



Narragansett
SCHOOL SYSTEM

District Technology Plan
2018-2021

Mission: The Narragansett School System's Technology Plan fosters personalized and innovative learning of and through technology and systems that promote student engagement, voice and choice.

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Committee Members

Jim Bianco – Middle School Parent

Chris Herz – High school Teacher

Jacob Bromberg – Technology Department

Marianne Kirby – Middle School Principal

Emily Chartier – District Math Coach/Elementary School Parent

Jen Loiselle – Middle School Teacher

John Conroy – Middle School Parent

Giulio Lugini – Director of Technology

Mike Convery – Curriculum Director

Joan Mouradjian - Middle School Librarian

Guy DeWardener - Town Resident

Michael Robenhymer – Technology Department

Derek Emery – Assistant Director of Technology

Lauren Ruggiero – Communications Specialist

Jane Flood – Elementary School Speech Therapist

Pam Sherman – Middle School Parent

Eric Gartner - High School Teacher

Justin Skenyon – School Committee Member

Curriculum, Instruction and Assessment

Goal 1: Maintain and support personalized learning and assessment systems that support teaching and learning in the 21st century school environment.

Strategies	Action Step	Intended Outcome
1.1 Provide a learning management system (LMS) and classroom collaboration system that connects all digital learning.	Pilot, deploy and train all users on PowerSchool Learning LMS.	Implement a Unified Learning Management System (PowerSchool Learning) for grades 5 – 12.
1.2 To bridge the gap between technology and curriculum.	Hire a district technology coach.	Utilize the expertise and skills of a technology coach to expand and support personalized learning initiatives in the classroom.
1.3 Continue to support and streamline state mandated standardized assessments systems.	Work with state level assessment coordinators to deploy systems and software necessary for standardized assessments.	Provide a seamless standardized testing environment for teachers and students.
1.4 Continue to support school based assessment systems (NWEA, PSAT 8-9 College Board).	Work with school assessment coordinators to deploy systems and software necessary for standardized assessments.	Provide a seamless standardized testing environment for teachers and students.
1.5 Investigate options for a Response to Intervention (RTI) System / module that integrates into PowerSchool.	Implement and deploy RTI module in PowerSchool Student Information System.	Provide a centralized system to store and share RTI information with all staff.
1.6 Continue to support and expand the Career and Technical Education (CTE) pathway programs at NHS.	Work with CTE coordinator and teachers to assist in technology purchasing and support of CTE technology and equipment.	Provide state of the art systems and hardware that support the CTE programs .

Robust Infrastructure

Goal 2: Maintain and upgrade a robust infrastructure that supports teaching and learning in the 21st century school environment.

Strategies	Action Step	Intended Outcome
2.1 Ensure that each student has adequate access to appropriate technology and instructional resources.	Continue the 1 to 1 laptop program with refreshers when students enter 5 th , 9 th grade and every 4 years at 3 rd and 4 th grade level.	Students always have a dedicated device for instructional purposes.
2.2 Ensure that each student's device has the appropriate hardware/software to access all digital instructional resources necessary.	Review and assess 1 to 1 device choice on a yearly basis.	Choose devices that are cost effective and have all necessary requirements.
2.3 Appropriate broadband access and security to the Internet both in and out of school for students and educators.	Upgrade district firewall for better performance and security as bandwidth and device connections increase.	Enable all student and educator devices to securely connect to and easily use our network infrastructure.
2.4 Take advantage of Erate (federal funds) to upgrade applicable aging infrastructure.	Apply for Erate category 2 funding to replace aging / expiring wireless access points and firewall.	Reduce district infrastructure upgrade costs by leveraging Erate funding.
2.5 Continue to infuse interactive technologies into the classroom to enhance delivery of instruction.	As funding is available, replace aging projectors with interactive panels.	Every classroom will be equipped with an interactive panel allowing for projection, device control, whiteboard capability and interactive lessons.
2.6 Continue to expand the network to support additional devices needed by all departments in the system.	Continue with category 6 wiring in the buildings to support cameras, access points and other new devices.	New devices will be connected with category 6 wiring drops with speeds up to 10Gb/s.

Data and Privacy

Goal 3: Establish data and privacy protocols to ensure security and privacy in our network and systems.

Strategies	Action Step	Intended Outcome
3.1 Prevent a data loss that would significantly impact the functioning of the school system at the administrative and educational level.	Explore options for off-site backup, create a disaster recovery plan and test recovery plan for business continuity.	To have a secure and annually tested off-site backup of all on-site critical data, primarily the student information system and the financial systems.
3.2 Streamline the process behind deploying and managing credentials for the various systems used by administration, teachers and students.	Investigate Single Sign On (SSO) options for newly deployed and currently used systems.	Reduce the complexity of credential deployment and management while enhancing user-level security.
3.3 Streamline the process for newly enrolled staff and students. Manage accounts and device assignment with greater efficiency.	Create a standardized account package and enrollment process for incoming students.	To deploy a standardized account package procedure to increase efficiency and consistency when on-boarding new users.
3.4 Create a process for informed decision making about student learning based on analytical data.	Explore PowerSchool Unified Insights (Analytics) as a data informed decision making platform.	Expand PowerSchool to include Unified Insights (Analytics).
3.5 Ensure a secure network to limit exposure to threats and reduce the risk of potential vulnerabilities.	Explore pen (penetration) testing options to ensure proper security.	Select a penetration testing company to test our network and address potential insecure areas.
3.6 Gain more insight and control of district owned devices for better management.	Explore network transparency tools to better control / monitor current systems.	Select and deploy a cost effective MDM (mobile device manager).
3.7 Keep our staff informed and up to date on technology best practices.	District will provide informational / courses on cyber security and privacy.	Select and implement an online training tool that informs staff about security and best practices.
3.8 Enforce Ed-Fi compliance for all current school system data systems.	Create ODS connections to our local school system data systems to create interoperability.	Ability to connect to ODS for various systems.

Community Partnerships

Goal 4: The Narragansett School Technology department will utilize community resources and local partnerships to support high-quality academic opportunities. Community based interactions and local expertise will be leveraged to help expand the experiences that are offered to our students.

Strategies	Action Step	Intended Outcome
4.1 Learning opportunities will be explored both on and off school sites by leveraging corporate sponsorship.	Continue High School computer science relationship with Epic Games Inc.	Use community partnership to enhance our computer science curriculum and maintain a connection to modern industry standards
4.2 Learning opportunities will be explored both on and off school sites by leveraging relationships with higher education.	Continue High School Cisco Networking relationship with Rensselaer Polytechnic Institute.	Work with Rensselaer contacts to continue to build and update the Cisco Networking Academy.
4.3 Explore funding opportunities by leveraging local funding resources with community based organizations.	Maintain a relationship with the Narragansett Education Foundation and PTO groups.	Use the foundation and groups to enhance and support K-12 educational programs.
4.4 Learning opportunities will be explored both on and off school sites by leveraging relationships with higher education.	Continue High School computer science relationship with the University of Rhode Island.	Work with University of Rhode Island contacts to continue to build and update the computer science curriculum at NHS and NPS.
4.5 Explore professional development and purchasing opportunities by working with local technology societies.	Continue affiliation with the Rhode Island Society of Technology Educators (RISTE).	Attend RISTE events to stay current with state technology initiatives, professional learning workshops, and purchasing agreements.

Personalized Professional Learning

Goal 5: Educators will be committed to and engaged in collaborative, goal oriented approaches to evaluation and learning in order to serve as a model for students and to provide effective strategies for student learning.

Strategies	Action Step	Intended Outcome
5.1 Provide basic cyber-security training for staff.	Research micro-credential programs to provide to cyber-security training.	All staff will gain the skills necessary to avoid cyber-security pitfalls.
5.2 Continue to offer outside PD opportunities, (Masscue, etc.)	Budget for professional development days to support staff attending outside PD opportunities.	To gain higher level knowledge and training in technology related to content area.
5.3 Develop a connected coach program which pairs technology education leaders with other staff members.	Work with building administrators and technology coach to design a connected coach program.	Create a shared space to capture goals and outcomes or reflect on the learning.
5.4 Continue to offer small group training opportunities such as tech bites and tech tastings.	Designate a schedule during the academic year for educators to collaborate, connect, and demonstrate successful techniques.	Sharing of techniques and content between all educators.
5.5 Create personalized professional development by using staff input.	Create a professional development needs assessment to gather input from our staff.	Align personalized professional development content to meet our educators needs.
5.6 Technology Department will collaborate with CTE students in the high school technology pathway.	Develop a schedule for student / technology department collaboration.	Provide CTE students with real life work experience.

Budget and Resources

Goal 6: Budget to support administrative systems, instructional systems, networking, hardware, and staffing.

Strategies	Action Step	Intended Outcome
6.1 Align the District Technology Plan to other school plans and Narragansett School System goals.	Review district plans and goals to align with new 2018-2021 district technology plan.	Budget for additional technology and resources needed to support district goals and plans.
6.2 Constantly maintain and upgrade technology systems and hardware throughout the district.	Continue to support adequate funding based on the District Technology Plan through the annual budget.	Funding will be available through the budget to maintain and upgrade technology systems and hardware.
6.3 Annually review the district budget to ensure appropriate and cost-effective systems and devices are purchased for the district.	Continue to explore new hardware, software, systems and support to ensure efficiency and cost savings.	Budget for the most appropriate hardware, software and systems in a fiscally responsible and prudent manner.
6.4 Provide adequate staffing to support 1:1 environment, expanding technology and systems in the district.	Continue to budget for staffing necessary to support technology in our educational environment.	Provide a high level of technological service and support to students, educators, and parents to ensure successful use of technology in the district.
6.5 Continue to use the ERATE program to help offset and additionally fund the technology budget.	Use the ERATE subsidies to help offset the costs of district-wide Internet bandwidth and supplement other eligible technology purchases (firewall, access points) in the district.	Supplement existing budget with ERATE funding to maximize Internet bandwidth and eligible hardware .

Appendix A:

District Technology Profile

The Narragansett School District serves the communities of Narragansett and Saunderstown. The district contains four buildings connected by local fiber. One elementary school, one middle school, one high school, and a central administration building make up the four connected sites.

Narragansett is a beach town community with a commitment to the highest standard of education.

SCHOOL NAME	Enrollment 2018
Narragansett Elementary School	446
Narragansett Pier Middle School	430
Narragansett High School	428
Central Office	Total: 1304

Current Staffing Technology Department:

- Director of Technology (1)
- Technology Coordinator (1)
- Technology Specialists (2)
- Data Specialist (.6)

Appendix B:

1 to 1 Computing Profile

Appendix A: Student Device Recommendations

Devices:

Narragansett School System has made a commitment to ensure staff and students are using the most reliable state of the art technology.

Current 1:1 Devices In Use:

Faculty and Staff: MacBook Pros, Dell Chromebooks and Dell Latitude Windows 10 Laptops.

Grades PK – 2: Ipad mobile carts, MacBook Pro mobile carts and Mac Desktop stations.

Grades 3 – 4: 1 to 1 Dell Chromebooks

Grades 5-8: 1 to 1 Dell Latitude 3340 and 3380

Grades 9 – 12: 1 to 1 Dell Latitude 3350 and 3380

Total Counts of 1:1 Student Devices (2017-2018 School Year):

Dell Latitude 3380: 301

Dell Latitude 3350: 327

Dell Latitude 3340: 230

Dell Chromebooks: 166

Total 1 to 1 Student Devices: 1024

Appendix C:

Network Infrastructure

Narragansett School District's network consists of four sites connected with 24 Strand, 10GB Fiber Optics. All buildings are connected (10 Gbps) back to the data center located at the high school, which is the hub for the district.

Main distribution frames (MDF) and intermediate distribution frames (IDF) are needed in all sites. Every IDF is connected to the MDF with fiber (10 Gbps). Additionally, all classrooms and most other rooms are equipped with a wireless access point (WAP) and at least one wired Ethernet connection, providing network access in every building across the district. All buildings access the Internet through a 500 Mbps connection provided by OSHEAN.

As the hub of the district, the main data center located on the high school campus houses the bulk of the server infrastructure. To reduce the number of physical servers needed, the district uses a virtualized server environment. All systems, data storage and telephone communication is processed at this site. A battery backup unit and generator maintain almost 100% up time.

BUILDING MDF/IDF WAP

NHS: 4 Network distribution frames and 49 Aps

NPS: 3 Network distribution frames and 50 Aps

NES: 4 Network distribution frames and 50 Aps

CO: 1 Network distribution frame and 3 Aps