schoenly by 4%. <u>Year 2:</u> Increase device count at Appleby and Schoenly by 4%. <u>Year 3:</u> Increase device count at Appleby and Schoenly by 2%.	Evaluate the yearly Inventory and replace and add devices to meet the 10% increase.  Continue to work with the Business Office and vendors to find the lowest price for devices that meet the standard of a 5-year device lifetime.	<ul style="list-style-type: none"> <li>● Local Funding               <ul style="list-style-type: none"> <li>○ Technology Budget</li> </ul> </li> </ul>
Continue the 5-year device refresh program, as necessary (i.e., staff / student devices, 21st Century Carts, and printers).	Manager of IT Business Administrator Superintendent of Schools	<u>Year 1-3:</u> Continue an inventory list that identifies the continuation of the 5-year device refresh program, as necessary (i.e., student devices, 21 <sup>st</sup> Century Carts, printers).	Evaluate longevity of equipment from vendors and include a yearly reports given by Manager of IT at District Leadership meetings and annually at a Board of Education meeting in June of each year.	<ul style="list-style-type: none"> <li>● Local Funding               <ul style="list-style-type: none"> <li>○ Technology Budget</li> </ul> </li> </ul>
Investigate and implement a more centralized printing solution which reduces costs at all schools.	Manager of IT Business Administrator Superintendent of Schools	<u>Year 1:</u> Investigate a solution that fits a need at all buildings for a print solution.  <u>Year 2:</u> Work with the Business Office to find the most competitive price for the district's needs.  <u>Year 3:</u> Implement a centralized solution.	Evaluate the cost savings with going to a centralized print solution and implement.	<ul style="list-style-type: none"> <li>● Local Funding               <ul style="list-style-type: none"> <li>○ Technology Budget</li> <li>○ Copier Budget</li> </ul> </li> </ul>