Final Report

Southeast Technology Network

Participating Communities/School Districts and Collaborative:

Abington Public Schools
North River Collaborative
Avon Public Schools
Bridgewater-Raynham Regional School District
Hanover Public Schools
Hingham Public Schools
Holbrook Public Schools
South Shore Vocational Technical High School
West Bridgewater Public Schools
Whitman-Hanson Regional School District

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INTRODUCTORY LETTER

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***Joanne Haley Sullivan**, Executive Director*
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Dear Colleague,

We are pleased to present to you the final report of the Southeast Technology Network, a regional approach to providing technology services to school districts. As you will read in the report, the Network has achieved goals of building efficiencies and economies of scale in the districts which will have long-lasting impact.

The Southeast Technology Network includes the school districts of Abington, Avon, Bridgewater-Raynham, Hanover, Hingham, Holbrook, South Shore Vocational Technical School West Bridgewater, Whitman-Hanson, and North River Collaborative. Working with these 10 districts, Abington Schools subcontracted with North River Collaborative and developed a regional network to efficiently address identified shared technology needs of school districts to increase capacity through shared resources.

Historically, the implementation and leadership for technology in each school district is the responsibility of the district's technology coordinator, yet a significant amount of this person's time is spent in routine repairing and replacing equipment. In these districts, there was a lack of:

- efficient, cost effective structures and services across districts that could overcome duplication of effort and resources**;**
- efficient data identification, collection, storage, analysis and reporting;
- training for teachers to integrate instructional technology into their teaching; and
- a systematic approach to *shared* procurement of technology and related services.

While the elements above were not in place, there was at the same time, a duplication of some services across the districts. Each district had its own highly skilled and paid technology coordinators providing lower level "break/fix" functions in their districts.

To overcome the identified concerns expressed in these school districts, the Southeast Technology Network was established. Successes include the following:

- Technology audits were completed for each of 10 districts/ educational collaboratives identifying potential cost efficiencies and cross district needs.
- A shared approach to student achievement data analysis to support instructional decision making was established across multiple school districts.

- Over 100 educators, administrators, and technology leaders were trained to implement best practices in instructional technology integration, and an online system for sharing technology infused lessons across districts was established.
- A centralized Technology Help Center was established for use by districts.
- A structure for group procurement of technology products was established that resulted in savings of 25-50% on required start up costs and 15-25% on annual licenses for technology applications related to educator evaluation, student achievement, and web-based learning platforms for districts in the southeast region of the state.

It is our hope that you will find the attached Final Report to be helpful in learning about this project.

Sincerely,

Joanne Haley Sullivan
Executive Director
North River Collaborative

Peter Schafer
Superintendent
Abington Public Schools

EXECUTIVE SUMMARY

The Southeast Technology Network has been established through the leadership of North River Collaborative (NRC) as a regional approach to technology services for school districts. The Network's purpose is to efficiently address specific shared technology needs of numerous school districts in the region. The grant funded an assessment of existing technology assets, strengths and needs; the development and sharing of technical expertise; and the strategic systematic deployment of supportive software, hardware, staffing, and training. As a result of this implementation, participating districts now share in coordinated and improved technology-related services resulting in efficiencies of procurement and human resources.

Through an innovative and collaborative approach to technology services, the Network has systematically provided participating districts with expertise and resources. These have been delivered as a menu of services designed to increase capacity through shared resources and knowledge in five areas, thereby providing cost savings and/or cost avoidance:

- Technology leadership
- Operational and analytic data management to support decision making
- Instructional technology integration
- Computer repair and Technology Help Center
- Coordinated and economical procurement capability

Abington Public Schools fully expects the menu of technical services and training offered by the proposed Southeast Technology Network will grow steadily as districts understand and appreciate the power of sharing resources. Individually and as a region the participating districts have increased both the quality and depth of their technology capabilities and efficiencies.

PARTNER COMMUNITIES

North River Collaborative (NRC) implemented the Southeast Technology Network as a subcontractor for the lead agency, Abington Public Schools. The Abington Superintendent of Schools worked closely with the North River Collaborative to ensure that the project was completed effectively within budget.

Partner Communities/School Districts and Collaborative:

- Abington Public Schools
- North River Collaborative
- Avon Public Schools
- Bridgewater-Raynham Regional School District
- Hanover Public Schools
- Hingham Public Schools
- Holbrook Public Schools
- South Shore Vocational Technical High School
- West Bridgewater Public Schools
- Whitman-Hanson Regional School District

The **Technology Advisory Committee** serves as the governing structure and includes the Superintendent/Assistant Superintendent and Technology Director from each district and North River Collaborative. The Committee provided input regarding the infrastructure, procedures, staffing, and menu of service/product options. The Committee met regularly throughout the implementation period to guide the project work, to: select consultants, select data analysis tools, and identify and prioritize needed components of the shared Technology Help Center.

The **participating districts** have:

- Participated in Technology Advisory Committee meetings regularly throughout the duration of the project
- Participated in Technology Assessments, including:
    - Participated in on-site meetings and tours with Technology Consultant
    - Provided data and records of technology assets and needs
    - Reviewed and provided feedback for draft technology assessments
- Participated in the selection of data systems
- Provided school and student level data to implement the data systems
- Abington, Hanover, Holbrook, and Whitman-Hanson piloted systems for student data analysis that ultimately determined the selection of a common tool across these districts.
- Designated teacher leaders (coaches), teachers, and administrators to participate in training with the Technology Integration Specialist (totaling more than 100 staff)
- Specified needs for components of a centralized Technology Help Center
- Nineteen districts, throughout the Southeast Region, participated in vendor events to support decision making resulting in savings through group procurement

North River Collaborative contracted with a variety of consultants to complete specific components of the initiative. NRC provided oversight/responsibility for services of vendors and Network staff across all districts. NRC coordinated grant work with each district's designated District Technology Contact who retained oversight/responsibility of services for their particular district.

North River Collaborative has:

- Convened and facilitated Technology Advisory Committee meetings
- Contracted with consultants for components of the project
- Overseen the completion of Technology Assessments for each district and the overall Network
- Researched and reviewed over 15 products for data analysis, selected, purchased, and piloted data systems for operational and analytic data management to collect, analyze, and report student level data
- Developed templates and served as liaison for districts with software companies for data collection to provide data analytic reports for districts, administrators and teachers
- Designed, planned, disseminated, organized technology integration training for 18 teacher leaders, 71 teachers and 17 administrators
- Developed a website, to support shared development and implementation of over 70 technology-infused lessons and resources

- Conceptualized components and structure of a shared Technology Help Center
- Established the Technology Help Center and disseminated a menu of services
- Organized presentations by vendors for targeted technology solutions for district needs
- Negotiated substantial savings with selected vendors based on this regional approach to volume purchasing

GOALS

Goal 1: Infrastructure

- Conduct a technology assessment in each district to identify potential efficiencies and cost savings in the use of technology.
- Determine the organizational structure to be used for a cross-district collaborative technology services model.
- Establish and implement mechanisms and cost structures for sharing staff and resources across districts for data analysis, instructional technology integration, computer repair, and procurement.
- Identify or develop a leadership structure to sustain the initiative through increased communication about efficiencies, best practices, and potential cost savings or cost-avoidance strategies.

Goal 2: Data Identification, Collection, Storage, Analysis and Reporting

Select and purchase data analytic software tools for collection, storage, analysis and reporting of student assessment and other data.

Develop systems to collect, analyze, and report data from multiple districts, including (a) core reports for all, and (b) selected customized reports for individuals/districts.

- Develop initial data collection and input procedures, report design, and initial queries related to the district specifications.

Goal 3: Instructional Technology Integration

- Provide explicit and embedded professional development in instructional pedagogy related to using technology to improve student achievement.
- Establish a mechanism for and promote the sharing of extra seats in technology-related professional development sessions that are planned by individual districts.
- Formalize system(s) for sharing information and experiences across districts about the strengths and weaknesses of various instructional software and instructional technology, assisting districts in making purchase and implementation decisions.
- Establish a process and online site/system through which teachers can share effective technology-infused lessons.

Goal 4: Technology Help Center

- Establish and implement a centralized Technology Help Center to support cross-district hardware and software maintenance and repair.

Goal 5: Procurement

- Establish a procurement structure for group purchasing of technology products, including hardware, software, tools and applications, including a system for communicating and promoting regional commonalities when making purchases
- Develop a structure for participating districts to share with each other their own information about best procurement strategies and increased cost effectiveness

IMPLEMENTATION PLAN

Goal 1: Infrastructure

1.1 Subcontract with North River Collaborative (NRC)
(Abington School Committee, NRC Board of Directors)

Abington Public Schools, the lead agency, subcontracted with North River Collaborative as programmatic lead to conduct the work of the grant. North River Collaborative, a 501(C)(3) non-profit organization and leading educational collaborative, was selected because it has a 35-year history of providing an array of high-quality educational and human services to all of the communities in this Network and a commitment to advancing regional projects. Educational collaboratives are regional agencies designed to develop, manage, and provide services or programs as extensions of the public school districts.

1.2 Convene Technology Advisory Committee
(NRC Executive Director)

The Southeast Technology Advisory Committee met regularly throughout the duration of the grant, responding to the scope of work and need for collaborative decision-making.

1.3 Recruit and contract with consultants for project management and sub-components
(NRC Executive Director, Technology Advisory Committee)

NRC originally planned to have a Project Manager coordinate all activities of the grant, however there was a limited pool of applicants with the expertise that encompassed all of the tasks in the job description. As a result, the Project Manager position was divided into task-related components including: technology audits, data systems analysis, project management, procurement, and instructional technology integration. Consequently, the pool of applicants with targeted experience and expertise was significantly expanded. NRC contracted with multiple consultants rather than hiring full or part-time employees, an improvement on the original proposal.

1.4 Conduct Technology Assessment for each district and the overall Network

(High-level Technology Consultant: Rossye Carroll, Atlantic Associates)

North River Collaborative (NRC) contracted with Atlantic Associates, Inc. to provide expert consulting services for collaborative technology processes, capabilities, and staff to support the Southeast Technology Network.

Phase 1 – Pre Assessment Review. Atlantic met with senior staff from the participating school districts and NRC to define goals for the project, identify participants in targeted interviews, refine the project plan and schedule, and to coordinate activities for gathering needed background material to support the review process.

Phase 2 – Technology Assessment Review. Atlantic conducted technology site-infrastructure walkthroughs and interviewed key district and NRC personnel to capture information on the technical environments, support infrastructures, technology effectiveness, and opportunities for improving technical operations and cost benefits. Utilizing this information, Atlantic developed technology profiles for each of the districts and for NRC.

Phase 3 – Assessment Analysis and Documentation. Finally, Atlantic analyzed the data gathered in staff interviews and site walkthroughs along with the provided background information and developed technology profiles to identify challenges and potential opportunities for improvements in the use of technology. There were multiple reviews by district technology staff and superintendents to validate each report. Individual district needs were compiled and analyzed to determine common needs across the Network resulting in a summary report. Multiple presentations were provided to stakeholders.

1.5 Mechanisms and Cost Structures for Sharing Staff and Resources

(North River Collaborative, Technology Advisory Committee representatives)

Help Center. The direct costs associated with operating the Shared Technology Help Center are derived from four categories: staffing, software, hardware, and other associated costs. NRC analyzed costs and provided an estimate of the projected costs for school districts for the first full year of Help Center operations. Costs were proposed using several cost mechanisms: dividing the cost by district staff FTE, or cost by town, or cost of days allocated per district. Districts agreed that cost by day was the most fair, however it was difficult for them to commit to this structure because they were unable to envision how the time would be allocated and prioritized across multiple districts (i.e., would their district work be addressed in a timely manner).

Instructional Technology Integration Specialist. The direct costs associated with providing Instructional Technology Integration Specialist services are derived from four categories: staffing, website development, software and instructional materials. NRC analyzed costs for the Teacher Leader seminars (40 hours), Teacher Team Cohort seminars (15 hours), and Administrator seminars (6 hours). The costs for school districts include a per-participant rate with the expectation that each participating school register a Teacher Leader, Administrator, and one or more Teacher Team Cohort.

Procurement of Data Analysis Software. The direct costs associated with providing data analytical software are based on a one-time, start-up district fee, plus an annual per-student rate. Reduced pricing for regional participants were negotiated by North River Collaborative on behalf of all districts and collaboratives participating in the CIC Grant. Districts contract individually with *Baseline Edge/Longleaf* at the reduced rate. This same model of NRC negotiation for regional price reductions will be used for future shared procurement enterprises.

Goal 2: Data Analysis

2.1 Contract with Data Analyst Consultant

(NRC Executive Director, Technology Advisory Committee Representatives)
The Network contracted with a shared Data Analyst to develop common data collection and report protocols to be used across multiple districts, saving time and money, rather than each district hiring its own.

2.2 Research software tools and vendors with data management solutions for districts including presentations by vendors to demonstrate their data management solutions to districts

(Data Analyst Consultant)
Working with the consultant, NRC and district representatives conducted a comprehensive review of analytic software products cost/benefit analysis compared with a custom data service.

2.3 Select and purchase a data analytic software package and server hardware; and develop data system templates, protocols and procedures for submitting data, and requesting and producing reports

(Technology Advisory Committee, NRC staff, Data Analyst Consultant: Tripp Micou, Practical Computer Applications, Inc.)

Tableau Software was originally selected for its capacity to display data analyses graphically and numerically in interactive "dashboard" displays that permit users to focus analysis by selecting sub-sets of data. Data analytic software tools for collection, storage, analysis and reporting of student assessment and other data are purchased and a secure server was installed. NRC's consultant has developed protocols for the structure of common data analysis and reporting. Tableau dashboards were designed and piloted to provide data needed to answer specific questions posed by teachers and administrators.

2.4 Districts select, purchase, and pilot an additional data analysis tool: BaselineEdge/ BaselineEdge/Longleaf software solution

(Districts: Abington, Hanover, Holbrook, Whitman-Hanson; Data Analyst Consultants: BaselineEdge/Longleaf; NRC staff)
The BaselineEdge/BaselineEdge/Longleaf data management and reporting system is being piloted in schools and includes teacher, administrator, and district level access. School

staff were trained in protocols and procedures for data uploads, and generating data analytic reports.

Goal 3: Instructional Technology Integration

3.1 Contract with Instructional Technology Integration Consultant

(NRC Executive Director)

A **Technology Integration Specialist** was contracted to develop a website and provide training to directly benefit 89 teachers (including teacher leaders) and 17 administrators. This training built capacity in districts for effective technology integration through the formation and training of 18 building-based teams that will support and model best practices for improved student achievement within their schools. Ultimately this will have a positive impact on thousands of students as teachers put newly acquired instructional technology pedagogy into practice and share strategies and lessons with colleagues.

3.2 Create and implement a system for sharing cross-district opportunities for technology professional development

(NRC, READS Collaborative, with the Southeast Collaborative Regional Organization (SCRO))

Through a separate funding source, NRC cooperated with READS Collaborative and SCRO to customize a shared professional development registration platform, *SmartPD.* This enhancement to *SmartPD* allows 35 school districts and 9 collaboratives to promote access to open seats in training opportunities in each others' districts resulting in a system for sharing cross-district opportunities for professional development including technology.

3.3 Create and implement a process for teachers to share technology infused lessons across districts

(Maureen Tucker, Instructional Technology Consultant, District-based staff trained in cohorts)
Link to the related website.

The **Technology Integration Specialist** developed a website to support the course and ongoing sharing of technology-infused lessons among teachers in many school districts. The website is comprised of separate pages with access to:

- Web 2.0 Tools – links and demonstrations of applications (e.g. *Animoto, Voki, Wordle*);
- Links to high-quality, web-based instructional applications; and
- Teachers own lessons organized by district, grade level, and subject.

It is expected that this model will extend the impact of the direct training to other teachers within the buildings through collegial modeling and support, instead limiting it to just participants' own classrooms.

3.4 Provide professional development to cohorts of teachers from multiple districts *(Instructional Technology Consultant)*

The Instructional Technology Integration Specialist trained teams of teachers in each district to build a nucleus of support and expertise in schools. Each team was comprised of one technology coach and several teachers. Coaches received 40 hours of training and teachers received 15 hours of training. Administrators from each school district also received 6 hours of training in order to better understand technology integration in instruction, and then provide appropriate support and supervision for staff.

Teacher Leader/Coach Seminar. The Coach seminar included 5½ days of blended training, including face-to-face, online asynchronous projects, and leading their school-based teams. Examples of topics addressed include:

1. Elements present in high quality technology integration;
2. Demonstration of model lessons;
3. Technology applications that promote creativity, collaboration, communication and critical thinking;
4. Universal Design for Learning;
5. Creating screen-casts;
6. Creating a project website for the sharing of resources in and across districts;
7. Strategies for effective technology leadership/coaching; and
8. Facilitating a Tuning Protocol to provide constructive feedback.

Teacher Cohort Seminars. A total of four cohorts of teacher teams from more than 18 schools completed 2 days of hands-on training, plus 3-hours online asynchronous training. Examples of topics addressed include #1 through #4 listed above and:

9. Online resources for interactive whiteboards (generic-not brand specific);
10. Video in the classroom;
11. Digital story telling;
12. Improving student writing with technology; and
13. Web 2.0 applications.

Administrator Seminar. Two or three administrators (e.g., building principal/asst. principal; central office administrator) participated in a one day seminar introducing administrators to the project in order for them to support the dissemination of best practices in instructional technology integration in their schools and districts. Examples of topics addressed include:

1. Best practices in technology for 21st Century Learning;
2. Elements of good models of teaching with technology;
3. Evaluating technology integrated lessons;
4. The role of administrators in technology integration; and
5. Ways to support the ongoing work of the technology leaders and teams.

Goal 4: Technology Help Center

4.1 Document district technology support environments.

(High-level Technology Consultant: Rossye Carroll, Atlantic Associates)

Under this component, Atlantic Associates provided technical services to provide recommendations on establishing a Shared Technology Help Center. Atlantic analyzed the district Technology Assessment results and the defined support requirements and made several core recommendations to mitigate the support challenges and issues being experienced by the school districts, including implementing a multi-district Shared Technology Help Center as a means of augmenting their existing support capabilities, and providing centralized managed services to the districts. This was intended to enable districts to share the costs of providing needed support services without adding additional in-house staff, to enhance the responsiveness of their support programs, minimize down time, and to better meet the needs of supporting planned new technology initiatives.

4.2 Define Shared Help Center Requirements and document findings and recommendations

(High-level Technology Consultant: Rossye Carroll, Atlantic Associates)

Atlantic recommended that the Help Center provide shared Level 1 technology support services for use by district teachers, staff, administrators, students, and parents. The Level 1 support should include: answering basic "how to" technical questions, creating new user accounts, resetting passwords, verifying correct hardware and software setup, providing and maintaining on-line tutorials, self help knowledge bases, and other web-based support facilities.

Atlantic recommended that users should be able to access Help Center services by multiple methods including: email, telephone, live chat, and web-based self help. Help Center staff will analyze symptoms and resolve basic problem(s), document problems and resolutions, and escalate issues requiring specialized expertise or in-person intervention to district technical support personnel for resolution. Level 1 support desks commonly resolve an average of 80% percent of user reported problems.

Next, Atlantic met with senior staff form North River Collaborative and the participating school districts to review the goals and objectives of the Project. An integral component to successfully completing the analysis process and developing appropriate recommendations for the Shared Help Center was obtaining an accurate understanding of the districts' shared support requirements.

A summary of the topics discussed in the Shared Help Center requirements review sessions is provided below.

Scope of Help Center. The group discussed and defined the desired scope of the Shared Help Center including:

Participating Districts

Client Communities within Districts
Types of Support

Software Support Services. The group reviewed and defined the software based support services to be provided by the Shared Help Center including:

Packages
License Management
Installation and Configuration Support
Software Image/Package Distribution
Problem Analysis/Resolution
Training/Tutorial

Hardware Support Services. The team also reviewed and defined the hardware based support services to be provided by the Shared Help Center including:

Platforms/Equipment
Installation and Configuration
Systems Upgrades/Procurement
Break/Fixes
Accessories Upgrade(s)/Procurement
Problem Analysis/Resolution
Preventative Maintenance

Network Services. The group reviewed and defined the network based support services to be provided by the Shared Help Center including:

Network Monitoring
Managed Services
Account Creation
Access Problem Identification/Resolution
On-Campus Wireless Access Problem Identification/Resolution
Printing Problem Analysis/Resolution
Remote Backup
Exchange Hosting

Application Support Services. The team also reviewed and defined the district application system based support services to be provided by the Shared Help Center including:

Packages
Problem Analysis/Resolution
Account Creation/Maintenance
Access Problem Analysis/Resolution
Report Creation/Generation
Patch Management/Change Request
System Functional Support

Other Services. Finally, a survey was conducted and the group reviewed and defined the other general technology based support services to be provided by the Shared Help Center including:

Telecommunications Services
Web Support Services
Audio/Visual Services

4.3 Contract with Technology Help Center consultants and set up the Technology Help Center; purchase tools, supplies, and equipment
(NRC Executive Director, NRC Director of Technology, Greg Shea, Technology Consultant from Atlantic Associates)

NRC dedicated two months to complete the tasks necessary to prepare for successful start up of Shared Technology Help Center operations. These tasks included:

- Developing an implementation plan for starting up Help Center operations;
- Hiring and orienting Help Center consultants to the supported educational environments;
- Marketing Help Center services and performing initial community outreach,
- Establishing and documenting Help Center operating procedures and guidelines, service metrics;
- Acquiring the Help Center support system/services, workstations, and tools: *GroupLink* helpdesk software
- Configuring and customizing the Help Center support system and web based services for use by NRC to support school districts;
- Providing systems training to Help Center staff;
- Populating the Help Center problems/solutions knowledgebase and asset tracking database.

GroupLink helpdesk software was chosen because it is cost-effective and:

- Has a simple submission form to request assistance;
- Includes general information technology FAQ, network connectivity, and hardware troubleshooting;
- Enables the Help Center staff to update the self-help knowledgebase FAQ database and reduce end-user incident requests;
- Includes support through telephone and remote access; and
- Provides monitoring the systems, network, and assess management tracking;

4.4 Establish and disseminate menu of services and cost structure for the Technology Help Center
(NRC Executive Director, NRC Director of Technology, Technology Consultants)

NRC and the participating school districts investigated methods of sharing systems, services, and technical support resources for those system types and services used across multiple districts. A select subset of these systems and services are centrally hosted by NRC. The menu of centrally managed services includes:

- website hosting and content management,
- e-mail services,
- e-mail archiving,

- content filtering/spam/anti-virus services,
- network monitoring and managed firewall services,
- Virtual Private Network and remote access services,
- off-site back-up and recovery,
- data analysis,
- telephone support services,
- staff augmentation,
- installation and configuration of PC's,
- audio-visual/white board support, *and*
- targeted professional development and technical training for struggling staff.

The direct costs associated with operating the Shared Technology Help Center are derived from four categories: staffing, software, hardware, and other associated costs. NRC analyzed costs and provided a estimate of the projected costs for school districts for the first full year of Help Center operations. Costs were proposed using several cost mechanisms: dividing the cost by district staff FTE, or cost by town, or cost of days allocated per district. Districts agreed that cost by day was the most fair, however it was difficult for them to commit to this structure because they were unable to envision how the time would be allocated and prioritized across multiple districts (i.e., would their district work be addressed in a timely manner).

Districts were committed to the concept of shared Help Center with the premise that Help Center technicians would respond to the common "break-fix" requests, freeing the more highly skilled and higher paid technology coordinators to address the higher level tasks that are suited to their skill level and training. However, they were not able to identify specific financial savings because of some added costs to contract for Help Center services. While these may ultimately led to savings for the districts, this was a barrier that districts couldn't overcome during a difficult budget-cutting year. Additionally, service agreements for some of the Help Center components had previously been renewed by districts for multiple years, and thus the cost might have been duplicative for them for a number of years. As a result, while there may be savings in the longer term, districts were concerned that it would still cost more money in the short term, and therefore have not yet been able to reach the result of shared staff for the Help Center function.

Goal 5: Procurement

5.1 Identify priority procurement needs of districts

(NRC Executive Director and staff)

Due to the delayed implementation date of the grant, the districts had already completed the majority of their technology purchasing for FY13. However, software for both educator evaluation and student data analysis was identified as common emerging needs.

5.2 Establish systems to determine which items and contracts to procure as a group and protocols to implement

(NRC Executive Director and staff)

1. Conduct needs assessment to identify purchasing district needs
2. Conduct vendor presentations for target technology solutions where participants rate attributes of products through common, consistent criteria
3. Survey participants regarding product preference to identify participating districts based on product interest
4. Select vendor(s)
5. Negotiate discounted pricing for regional volume purchases of targeted technology solutions
6. Communicate discounted pricing for volume purchases to participating districts
7. Disseminate and validate the significance of the savings to participating districts
8. Districts individually order products with vendors.

Economies of scale or efficiencies

Economies of scale were realized by districts in the cooperative purchasing of technology items. In this project, a student data analysis software and a "talent management" or educator evaluation software tool were procured as described above. As a result, a 25% discount was achieved for the school districts for the start-up implementation of *Baseline Edge/Longleaf* (the chosen software product) as well as a 15% discount on the annual rate per student for data analysis. Additionally, the talent management component was reduced by 50 % for the start-up implementation and 25% for annual fees. The Technology Advisory Committee will continue to meet to identify other common needs for group procurement.

Cost savings were based on the expectation of quantity purchases from multiple school districts in Southeastern Massachusetts. The rates were negotiated by North River Collaborative on behalf of all districts and collaboratives participating in the CIC Grant and in the specific vendor presentations. Districts contract individually with *Baseline Edge/Longleaf* at the reduced rate.

The cost for student data analysis software is based on a one-time, start-up district fee, plus an annual per-student rate. This allows for the flexibility to increase student participation over time. The initial purchase commitment through the grant included 4,265 students in four districts. For these four districts, the *actual cost savings for the initial year* totaled $5,023. The vendor has committed to recognizing these discounted rates in future year purchases.

The cost for talent management software is based on a one-time, start-up district cost, plus an annual fixed cost for each school site and overall central office access. Numerous districts and collaboratives have contracted at the discounted rate for talent management software services beginning for the FY14 school year. For the seven districts/collaboratives that committed to purchasing during 2013, the *actual cost savings for the initial year* totaled $23,029. NRC knows that additional districts/collaboratives also purchased this product at the discounted rates. The vendor has committed to recognizing these discounted rates in future year purchases.

BUDGET

The <u>original budget</u> request was based on:

- Different components of whole project and what was needed to meet the objectives – both staffing and hardware, software, and supplies
- Planned on highly skilled and diversified Project Manager who would oversee the entire project and complete many aspects of the project (e.g., technology assessments, procurement, data analysis)
- Provide administrative assistants for the project to help with data analysis and managing information collection, processing, and dissemination for other components. Salary was based on NRC Salary Schedule.
- Cost of hardware and software was based on research with current vendors to estimate individual pricing
- Salary for Project Manager was based on recommendations by Technology Advisory Committee

Changes made to the budget throughout the process:

- Hiring individual Consultants for each of the five components instead of one Project Manager and two consultants. Additional consultants included: High-level Technology Consultant, Data Systems Analysts, additional Help Center consulting time.
- Increase funding for Instructional Technology Integration Specialist because the training implementation model changed from each individual district to a cohort model of technology teams across districts attending more days of training.

ITEM	Original Budget	Amount Expended
Project manager	$75,397	$80,031.87
Office supplies	$2,869	$2,872.02
Office computer equipment	$3,110	$1,151.26
Travel/mileage	$2,880	$0.00
Project administration	$9,509	$8,160.00
Data analytical software	$53,800	$38,358.59
Printing	$1,250	$0.00
Hardware, software, and technology supplies	$13,875	$9,216.90
Remote center set up	$16,000	$10,574.44
Professional development	$21,000	$21,000.00
TOTAL BUDGET:	**$199,690**	**171,365.08**

CHALLENGES AND SOLUTIONS

Challenge 1: NRC planned to hire a highly skilled and diversified Project Manager who would oversee the entire project and complete many aspects of the project (e.g., technology assessments, procurement, data analysis). NRC posted the position internally and externally, to staffing agencies and published in the Boston Globe. Unfortunately no candidate or consultant was identified with the needed range of skills. Therefore, there was no designated person whose primary responsibility was to keep the project moving forward.

> **Solution:** (1) NRC created a Request For Proposals that was disseminated to consulting groups and other vendors based on recommendations from the Technology Advisory Committee. As a result, additional consultants were hired to complete individual components of the Network's goals, including: High-level Technology Consultant, Data Systems Analysts, additional Help Center consultation. (2) NRC Executive Director and staff members absorbed the responsibility of oversight and accountability for implementation within their existing schedule. (3) The Technology Advisory Committee worked more closely with NRC to provide technical assistance regarding details of the implementation.

Challenge 2: The implementation of the data analysis changed direction mid-way through the project. The Network began with a vision of hiring a Shared Data Analyst to support analysis of student data for instructional decision making, which would allow sharing best practices across multiple districts. The analysis product, *Tableau,* was purchased and work was progressing toward piloting it in several districts.

Mid-way through the project a new student data analysis product emerged *(BaselineEdge/ BaselineEdge/Longleaf)* that is aligned with a compatible product for "Talent Management" that many of the districts were planning to use for educator evaluation. Because of this, districts started to disengage from their focus on using a ***shared person*** for data analysis, and moved toward using a ***shared product*** to achieve a very similar outcome.

> **Solution:** (1) Districts decided to pilot *BaselineEdge/ BaselineEdge/Longleaf* in order to maximize the use of student data analysis for both instructional improvement and educator evaluation. (2) In alignment with shared procurement activities, NRC negotiated a substantial discounted pricing for regional volume purchases. A 25% discount was achieved for the school districts for the start-up implementation of Baseline Edge/Longleaf (the chosen software product) as well as a 15% discount on the annual rate per student, and the talent management component was reduced by 50 % for the start-up implementation and 25% for annual fees. Districts contract individually with *Baseline Edge/Longleaf* at the reduced rate. Contracts for Year1 included explicit "Years 2+ Annual Subscription" quotes that include the 15% discount on the annual rate per student. (3) Sample screens and reports using the initial product are available for demonstration purposes if districts wish to see how the product handles data.

Challenge 3: Districts were committed to the concept of shared Help Center with the premise that Help Center technicians would respond to the common "break-fix" requests, freeing the more highly skilled and higher paid technology coordinators to address the higher level tasks that are

suited to their skill level and training. Unfortunately, the Network was unable to achieve this shared staffing goal for the following reasons.

(1) The technology assessments were the first priority of the Network and common needs were not identified until well into the project timeline. Additional discussions, surveys, and analysis were needed to define the element, staffing, and infrastructure of the Help Center. Therefore, the Help Center did not get established until near the end of the project which did not allow time to pilot the service with school districts and allow for their input and satisfaction once operational.

(2) School districts were not able to identify specific financial savings because of some added costs to contract for Help Center services. While these may ultimately led to savings for the districts, this was a barrier that districts couldn't overcome during a difficult budget-cutting year. Additionally, service agreements for some of the Help Center components had previously been renewed by districts for multiple years, and thus the cost might have been duplicative for them for a number of years.

(3) Districts are reluctant to relinquish responsibility for insuring sustained and maintained operational systems to a newly developed Help Center. As a result, while there may be savings in the longer term, districts were concerned that it would still cost more money in the short term, and therefore have not yet been able to reach the result of shared staff for the Help Center function.

Solution: The Help Center is established and operational, although currently not fully staffed. NRC is modeling the policies, procedures and implementation of the Help Center and will document specific Help Center metrics and service expectations. NRC will share results with district Superintendents and Technology Advisory Committee and solicit additional participants once the school year is underway and budgets have been resolved.

If NRC was to begin again, the establishment of a "basic" Help Center would be accelerated to allow services to begin, and additional components would be added as needs were identified.

OUTCOMES

Abington/North River Collaborative collected data on progress related to the following outcomes:

Outcome Measure: Analysis of data. Systems that will support multiple school districts' operational and analytic data management (e.g., collect, analyze and report student-level data) to improve instructional decision making that will ultimately improve student achievement.

This objective has been or is in the process of being achieved—school districts have access to operational and analytic data management (e.g., collect, analyze and report student-level data) to improve instructional decision making that will ultimately improve student achievement. A product was identified and training was provided so that principals can implement this data

analysis and answer questions they pose about their students—right at their own desktop. This is a preferable outcome to the original plan of using a data analyst to complete this work one step further away from the actual need for the data point. Principals and data teams can now run "real time" reports about students' progress to inform their instructional decision-making. By identifying the right software solution for districts to complete data analysis and reporting, schools and districts now have timely access to information they need to support their students. The product chosen has enhanced value because it can be integrated with, and used to support, a companion software solution to support the new Massachusetts Educator Evaluation System. By negotiating a discounted price for this grant period and for the future, districts have found this to be an affordable and sustainable solution.

- **Related Data:**
  - 4 districts piloting: Abington, Hanover, Holbrook, Whitman-Hanson
  - 13 products reviewed
  - BaselineEdge/Longleaf chosen by pilot districts
  - Innumerable reports are available, individualized based on specific assessments and interventions used in each district. These include reports about Behavior, Reading, Math, and Writing.

Outcome Measure: Reduction of redundancies. Establish and implement mechanisms for sharing technology staff across multiple school districts for instructional technology integration, technology repair, and procurement.

Significant progress on the goal of reduction of redundancies was achieved. One-hundred six educators from ten school districts were trained by a shared consultant, and lessons are now being shared by educators through a website that can continue to grow. The Technology Help Center has been established and districts are currently evaluating how they can best benefit from the Help Center and how it can be sustained through district funding and reduce the use of highly paid staff to carry out routine, low-complexity tasks. For shared procurement, districts have experienced the potential of the buying power of group collaboration that will be sustained beginning Spring, 2013.

- **Related Data:**
  - **Professional Development.** The Network contracted with a shared high-quality Instructional Technology Integration Specialist to provide training. In this way, ten school districts had this service available to be shared rather than each district hiring its own.
  - **Technology Help Center.** A Technology Help Center for network and hardware repair has been established. The services available include: software and hardware support services, network services, application support and other services.
  - **Shared Procurement.** In this case, the Network has shared the expertise of technology staff across multiple school districts by working together to develop a process for shared procurement. They communicated the assessments of products for their district, thereby leveraging the purchase of high quality products across the Network.

Outcome Measure: Increase number of shared lessons. Increase the number of technology-infused lessons that teachers exchange across districts by establishing a process and online system for collaboration and sharing of lesson plans.

The goal to increase the number of technology-infused lessons that teachers exchange across districts by establishing a process and online system for collaboration and sharing of lesson plans was achieved. Participants were provided with high quality training that enhanced their ability to provide technology infused lessons for their students. The ongoing work of the coaches and others who are trained is to extend the impact of the direct training to other teachers within the buildings through collegial modeling and support, instead of limiting it to just participants' own classrooms. This is a challenge that districts continue to struggle with, but administrators' training included strategies and encouragement to continue to disseminate the use of technology in classroom teaching.

- **Related Data:**
  - The Technology Integration Specialist has provided training that directly benefited 89 teachers and teacher leaders and 17 administrators.
  - This training has built capacity in districts for effective technology integration through the formation and training of 18 building-based teams that will support and model best practices for improved student achievement within their schools.
  - Ultimately this will have a positive impact on thousands of students as teachers put newly acquired instructional technology pedagogy into practice and share strategies and lessons with colleagues.
  - The Instructional Technology Integration Specialist trained two teams of teachers in each district which built a nucleus of support and expertise in each building. Each team is comprised of one technology coach and four teachers. Coaches received 40 hours of direct instruction and teachers received 18 hours of instruction. One or two building administrators from each district also received 6 hours of training in order to better understand technology integration in instruction, and then provide appropriate support and supervision for staff.
  - Website for sharing lessons established, and 10 districts contributed over 70 lessons which continue to be posted since the completion of the training.

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REFERENCES

- NRC Instructional Technology Integration Website linkpage
- Instructional Technology Integration website
- NRC Managed Technology Services Survey template
- NRC Multi-District Technology Help Center and Managed Services Proposal

RESOURCES

- Minnesota Southwest Service Cooperative (SW/WC), Marshall, Minnesota presentation at Association of Educational Service Agencies Conference, 2010