Texas K-12 Chief Technology Officer Council 2014-2015 Team Award

Team Members Being Nominated for the Award

Frankie Jackson	CFISD	CTO	frankiej.Jackson@cfisd.net
Paula Ross	CFISD	Director, Infrastructure, Communications and Networks	paula.ross@cfisd.net
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Jay Johnson	CFISD	Director, Technology Support Services	jay.johnson#@cfisd.net
John Crumbley	CFISD	Director, Information Services and Applications	john.crumbley@cfisd.net
Oscar Villar	CFISD	Senior Wide Area Networking Specialist	Oscar.villar@cfisd.net
Larry Barrios	CFISD	Manager, Device Imaging and Integration	larry.barrios@cfisd.net

2014-2015 Technology Services Leadership Team

Technology Services Department - Leadership Team 2014 - Oscar Villar, Larry Barrios, Paula Ross, Frankie Jackson, Jennifer Miller, Jay Johnson, and John Crumbley

All nominees for the team are Texas K-12 CTO Council members

Cypress Fairbanks ISD maintains a large institutional Membership #221880 and has since 2007

Effective Leadership: **How did the team demonstrate effective leadership in using information technologies to increase opportunities and accessibility for student learning? Be specific and describe examples to support the team's activities. (include approximately 500 words)**

The Cypress Fairbanks ISD (CFISD) Technology Services Leadership Team demonstrated effective leadership in using information technology to increase opportunities and accessibility for student learning by:

1) Setting forth a vision and working with CFISD stakeholders in a formal setting called the Long Range Planning Committee (LRPC), to prepare a technology plan that meets the needs of students and staff through the year 2020
2) Translating the technology plan into 13 crystal clear recommendations that was used to build a Bond Technology Referendum for $1.2 billion dollars, with $217+ million dollars allocated for technology upgrades
3) Articulating the vision for technology to the CFISD community and receiving a 69% approval rating in the passing of the May 2014 Bond Referendum
4) Issuing fifteen Request for Proposals (RFPs) and selecting the most innovative technology partners in the nation, using a best of breed technology model, to help CFISD build a network architecture, designed to increase opportunities and accessibility for students not only for today, but to evolve with new technology demands through the year 2020
5) Collaborating with CoSN's Smart Education Network Design (SEND) II initiative to develop next-level resources for building network architectures in partnership with leading industry-level technology cohorts
6) Designing and building a leading-edge K-12 network architecture that includes the most innovative aspects of technology designs with capacity, reliability, ubiquity, security, redundancy, resiliency, and mobility; and may be the most innovative and largest of its kind, including:
    a. Internet services that are designed to grow substantially with associated school Internet infrastructure components that are sized adequately and scalable
    b. Wireless design that considered capacity as well as access, with multiple delivery locations within the Wide Area Network (WAN) for Internet access
    c. Student computing, specifically Bring Your Own Device/Technology and mobile devices that are untrusted, devices that are considered to be the primary devices accessing the network
    d. Multipoint network design with multiple Internet Service Providers, using a 3rd party CoLocation facility
7) Sharing this design with CoSN's SEND II initiative so CFISD's design may be used as the blueprint across the nation to not only increase CFISD's opportunities and accessibility for student learning, but all students!

Additionally, the Technology Services Leadership Team demonstrated effective leadership in building a framework for managing a technology service system based on national standards (Baldrige for Education), which sets a foundation in place to provide world-class K-12 technology service. This framework *resulted in achieving an average of 92% customer satisfaction rating, a reduction of 91% in the overall average service request cycle time, and a decrease of 76% in the backlog (old) open service requests.*

Lastly, the Technology Services Leadership Team adopted a stringent project management and communication strategy for completing major projects, which *resulted in successfully implementing twelve (12) mission critical systems and stabilizing the technology infrastructure. The following shows the 12 systems that were implemented during the 2013-2014 school year:*

1. Replaced the technology service request management system with iSupport.

2. Replaced the district's technology asset tracking system with Hayes.

3. Migrated the district's network from Novell to Microsoft Active Directory.

4. Replaced all Business Services software with Sungard's latest software, eFinance 5.0.

5. Standardized and replaced the Microsoft Office suite with Microsoft Office 365.

6. Replaced Novell Groupwise E-mail with Microsoft Office 365 Outlook.

7. Replaced Sungard's eSchoolPlus Student Information Systems servers and processors.

8. Upgraded the Sungard eSchoolPlus Teacher Access Center (TAC).

9. Replaced the district's Internet content filter from Trustwave 8e6 to Fortiguard.

10. Upgraded the library automation software and hardware with the latest version of Destiny.

11. Updated the district Technology Plan and received certification from the Texas Education Agency through the year 2017.

12. Replaced our Internet Service Provider (ISP) services from Phonoscope to ICTX, which increased Internet bandwidth capacity by 200%.

Community Building: **How did the team build community with parents, teachers and educational leaders to effect the desired changes? What particular changes have been instituted in the district that have been successful? What process, possibly replicable for other districts, were used to communicate and motivate the community? (include approximately 500 words)**

The CFISD Technology Services Leadership Team built community with parents, teachers, students, technology service staff, and educational leaders by working closely with stakeholders to develop a shared vision with long-term, big-picture perspectives on district goals, to plan for meaningful and effective uses of technology. Their GOAL, as leadership team members serving on the district's Long Range Planning Committee (LRPC), was to involve members of the community in evaluating the need for TECHNOLOGY, and the scope of TECHNOLOGY in the bond issue. Their leadership led to a Bond Technology Referendum for $217+ million dollars, all designated for technology upgrades. The successful changes that were instituted as part of this process are the approval of the following new technologies that will increase accessibility and student learning:

Instructional Technology Recommendation (APPROVED)	Estimated Cost
Upgrade Standard Classroom Technology	$93,243,466
Upgrade Student Mobile Technology	$8,269,076
Upgrade High School Labs - CTE, USH, etc.	$4,795,938
Upgrade Library Technology	$3,238,058
Upgrade Special Campuses	$1,931,724
Install Instructional Technology in New Campuses	$14,674,615
Upgrade Other Technology - ISC Labs	$711,964
Total for Instructional Technology	**$126,864,841**
Technology Services Recommendation	**Estimated Cost**
Install High Speed Wireless Access Infrastructure	$12,934,270
Install Network Electronics Infrastructure	$28,689,853
Upgrade Connectivity, Power, and Air Conditioning	$9,640,013
Upgrade the Data Center and Infrastructure	$10,148,660
Upgrade Staff 's Technology and Telephone Systems	$19,749,725
Install Technology Infrastructure in New Schools	$3,315,248
Design Contingency	$5,913,444
Total for Technology Services	**$90,391,214**
Total for Technology	**$217,256,055**

Community Building: (continued)

The team used the framework and essential skills from the Certified Education Technology Leader (CETL) program, as a basis for building community partnerships, which can be replicated in other districts to communicate and motivate their communities. The following are some examples of repeatable processes, all of which the team is prepared share across the state and nation.

1) Building trust and establishing a mutually beneficial relationship with the community by explaining the fundamentals of the future technological environment for student learning
2) Creating a vision for how information technology will contribute to student success
3) Shaping expectations for an information-enabled enterprise
4) Weaving business and information technology strategy into one enterprise
5) Using effective communication of complex technology needs in community-relevant language. Some specific learnings include to communicate directly, honestly, and respectfully using all forms of speaking, writing, and presenting, using emerging technologies and aligning the message to the stakeholder. Examples that the team demonstrated include:

   - Giving presentations
   - Publishing writings of status and initiatives
   - Using persuasive internal discussions regarding district initiatives
   - Emailing news to department team leaders
   - Meeting with Department administrators and team leaders
   - Using effective communication methods like listening before talking, and remembering who your audience is and talking to that level
   - Being transparent and proactive communication with all stakeholders
   - Saying things multiple times and via multiple channels
   - Ensuring that essential information is placed on district website
   - Engaging in regular meetings with senior staff members
   - Seeking out leaders in other departments to discuss upcoming initiatives and ensure that we are all on the same page
   - Participating in online blog for dept., Create videos, Connect w/parents on Facebook

Innovative Use of Technology: **How did the team demonstrate effective leadership in using information technologies to increase opportunities and accessibility for student learning? Describe how this team leadership has improved classroom instruction, teacher training and delivery, effective online programming, etc. (include approximately 500 words)**

The CFISD Technology Services Leadership Team demonstrated innovative, effective leadership in using information technologies to increase opportunities and accessibility for student learning by focusing on instructional needs FIRST. The team secured a sufficient budget of $217 budget that would be needed to implement emerging technologies, not only for today, but through the year 2020, which results in improved classroom instruction, teacher training and delivery, and effective online programing. Blended with information technology, the team demonstrated innovation by directing, coordinating, and ensuring the implementation of all tasks related to technical, infrastructure, standards, and integration of technology into every facet of the district's operations.

The team designed an enterprise level wireless network that supports over 400,000+ devices, including district devices, Bring Your Own Device/Technology, and visitor devices, all on a secured wireless authenticated network.

Cluster	District Devices	District Device Totals	BYOT Devices	BYOT Device Totals	Visitor Devices (25% of Staff and Student Count)
Elementary Student	0.5	30382	1	60763	15191
Middle Student	0.5	14374	2	57494	7187
High School Student	0.5	19060	3	114362	9530
Staff and Teachers	2	29468	3	44202	3684
Totals		93284		276822	35591
				Total Wireless Expected Devices	405697

Examples of innovation when architecting the network to support the instructional needs transformation to a technology-enriched learning environment included a design that supports:

- Full student learning mobility and 1:1 classroom access, including BYOD/T, with 25% coverage for all parents and visitors.
- Sufficient wireless coverage and capacity through the year 2020-2021
- Capacity for 24/7 virtual school access
- Full business continuity and data replication as needed
- Deep directory integration for authorization and management of services and devices
- Substantial Internet capacity from multiple providers
- Category 6 cabling and 1GB/10GB + core access
- Unified communications

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Impact on Learning: What is the major impact of the team's achievement? How has this work impacted learning within the district? Please cite specific examples and data to support these efforts. (include approximately 500 words)

The major impact of the Technology Services Leadership Team's achievement is the design of next-level network architecture, using CoSN's Smart Education Network Design (SEND) II initiative guidelines that includes the most innovative aspects of technology designs with capacity, reliability, ubiquity, security, redundancy, resiliency, and mobility. This work impacts learning within the district because it is the most innovative and largest of its kind across the nation in Public K-12 Education. Additional impactful examples support learning by the following.

- Adapting to and integrating with instructional , education-based cloud services
- Securing and implementing sufficient broadband access — as well as providing for the ongoing network monitoring and management, for reliability and resiliency
- Assuring 100% availability for instruction by contracting with multiple Internet Service Providers that is needed for redundancy and sufficient capacity: having multiple ISPs increases capacity resilience, and service-provider flexibility
- Providing 24/7, mobile, anytime computing is critical to the support of Personalized Learning Environments (PLEs)
- Increasing resiliency by providing secondary network operations locations and secondary data center services at an external (outside of the district) colocation offering
- Building the WAN for multiple service delivery locations to double capacity to ensure student learning and system availability
- Using a professional, carrier-neutral data center as the additional service delivery location to provide greater accessibility
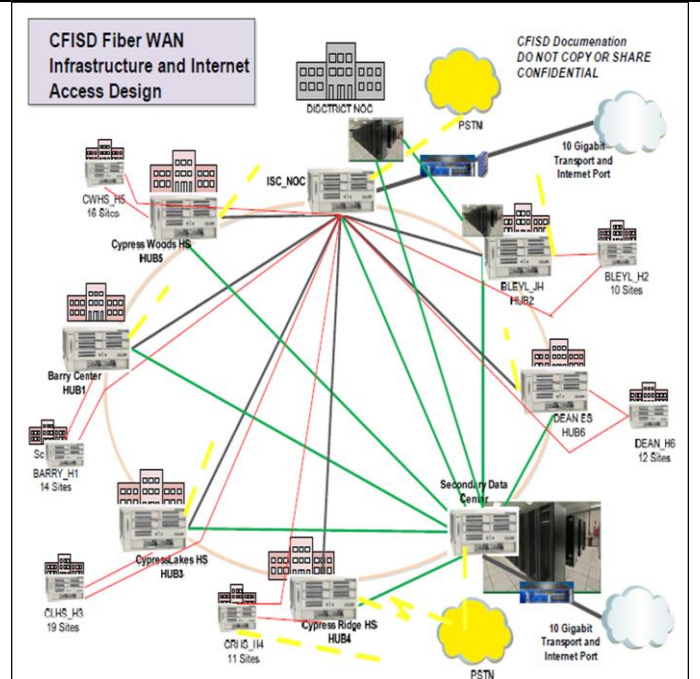
- Developing a rubric to gauge student learning in classroom instruction that serves as a measure for classroom involvement, teacher instruction, student expectations, career and college readiness, with specific examples of how technology is integrated.

Private/Public Sector Partnership: How did the team develop effective public and/or private partnerships and policies that provide connectivity to learners in schools? What unusual or interesting project(s) has the team undertaken that has brought effective private and/or public partnership support and assistance to schools?

The Technology Services Leadership team developed effective public and private partnerships and policies that enabled the funding to provide connectivity to students in CFISD schools. The Leadership Team worked in partnership with over 50 public and private stakeholders to build relationships and ultimately passed the Technology Bond for $218M, the largest ever passed in the state for technology upgrades. This required the team to take a close look at how the district determines technology requirements, expectations, and preferences. They worked hard to understand the key factors that led to stakeholder satisfaction and loyalty of students and all other community stakeholders.

One unusual and interesting project is Club Rewind, which is a before and after school care program, and summer school program, designed by CFISD at the elementary and middle school levels. Many of the activities in the program are designed with technology as the educational enhancement in mind. During the summer, students used their district network logins to access websites used for lessons, as well as educational games and activities. They also used the technology for research and presentation building.

In summary, the Technology Services Leadership team provided the transformation of technology into a technology-rich, learning environment with the vision in mind to "*be the district that transforms educ*ation." This vision is translated into a reality by providing the network architecture that supports teaching and learning, coupled with management and operations that embodies infrastructure systems, critical infrastructure components, and system structures that support capacity, reliability, and mobility.