



LOWER HUDSON REGIONAL INFORMATION CENTER



2023-2028

LOWER HUDSON REGIONAL INFORMATION CENTER  
**REGIONAL TECHNOLOGY PLAN**

793 Plan



SOUTHERN WESTCHESTER  
BOCES



PUTNAM/NORTHERN  
WESTCHESTER BOCES



ROCKLAND BOCES



“Technology will never replace great teachers, but technology in the hands of great teachers is transformational.”

—George Couros, Author/Educator

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## SECTION ONE | REGIONAL TECHNOLOGY PLANNING PROCESSES

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The Lower Hudson Regional Information Center (LHRIC) is committed to seeking input from constituents to guide the development of the regional plan and services. To improve services and deepen school consortium partnerships, the LHRIC organized an Advisory Committee. The LHRIC Advisory Committee represents diverse roles and responsibilities; comprising approximately 30 volunteers across each BOCES region with roles including BOCES superintendents, school district superintendents, assistant superintendents for business, assistant superintendents for instruction, directors of technology and the three BOCES curriculum managers/directors. The LHRIC Advisory Committee meets four times per year to assist with future planning. The committee charters representatives to act on behalf of their region's districts and provide input on the direction of the LHRIC and the many critical consortium issues that arise. Representatives from the Yonkers Schools as well as our non-component school district, Mamaroneck Schools, are invited when we develop the 793 plan.

This year, the Advisory Committee met two additional times to work on the 793 Plan. State priorities, regional challenges and priorities, and local district instructional technology plan goals were the foundation for the goals of this Regional Technology Plan.

As an advisory, we first identified the needs and challenges of our region with a review of the district instructional technology plans. We prioritized those needs on a regional level in order to establish direction for the regional plan. We then developed goals and objectives that align with the state priorities and regional priorities. After developing the measures that will be used to evaluate this plan, we will be prepared to implement it in the 2023-24 school year, continuing to monitor and refine it as we evaluate its outcomes and revise the plan moving forward.

Incorporating the feedback from additional groups is also an important part of the planning process. The LHRIC participates in a variety of statewide planning groups such as: Data Warehouse group, Finance Manager group, Test Scoring group, the RIC Directors Technical Committee, Statewide RIC Data Structure/Report Committee, Model Schools, RIC One Data Privacy and Security Team meetings, and the Cyber Intelligence Task Force, etc. Our partnership with Rockland, Putnam | Northern Westchester and Southern Westchester BOCES offers continued opportunities for collaboration and feedback. Participation in these groups allows us to have a broader view of the innovations and directions that others are pursuing around the state.

We also elicit feedback through periodic service surveys, district conversations with Account Managers, and feedback from the Technology Leadership Institute and other regional K-12 technology conferences.

## SECTION TWO | CURRENT CONTEXT

### Mission Statement:

Lower Hudson Regional Information Center

The mission of the LHRIC is to provide K-12 Leadership with our partner districts to achieve their educational technology goals.

Scope	Current Environment - opportunities and challenges	Regional Priorities and Needs
Technology Leadership	<ul style="list-style-type: none"> <li>Expanding information technology ecosystem</li> <li>Maintaining 1-to-1 environments</li> <li>Inflation, supply chain, and other influencers</li> <li>Increasing equitable access</li> </ul>	Enabling and Maintaining Reliable Technology
Instructional Leadership	<ul style="list-style-type: none"> <li>Increased use of online learning</li> <li>Increased use of instructional technology</li> <li>New NYSED learning standards</li> </ul>	Enhanced Teaching and Learning, Computer Science & Digital Fluency Standards Support
Data leadership	<ul style="list-style-type: none"> <li>Evolving data reporting requirements</li> <li>ESSA (pandemic impact)</li> <li>Increased use of and interest in dashboards</li> <li>New applications/enhancement of existing solutions</li> </ul>	Data-Informed Educators and Staff, Enhanced Data Analytics
Data privacy and security	<ul style="list-style-type: none"> <li>Cybersecurity threats</li> <li>Education Law 2-d compliance</li> <li>NIST CSF compliance</li> <li>Insurance providers' requirements</li> <li>Vendor partner management</li> </ul>	Protected Technology, Protected Data



## SECTION THREE | 5-YEAR REGIONAL TECHNOLOGY PLAN

Scope	Goals	Two-year Performance Objectives	Metrics
Technology Leadership	<ul style="list-style-type: none"> <li>• Modernize the technology ecosystem to support instructional and administrative needs</li> <li>• Aligned NYSED priorities: State Priority 1: improving digital equity, including increasing student and teacher access to devices and broadband internet, both in school buildings and in place(s) of residence</li> <li>• Aligned regional priorities: enabling and maintaining reliable technology</li> </ul>	<ul style="list-style-type: none"> <li>• Provide an infrastructure that supports equitable access for all</li> <li>• Assist with management and planning for 1-to-1, expanded technology</li> </ul>	<ul style="list-style-type: none"> <li>• Service participation</li> <li>• Bandwidth availability</li> <li>• Bandwidth performance</li> <li>• Upgrades</li> <li>• Installment Purchase Agreement (IPA) metrics</li> <li>• Cost and value analysis</li> <li>• New purchases</li> </ul>

## SECTION 3 | 5-YEAR REGIONAL TECHNOLOGY PLAN

Scope	Goals	Two-year Performance Objectives	Metrics
Instructional Leadership	<ul style="list-style-type: none"> <li>Support effective use of learning technology to support instructional needs</li> <li>Aligned NYSED priorities: State Priority 2: increasing access to technology-enhanced, culturally- and linguistically-responsive, differentiated, and personalized learning environments to support improved teaching and learning for all students, including students with disabilities and English language learners (ELLs)</li> <li>Aligned NYSED priorities: State Priority 3: increasing equitable access to high-quality instruction, courses, and multi-modal learning experiences through digital technology, including but not limited to advanced courses, for all districts, including small, rural, and/or high-needs districts</li> <li>Aligned NYSED priorities: State Priority 4: providing access to relevant and rigorous professional development to ensure educators and leaders are proficient in technology for both instructional and administrative purposes</li> <li>Aligned regional priorities: enhanced teaching and learning, computer science &amp; digital fluency standards support</li> </ul>	<ul style="list-style-type: none"> <li>Assist districts in providing flexible learning environments that encourage choice and differentiation for all students</li> <li>Develop thoughtful learning targets that address NYS Computer Science and Digital Fluency Standards</li> <li>Expand thoughtful learning opportunities in all areas of instructional technology that supports the adult learner</li> <li>Assist districts in increasing equitable access to high-quality digital resources and standards-based, technology-rich learning experiences</li> </ul>	<ul style="list-style-type: none"> <li>District participation in course creation</li> <li>Course participation</li> <li>Course alignment to priorities, materials produced</li> </ul>

Scope	Goals	Two-year Performance Objectives	Metrics
Data Leadership	<ul style="list-style-type: none"> <li>• Modernize the data ecosystem to support instructional and administrative needs</li> <li>• Align NYSED priorities: State Priority 5: utilizing, maintaining, and continuing to enhance a robust data environment, including but not limited to the multiple data collection points within the student information repository system (SIRS) and all data applications within the New York State business application portal, to positively impact instruction and decision-making</li> <li>• Align regional priorities: data-informed educators and staff, enhanced data analytics</li> </ul>	<ul style="list-style-type: none"> <li>• Support districts in centralizing district, school, classroom and student data so instructional decisions are driven by data</li> <li>• Provide vehicles to analyze data to inform, personalize, and guide instruction — ensuring the data analysis leads to impactful practices in the teaching and learning environment</li> </ul>	<ul style="list-style-type: none"> <li>• District participation in service that supports data analysis</li> <li>• Course offerings and participation</li> <li>• Data integrations</li> </ul>



## SECTION 3 | 5-YEAR REGIONAL TECHNOLOGY PLAN

Scope	Goals	Two-year Performance Objectives	Metrics
Data Privacy and Security	<ul style="list-style-type: none"> <li>• Maintain a robust privacy and security posture to support the protection of data and the reliability of the ecosystem</li> <li>• Align NYSED priorities: State Priority 6: implementing and maintaining data privacy and security controls ensuring compliance with all applicable privacy laws and regulations including, but not limited to, New York State Education Law 2-d and the NIST Cybersecurity Framework (CSF)</li> <li>• Align regional priorities: protected technology, protected data</li> </ul>	<ul style="list-style-type: none"> <li>• Educate the community on appropriate use of technology</li> <li>• Provide infrastructures that complement the NIST CSF and promote a safe learning environment.</li> <li>• Protect and prepare against malicious cybersecurity actions</li> <li>• Help districts navigate compliance and implement best practices</li> </ul>	<ul style="list-style-type: none"> <li>• Course offerings and participation</li> <li>• Cybersecurity offerings</li> <li>• DPSS participation</li> <li>• DPSS materials</li> </ul>

## SECTION FOUR | PLAN VALUE

### VALUE OF SHARED SERVICES AND THE RELATED REGIONAL COLLABORATIVE PLAN

Shared services and related regional collaborative planning processes increase the buying power of districts and support educational agencies in enhancing local capacity by facilitating access to specialized and trusted technology and data experts. In addition to leveraging economies of scale, new technology services require a formal process to evaluate costs. Cost-effectiveness involves more than determining cost, it also involves assignment of a value to districts.

Cost-effectiveness analysis is used to routinely review the cost and effectiveness of services offered through the LHRIC. The goal of cost-effectiveness analysis is to determine that the services being provided are justified in their costs to districts.

The LHRIC's standard method of cost-effectiveness analysis includes the following processes:

- Monthly profit/loss statement review of service expenses and associated revenue to ensure fiscal responsibility of operational activities
- A process through which services that are not financially viable are raised to the attention of leadership for action.
- Routine review of service satisfaction from districts
- Input from districts on new services to be developed or enhancements to existing services through 793 planning.
  - A budget development process through which district input is reflected in the proposed budget
  - Proposed expenses are compared against current and proposed district contract revenue to ensure coverage of expenses, utilizing a zero-based budget approach

The proposed budget requires voting by component school district and SBWOCES board adoption. Budgets are proposed to the SWBOCES Board and voted by component districts.

Planning is critical to ensuring regions have access to shared services aligned with current needs. Through collaborative planning processes, existing services are modernized and new services are developed. As the education sector generally has limited access to resources, planning supports essential prioritization of work and responsive allocation of regional resources. This planning supports continuous service improvement and effective provision of services. On page 5, information is available about current needs and priorities. On pages 6–9, the regional direction is defined in the form of a 5-year plan.

## SECTION FIVE | REVIEW OF PREVIOUS PLANS

### STATE TECHNOLOGY LEADERSHIP

- Work in conjunction with members of the State Education Department to enhance state, regional and local technology plans, and related processes
- Lead technology plan reviewers, evaluators and NYSED point of contact for 62+ districts in our region.
- Successfully completed reviews for all districts by NYSED's deadline and informed NYSED of any outliers who had edits to correct
- Worked with an outside consultant early in the process to provide district support in completing their technology plans
- Provided assistance to the Smart Schools Review Board and New York State school districts, as the state continues to implement the Smart Schools Bond Act
- Continue to partner with NYSED (New York State Education Department) to provide districts with support related to computer-based testing initiatives
- Provide data, as requested, to NYSED and other partners, to inform state and national broadband initiatives (Student Digital Resource Data) and programs
- Maintain partnerships with NYSCATE, ISTE, CoSN and other technology leadership organizations
- LHRIC Model Schools employees are active members of NYSCATE with some serving as board members.
- Utilized NYSCATE consultants as professional developers to support regional work
- Staff completed ISTE certification and offered regional certification classes
- We supported regional CoSN CETL certification for member districts
- Introduced over 40 NYSCATE online courses (sponsored by NYSED grant) to region's portfolio of professional learning opportunities
- Continue to work collaboratively on bids, RFPs and contracts that address statewide needs and leverage economies of scale

### STATE DATA LEADERSHIP

- Continued to work with NYSED and the other RICs and Big Five to promote and assist with Computer-Based Testing
- Continued to attend the weekly CBT Working Group meetings
- Continued to work with NYSED, RICs and Level 2 on the Data Flow project to improve the processing and movement of the data to Level 2
- Monitored, enhanced and expanded the RICs' Common Data Views Initiative
- Worked in conjunction with Assessment vendor, NYSED and the RICs to make necessary modifications to existing New York State assessment processes and support services (including, but not limited to, answer sheet development, data warehouse, scanning and scoring and instructional reports)
- Developed strategic plans to improve data analysis reports and dashboards
- Continued the work with NYSED, the Big Five and the other RICs on the State Data Ecosystem
- Developed strategic plans to increase the number of stakeholders with electronic access to RIC-developed instructional reports
- Worked in conjunction with NYSED to provide educators with timely access to student reports
- Continued to assist NYSED in communicating valuable information related to New York State data, assessment, and accountability initiatives
- Monitored, expanded and refined the data integration and security initiatives
- Worked in conjunction with the LHRIC Data Privacy Service and the New York State Chief Privacy Officer to provide leadership related to Education Law 2-d
- Continued to update and provide resources to all districts in New York State regardless of service membership. We also provided enhancements to the RIC One Data Privacy and Security Service tools such as the Professional Development Modules, Inventory Tool and NIST Cybersecurity Framework Assessment tool

- In conjunction with the other RIC's the RIC One Statewide Team, with LHRIC leading the way, conducted the first Statewide Data Protection Officer User Group. Over 200 districts from across the state assembled to learn about how they can protect the data and systems in their region. The Chief Privacy Officer for NYSED was the keynote speaker at the User Group
- Developed strategic plans to increase the number of districts across the state with access to the tools developed by the RIC One DPSS team
- Expanded the reach of the DPO User Group to all districts DPO's in New York State regardless of participation in the RIC One DPSS Base Service

## DATA QUALITY AND SECURITY

- Increased the reports necessary to include new state reporting requirements and other data as defined by NYSED for accountability
- Continued to reduce the risk of State Reporting errors, as well as the time and labor constraints faced by our Districts when complying with State Reporting
- Researched new applications of Rules Validation Engine technology to serve our Districts
- Continued to concentrate on increasing the quality of the data in our Data Warehouse and in the source Student Information Systems (SIS)
- Continued to author new State Reporting Rules and SIS Prescriptions as promulgated by the State
- Continued to use systems (including Elevate Data Quality; formerly CERTIFY) to give Districts early warning of State Reporting errors
- Continued to work with the student information systems to develop early reports, so districts have time to correct the data in their SIS
- Worked with the other RICs to enhance the RIC One DPSS as the regulations around Ed Law 2d were implemented
- Provided workshops and user groups on a monthly basis. We provided just-in-time responses to district data privacy and cybersecurity questions; we are the liaison with NYSED's Privacy Office
- The RIC One DPS Service NIST CSF tool was a focus of the work with the districts in the LHRIC's region for the 2021–2022 school year

- Continued to meet with the RIC One Statewide team virtually each week and face to face annually
- Represented on NYSED's newly formed Data Privacy Advisory Council. This group met on a quarterly basis throughout the year
- Worked with data services team regarding the potential for using RIC One API for Computer Based Testing account provisioning
- RIC One API was deemed end of life as of June 30, 2022. Rising costs made the funding model unsustainable
- Continued to represent our Districts in NYSED's redesign of the State Reporting Data Collection System. We continued to participate in several state-wide RIC and NYSED groups to develop data quality standards across the state
- Continued to enable Districts to efficiently comply with the State requirement to use State Test scores in their Progress Reports and Report Cards by automating the integration of eScholar/Level 1 Data Warehouse

## DATA SERVICES AND DATA ANALYSIS FOR DECISION MAKING

- Supported benchmark assessments (such as STAR, MAP, iReady, AimswebPlus) that identify skills students “are ready to learn”
- Once skills are identified, software resources were recommended from an expansive software portfolio vetted by educational professionals and compliant for Data Privacy and Security. Resources were shared with educators to be used immediately for independent or small group instruction
- Evaluated methods to provide data to district administrators and to teachers in simple, visual screens so they can understand the data and act immediately
- Explored methods in Cognos analytics to provide plain language search
- Explored methods for Predictive Analysis to identify students at risk — using tools such as Cognos Analytics and Microsoft Power BI
- Supported districts in Computer-Based Testing for both NYSAA (New York State Alternate Assessment) and ELA (English Language Arts), Science, NYSESLAT, and Math
- Continued to work with building inquiry teams to design reports that will benefit student learning (ESSA)

- Continued to meet both formally and informally with our districts to enable us to design better, simpler, and more dynamic reports
- Continued to improve Data Integration Services to assist districts in moving student data to and from Student Management Systems and other associated databases
- Data Analysis professional development was continued to help teachers understand data about their students so they can help them improve their skills
- Continued to provide a CIO Support Service for Districts.
- Worked with RIC, NYSED, and Big Five teams to review best practices and the necessary reports for verification of newly required data elements. We will continue to share common reports across the state that will allow our districts to improve student performance
- Worked with other RICs and NYSED in collecting data from Interim Assessments from Districts
- Helped districts provide formative and summative assessments as needed and to collect the data for analysis to provide quality assistance and improve student learning. Explored the possibility of creating computer-based formative and summative assessments in our Level 1 Data Warehouse
- Provided a “Dashboard” that is personalized for Teachers and Administrators to quickly gain insight into the performance and needs of their students
- Continued to enhance our own security and privacy procedures to continue compliance with SOC-2 certification and new State legislation
- Continued to work with districts to assess their NIST Cybersecurity Framework profile, which will provide data for decision making regarding cybersecurity measures
- Continued to support districts in gathering data on third-party contracts to facilitate decision making on software that has access to data protected under Education Law 2-d

### MANAGED TECHNOLOGY SUPPORT SERVICES

- Continued to expand participation in our Managed IT Support Service as well as other Technology Support Services. Brought on three new districts and project another two districts moving into the service
- Continued to focus on identifying how to continue to secure our district networks through existing and new services
- Began the process of enabling MFA for districts and building an infrastructure that will assist with IDAM and integrate the use of MFA for critical applications
- Partnered with SOC vendor to provide SOC services to the LHRIC network and have invested in firewall and IPS\IDS devices to provide internal security for the LHRIC data center and districts on our private WAN
- Continued to upgrade our network and our private WAN that we share with all of our districts to a 100GB core infrastructure
- Upgraded our Internet connections to 100GB handoffs

### COMPUTER BASED TESTING

- Assisted school districts with evaluating current technologies and making recommendations for improvements to meet CBT requirements

## MODEL SCHOOLS

- Delivered extensive learning opportunities in literacy, math, science, technology
- Expanded our professional development portfolio to reflect Spark videos – just in time learning; online courses and webinars – focused on blended instruction and provided an opportunity for educators to learn at their own pace with a dedicated coach for support
- Due to the extensive use of web tools for professional learning across the region, Model Schools’ professional developers continued to support “just in time” coaching for district leaders and teachers
- Continued to support Active Learning Environments through Model Schools consulting, PLC cohort Teaching First, Technology Second, and through our Technology Leadership Institute
- Continued collaboration with statewide Model Schools, Software as Service and Distance Learning consortiums
- Participated in Statewide collaboration and exploration of eSports
- Collaborated on the NYS K-12 Computer Science and Digital Fluency Standards
- Reorganized staffing to focus work more closely on data and assessment
- Worked collaboratively with districts in designing data dashboards that pull data from multiple sources in an effort to improve learning environments for all students
- Data demonstrated a need for just-in time, blended, virtual and face-to-face professional development. Developed programs and offerings with this in mind
- PD Your Way was reintroduced to the department as a model for all professional services moving forward
- Dedicated internal professional development time was allotted to design blended content for region



## APPENDIX A | REGULATORY REQUIREMENTS SUMMARY

All plans must include Appendix A, which identifies the pages of the plan that addressed the required regulatory elements. Please indicate the page number(s) where the Regional Technology Plan addresses the following required elements:

REQUIRED ELEMENT	PAGE(S)
1. A description of the regional collaborative planning process.	4
2. A description of how the regional technology plan supports efficient and effective provision of technology services, which includes a description of major challenges to be addressed by the plan;	5, 10
3. A description of how the regional technology plan addresses the technology and data priorities and needs of the state, and how such plan will increase school district access to technology and assist school districts in developing and maintaining robust information privacy, information security, and cybersecurity controls;	6–9
<ul style="list-style-type: none"> <li>State Priority 1: Improving digital equity, including increasing student and teacher access to devices and broadband internet both in school buildings and in place(s) of residence;</li> </ul>	6
<ul style="list-style-type: none"> <li>State Priority 2: Increasing access to technology-enhanced, culturally- and linguistically-responsive, differentiated, and personalized learning environments to support improved teaching and learning for all students, including students with disabilities and English language learners (ELLs);</li> </ul>	7
<ul style="list-style-type: none"> <li>State Priority 3: Increasing equitable access to high-quality instruction, courses, and multi-modal learning experiences through digital technology, including but not limited to advanced courses, for all districts, including small, rural, and/or high-needs districts;</li> </ul>	7
<ul style="list-style-type: none"> <li>State Priority 4: Providing access to relevant and rigorous professional development to ensure educators and leaders are proficient in technology for both instructional and administrative purposes;</li> </ul>	7
<ul style="list-style-type: none"> <li>State Priority 5: Utilize, maintain, and continue to enhance a robust data environment, including but not limited to the multiple data collection points within the Student Information Repository System (SIRS) and all data applications within the New York State Business Application Portal, to positively impact instruction and decision-making;</li> </ul>	8
<ul style="list-style-type: none"> <li>State Priority 6: Implementing and maintaining data privacy and security controls ensuring compliance with all applicable privacy laws and regulations including, but not limited to, New York State Education Law 2-d.</li> </ul>	9
4. A list of regional priorities and needs that the regional technology plan will address;	5
5. A description of the methods used to identify and prioritize needs in the region, which shall include engagement with key stakeholder groups;	4
6. A list of quantifiable goals and a description of how the goals will directly address the regional technology needs and improve service delivery over the next five years;	6–9
7. Performance objectives for the first two years of the plan;	6–9
8. A description of the procedures that will be put in place to monitor the plan's implementation;	6–9
9. An evaluation of the performance objectives for the previous two years	11–14
10. Appendix A	15
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**APPENDIX B | COOPERATIVE PLANNING ASSURANCES**

The BOCES District Superintendents within the service delivery area are responsible for approving the regional planning process and certifying the assurances outlined below.

**DISTRICT SUPERINTENDENTS' SIGNATURES**

I approve the regional collaborative planning process used to develop and maintain our regional technology plan.

I assure that my BOCES participated fully in the development of this regional plan.

I assure that users, as defined in guidance, were substantively involved in the development of this plan.

I assure that all technology services offered by my BOCES and the Regional Information Center are cost-effective.

  
District Superintendent Signature  
District Superintendent Name

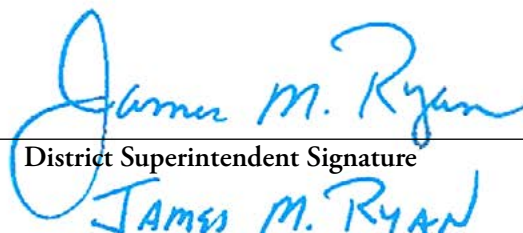
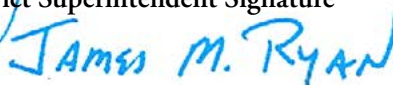
Date

BOCES

  
District Superintendent Signature  
District Superintendent Name

Date

BOCES

  
District Superintendent Signature  
District Superintendent Name

Date

BOCES

## APPENDIX C | INSTRUCTIONAL AND ADMINISTRATIVE SOFTWARE AND APPLICATIONS

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This information is provided under separate cover using the NYSED provided spreadsheet template.



LOWER HUDSON  
REGIONAL INFORMATION CENTER



SOUTHERN WESTCHESTER  
BOCES



PUTNAM/NORTHERN  
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ROCKLAND BOCES



“Technology can become the “wings” that will allow the educational world to fly farther and faster than ever before — if we allow it.”

—Jenny Arledge, Educator



