

Narragansett school system

District Technology Plan 2022-2025

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

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Committee Members

Jim Bianco – High School Parent	Marianne Kirby – Middle School Principal
Jacob Bromberg – Technology Department	Jen Loiselle – Middle School Teacher
Emily Chartier – Middle School Dean	Giulio Lugini – Director of Technology
John Conroy – High School Parent	Liam Manchester - High School Student
Gail Dandurand – Curriculum Director	Alex Menzies – School Committee Member
Derek Emery – Assistant Director of Technology	Vanessa Miller - District Technology Coach
Jack Fernandes – Technology Department	Joan Mouradjian - Middle School Librarian
Jane Flood – Elementary School Speech Therapist	Lauren Ruggiero – Communications Specialist
Eric Gartner - High School Teacher	Pam Sherman – High School Parent
Chris Herz – High school Teacher	Justin Skenyon – School Committee Member
Alex Hoff - High School Student	Molly Sylvia - High School Teacher

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
Year One		
1.1 Understand what students know and are able to do with the devices and software they use daily.	Conduct a K-12 survey of tech skills in NSS as compared to ISTE scope and sequence of tech skills.	Written scope and sequence of tech tools and skills introduced, reinforced and mastered at each grade level.
1.2 Utilize K-12 Tech Skills Scope and Sequence.	Identify skills gaps to be addressed at each grade level and establish targeted skills for each grade to address.	Students are prepared with the tech skills necessary to be successful at each respective grade level.
	Year Two	
1.3 Create and maintain a tech-help website for faculty, students and families.	Build off the tech coach website to and include the technology department.	Multi-pathway access to tech support for students, staff and families.
	Yearly	
1.4 Provide learning management systems (LMS) that connect all digital learning.	Support understanding of Learning Management Systems through Onboarding PD August '22 for Schoology, utilization of LMS lead teachers and continuous support of all LMS throughout the school year.	All Narragansett teachers and staff and students utilize learning management systems to their fullest capacity to support personalized learning and assessment opportunities for all.
1.5 List of current approved and unapproved tools available to teachers to support blended and personalized learning.	available throughout the district.	Teachers regularly reference the sheet for making decisions on what technology to implement into the classroom.
1.6 New students to the district are systematically onboarded to all relevant technology hardware & software.	students and with a curated checklist of steps needed to fully	Students new to the district have access to and ownership of the tools that best support them as learners at the NSS.

Robust Infrastructure

Goal 2: Maintain and upgrade a robust infrastructure that promotes an inclusive support environment for a modern teaching and learning culture.

Strategies	Action Step	Intended Outcome
	Year One	
2.1 Coordinate and install a secondary/backup internet service provider (ISP).	Search and get quotes from various ISP companies to find the most appropriate secondary ISP for the district's needs.	Have a cost effective ISP installed and maintained as a secondary/backup to our primary ISP.
2.2 Support classroom use and accessibility of 3D modeling and extrusion manufacturing technology.	Replace older proprietary 3D printers and software with current and user-friendly versions.	Teachers and students have access and support for a simplified method of designing and manufacturing 3D models.
2.3 Support the addition of outdoor learning spaces.	Install access points to provide connectivity to outdoor learning spaces.	Students are empowered to use technology while working in an outdoor classroom.
2.4 Provide representation on the building committee for projects like the NHS auditorium upgrade.	Work with the building committee to provide guidance on any technology related projects.	Ensure that the technology included in building projects align with the district technology plan.
2.5 Use athletic camera systems that meet our data privacy standards to broadcast athletic events to NSS families.	Optimize and maintain our current system of Pixellot Athletic Cameras in combination with our secondary ISP.	Deploy athletic cameras in the High School gymnasium and athletic fields to automatically record and distribute athletic event footage to families.
	Year Two	
2.6 Refresh the district website.	Work with our web design vendor to select and implement an updated design template and maintain updated content.	Present a modern and useful web presence to the NSS community and families considering enrollment.
2.7 Research and deploy a new district phone system to replace our 20 year old system that is facing end-of-life support discontinuation.	Compare products from various vendors and other school districts and deploy a system to fit our needs now and into the future.	Deploy a modern, easy to manage, scalable phone system to all administrators and classroom users and sites.
Yearly		
2.8 Ensure that each student has adequate access to appropriate technology and instructional resources.	Continue the 1-to-1 laptop/Chromebook/iPad program with new devices when students enter the 1st, 5th and 9th grades.	Students each have modern, up-to-date, dedicated devices for instructional purposes.

2.9 Ensure that all staff and administrators have adequate access to appropriate technology and instructional resources.	Continue the 4-year laptop review and replacement cycle for administrator and staff laptops.	Staff and administrators always have a dedicated device for instructional purposes.
2.10 Ensure that each student's device has the appropriate hardware and software to access all digital instructional resources necessary.	Review and assess 1-to-1 device choice on a yearly basis.	Acquisition of devices that are cost effective and have all necessary requirements.
2.11 Appropriate broadband access and security to the Internet both in and out of school for students and educators.	Continue to keep the district's firewall updated for performance and security as bandwidth and device connections increase.	Enable all student and educator devices to securely connect and easily use our network infrastructure.
2.12 Ensure all devices are running supported, up-to-date operating systems.	Decommission and replace hardware that is incompatible with Windows 11 and upgrade all other devices to Windows 11.	Ensure that devices will receive security updates and vendor support by using the latest operating system.
2.13 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 network firewall.	Reduce district infrastructure upgrade costs by leveraging Erate funding.
2.14 Continue to infuse interactive technologies into the classroom to enhance delivery of instruction.	Follow the 10 year replacement cycle developed for interactive display boards in the classroom.	Every classroom will be equipped with an interactive panel allowing for projection, device control, whiteboard capability and interactive lessons.
2.15 Continue to expand the network in order to support additional devices needed by all departments in the system.	Continue installing 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.
2.16 Protect our network against cyber threats.	Purchase penetration testing software/subscription to test the network against cyber threats on a regular basis.	Ensure that our network is safe against cyber threats.
2.17 Maintain accurate hardware inventory and repair records that help to guide future purchasing and service decisions.	Purchase and implement modern inventory and repair tracking software.	Minimize device loss and leverage repair tracking data to inform replacement part purchases.
2.18 Maintain a video security system at our buildings.	Keep our video security cameras and NVR system effective and up to date.	Ensure safety at our buildings with security cameras at all entry points.

Data and Privacy

Goal 3: Establish data and privacy protocols to ensure security and privacy in our network, systems and third-party applications used by our students and staff.

Strategies	Action Step	Intended Outcome
	Year One	
3.1 Create a district policy directing the use of monitoring systems.	Tech team members will be involved in the creation of student device monitoring / filtering policy.	Students and Guardians will have an informed understanding of our monitoring/filtering policy.
3.2 Formalized process or pathway to deploying new products within the district for teachers and administrators.	Continue to deploy new and updated hardware for district teachers and administrators.	Decisions are made holistically when purchasing new tech or tech-based curriculum.
3.3 Work with the school district's insurance provider to build on and implement safety initiatives and security measures.	Research and deploy 2 factor authentication into appropriate systems.	All systems will be secured and fortified to prevent breaches.
3.4 Complete the school district's insurance provider needs assessment based on cyber security and safety.	Students and Educators will complete and submit the questionnaire.	A documented step plan to increase cyber security and safety.
3.5 Create a comprehensive network map documenting fiber, category 5 and category 6 connections. Include all network equipment in the map, ie HP switch gear and all Access Points.	Meet with the tech team to document our organization's network.	A digital diagram of the organization's network that is filed with the director and not posted to the internet.
3.6 Work on creating a business continuity and disaster recovery plan.	Draft and file a formal business continuity and disaster recovery plan.	Provide training and testing of the plan.
	Year Two	
3.7 Research and deploy a protective Domain Name Service (DNS) system to protect the overall security of our network.		Deploy a DNS protective service covering all subnets in the district's network.
Yearly		
3.8 Effectively meet the needs of Narragansett addressed through policy, technology and/or effective practice sharing around effective privacy management.	Continue our relationship with SDPC (Student Data Privacy Consortium) to vet third-party applications.	Policy, technology and/or effective practice sharing around effective privacy management is on a continuous cycle of improvement for NSS.
officially privacy management.		improvement for 1955.

3.9 Ensure Teachers, Staff and	Schedule Staff Meetings	Teachers, Staff and
administrators are kept informed	alongside yearly training starting	administrators who understand
of Privacy and Security	at the beginning of the school	and practice safe measures
Measures (Cyber Security	year and District Professional	around technology use.
Training).	Development.	
3.10 Partner with educators,	Curriculum Investigation to	Embedded processes and
leaders, students and families to	embed digital citizenship lessons	procedures in the classroom and
foster a culture of respectful	as an extension of the library	school that support a media /
online interactions and a healthy	media curriculum, professional	digital healthy and mindful
balance in their use of technology.	development and communication	community. (i.e. Netiquette,
(ISTE 4.7.b)	with parents.	citations, etc.)
3.11 Support educators and	Curriculum Investigation to	Students and educators who
students to critically examine the	embed digital citizenship lessons	demonstrate the ability to
sources of online media and	around the issue of bias as an	evaluate the credibility, accuracy
identify underlying assumptions.	extension of the library media	and relevance of data,
(ISTE 4.7.c)	curriculum, professional	multimedia and online sources
	development.	and recognize the perspective of
		the author and purpose or bias of
		the information sources.
3.12 Empower educators, leaders	Staff meetings focused on	Educators and students will have
and students to make informed	student data privacy, embedded	a deeper understanding of their
decisions to protect their personal	as part of the library curriculum	online presence and make
data and curate the digital profile	and embedded in the CS	qualitative decisions with what
they intend to reflect. (ISTE 4.7.d)	curriculum.	they share online.

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
	Yearly	
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.
4.3Learning 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.
4.4 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.
4.5 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.
4.6 Continue involvement with and membership in local technology associations.	SDPC (Student Data Privacy Consortium), RISTE (Rhode Island Society of Technology Educators), CSTA-RI (Computer Science Teachers Association of Rhode Island), URI (University of Rhode Island), CS4RI (Computer Science for Rhode Island).	Members of our team stay informed and up-to-date on local technology information and trends.

4.7 Continue involvement with	ISTE (International Society for	Members of our team stay
and membership in national	Technology in Education),	informed and up-to-date on
technology associations.	MS-ISAC (Multi-State	local technology information
	Information Sharing and	and trends.
	Analysis Center), K12Six (K12	
	Security Information	
	Exchange).	

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. Teachers will be trained to use the tools and resources integrated within the district and within the curriculum. Targeted professional development will be tied to their individual needs and the goals of the district so that teachers are prepared to implement and manage a blended learning environment to personalize learning for students.

Strategies	Action Step	Intended Outcome
	Year One	
5.1 Model the use of instructional design principles with educators to create effective digital learning environments. (ISTE 4.4d)	Support understanding of Learning Management Systems through Onboarding PD August '22 for Schoology, utilization of LMS lead teachers and continuous support of all LMS throughout the school year.	All Narragansett teachers and staff and students utilize learning management systems to their fullest capacity to support personalized learning and assessment opportunities for all.
	Year Two	
	Targeted Coaching cycles will help educators use digital tools to create effective assessments that provide timely feedback and support personalized learning. (ISTE 4.4b) PD on Student Agency, Data	improvement around blended and
4.6.c).		
	Yearly	
5.4 Professional Development focused on blended and personalized learning Strategies and tools.	Opportunities offered at BOY PD, Choice PD Sessions, Staff Meetings, District PD Days, PD Choice Board.	A common understanding of blended and personalized learning that leads to classroom practices that develop student engagement, identity, voice, and choice.
5.5 Curriculum Academy offers opportunity for teachers to dive deeper into Personalized Learning concepts, strategies and tools.	Blended Learning Curriculum Academy offered each year.	Written curriculum incorporating Blended and Personalized Learning strategies.

		· ·
5.6 Recognize educators across		Empowered Educators and a
the organization who use	and curriculum newsletters.	community of learners.
technology effectively to enable		
high-impact teaching and learning.		
(ISTE 4.1.d)		
5.7 Continually make	Evaluating Impact of	A personalized professional
improvements in order to meet the		development program that meets
schoolwide vision for using	T =	educators where they are and guides
technology for high-impact	PD sessions and their needs for future PD.	them towards district goals.
teaching and learning. (ISTE 4.5.c)	for future FD.	
5.8 Inspire and encourage	Support tech help desk	Worked-based learning hours for the
educators and students to use	powered by students at	students, hands-on experience for
technology for civic engagement	Narragansett High School.	students and additional support
and to address challenges to		provided to the technology
improve their communities. (ISTE	for uses of tech for civic	department for the benefit of all students and staff at NHS.
4.7a)	engagement.	students and staff at NHS.
5.9 Build the capacity of educators,	Tech Coach enrolled in ISTE	PD aligned to ISTE standards and
leaders and instructional teams to		an increased awareness of ISTE
put the ISTE Standards into	1 0	standards throughout the district.
practice by facilitating active		
learning and providing meaningful		
feedback. (ISTE 4.5.b)		
5.10 Partner with educators to	Survey teachers at the end of	PD focused on the efficacy of apps
evaluate the efficacy of digital	•	used so educators have the tools to
learning content and tools to	used and in what capacity	choose tools that best enhance
inform procurement decisions and	Coaching and PD offered	learning.
adoption. (ISTE 4.3.c)	focused on the efficacy of	_
(== ==)	digital learning tools.	
	Discussions of apps/software	
# 11 A solve a land	used at VAT team meetings.	E
		Formative assessment used daily in
in securely collecting and		the classroom and data analyzed to inform instruction.
analyzing student data. (ISTE	Instructional coaching support	mnorm msu ucuon.
4.6.a)	of data analyzation.	
5.12 Support educators to interpret	· ·	Data is an embedded and valued
qualitative and quantitative data to		component of teaching and learning.
inform their decisions and support		Personalized learning practices are
individual student learning (ISTE		frequently employed and based on
4.6.b).		data (for ex. Station Rotation).

Budget and Resources

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

Strategies	Action Step	Intended Outcome
Year Three		
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 2024-2025 district technology plan.	Budget for additional technology and resources needed to support district goals and plans.
	Yearly	
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.6.4 Provide adequate staffing to	Continue to explore new hardware, software, systems and support to ensure efficiency and cost savings. Continue to budget for staffing	Budget for the most appropriate hardware, software and systems in a fiscally responsible and prudent manner. Provide a high level of
support a 1:1 environment, expanding technology and systems in the district.	necessary to support technology in our educational environment.	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.
6.6 Continue monitoring teacher use of software as compared to cost.	Complete a cost analysis of teacher used software to determine the best distribution of funds.	Teachers use the best software available for the most reasonable cost.
6.7 Consolidating and streamlining existing systems and tools (applications).	Evaluate which applications and systems educators are using and consolidate them into a more streamlined and nuanced paradigm.	Educators will be using the best available teaching tools without unnecessary overlap of technology.
	Continue acquisition and rotation cycle of student and teacher laptops.	Budget accordingly for the continued purchase and rotation of student and teacher laptops.

Digital Equity

Goal 7: Ensure all student have access to and ownership of the tools that best support them as learners, help students develop the skills and competencies they require in order to best take advantage of these digital resources, and communicate the value of using these tools to engage with learning experiences that are targeted, authentic, relevant, socially connected, and growth-oriented.

Strategies	Action Step	Intended Outcome
	Year One	
7.1 Establish a Digital Equity Sub-Committee.	Recruit students, teachers, school and academic leaders, parents and community members.	A committed group of individuals will bring to the table a diversity of perspectives, ideas, and experiences pertaining to digital equity.
7.2 A shared understanding of digital equity.	Committee will examine foundations of digital equity and the digital equity guide.	Create an operational definition of digital equity for Narragansett.
7.3 Examine existing practices, resources, and needs in Narragansett.	Begin a digital equity audit utilizing TLA's <u>Digital Equity Audit</u> - <u>Self-Assessment Tool</u> and <u>Digital</u> <u>Equity Audit: Companion Workbook</u> .	Foster productive dialogue within leadership teams to clarify a vision and strategy, articulate needs, and identify areas for improvement.
7.4 Vision Statement	Draft a vision for digital equity that is grounded in the student experience.	Create a concrete vision for teaching and learning with technology so that educators, students, and broader community members understand the greater purpose behind digital equity efforts.
	Year Two	
7.5 A shared understanding of digital equity.	Communicate to the teachers, parents, students and community plan for digital equity.	Increase awareness of and commitment to Digital Equity as a district.
7.6 Provide every student with high quality learning experiences through technology.	Investigate considerations to support digital equity in the classroom to build critical competencies for the digital world.	Focus on the areas that are identified.
7.7 Create a plan for staff professional development around digital equity.	Specific PD days planned. Establish coaching cycles to support digital equity efforts in the classroom.	Create a curriculum that is targeted and relevant, offering experiences that are actively engaging, socially connected and growth-oriented.
7.8 Implement a shift in teacher practice.	Coaching cycles focused on equitable use of digital learning tools.	Teachers will facilitate equitable use of digital learning tools and content that meet the needs of each learner. (ISTE 4.1b)

7.9 Create a culture of Digital	Engage leadership and the greater	A diverse committee of stakeholders	
Equity.	community with digital equity	will meet regularly to support digital	
	efforts.	equity efforts in Narragansett.	
7.10 Leadership will support	Onboard any new leadership.	Create a common understanding of	
digital equity efforts.		digital equity throughout the district.	
Year Three			
7.11 Examine existing practices,	Revisit Audit <u>Digital Equity Audit</u> -	Systemic changes will be acknowledged	
resources, and needs in	Self-Assessment Tool and Digital	and new focus areas identified.	
Narragansett.	Equity Audit: Companion Workbook.		
7.12 Create a plan for staff	Specific PD days planned, coaching	Create a curriculum that is targeted and	
professional development around	cycles established to support digital	relevant, offering experiences that are	
digital equity.	equity efforts in the classroom.	actively engaging, socially connected	
		and growth-oriented.	
7.13 Implement a shift in teacher		Teachers will facilitate equitable use of	
practice.	equitable use of digital learning	digital learning tools and content that	
	tools.	meet the needs of each learner. (ISTE	
		4.1b)	
, 11	Establish a culture of continuous	Technology policies will be developed	
and practices to sustain digital	improvement of digital equity,	with digital equity in mind,	
equity.	enabling systems and structures that	multiple-access tech support, learning	
	remove barriers to digital equity and	materials and tools for teachers and	
	maintain essential, aligned supports	students that are universally accessible as	
	for teachers.	well as culturally responsive.	
7.15 Explore resources to take	Expand our toolbox of strategies	Create resources and support for teachers	
digital equity forward in	around digital equity through	and staff.	
Narragansett.	research from various sources.		
7.16 Digital Equity will be part of	Report out to the equity committee	Digital Equity will be written into the	
the greater equity efforts in the	to bridge the gap.	equity mission statement for the district.	
district.			
7.17 Digital Equity is never done.	Investigate practices on handling	Update or revise practices to support	
•	change management processes that	continual change.	
	cycle.		

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 2021-22	Total Users 2021-22
Narragansett Elementary School	383	468
Narragansett Pier Middle School	315	388
Narragansett High School	492	577
Central Office and Transportation		51
	Total: 1,190	Total: 1,484

Current Staffing Technology Department:

- Director of Technology (1)
- Technology Coordinator (1)
- Technology Specialists (2)
- Data Specialist (.75)
- Technology Integration Coach (1)

Appendix B:

1 to 1 Computing Profile

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: Dell Latitude Windows 10 Laptops

Grade PK: Ipads (6 per Classroom)

Grade K: 1 to 1 Ipads

Grades 1 – 4: 1 to 1 Dell Chromebooks

Grades 5-8: 1 to 1 Dell Latitude 3310, 3340 and 3380 Grades 9 – 12: 1 to 1 Dell Latitude 3300, 3310 and 3380

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: 5 Network distribution frames and 49 Aps NPS: 3 Network distribution frames and 51 Aps NES: 4 Network distribution frames and 46 Aps CO: 1 Network distribution frame and 3 Aps