



## **Florida Rural School Digital Transformation Request and Findings**

On behalf of Florida's three educational consortia, Heartland Educational Consortium (HEC), Northeast Florida Educational Consortium (NEFEC), and the Panhandle Area Educational Consortium (PAEC), we present the issues, concerns, and findings of the 2014 technology needs of Florida's small, rural school districts.

Section One: *Consortia Map/Student Population and District E-Rate Tables*; 2014 data provided by Florida Department of Education on Consortia student population and E-Rate share based on free and reduced lunch criteria.

Section Two: Letters of support regarding the modernization of the Federal E-Rate Program

- *Florida Association of District School Superintendents (Florida Senator William Montford III)*
- *Panhandle Area Educational Consortium (Patrick L. McDaniel, Executive Director)*
- *Northeast Florida Educational Consortium (Dr. Jim Surrency, Executive Director)*
- *Heartland Educational Consortium (Tom Conner, Executive Director)*

Section Three: *Gap Report* defining the digital divide between Florida's urban and rural school districts

Section Four: *Rural School Transformation Request*; a narrative and appropriation request to Florida Governor Rick Scott, the Florida Department of Education, The Florida Senate, and the Florida House of Representatives

Section Five: *District School Bandwidth Data*; 2014 bandwidth data (speeds) for both interconnection and out to the public Internet as provided by individual schools in the Consortia's 35 districts.

Section Six: *Findings for PAEC, NEFEC, and Heartland Educational Consortium Rural Schools Technology Transformation Plan*; An independent analysis by a private consulting firm, *ConnectEducation*, regarding the current bandwidth at Florida's rural schools relative to Florida's statewide technology goals and objectives.

Section Seven: *Technology Transformation Brochure*; an overview of Florida's rural school technology needs.

HEC  
Dr. Debra Elliot  
863-531-0444

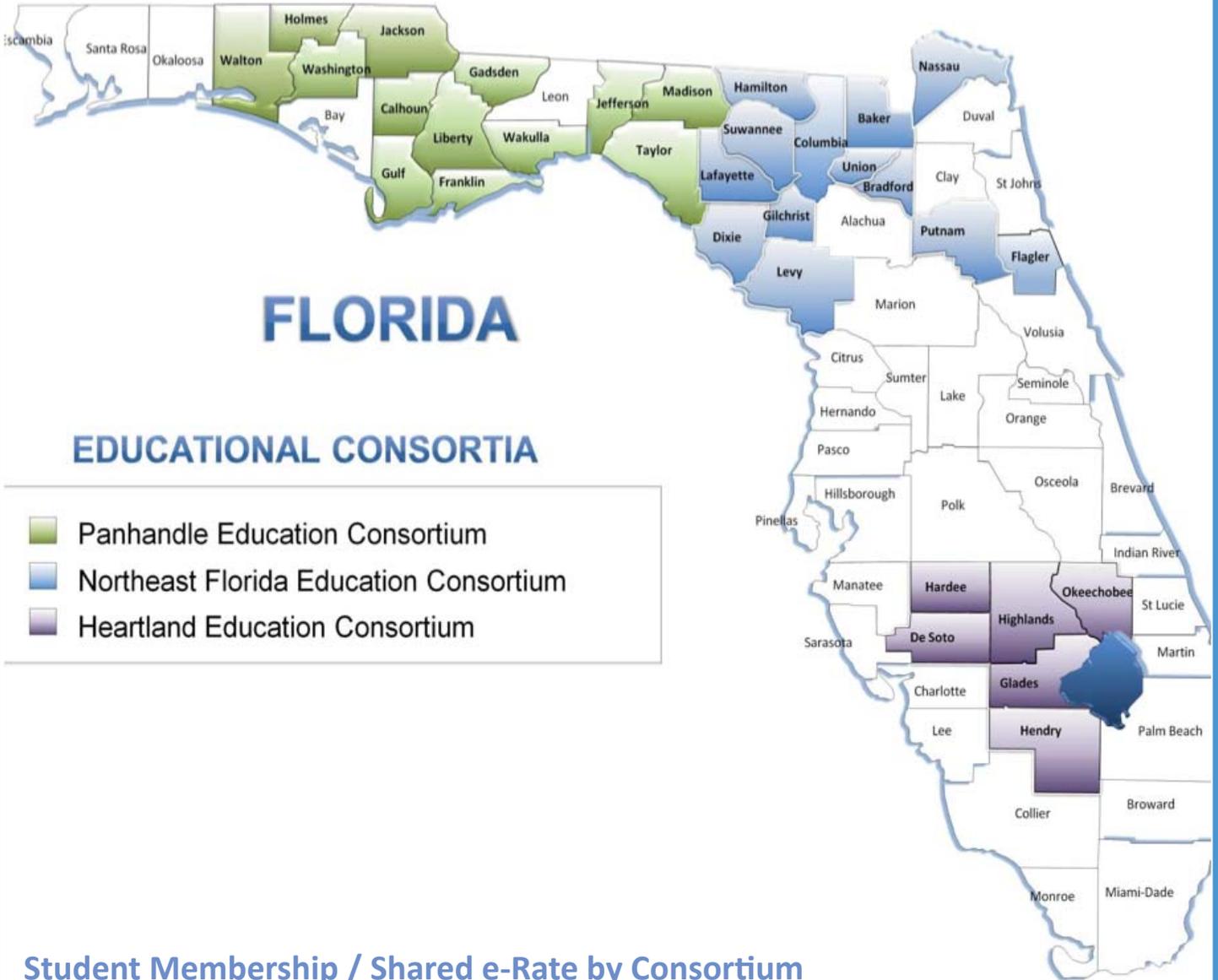
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**Student Membership / Shared e-Rate by Consortium**

PAEC			NEFEC			HEC		
District	Student Membership	Shared e-Rate	District	Student Membership	Shared e-Rate	District	Student Membership	Shared e-Rate
Calhoun	2,277	80%	Baker	4,985	78%	De Soto	4,697	90%
Franklin	1,283	90%	Bradford	3,244	80%	Glades	1,531	70%
Gadsden	6,012	90%	Columbia	10,137	79%	Hardee	5,132	86%
Gulf	1,863	77%	Dixie	2,085	90%	Hendry	5,151	87%
Holmes	3,328	83%	Flagler	12,742	74%	Highlands	12,198	84%
Jackson	6,833	82%	Gilchrist	2,607	80%	Okeechobee	6,395	86%
Jefferson	966	90%	Hamilton	1,687	90%			
Liberty	1,431	85%	Lafayette	1,235	80%			
Madison	2,532	87%	Levy	5,506	90%			
Taylor	3,007	90%	Nassau	11,148	64%			
Wakulla	5,072	77%	Putnam	11,111	86%			
Walton	7,528	76%	Suwannee	5,975	86%			
Washington	3,307	90%	Union	2,365	80%			



**FADSS**

Florida Association of  
District School Superintendents

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DEVELOPMENT

GOVERNMENTAL  
RELATIONS

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LEADERSHIP DEVELOPMENT

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# Florida Association of District School Superintendents

November 7, 2013

**COMMENTS: FEDERAL COMMUNICATIONS COMMISSION  
Washington D.C. 20554**

*WC Docket No. 13-184*

## **Matters of Maximizing the E-Rate Program for Schools and Libraries**

Please accept this letter in support of comments filed on September 13, 2013 on Matters of Maximizing the E-Rate Program for Schools and Libraries by the Panhandle Area Educational Consortium, the North East Florida Educational Consortium and the Heartland Educational Consortium.

Specifically, we support the position that state-wide purchasing co-ops and consortia could result in significant cost savings to our national rural schools and libraries. Florida is now part of the Association of Educational Purchasing Agencies (AEPA) serving states across the nation. This program as detailed on Section H., Line 220 is exactly what Florida is doing right now with all other educational services and supplies.

We also support the concept of using a hybrid-owned network developed by a consortium of schools for our small and rural districts. In Florida, the three (3) educational consortia have extensive experience in the successful development of services and products for small, rural districts that otherwise would have been unattainable by the districts. The consortia are North East Florida Educational Consortium, Panhandle Area Educational Consortium and Heartland Educational Consortium.

Recent legislation within the Health Care Connect program reviewed numerous pilots nation-wide and determined that allowing the entity (the health care provider consortium) to design, build and operate its own network was a viable solution to drive down broadband access pricing in rural areas. We want the same for our regional education consortia, on behalf of our small and rural school districts. We think this would work very well in Florida. We also support the opportunity to accept bids for purchasing services, building or leasing dark fiber as a means to drive down the costs of technology and to stimulate competition in underserved areas.

Therefore, we propose that the FCC adopt the same rules as it did in the Health Care Connect program, with no requirement for a pilot program, and allow schools to create consortia to build and manage their own networks where other providers' pricing is not competitive for the needs of the schools and libraries within the consortia.

Thank you for your time and consideration of our comments regarding these extremely important matters.

Sincerely,

William J. Montford, III  
Chief Executive Officer



**Panhandle  
Area  
Educational  
Consortium**

*Educational Solutions Today...  
and Tomorrow*

**Patrick L. McDaniel**  
*Executive Director*



*The Mission of  
PAEC is to enable  
all member and  
participating  
districts to attain  
their goals by  
providing:  
\*leadership and  
support services,  
\*maximizing the use  
of resources,  
\*linking schools, and  
\*facilitating  
communication  
across the  
consortium.*

**COMMENTS: FEDERAL COMMUNICATIONS COMMISSION**

Washington D.C. 20554

WC Docket No. 13-184

**Matters of Maximizing the E-Rate Program for Schools and Libraries**

On behalf of 14 rural public school districts in the State of Florida, The Panhandle Area Educational Consortium would like to request that rules would be adopted that would allow and encourage all schools in the State of Florida to maximize cost-effective purchasing in the E-rate program. We feel that state-wide purchasing co-ops as the one managed by PAEC and acting as Florida's Representatives on behalf of 26 states could result in significant cost savings to our national rural schools and libraries. Florida is now part of the Association of Educational Purchasing Agencies (AEPA) serving states across the nation. This program as detailed on Section H. Line 220 is exactly what Florida is doing right now with all other educational services and supplies.

The Panhandle Area Educational Consortium also would like to propose that the concept of using a hybrid - owned network developed by a consortium of schools would work very well for our small and rural schools. In Florida, the three (3) educational consortia have extensive experience in the successful development of services and products for small, rural districts that otherwise would have been unattainable by the districts. The consortia are Northeast Florida Educational Consortium, Panhandle Area Educational Consortium and Heartland Educational Consortium.

Recent legislation within the Health Care Connect program reviewed numerous pilots nation-wide and determined that allowing the entity (the health care provider consortium) to design, build and operate its own network was a viable solution to drive down broadband access pricing in rural areas. We want the same for our regional education consortia, on behalf of our small and rural school districts. We think this would work very well in Florida.

Therefore, we propose that the FCC adopt the same rules as it did in the Health Care Connect program, with no requirement for a pilot program, and allow schools to create consortia to build and manage their own networks where other providers' pricing is not competitive for the needs of the schools and libraries within the consortia.

Sincerely,

Patrick L. McDaniel  
Executive Director



## North East Florida Educational Consortium

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COMMENTS: **FEDERAL COMMUNICATIONS COMMISSION**  
Washington D.C. 20554

WC Docket No. 13-184

### Matters of Maximizing the E-Rate Program for Schools and Libraries

The 15 rural school districts of the North East Florida Educational Consortium would like to request that rules would be adopted that would allow and encourage all schools in the State of Florida to maximize cost-effective purchasing in the E-rate program. We are proposing that the concept of using a hybrid-owned network developed by a consortium of schools would work very well for our small and rural schools.

Recent legislation within the Health Care Connect program reviewed numerous pilots nation-wide and determined that allowing the entity (the health care provider consortium) to design, build and operate its own network was a viable solution to drive down broadband access pricing in rural areas. We are proposing the same opportunity be available for our regional education consortia, on behalf of our small and rural school districts.

In Florida, the three (3) educational consortia have extensive experience in the successful development of services and products for small, rural districts that otherwise would have been unattainable by the districts. The consortia are North East Florida Educational Consortium, Panhandle Area Educational Consortium and Heartland Educational Consortium.

Therefore, we propose that the FCC adopt the same rules as it did in the Health Care Connect program, with no requirement for a pilot program, to allow educational consortia to build and manage their own networks where other providers' pricing is not competitive for the needs of the rural schools and libraries within the consortia. Thank you for your consideration.

Sincerely,

Dr. James A. Surrency  
Executive Director

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# HEARTLAND EDUCATIONAL CONSORTIUM

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Executive Director

COMMENTS: **FEDERAL COMMUNICATIONS COMMISSION**  
Washington D.C. 20554

WC Docket No. 13-184

### Matters of Maximizing the E-Rate Program for Schools and Libraries

The Heartland Educational Consortium's mission is to facilitate a collaborative culture that encourages the sharing of resources and ideas that enhance the development of programs and services that support the educational goals of member districts. The Heartland would join with the other two educational consortiums to request that rules would be adopted that would allow and encourage all schools in the State of Florida to maximize cost-effective purchasing in the E-rate program. We feel that state-wide purchasing co-ops as the one managed by the Panhandle Area Educational Consortium (PAEC) could result in significant cost savings to our rural schools and communities.

The Heartland Educational Consortium also would join PAEC to propose that the concept of using a hybrid - owned network developed by a consortium of schools has the potential to work very well for our small and rural schools. In Florida, the three (3) educational consortia have extensive experience in the successful development of services and products for small, rural districts that otherwise would have been unattainable by the districts. The consortia are Northeast Florida Educational Consortium, Panhandle Area Educational Consortium and Heartland Educational Consortium.

Recent legislation within the Health Care Connect program reviewed numerous pilots nation-wide and determined that allowing the entity (the health care provider consortium) to design, build and operate its own network was a viable solution to drive down broadband access pricing in rural areas. We want the same for our regional education consortia, on behalf of our small and rural school districts. We think this would work very well in Florida.

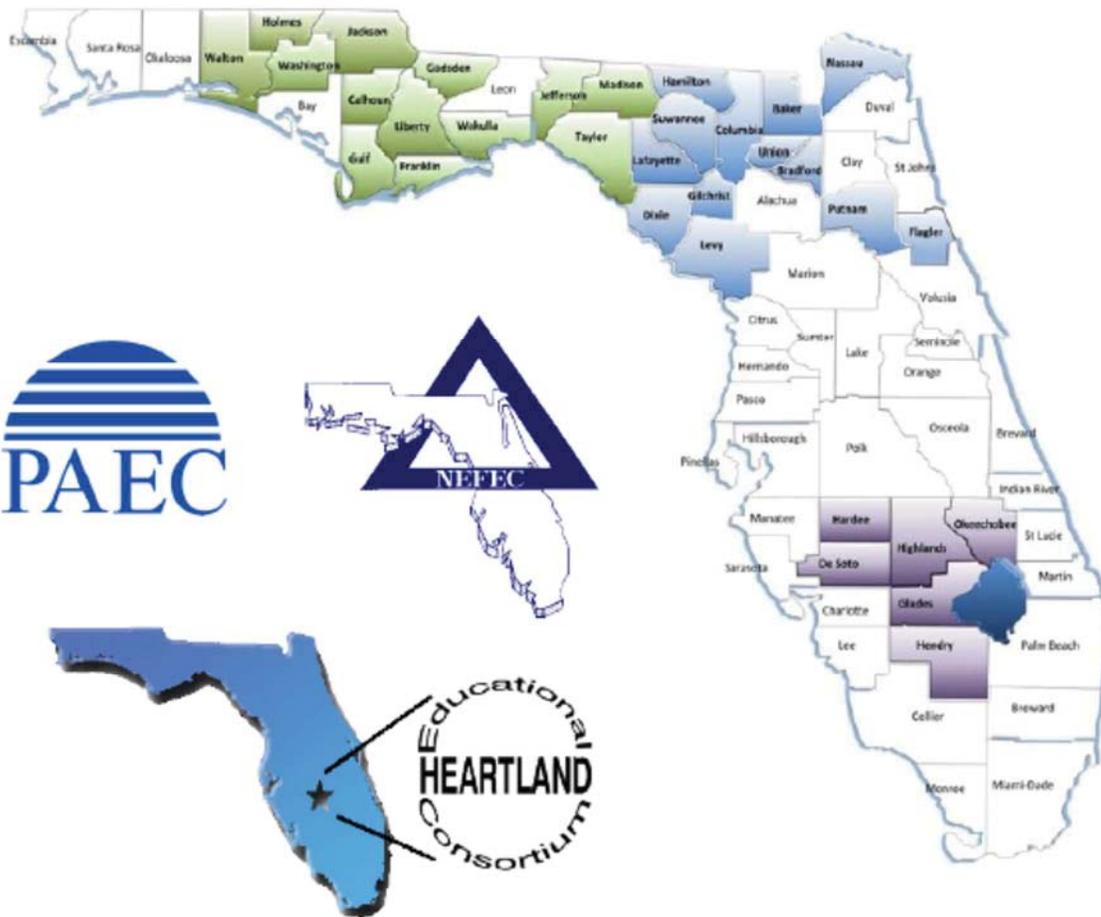
Therefore, we propose that the FCC adopt the same rules as it did in the Health Care Connect program, with no requirement for a pilot program, and allow schools to create consortia to build and manage their own networks where other providers' pricing is not competitive for the needs of the schools and libraries within the consortia.

Yours Truly,

Thomas W. Conner

# GAP REPORT

## RURAL SCHOOL TECHNOLOGY TRANSFORMATION



Florida's 35 small, rural school districts, representing 154,421 students, currently operate at an extreme technological disadvantage with an average of 17 Mbps bandwidth for digital learning reflecting an 83% deficiency in meeting the FLDOE bandwidth standard for Florida schools (See attached graph). This is due to rudimentary broadband availability, funding restraints, and affordability, compared to urban school districts where capacity and competitive pricing are available. Clearly, this digital gap renders extreme difficulties for rural school students to compete academically in a digital environment much less comply with the technology goals and objectives of educational and governmental policy makers.

In an effort to highlight the plight of rural school districts, Florida's three educational consortia, Heartland Educational Consortium, North East Florida Educational Consortium, and Panhandle Area Educational Consortium, developed a case study using Putnam County, Florida, supplemented by data from all 35 small, rural school districts in Florida. Putnam County schools are a reflection of how much deeper the technology issues lie under the surface of mere bandwidth discussions.

For example, not only does the district only have access to 12 Mbps, but also suffers from a 768 Kbps connection from most schools to the Internet...frustrating the district's desires to capitalize on digital learning opportunities.

**Two things are significant:**

A. Based on data provided by Putnam County, 1960's infrastructure is the only option available to connect schools to the central office as evidenced by the fact that their connection to the Internet is 12 Mbps.

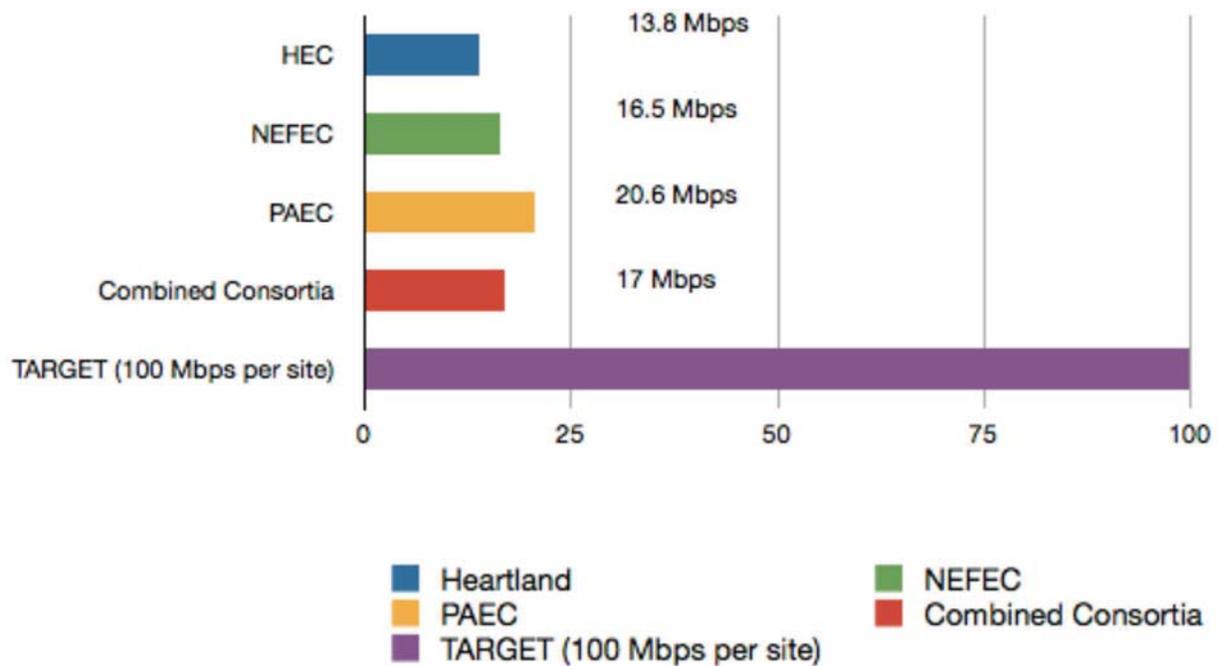
B. The cost to upgrade and modernize the existing connection from each school to the central office is financially impractical.

The estimated cost to run fiber in the State of Florida is \$26,250 per mile based on recent bid awards. In Putnam County, there are 223.71 miles of fiber that would need to be run in order to deliver 100 Mbps to the schools now, with a plan to get to 1 Gbps to the school over 5 years. This line item alone represents a cost of \$5,872,375. While E-rate may pay for a portion of this cost, even at the current discount rate of 80%, the cost to the district would be \$1,174,447 just for the fiber alone. The "internal connections" to then route bandwidth throughout the school is another costly item. This simple analysis gives a clear example of why Florida's rural schools need support to meet the goals of Digital Content, as stated by the Florida DOE.

We invite you to review our *Technology Transformation Plan* for further details. As you will see in the report, Florida's rural school districts exist in a vacuum of technology infrastructure where private companies find no economic advantage to provide services. Florida's three educational consortia propose public/private partnerships to provide educational solutions and industry expertise to close the gap for small, rural schools in our state.

The following graph illustrates the current state of broadband and bandwidth available in the Regional Consortia's 35 small, rural school districts compared to benchmarks established by the Florida Department of Education. As indicated, a widening technology gap exists between professional and political expectations and current technological realities.

## Digital Disparities In Florida's Small, Rural School Districts



The only way the 35 rural districts in the educational consortia can meet the digital readiness standards is by building and managing their own hybrid, business partner supported networks with a supplemental appropriation to these districts.



# Rural School Technology Transformation Request

A Survey of Essential Technology Needs of the 21st Century Small, Rural Classrooms

2014-2015

## Executive Summary

The accompanying documents clearly illustrate the difficulties Florida's rural school districts are facing in meeting the technology needs of their students, teachers and parents. The Regional Consortia are proposing a five-year plan that will establish modern infrastructure that is scalable for future needs and minimizes reoccurring costs. Each Consortium will work with individual participating districts to assist in the design and implementation of an infrastructure plan that:

1. Establishes district owned and maintained fiber connections between schools and the district office. Fiber is necessary to accommodate rapidly increasing bandwidth needs and it is also serviceable for 15-20 years. Of the few rural districts that are currently using fiber connections, most are leasing the fiber with high reoccurring costs (even with e-rate discounts applied). Many rural districts are still using copper connections which are incapable of accommodating even minimal bandwidth standards.
2. Continues to upgrade internal school connections including modern cabling, switches, and wireless access points that will comply with new standards that will be effective in 2015.
3. Leverages public/private partnerships to establish affordable options for fiber connections. Rural districts suffer an extreme cost disadvantage due to geography and population. Each Consortium will work with their participating districts to identify public and private partners that will enable the schools to experience hi-speed connections at sustainable costs.
4. Installs network management equipment and software so that bandwidth is utilized to its fullest potential. The vast majority of rural districts deploy a hub and spoke structure where internet access is shared by the schools from the district office connection. This structure is optimal for network security, staffing and various other reasons. The ability to manage network traffic is vital in a shared structure, especially when bandwidth is at substandard levels, as is the case in Florida's rural districts. Opportunities for implementing Consortium-based cloud technology for digital content will be pursued in this realm as well.

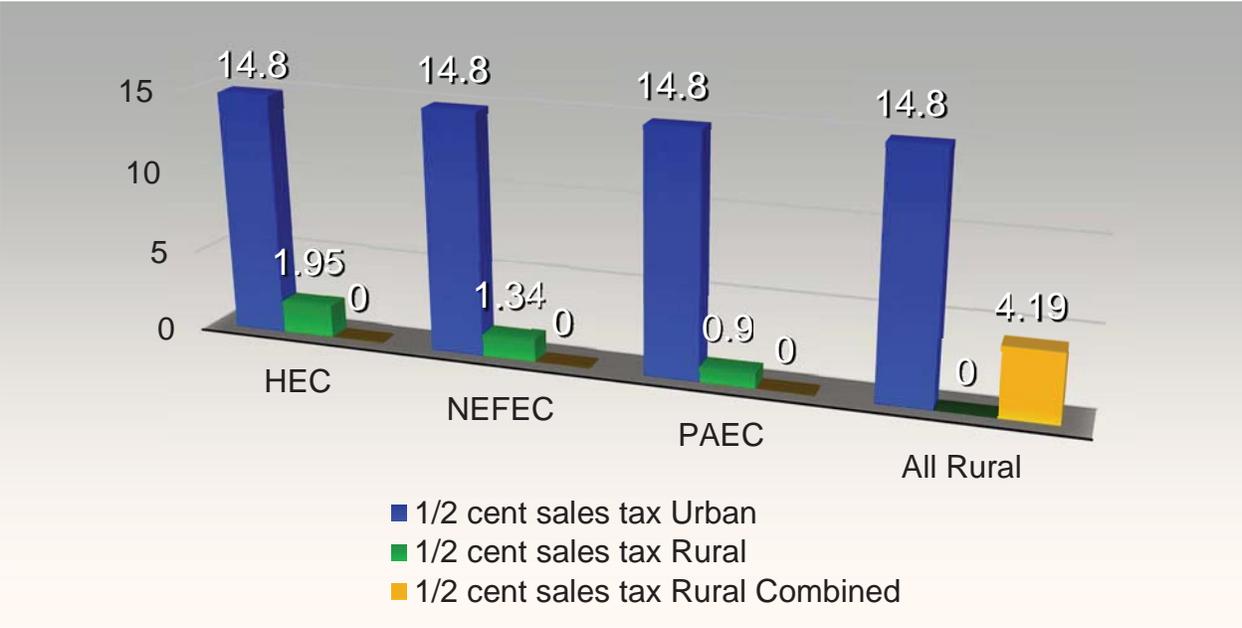
The attached chart proposes \$15 million per year for five years to address the infrastructure needs of 40+ small Florida school districts. The plan would require each member school district to work with their respective Consortium to establish a 5-year infrastructure plan that targets the four areas noted above. Each plan would require scalability, elimination of reoccurring costs where prudent, and partnerships that generate savings and benefits. The Consortia commit to a standing statewide technology infrastructure committee to review plans and maximize the effect the proposed additional resource. Each district will have drastically different scenarios ranging from the distances of schools to central offices for fiber runs, to the age and quality of wiring in individual schools and buildings. Each district has complex issues that will require a detailed strategic long-term plan. Continuing to allocate technology funds on a state-wide FTE basis will leave rural districts further behind. This plan puts Florida's small/rural districts on a sustainable path that prioritizes expenditures so that all schools meet the State's technology goals in a timely and cost effective manner.

## Rural School Technology Transformation 5-Year Implementation

The implementation plan below is designed to allow each Regional Consortia to work with their participating small and rural districts and schools to target specific technology infrastructure needs. Utilizing the Consortia allows for the prioritizing of greatest need, volume purchasing, and improved standardization. The Consortia will work with each individual district to develop a long-term scalable model that reduces reoccurring telecommunication costs by installing district owned and maintained connections (fiber) and supporting network hardware. This model will also continue the upgrade of each school's infrastructure, which includes cabling, switches, wireless access points, and other supporting hardware and software. In addition, the Consortia will advocate on behalf of the districts for expanded E-rate funding/services.

FUNCTION	2014-15 Total Request: \$15 Million for 35 school districts	2015-16 Total Request: \$15 Million for 35 school districts	2016-17 Total Request: \$15 Million for 35 school districts	2017-18 Total Request: \$15 Million for 35 school districts	2018-19 Total Request: \$15 Million for 35 school districts
<b>District Fiber:</b> Provide WAN support (site to site) towards designing and building a district owned network	Prioritize based on greatest need, and coordinate with anchor institutions to share/reduce the cost	Prioritize based on greatest need, and coordinate with anchor institutions to share/reduce the cost	Prioritize based on greatest need, and coordinate with anchor institutions to share/reduce the cost	Prioritize based on greatest need, and coordinate with anchor institutions to share/reduce the cost	Prioritize based on greatest need, and coordinate with anchor institutions to share/reduce the cost
<b>Internal Connections:</b> Local Area Network (LAN) cabling & equipment, installation, and service	Prioritize (based on greatest need) the installation and upgrading of School LANs, leveraging E-rate dollars.	Prioritize (based on greatest need) the installation and upgrading of School LANs, leveraging E-rate dollars.	Prioritize (based on greatest need) the installation and upgrading of School LANs, leveraging E-rate dollars.	Maintain School LANs, and optimize as needed.	Maintain School LANs, and optimize as needed.
<b>Wireless Access</b> to the classroom (IEEE standards)	Fill-in access deficiencies	New standards implementation	New standards implementation	New standards implementation	Maintain wireless access
<b>Internet Access:</b> Standard expectation at 100 Mbps external and 1 Gbp internal based on a 1000 student school (E-rate Priority I)	Maintain existing access and continue to work with Consortia for expanded E-rate opportunities. (i.e. Health Care Connect Program)	As infrastructure improves, increase bandwidth while continuing to work with Consortia for expanded E-rate opportunities.	As infrastructure improves, increase bandwidth while continuing to work with Consortia for expanded E-rate opportunities.	As infrastructure improves, increase bandwidth while continuing to work with Consortia for expanded E-rate opportunities.	Maintain Internet access while continuing to work with Consortia for expanded E-rate opportunities.
<b>Network Management:</b> equipment, software, and service. (e.g. Traffic Optimization)	Upgrade management control equipment, services, and software.	Upgrade management control equipment, services, and software.	Upgrade management control equipment, services, and software.	Maintain previous Network Management equipment and address any Network Management deficiencies	Maintain previous Network Management equipment and address any Network Management deficiencies

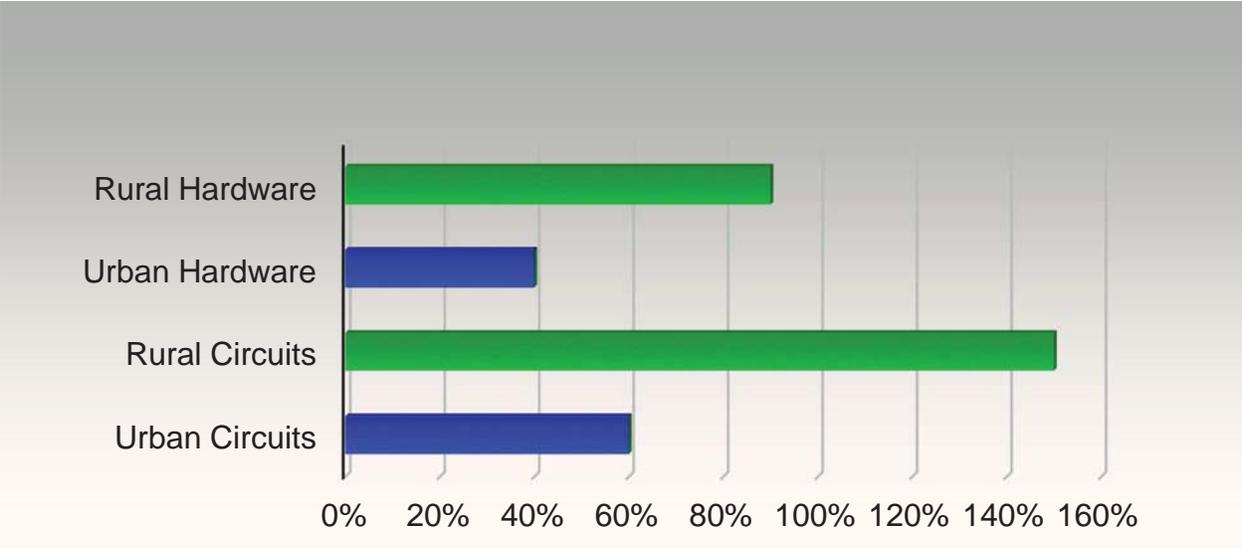
## Rural vs. Urban MSA (Metropolitan Statistical Area) in Millions per Month



This chart shows the difficulty that small rural areas face when trying to generate technology enhancement dollars using a 1/2 cent sales tax in comparison to an Urban MSA with similar FTE. Adding all three consortia MSA's together would generate 4.19 million compared to 14.8 million for the Urban area. \*\*MSA data from State website

12/2012 HEC-Port St. Lucie, NEFEC-Gainesville, PAEC-Panama City\*\*

## Cost Differentials Between Rural and Urban Florida School Districts



Rural counties are disadvantaged due to “price concessions on quantity purchases” allowed per DMS state contracts.

## State of Florida-Educational Consortia's /School Bandwidth Survey

Site / Location      Student Count      Bandwidth      # of Schools Served      Does This Site Connect Back to District Office?

\*\*Data collected late September 2013

Blue indicates shared district office connection limits school connection

Yellow indicates direct connection that is well below required bandwidth capacity

Green indicates the school meets FLD OE bandwidth goals

NEFEC	Baker County	5088	50 Mbps	7	
	Macclenny Elementary School	625	1G Fiber	Yes	
	Pre-K Kindergarten Center	604	1G Fiber	Yes	
	Westside Elementary	627	1G Fiber	Yes	
	Baker County Middle	1106	1G Fiber	Yes	
	Keller Intermediate	786	1G Fiber	Yes	
	Baker County High School	1264	1G Fiber	Yes	
	Baker Adult Education Center	76	1G Fiber	Yes	
NEFEC	<b>Bradford County</b>	<b>3299</b>	<b>45Mbps</b>	<b>7</b>	
	Brooker Elementary	137	50 Mbps	Yes	
	Hampton Elementary	164	50 Mbps	Yes	
	Lawtey Community School	269	50 Mbps	Yes	
	Southside Elementary	645	50 Mbps	Yes	
	Starke Elementary	575	2G Fiber	Yes	
	Bradford Middle School	710	1G Fiber	Yes	
	Bradford High School	799	2G Fiber	Yes	
PAEC	<b>Calhoun County</b>	<b>2238</b>	<b>100Mbps</b>	<b>5</b>	
	Altha	563	10Mbps	Yes	
	Blountstown El	701	10Mbps	Yes	
	Blountstown Middle	307	10Mbps	Yes	
	Blountstown High	398	60Mbps	Yes	
	Carr El and Middle	269	10Mbps	Yes	
NEFEC	<b>Columbia County</b>	<b>10195</b>	<b>65Mbps/DAN200Mbps</b>	<b>17</b>	
	Columbia City Elementary	682	20Mbps	Yes	
	Eastside Elementary	552	10Mbps	Yes	
	Melrose Park Elementary	470	10Mbps	Yes	
	Niblack Elementary	333	10Mbps	Yes	
	Pinemount Elementary	439	10Mbps	Yes	
	Five Points Elementary	457	10Mbps	Yes	
	Fort White Elementary	684	20Mbps	Yes	
	Summers Elementary	710	20Mbps	Yes	
	Westside Elementary	703	20Mbps	Yes	
	Lake City Middle School	1082	20Mbps	Yes	

### State of Florida-Educational Consortia's /School Bandwidth Survey

Site / Location	Student Count	Bandwidth	# of Schools Served	Does This Site Connect Back to District Office?
Challenge Learning Center	98	10Mbps		Yes
Chrysalis Center	35	Fiber to CO		Yes
Fort White Middle School	534	20Mbps		Yes
Richardson Middle School	549	20Mbps		Yes
Columbia Adult Education Center		Fiber to CO		Yes
Columbia High School	1691	20Mbps		Yes
Fort White High School	1176	20Mbps		Yes
<b>DeSoto County</b>	<b>5033</b>	<b>100 Mbps</b>	<b>9</b>	
DeSoto County High School	1175	100 Mbps		Yes
DeSoto County Middle School	1041	100 Mbps		Yes
Memorial Elementary School	883	50 Mbps		Yes
Nocatee Elementary School	589	50 Mbps		Yes
West Elementary School	889	100 Mbps		Yes
DeSoto Early Education Center	111	10 Mbps		Yes
DeSoto Connections	22	10 Mbps		Yes
Family Service Center		10 Mbps		Yes
Spring Lake Youth Academy	21	10 Mbps		Yes
<b>Dixie County</b>	<b>2095</b>	<b>200 Mbps</b>	<b>5</b>	
Anderson Elementary	545	300Mbps		Yes
Old Town Elementary	547	300Mbps		Yes
Ruth Raines Middle School	443	1GFiber/300Mbps		Yes
Dixie County High School	502	1G Fiber		Yes
Dixie County Adult Education	13	100M Fiber		Yes
Dixie County Business Services	0	300Mbps		Yes
Kindler Cub School, Inc.	45			No
<b>Flagler County</b>	<b>12520</b>	<b>500 Mbps</b>	<b>14</b>	
Belle Terre Elementary	1397	1 Gig		Yes
Bunnell Elementary	1222	1 Gig		Yes
Old Kings Elementary	1133	1 Gig		Yes
Rymfire Elementary	1311	1 Gig		Yes
Wadsworth Elementary	917	1 Gig		Yes
Buddy Taylor Middle School	974	1 Gig		Yes
Indian Trails Middle School	872	1 Gig		Yes
Everest Alternative		1 Gig		Yes

\*\*Data collected late September 2013

## State of Florida-Educational Consortia's /School Bandwidth Survey

Site / Location	Student Count	Bandwidth	# of Schools Served	Does This Site Connect Back to District Office?
Matanzas High School	1566	1 Gig		Yes
Flagler Palm Coast High School	2315	1 Gig		Yes
Imagine School at Town Center	813	1 Gig		Yes
Heritage Academy	157	1 Gig		Yes
Palm Harbor Academy	103	1 Gig		Yes
Pathway Academy	71	1 Gig		Yes
<b>Florida School for the Deaf &amp; the Blind</b>	<b>614</b>	<b>100 Mbps</b>	<b>7</b>	
FSDB Deaf Elementary School	115	1 Gig		Yes
FSDB Deaf Middle School	89	1 Gig		Yes
FSDB Deaf High School	165	1 Gig		Yes
FSDB Blind Elementary School	59	1 Gig		Yes
FSDB Blind Middle School	42	1 Gig		Yes
FSDB Blind High School	101	1 Gig		Yes
Career Education & Transition	43	1 Gig		Yes
<b>F.A.M.U DRS</b>	<b>490</b>	<b>1.25Gbps</b>	<b>1</b>	
<b>Franklin County</b>	<b>1015</b>	<b>9 Mbps</b>	<b>2</b>	
Franklin County Schools - main campus	1000	9 Mbps		Yes
Franklin County Learning Center	15	< 10 Mbps		Yes
<b>Gadsden</b>	<b>6017</b>	<b>106Mbps</b>	<b>15</b>	
Carter Parramore Academy	169	1 Gbps		Yes
Chattahoochee Elementary School	178	100 Mbps		Yes
Crossroad Academy Charter School	342	1 Gbps		Yes
East Gadsden High School	833	100 Mbps		Yes
Gadsden Elementary Magnet School	202	1Gbps		Yes
Gadsden Technical Institute	180	1Gbps		Yes
George W Munroe Elementary School	666	1Gbps		Yes
Greensboro Elementary School	414	1Gbps		Yes
Gretna Elementary School	357	1Gbps		Yes
Havana Elementary School	521	100 Mbps		Yes
Havana Middle School	186	100 Mbps		Yes
James A Shanks Middle School	562	1 Gbps		Yes
St John Elementary School	286	1 Gbps		Yes
Stewart Street Elementary School	646	1 Gbps		Yes

\*\*Data collected late September 2013

**State of Florida-Educational Consortia's /School Bandwidth Survey**

	Site / Location	Student Count	Bandwidth	# of Schools Served	Does This Site Connect Back to District Office?
	West Gadsden High School	475	1 Gbps		Yes
NEFEC	<b>Gilchrist County</b>	<b>2662</b>	<b>50 Mbps</b>	<b>4</b>	
	Trenton Elementary School	719	1G Fiber		Yes
	Bell Elementary School	529	150 Mbps		Yes
	Bell Middle/High School	708	150 Mbps		Yes
	Trenton Middle/High School	706	100 Mbps		Yes
HEC	<b>Glades County</b>	<b>1588</b>	<b>50 Mbps</b>	<b>3</b>	
	West Glades School	466	1.5 Mbps		Yes
	Moore Haven JS High School	339	1G/100Mbps		No
	Moore Haven Elementary	416	100Mbps		No
PAEC	<b>Gulf County</b>	<b>1870</b>	<b>18Mbps</b>	<b>4</b>	
	Port St. Joe Elementary School	586	100 Mbps		Yes
	Port St. Joe Jr./High School	506	100 Mbps		Yes
	Wawahitchka Elementary School	416	100 Mbps		Yes
	Wawahitchka Jr./High School	362	100 Mbps		Yes
NEFEC	<b>Hamilton County</b>	<b>1556</b>	<b>100 Mbps</b>	<b>5</b>	
	Central Hamilton Elementary	318	100 Mbps		Yes
	North Hamilton Elementary	414	10 Mbps		Yes
	South Hamilton Elementary	188	10 Mbps		Yes
	Greenwood School	40	5 Mbps		Yes
	Hamilton High School	596	20 Mbps		Yes
HEC	<b>Hardee County</b>	<b>5132</b>	<b>200 Mbps</b>	<b>8</b>	
	Bowling Green Elementary School	448	20 Mbps		Yes
	Hardee County Jr. High School	1170	50 Mbps		Yes
	Hardee County Sr. High School	1301	50 Mbps		Yes
	Hilltop Elementary School	343	20 Mbps		Yes
	North Wauchula Elementary School	509	20 Mbps		Yes
	Pioneer Career Academy	14	20 Mbps		Yes
	Wauchula Elementary School	725	20 Mbps		Yes
	Zolfo Springs Elementary	557	20 Mbps		Yes

\*\*Data collected late September 2013

**State of Florida-Educational Consortia's /School Bandwidth Survey**

Site / Location	Student Count	Bandwidth	# of Schools Served	Does This Site Connect Back to District Office?
<b>Hendry County</b>	<b>6801</b>	<b>100 Mbps</b>	<b>10</b>	
LaBelle High School	1027	100 Mbps		Yes
LaBelle Middle School	709	100 Mbps		Yes
LaBelle Elementary School	532	100 Mbps		Yes
Uphergrove Elementary	401	100 Mbps		Yes
Country Oaks Elementary	803	100 Mbps		Yes
Clewiston High School	866	100 Mbps		Yes
Clewiston Middle	717	100 Mbps		Yes
Westside Elementary	557	100 Mbps		Yes
Eastside Elementary	562	100 Mbps		Yes
Central Elementary	553	100 Mbps		Yes
<b>Highlands County</b>	<b>11941</b>	<b>100 Mbps</b>	<b>19</b>	
Avon Park Elementary	572	100 Mbps		Yes
Avon Park High School	947	1000 Mbps		Yes
Avon Park Middle School	700	100 Mbps		Yes
Park Elementary	555	100 Mbps		Yes
Cracker Trail Elementary	595	100 Mbps		Yes
Fred Wild Elementary	535	100 Mbps		Yes
Hill-Gustat Middle School	739	100 Mbps		Yes
Kindergarten Learning Center	377	100 Mbps		Yes
Lake County Elementary	559	100 Mbps		Yes
Lake Placid Elementary	824	100 Mbps		Yes
Lake Placid High School	734	1000 Mbps		Yes
Lake Placid Middle School	650	100 Mbps		Yes
Memorial Elementary	627	100 Mbps		Yes
Sebring High School	1612	1000 Mbps		Yes
Sebring Middle School	712	100 Mbps		Yes
Sun 'N Lake Elementary	727	100 Mbps		Yes
Woodlawn Elementary	535	100 Mbps		Yes
Youth Care Academy	11	20 Mbps		No
Career Academy		20 Mbps		No

\*\*Data collected late September 2013



**State of Florida-Educational Consortia's /School Bandwidth Survey**

	Site / Location	Student Count	Bandwidth	# of Schools Served	Does This Site Connect Back to District Office?
INEFEC	<b>Levy County</b>	<b>6087</b>	<b>100 Mbps</b>	<b>12</b>	
	Bronson Elementary	585	10Mbps		Yes
	Bronson Middle/High School	580	25Mbps		Yes
	Cedar Key School	234	15Mbps		Yes
	Chiefland Elementary School	833	10Mbps		Yes
	Chiefland Middle School	332	15Mbps		Yes
	Chiefland High School	460	25Mbps		Yes
	Hilltop Alternative School	135	30 Mbpsx		Yes
	Joyce Bullock Elementary	596	10Mbps		Yes
	Nature Coast Middle School		10Mbps		Yes
	Williston Elementary School	485	10Mbps		Yes
	Williston Middle School	436	15Mbps		Yes
	Williston High School	590	25Mbps		Yes
	Whispering Winds Charter School		10Mbps		Yes
Yankeetown School	219	10Mbps		Yes	
PAEC	<b>Liberty County</b>	<b>1298</b>	<b>200 Mbps</b>	<b>5</b>	
	Bristol Youth Academy	38	10Mbps		Yes
	Horizons	15	200Mbps		Yes
	Hosford Elementary & Jr High	320	100Mbps		Yes
	Liberty County High School	340	100Mbps		Yes
	W. R. Tolar K-8	585	100Mbps		Yes
	<b>Madison County</b>	<b>2480</b>	<b>50 Mbps</b>	<b>6</b>	
	Greenville Elementary	160	10 Mbps		Yes
	Lee Elementary	250	10 Mbps		Yes
	Pinetta Elementary	211	10 Mbps		Yes
Excel School	39	1Gbps		Yes	
Madison Central School	1200	1Gbps		Yes	
Madison High School	620	1 Gbps		Yes	
INEFEC	<b>Nassau County School District</b>	<b>11746</b>	<b>200 Mbps</b>	<b>15</b>	
	Bryceville Elementary	218	40 Mbps		Yes
	Callahan Elementary	585	40 Mbps		Yes
	Callahan Intermediate	621	40 Mbps		Yes

\*\*Data collected late September 2013

**State of Florida-Educational Consortia's /School Bandwidth Survey**

Site / Location	Student Count	Bandwidth	# of Schools Served	Does This Site Connect Back to District Office?
Callahan Middle	797	100 Mbps		Yes
Emma Love Hardee Elementary	617	100 Mbps		Yes
Fernandina Beach High	844	100 Mbps		Yes
Fernandina Beach Middle	657	100 Mbps		Yes
Hilliard Elementary	739	100 Mbps		Yes
Hilliard Middle/Senior High	769	100 Mbps		Yes
Southside Elementary	605	40 Mbps		Yes
West Nassau High	1011	100 Mbps		Yes
Yulee Elementary	787	100 Mbps		Yes
Yulee Middle	1023	100 Mbps		Yes
Yulee High	850	100 Mbps		Yes
Yulee Primary	858	40 Mbps		Yes
<b>Okeechobee County</b>	<b>6525</b>	<b>120 Mbps</b>	<b>8</b>	
Central Elementary School	575	1 Gig		Yes
Everglades Elementary School	664	1 Gig		Yes
Okeechobee Freshman Campus	473	1 Gig		Yes
Okeechobee High School	1204	1 Gig		Yes
Osceola Middle School	907	1 Gig		Yes
Seminole Elementary School	625	1 Gig		Yes
South Elementary School	461	1 Gig		Yes
Yearling Middle School	697	1 Gig		Yes
<b>PK Yonge DRS</b>	<b>1141</b>	<b>1000 Mbps</b>	<b>1</b>	
PK Yonge DRS	1141	1000 Mbps		Yes
<b>Putnam County</b>	<b>11270</b>	<b>12 Mbps</b>	<b>22</b>	
CL Overturf 6th Grade Center (Beasley)	768 K			No
Browning Pierce Elementary	796	768 K		No
Children's Reading Center Charter	768 K			No
EH Miller Elementary	105	768 K		No
Kelly Smith Elementary	792	768 K		No
Interlachen Elementary	793	768 K		No
James A. Long Elementary	554	768 K		No
Mellon Elementary	422	768 K		No
Melrose Elementary	348	3 Mbps		No
Middleton-Burney Elementary	713	768 K		No

\*\*Data collected late September 2013

**State of Florida-Educational Consortia's /School Bandwidth Survey**

Site / Location	Student Count	Bandwidth	# of Schools Served	Does This Site Connect Back to District Office?
Mosley Elementary	467	768 K		No
Ochvilla Elementary School	476	3 Mbps		No
River Breeze Elementary	0	768 K		No
C.H. Price Middle School	533	768 K		No
Jenkins Middle School	773	768 K		No
Miller Intermediate School	403	768 K		No
Putnam Academy of A & S		768 K		No
Q.I. Roberts Middle School	286	768 K		No
Crescent City Jr./Sr. High School	861	768 K		No
Interlachen High School	763	768 K		No
Palatka High School	1336	768 K		No
<b>Suwannee County</b>	<b>6121</b>	<b>200 Mbps</b>	<b>8</b>	
Branford Elementary	680	200 Mbps		yes
Branford High School	696	200 Mbps		yes
Suwannee Primary School	900	1 Gig		yes
Suwannee Elementary	711	1 Gig		yes
Suwannee Intermediate School	641	1 Gig		yes
Suwannee Middle School	1048	1 Gig		yes
Suwannee High School	1232	1 Gig		yes
Technical Center		1 Gig		yes
<b>Taylor County</b>	<b>3080</b>	<b>160 Mbps</b>	<b>7</b>	
Perry Primary	680	< 10 Mbps		yes
Steinhatchee School	90	10 Mbps		yes
Taylor Elementary	650	< 10 Mbps		yes
Taylor Middle	640	10 Mbps		yes
Taylor High School	630	10 Mbps		yes
Taylor Technical	70	< 10 Mbps		yes
Taylor CDC	320	< 10 Mbps		Yes
<b>Wakulla County</b>	<b>5068</b>	<b>300 Mbps</b>	<b>9</b>	
Crawfordville Elementary School	583	50 Mbps		yes
Medart Elementary School	511	50 Mbps		yes
Riversink Elementary School	481	50 Mbps		yes
Riversprings Middle School	576	50 Mbps		yes
Shadeville Elementary School	595	50 Mbps		yes

\*\*Data collected late September 2013

**State of Florida-Educational Consortia's /School Bandwidth Survey**

Site / Location	Student Count	Bandwidth	# of Schools Served	Does This Site Connect Back to District Office?
Sopchoppy	154	50 Mbps		yes
Wakulla High School	1269	150 Mbps		yes
Wakulla Middle School	624	50 Mbps		yes
WEC District Pre-K Program	275	20 Mbps		yes
<b>Walton County</b>	<b>7791</b>	<b>200 Mbps</b>	<b>15</b>	
Bay Elementary School	322	1GB		yes
Emerald Coast Middle School	678	1GB		yes
Freepart Elementary School	600	1GB		yes
Freepart High School	344	1GB		yes
Freepart Middle School	436	1GB		yes
Maude Saunders Elementary School	649	1GB		yes
Mossy Head School	319	1GB		yes
Paxton Elem-High School	667	1GB		yes
South Walton High School	554	1GB		yes
Van R. Butler Elementary	943	1GB		yes
Walton Career Development Center	140	1GB		yes
Walton High School	675	1GB		yes
Walton Middle School	687	1GB		yes
West DeFuniak Elementary School	648	1GB		yes
WISE Center	129	1GB		yes
<b>Washington County</b>	<b>3349</b>	<b>200 Mbps</b>	<b>8</b>	
Chipley High School	566	30 Mbps		yes
Roulhac Middle School	584	30 Mbps		yes
Kate Smith Elementary School	779	30 Mbps		yes
Vernon High School	400	30 Mbps		yes
Vernon Middle School	396	30 Mbps		yes
Vernon Elementary School	523	30 Mbps		yes
WISE	55	100 Mbps		Yes
Okeechobee Youth Development Center	46	20 Mbps		No
<b>Union County</b>	<b>2423</b>	<b>100 Mbps</b>	<b>3</b>	
Lake Butler Elementary	889	1G Fiber		Yes
Lake Butler Middle School	712	1G Fiber		Yes
Union County High School	597	1G Fiber		Yes

\*\*Data collected late September 2013

October 15, 2013

## **Findings for PAEC, NEFEC and Heartland Educational Consortium Rural Schools Technology Transformation Plan**

### Overview:

ConnectEducation, NEFEC, PAEC and Heartland Educational Consortium worked together as a team to develop the findings in this report. All School districts in the three Consortia were contacted and consulted about the data contained herein.

Our question when we began was “Where do the districts, and the schools and associated campuses within them stand as it relates to the State’s objective for 100 Mbps per school during calendar year 2014?”

Follow up questions resulted from this exercise. Some of them came from the districts, some from the Consortia, some from the DOE and some from senators and their staff. This is a summary of some of the questions that arose from our collaborative exercise:

1. Why do the districts need 100 Mbps per school for bandwidth?
2. What does 100 Mbps of bandwidth cost?
3. How ready are the schools to handle that level of bandwidth with the current “internal” infrastructure that they already have?
4. What did the districts do with the \$6 million dollar appropriation given to them last year?
5. Who is controlling the cost of bandwidth that is being quoted to the schools?
6. How involved are vendors in influencing purchasing decisions at the district, the school and the state level?
7. What is the most cost effective mechanism to get 100 Mbps to each school?
8. Where did the 100 Mbps mark even originate from?
9. Is 100 Mbps of bandwidth enough?
10. What would be “enough” in five years?

This report will attempt to answer many of these questions, but may leave gaps or lead to even more questions. However, throughout the exercise many answers were given, considered and even validated.

Therefore, we respectfully submit this report as findings to solve to a number of these questions, the costs associated with the answers and to begin developing a methodology to go forward with a long range strategy to get schools the bandwidth and technology readiness required of them in what we all feel is the most cost effective manner.

Everyone polled agreed that the schools need more bandwidth for testing and upcoming digital learning initiatives as already set forth by State mandates. In addition, there are possible upcoming Federal mandates that are being considered.

Methodology:

Our methodology to determine where each school stood in terms of their bandwidth TO THE INTERNET was as follows:

Each district was polled about their internal connections between schools, and how and where these internal connections led out to the “public” Internet. We used the official E-Rate contracts to measure our findings. We did not use speed testing or any other metric but the **established and published E-Rate contract** to report back our findings.

We used DMS contract rates for the cost of bandwidth AND we used the state’s official AT&T contract rates to establish the rates that the schools within the districts pay for bandwidth.

We polled two outside Carriers within the State to get commercial rates for the same bandwidth to get our baseline commercial rates.

We used resources from PAEC, NEFEC and Heartland to do all of the research for this project with the exception of polling the two outside carriers. ConnectEducation did the research for the commercially available rates established as the baseline for our discussion.

We got the stated bandwidth mark of 100 Mbps per school from Mr. Ron Nieto, Deputy Commissioner of Innovation for the Florida Department of Education in September, 2013.

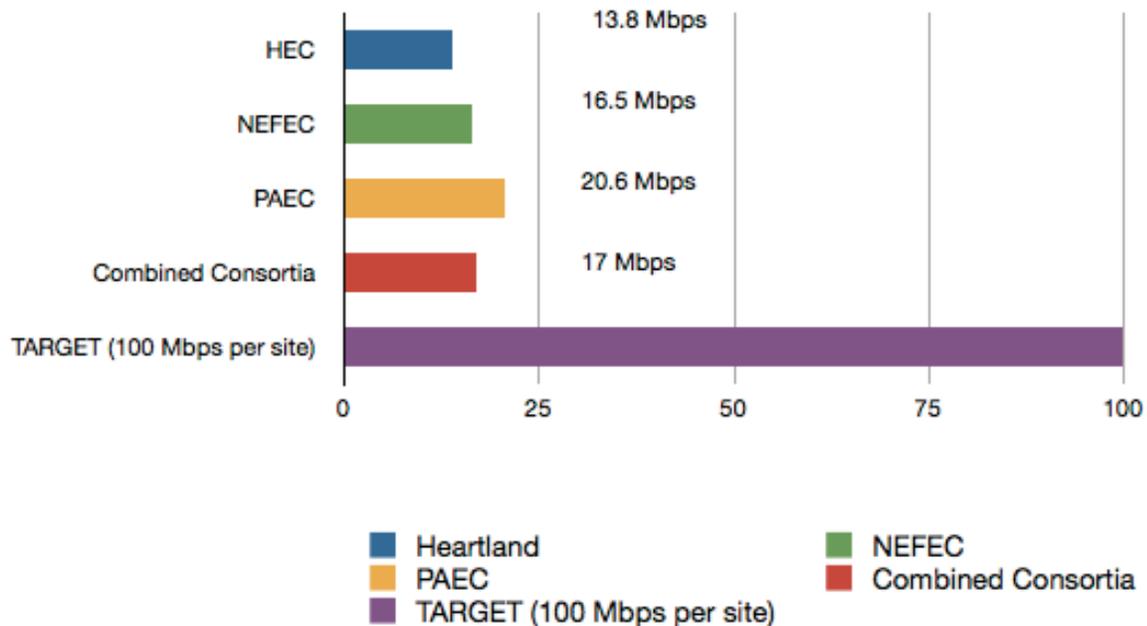
Findings:

Heartland Educational Consortium members are at 13.8 Mbps per school

NEFEC members are at 16.5 Mbps per school

PAEC members are at 20.6 Mbps per school

Combined, the three Consortia are at 17 Mbps per school



This represents a combined DEFICIT of 83% based on the DOE’s stated goal of 100 Mbps per school.

These are averages for all schools within the Consortia. However, it is noteworthy to mention that these numbers DO NOT reflect the possibility that 17% of schools have 100 Mbps per school.

Unfortunately, this average is across the board on all schools with the exception of four schools that do have at least 100 Mbps to the Internet out of the 289-school group. Indeed, this is a very critical part of our findings.

What we also know is that many of the schools are potentially in areas of the state where only copper is available to give bandwidth to the building. This is evidenced by the number of connections at or below 50 Mbps to the Internet.

The significance of this is that there may be a situation where the economics of the rural areas simply do not warrant the type of capital investment by the Carrier to put fiber into these areas.

### Why Fiber vs. Copper?

Fiber infrastructure is the preferred method for delivering high speed broadband for many reasons.

Copper infrastructure cannot deliver beyond 45 Mbps due to its very nature. That's why in more urbanized markets and newly built markets, fiber is used. By definition, this tells us that many of the schools in the areas that we polled have very old physical infrastructure in place.

Fiber is preferable because it lasts for a very long time (the Federal amortization rate for fiber loans per the USDA RUS is 17 years or more). It is also scalable. That is, as the bandwidth requirements in an area increase, more bandwidth can be shot through fiber (which is glass) than can be through copper without tearing up the infrastructure and replacing it.

Wireless is also not a good option. While wireless is a cheap short term "fix", wireless gear must be upgraded and replaced every 4 – 6 years per industry standard. Wireless technology simply moves too quickly to warrant not replacing it every 4 – 6 years.

Fiber infrastructure must be maintained. However, if there is enough fiber put into place in the beginning, electronics changes at specific points in the network can be made when necessary without having to replace the fiber itself. This makes the economics of fiber very desirable and inexpensive to maintain, which is why it is the preferred industry standard.

Therefore, we came to the conclusion that the schools should push for fiber to the building as their optimal solution.

### Why Not Carriers?

It is unreasonable to expect a Carrier to shoulder the full expense of bringing fiber to any rural area, no matter what state you are in. This is specifically due to the cost to lay fiber, \$26,250 or higher per mile depending on conditions, vs. the return on investment for the use of the fiber in the area.

Carriers must responsibly use their investment funds for areas that bring them the best return on investment. Rural areas typically do not give the kinds of ROI that a Carrier needs to lay vast amounts of fiber. Typically, a Carrier looks for at least 25 “homes per mile” passed in order to even consider a fiber build. A rural area just cannot sustain the revenue to justify spending the money. It’s not economically feasible.

#### Our Offered Solution, Hybrid Networks:

A Hybrid Network is a term used in recent legislation surrounding the new Connect Health Care fund that was the former Rural Hospitals fund, managed by the Universal Services Fund. This is also the funding source for E-Rate.

E-Rate rules are now under review and open comments suggest that the Hybrid Network approach may be the one that gets supported going forward.

A Hybrid Network is one that is developed in public-private partnership by states, consortia or any other public entity in conjunction with a private entity (a Carrier) to get the fiber out to areas where there is no other economic means to do so.

In essence it allows the public entity to lay the fiber and build the pieces of the network that are economically undesirable, and then to partner with existing network providers in areas where they already have network in place. This is not a new concept. Public-private partnerships have been instrumental in creating the mechanism to get infrastructure, services and other solutions to hard to reach populations through the U.S. for years.

Public-private partnerships create incremental revenue opportunities for the private enterprises involved, while offsetting some of the costs by using public funding in order to meet the needs of the communities they serve.

Our findings indicate that a Hybrid Network approach may be the best way to get Florida’s rural schools the bandwidth that they need while reducing the cost to the schools, reducing the cost to the state, and yet opening up these hard to reach markets to Internet providers, without having the provider shoulder the full burden of the costs to lay the network.

There are a number of Carriers that have vast amounts of fiber that run through some of your rural areas within the Consortia. Our proposal is to work with them to identify where they have assets and to “back fill” using public dollars so that they can get to your schools.

#### Additional Benefits in Cost Savings:

There are additional benefits to approaching the needs identified in Florida’s rural schools using this method.

According to your Department of Management Services, your schools may purchase bandwidth at \$37.74 per Mbps. Your DMS AT&T contract quotes \$50 per Mbps to your schools.

If we take an average of \$40 per Mbps as an assumed rate for service, each school would pay \$4,000 per month for bandwidth for 100 Mbps, or \$48,000 per year.

For all three Consortia, if we used 289 schools and associated school related buildings as our baseline, your three Consortia would be paying \$13,872,000 per year for 100 Mbps to each school. If, in three years, it’s determined that each school must have 300 Mbps due to increased use of technology for digital learning, dual enrollment, testing and related activities, the cost would rise to be \$41,616,000 per year.

Currently, there is a big push at the Federal level to get each school to 1 Gbps (1,000 Mbps) per school within a five-year period. If you were to pay the contracted rate, at today's pricing AND you had the fiber in the ground to get to each school, the schools would be collectively paying \$138,720,000 per year for bandwidth alone!

Clearly this is an unsustainable model within your rural districts, based on tax base, population density and number of residents.

We decided to ask two Carriers in the state what they charge a regular commercial customer for bandwidth. We got two answers that were congruent with one another. The answer is \$12 per Mbps where they have fiber. The key phrase in this sentence is "where they have fiber".

If your rural schools were to have fiber to get to the "public" Internet and be allowed to put their contracts out to bid with multiple providers, they could get Internet bandwidth at \$12 per Mbps.

So, let's do a quick cost analysis if you could access the "public" Internet for 289 schools in the three Consortia:

Year	Bandwidth	Current Rates	Commercial Rates	Savings
Year 1	100 Mbps	\$13,872,000	\$4,161,600	\$9,710,400
Year 3	300 Mbps	\$41,616,000	\$12,484,800	\$29,131,200
Year 5	1 Gbps (1,000 Mbps)	\$138,720,000	\$41,616,000	\$97,104,000

Please remember that these savings are on RECURRING costs. The State of Florida simply will not be able to afford to pay for these types of recurring costs should the State have to increase the bandwidth to each school beyond a certain point.

Our Proposal:

Capitalize the cost. Provide the schools the money through which COLLECTIVELY they can build where they need to so that they can use their buying power through the Consortia to push down the cost of bandwidth by accessing the "public" Internet.

The "Rural Schools Technology Transformation Plan", was developed by the three Consortia, and represents much more than a fiber build. It is inclusive of switches, routers, recurring network management fees for the larger network, curricula, teacher training, "cloud" computing solutions, security and more.

The cost per school would be an appropriation of \$264,255 per school, according to their plan. At this point in time, districts that are not part of a Consortium may elect to participate in this program so that the solution can be scaled up to accommodate them.

However, this funding must be held together and managed by the Consortia for the purposes of the greater network and not be given directly to each school or district. This project would entail long term planning for a long-term solution to a looming and large cost to the State.

It would not be inclusive of the annual funding that the schools receive in order to operate on a daily basis. Again, it is an appropriation request for a long-term solution to a long term problem that would enable rural schools districts to catch up and close the gap.

### Why the three Consortia?

There have been many private and public operators that have come into rural Florida and failed. Even recently, we saw well-intended initiatives, backed with local support, struggle and succumb to the overwhelming circumstances associated with this problem.

Florida's three Educational Consortia are in a unique position to tackle this effort and succeed. With over 50 years of reputation on the line, and 30 years of management under their belt with their successful Self-Insured Risk Management programs, the Consortia have a proven track record of working with their schools.

There is no one vendor that can address this problem. And now it has become mission critical to the survival of Florida's rural school systems to level the playing field and allow each child an equal opportunity to participate in today's technology driven economy.

The Consortia take this responsibility very seriously.

Florida's three Consortia would not be willing to undertake this proposition if they did not feel that a) they had to and, b) they are uniquely qualified to do so, and c) have the governing body to manage such a task.

The three Consortia recently stood hand in hand and worked nights and weekends to develop the data that you have read in this report. They have stood hand in hand in socializing this project with their members and critical leaders at the regional and state level.

They will stand united and work with all parties to create the processes, systems, policies and procedures to bring this project to fruition.

ConnectEducation has been involved only to assist them in developing these concepts. This is a Consortia objective and not driven by vendor influences.

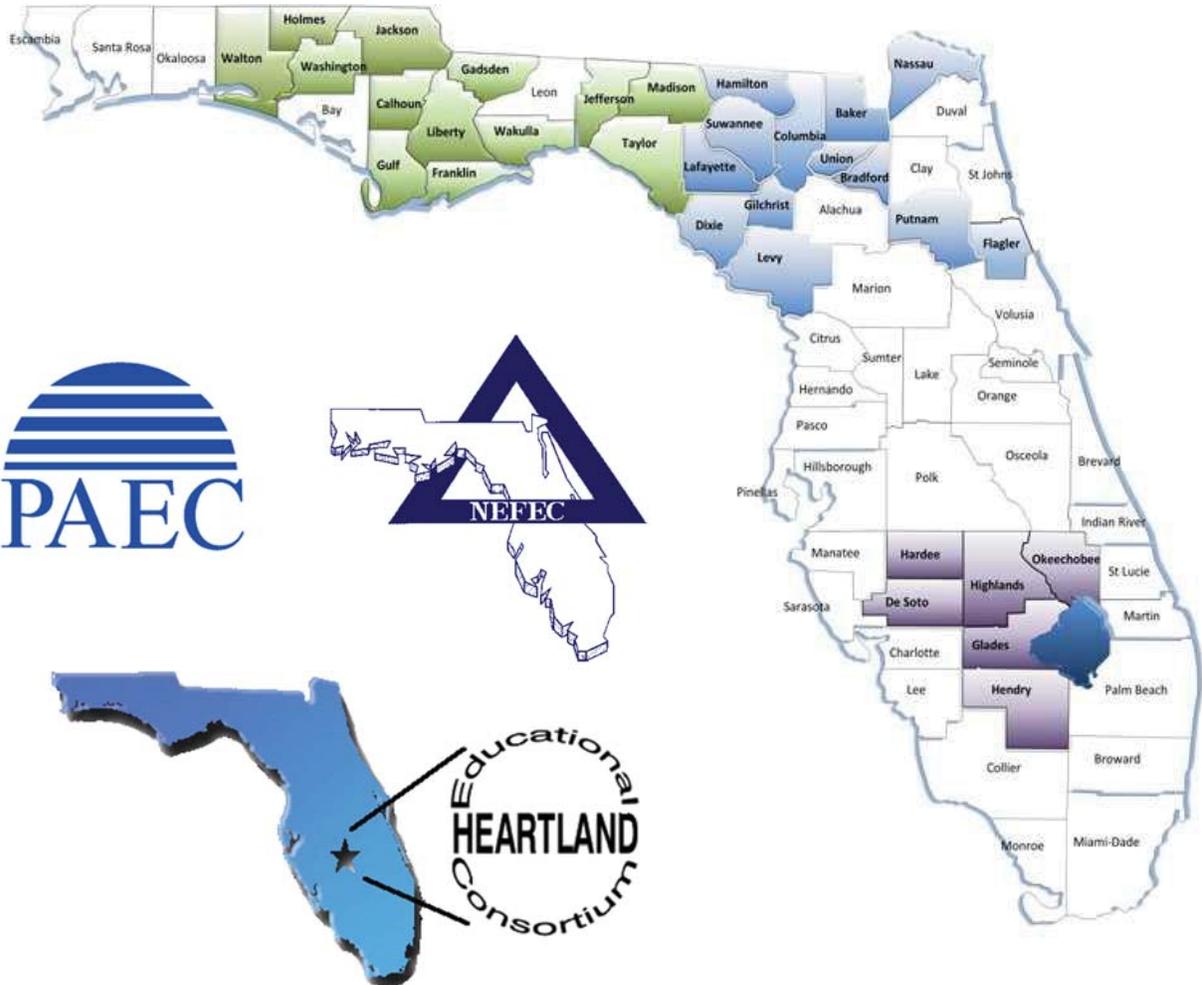
At this point in time, there seems no better qualified candidate than the three Consortia to develop the long range plan, and execute it to the specifications stated in this report.

Respectfully submitted,

Liz Zucco  
Managing Partner  
ConnectEducation, LLC

# RURAL SCHOOL TECHNOLOGY TRANSFORMATION REQUEST

Providing Direct Support to Achieve Digital Learning Readiness



Historically, small, rural school districts have been an innovative leader in developing and implementing unique solutions to teaching and learning challenges that face public education. Now that we are into the 21<sup>st</sup> century, we are faced with the challenge of bringing state-of-the-art digital technology to Florida's rural schools with increasing technology costs.

*To strengthen competitiveness and create jobs of the future, we need to make sure that students are digitally literate and have the skills and means to fully participate in a digital economy.*

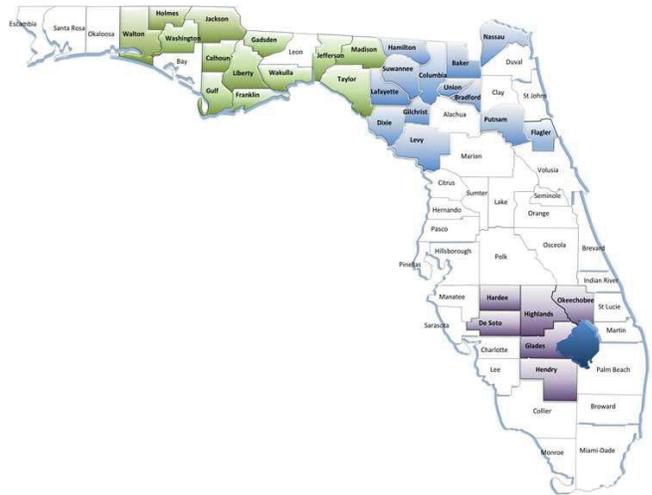
# RURAL SCHOOL TECHNOLOGY

A PATHWAY FOR MEETING THE TECHNOLOGY NEEDS OF

## Rural Partnership

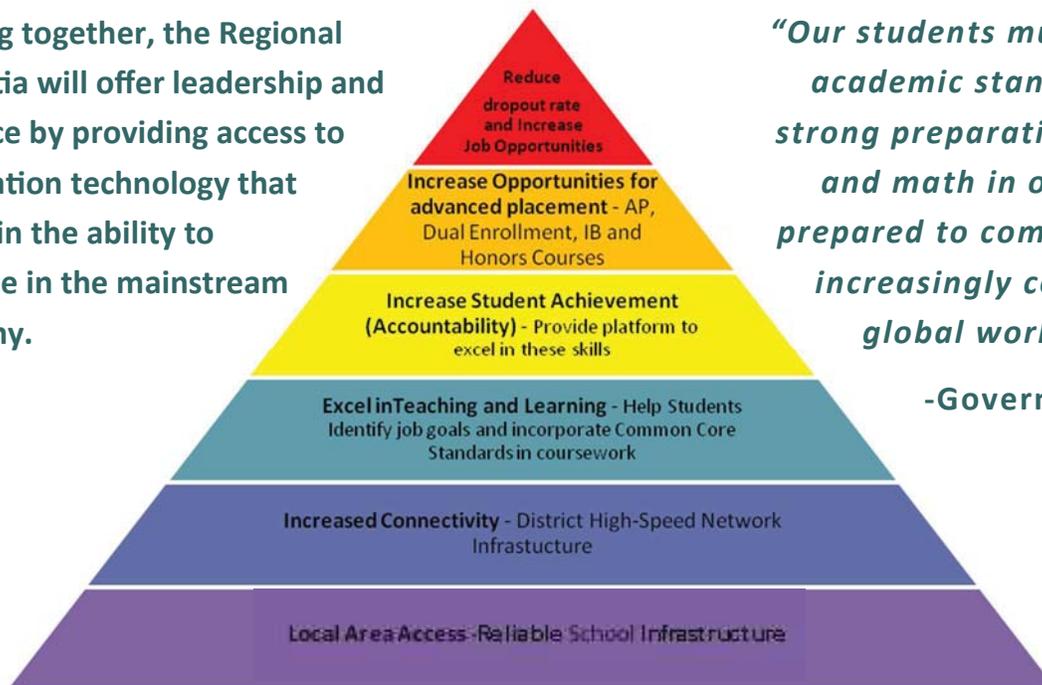
### Experience of Florida's Regional Consortia In Implementing Technology

*It is the intent of the Legislature that the delivery of education programs and services in the state be improved through digital technology. Nearly 12 years ago, through a federal technology grant, infrastructure was updated to bring participating rural schools into the digital world. Every school was given a router. Every school was updated with wiring and switches. Every school was provided internet access and collaborative tools. With the help of the private sector, the pathway to digital education was started. Although improvements have been made, they still fall far short of the needs of the 21st century classrooms.*



## Bringing a Stronger Foundation using Digital Education

**Working together, the Regional Consortia will offer leadership and guidance by providing access to information technology that results in the ability to compete in the mainstream economy.**



*“Our students must meet high academic standards with strong preparation in science and math in order to be prepared to compete with an increasingly competitive global workforce.”*

**-Governor Rick Scott**

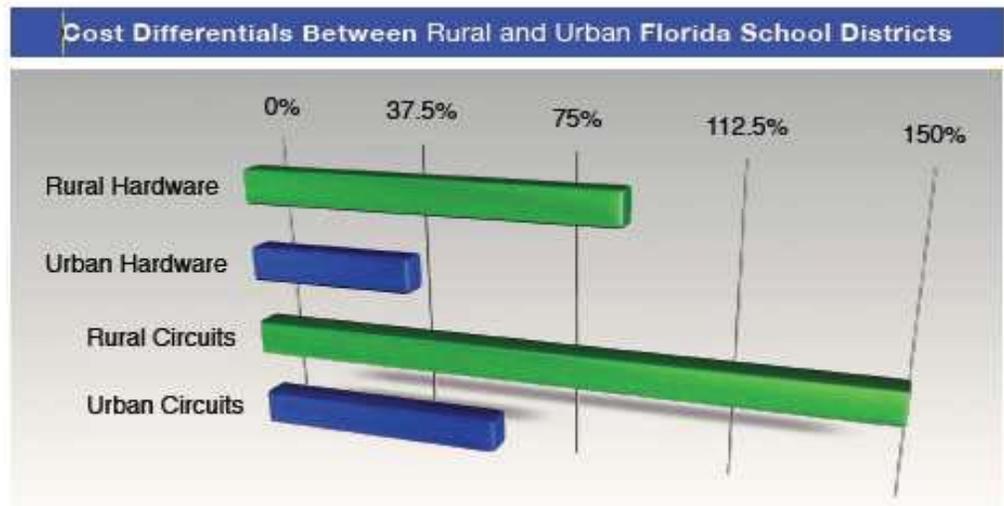
# TECHNOLOGY TRANSFORMATION REQUEST

OF THE 21ST CENTURY FOR SMALL, RURAL CLASSROOMS

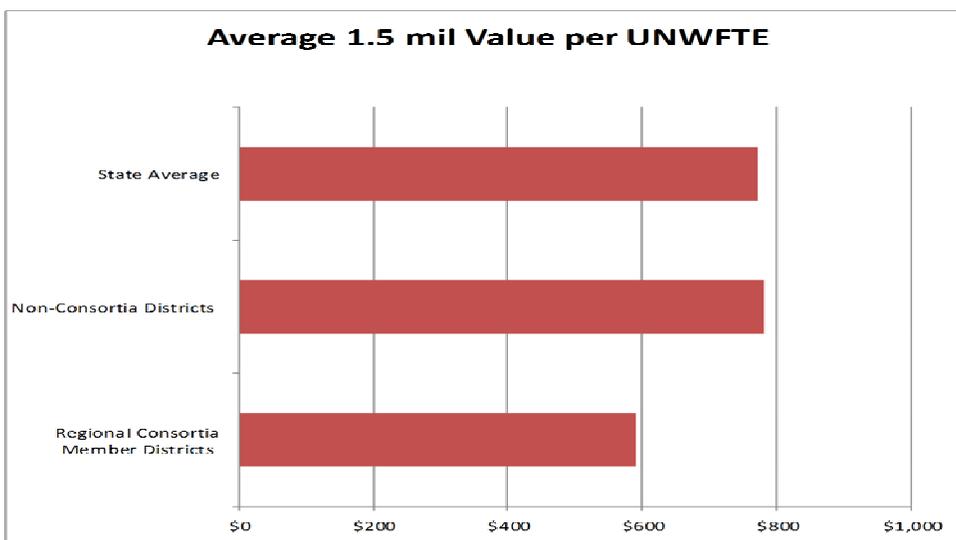
*Adherence to "Florida Standards" guidelines will force school districts across the nation to rethink the way they handle networking and computing in a number of mission-critical areas.*

## Why Do Rural School Districts Need A Separate Appropriation for Technology Infrastructure?

The operation of a small district is restricted by staff limitations and resources. Yet the requirements that these districts must meet are identical to the largest school district in the state. Compared statewide, it costs small and rural districts an average of 25-50% more to enhance or even sustain hardware, software and connectivity required by the State. This Partnership provides the power of collaboration—identifying and developing essential services that all school districts can utilize at greatly reduced costs. However, the INEQUITY cannot be overcome without additional funding.



Rural counties are disadvantaged due to "price concessions on quantity purchases" allowed per DMS state contracts.

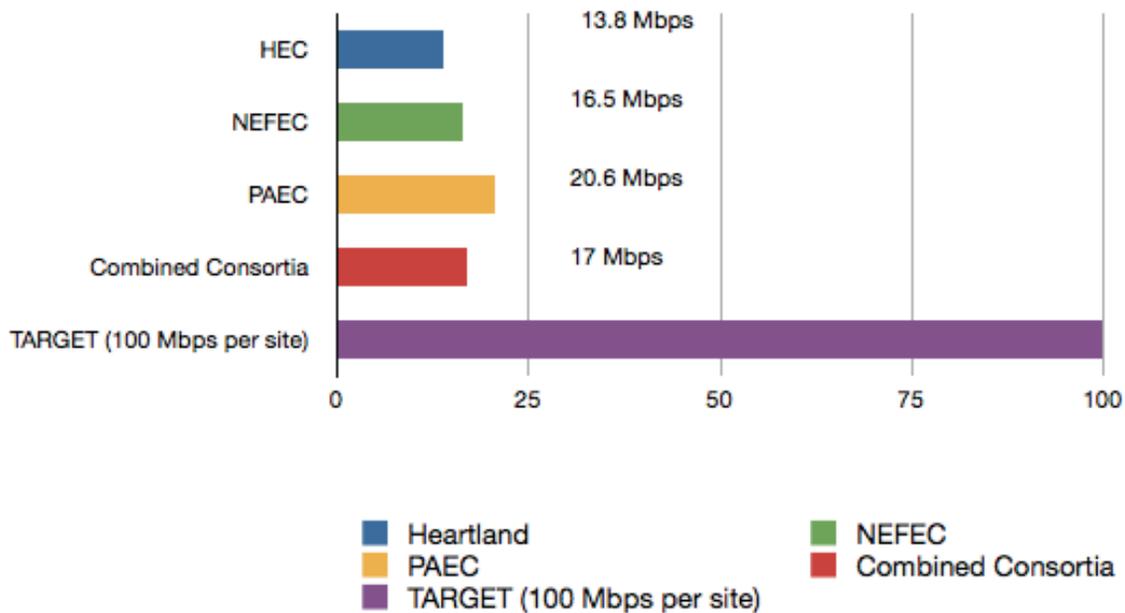


*"A person's circumstances (demographic, geographic, economic, or otherwise) must not be a barrier to full participation in the education system."*

Closing the Talent Gap, Florida Council of 100 and the Florida Chamber of Commerce, 2010

# A Rural School Technology Crisis

The Florida Educational Consortia objective is to increase access to digital learning readiness for students in rural and small school districts. In our alliance 289 schools, 154,421 students and 8,000 teachers representing forty-four percent of all Florida school districts have benefited from past endeavors that have sustained the technology and reaped the benefits for more than 10 years. To continue meeting the needs of these districts that by fact and definition are classified as small and rural, we are asking assistance to reduce the INEQUITY that exists in network infrastructure and connectivity in these schools. We can improve technological competitiveness and support the future needs of our students living in a digital world.



*\*\*In reference to the graph above, FAMU, P.K. Yonge and Jefferson School District have met FLDOE bandwidth goals.*

## Putnam County: A Case Study

The industry standard to run fiber in the State of Florida is estimated at \$26,250 per mile. In Putnam County, there are 223.71 miles of fiber that is needed to deliver 100 Mbps to the schools now, with a plan to get to 1 Gbps to all schools over 5 years. This line item alone represents a cost of \$5,872,375. While E-rate may pay for a portion of this cost, even at the current discount rate of 80%, the cost to the district would be \$1,174,447 just for the fiber alone. The "internal connections" to then route bandwidth throughout the school is another costly item. Similar scenarios are echoed for most of the small, rural districts. This simple analysis gives a clear example of why Florida's rural schools need support to meet the goals of Digital Content, as stated by the Florida DOE.