



LEARN • EMPOWER • ACHIEVE • DREAM

LONG-RANGE PLANNING COMMITTEE

TECHNOLOGY ASSESSMENT

JANUARY 10, 2019



**INSTRUCTIONAL TECHNOLOGY
ASSESSMENT**

LONG-RANGE PLANNING COMMITTEE INSTRUCTIONAL TECHNOLOGY

Today's Students - Tomorrow's Leaders



**LONG-RANGE PLANNING COMMITTEE
INSTRUCTIONAL TECHNOLOGY**

**Every Child Prepared for Success -
College, Career, or Military**



LONG-RANGE PLANNING COMMITTEE INSTRUCTIONAL TECHNOLOGY

Digital Age Learning

Technology Matters

"Technology can no longer be viewed as a learning enhancer; it must be viewed as a foundational piece of living in the 21st century.

- Justin Tarte @justintarte



QuotED

www.bamradionetwork.com/quotED



BUILDING A STRONGER TEXAS

Long Range Plan for Technology 2018- 2023



**Building a High-Speed, Stronger, Sustainable,
Secure Technology Program**

Strategic Goals in Technology

Personalized, Flexible, Empowered Learning	Equitable Access	Digital Citizenship	Safety and Security	Collaborative Leadership	Reliable Infrastructure
Adaptive and individualized learning based on student needs and abilities.	Fair and equal opportunities for all students to take full advantage of their education.	Responsible, safe, respectful, and legal use of technology.	Environment free of physical, emotional, and digital harm or risk.	Consensus-oriented decision making by multiple stakeholders to achieve shared goals.	Available, trusted technology components to support organizational goals.

Released - September 2018 Texas Education Agency



LONG-RANGE PLANNING COMMITTEE INSTRUCTIONAL TECHNOLOGY

Technology Application TEKS – Grades K-2



The student is expected to:

use communication tools that allow for anytime, anywhere access to interact, collaborate, or publish with peers locally and globally.

LONG-RANGE PLANNING COMMITTEE INSTRUCTIONAL TECHNOLOGY

Technology Application TEKS – Grades 3 - 5

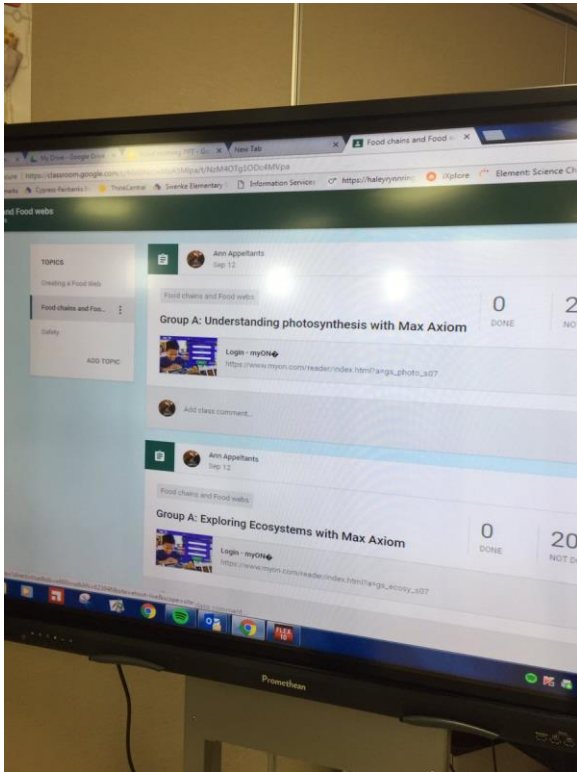


The student is expected to:

- (A) identify information regarding a problem and explain the steps toward the solution;
- (B) collect, analyze, and represent data to solve problems using tools such as word processing, databases, spreadsheets, graphic organizers, charts, multimedia, simulations, models, and programming languages

LONG-RANGE PLANNING COMMITTEE INSTRUCTIONAL TECHNOLOGY

Technology Application TEKS – Grades 6-8



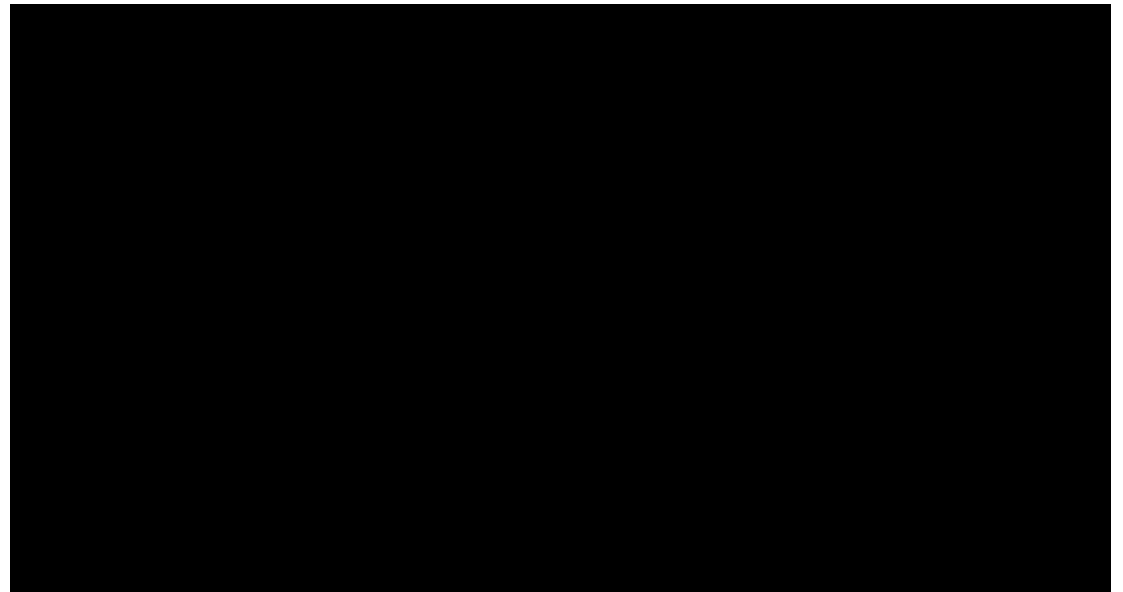
The student is expected to:

create and manage personal learning networks to collaborate and publish with peers, experts, or others using digital tools such as blogs, wikis, audio/video communication, or other emerging technologies.

LONG-RANGE PLANNING COMMITTEE INSTRUCTIONAL TECHNOLOGY

2014 Standard Classroom Technology

- Interactive Digital Displays
- Document Cameras
- Teacher Device
- 7-8 Student Devices
- Audio Enhancement System



LONG-RANGE PLANNING COMMITTEE INSTRUCTIONAL TECHNOLOGY

Additional 2014 Bond Technology Purchases



- Student Mobile Technology
- High School Labs
- Library Technology



LONG-RANGE PLANNING COMMITTEE INSTRUCTIONAL TECHNOLOGY

2014 Bond Rollout Schedule

Year	Content Area
1	Infrastructure, US History
2	Secondary English, Elementary Language Arts, Career and Technical Education, Special Education
3	Secondary Math, Elementary Math/Science, Career and Technical Education, Fine Arts, Special Education, Athletics/Physical Education
4	Secondary Science, Career and Technical Education, Fine Arts, Special Education, Elementary Large Groups
5	Secondary Art, Pre-Kindergarten, Kindergarten, Middle School Social Studies, Career and Technical Education, Special Education
6	High School Social Studies, Career and Technical Education, Special Education

LONG-RANGE PLANNING COMMITTEE INSTRUCTIONAL TECHNOLOGY

Instructional Technology Recommendations

1. Replace existing instructional technology (Replacement Cycle)
2. Install instructional technology in all new campuses
3. Fund new instructional technology initiatives



LONG-RANGE PLANNING COMMITTEE INSTRUCTIONAL TECHNOLOGY

1. Replace Current Instructional Technology (Replacement Cycle)

- Standard Classroom Technology
- Student Mobile Technology
- High School Computer Labs
- Library Technology

LONG-RANGE PLANNING COMMITTEE

INSTRUCTIONAL TECHNOLOGY

2. Install Instructional Technology in New Campuses

- Standard Classroom Technology
- Student Mobile Technology
- Library Technology



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INSTRUCTIONAL TECHNOLOGY

3. Fund New Instructional Technology Initiatives

- Wireless Displays for Every Classroom
- High School Language Labs
- Update Fine Arts
- Flex Space Technology
- Lending Devices for the Libraries
- New Support Facilities
- Special Education Needs



LONG-RANGE PLANNING COMMITTEE INSTRUCTIONAL TECHNOLOGY

New Initiative – Wireless Displays

- Allows teachers to connect to interactive digital displays wirelessly and still have touch access at the panel
- Enhances collaboration
- Support students from anywhere in the classroom
- Pilot feedback



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New Initiative – High School Language Labs

- Adds 1 Language Lab per High School
- Connects students with multiple partners or small groups to practice conversational language
- Provides the ability for teachers to monitor, coach, and assess students in real-time
- Allows teachers to administer performance-based assessments through simultaneous recording of students



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New Initiative – Flex Space Technology

- Allows extension of the classroom
- Adds large touchscreen monitors for collaboration
- Increases the number of student devices available
- Collaboration tables

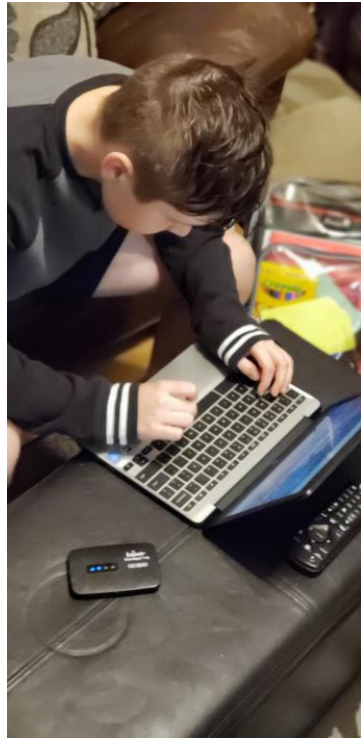


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New Initiative – Lending Devices for Libraries



- Provides filtered Internet access to students at home
- Allows checkout through campus libraries as needed
- Filters Internet for questionable content using Kajeet devices



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New Initiative – New Instructional Support Facilities

- New Instructional Support Center
- Repurpose of current Instructional Support Center
- Repurpose of current Windfern
- Equipment for each meeting space:
 - Interactive Display Panels
 - Sound Enhancement Systems
 - Document Cameras
 - Portable devices (Laptops and Chromebooks)



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New Initiative – Elementary Large Group System Upgrade

- Upgrades the existing sound system in Physical Education and Music classrooms
- Delivers content in music by amplifying voice and playing music
- Uses equipment to deliver audio components of required fitness assessments and for safety in PE



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New Initiative – Special Education Needs

- Adds Vocational Carts
 - Cricut machines
 - Bar Code Scanners
 - Other vocational equipment
- Adds Communication Carts
 - Tablets
 - Student Devices
- Updates Audiology Equipment for students with Auditory Impairment
- Increases the number of Read 180 devices by 3 - 4



LONG-RANGE PLANNING COMMITTEE INSTRUCTIONAL TECHNOLOGY

Priority of Instructional Technology Assessment

Priority 1

Replacement of Current Technology (Replacement Cycle)

Install Instructional Technology in New Campuses

Wireless Displays for Every Classroom

Update Fine Arts

Lending Devices for the Libraries

New Support Facilities

Special Education Needs

Priority 2

High School Language Labs

Flex Space Technology

LONG-RANGE PLANNING COMMITTEE INSTRUCTIONAL TECHNOLOGY

Instructional Technology Recommendations

Goal	Description	Cost
1	Replacement of Current Technology (Replacement Cycle)	\$136,421,062.10
2	Install Instructional Technology in New Campuses	\$1,591,850.58
3	Fund New Instructional Technology Initiatives	\$11,691,098.50
	Total Instructional Technology Request	\$149,704,011.18



TECHNOLOGY SERVICES ASSESSMENT

LONG-RANGE PLANNING COMMITTEE
TECHNOLOGY SERVICES

Technology Services

- Technology Services Support Structure
- 2014 Bond Projects
- Technology Services Recommendations



LONG-RANGE PLANNING COMMITTEE
TECHNOLOGY SERVICES

Technology Services

- **Technology Services Support Structure**
- 2014 Bond Projects
- Technology Services Recommendations



LONG-RANGE PLANNING COMMITTEE TECHNOLOGY SERVICES

District Technology Support Structure

Team #1



Cybersecurity,
Acquisitions and
Performance
Excellence

Team #2



Device Imaging and
Integration, Secondary
Campus Technician
Support, and Customer
Care Center

Team #3



Sustainability,
Assets and
Service

Team #4



Network
Infrastructure
and
Communications

Team #5



Information
Services and
Applications

LONG-RANGE PLANNING COMMITTEE TECHNOLOGY SERVICES

Technology Services Supports



Business Services

Facilities

Online State Testing

Student Services

Transportation

116,500+ Students

18,000 Employees



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TECHNOLOGY SERVICES

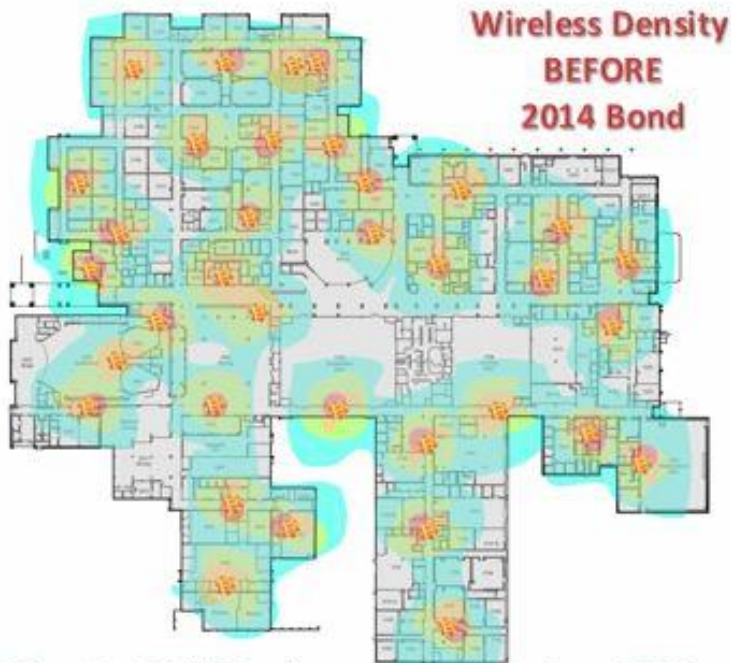
Technology Services

- Technology Services Support Structure
- **2014 Bond Projects**
- Technology Services Recommendations

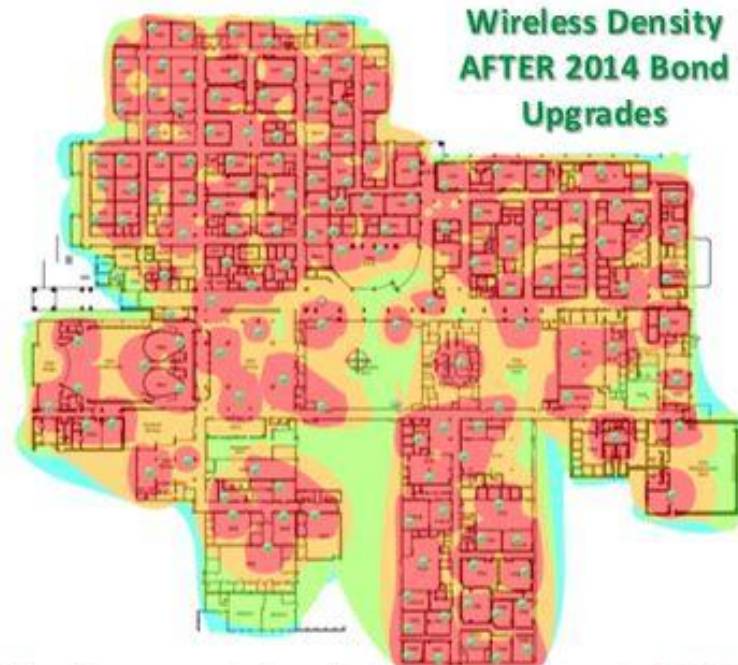


LONG-RANGE PLANNING COMMITTEE TECHNOLOGY SERVICES

Bond 2014 Project - Wireless Upgrade



Before the 2014 Bond, supported less than 1200 wireless connections



Now the new wireless infrastructure supports 5000+ wireless connections

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TECHNOLOGY SERVICES

Bond 2014 Project – BYOT



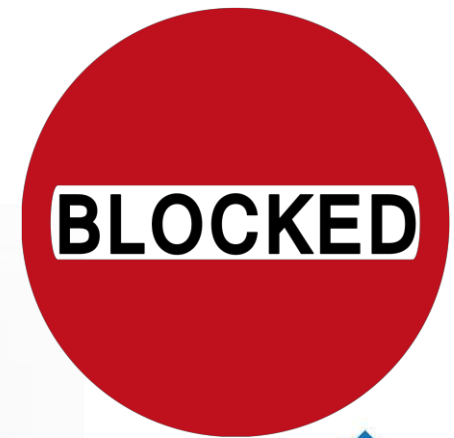
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Bond 2014 Project – Data Center Upgrade



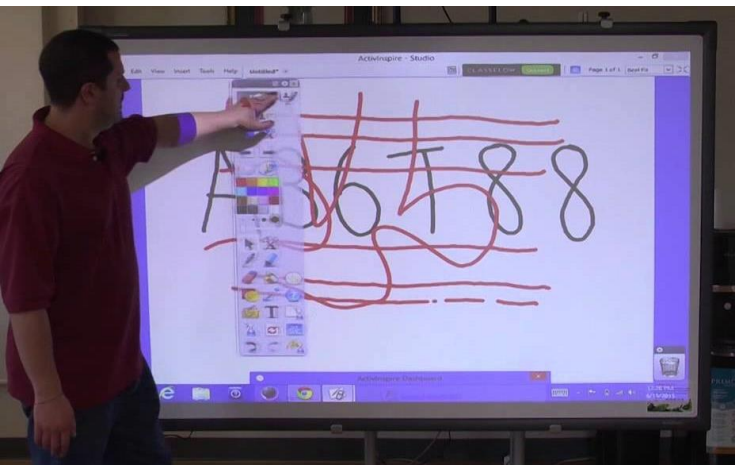
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Bond 2014 Project – Complete Network Upgrade



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Bond 2014 Project – Asset Purchases



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Bond 2014 Project – Technology for New Schools









BUILDING A STRONGER TEXAS

Long Range Plan for Technology 2018- 2023



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TECHNOLOGY SERVICES

Technology Services

- Technology Services Support Structure
- 2014 Bond Projects
- **Technology Services Recommendations**



LONG-RANGE PLANNING COMMITTEE TECHNOLOGY SERVICES

Technology Services Recommendations

1. Support Instructional Technology
2. Maintain Reliable Technology Infrastructure
3. Provide Technology for New Sites
4. Implement Cybersecurity Measures

LONG-RANGE PLANNING COMMITTEE TECHNOLOGY SERVICES

1. Support Instructional Technology



LONG-RANGE PLANNING COMMITTEE TECHNOLOGY SERVICES

Support Instructional Technology



Wireless Display Technology Gives Teachers the Freedom to Roam the Classroom



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TECHNOLOGY SERVICES

2. Maintain Reliable Technology Infrastructure

1. Sustain High Speed Wireless Access Infrastructure
2. Sustain Network Electronics Infrastructure
3. Upgrade Fiber and Cabling Connectivity
4. Build a Virtualized Server Data Center
5. Enhanced Unified Communications System
6. Replace Administrative Staff Technology
7. Replace Network Printers

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3. Provide Technology for New Sites

New Construction	Expansion / Renovation
Elementary School #59	Carpenter Center – Expansion
Middle School #20	Westgreen Agriculture Center – Expansion
New Instructional Support Center	Current ISC – Renovation
New Transportation Center	Exhibit Center – Expansion
Performing Arts Center	Windfern – Renovation
Windfern – New Construction	New Storage at Facilities
	Ben Bradley Center Expansion

LONG-RANGE PLANNING COMMITTEE TECHNOLOGY SERVICES

K12 Cybersecurity Incidents

- Phishing attacks
- Unauthorized disclosures, breaches or hacks
- Ransomware attacks
- Denial-of-Service attacks (DDoS)
- Other cyber incidents resulting in school disruptions and unauthorized disclosures



<https://k12cybersecure.com/map/>



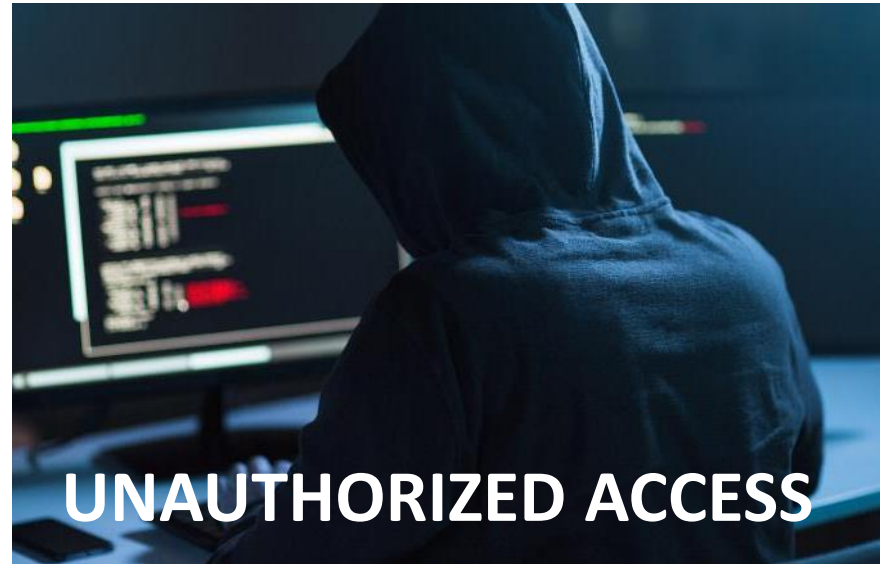
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Florida Virtual Schools Breach



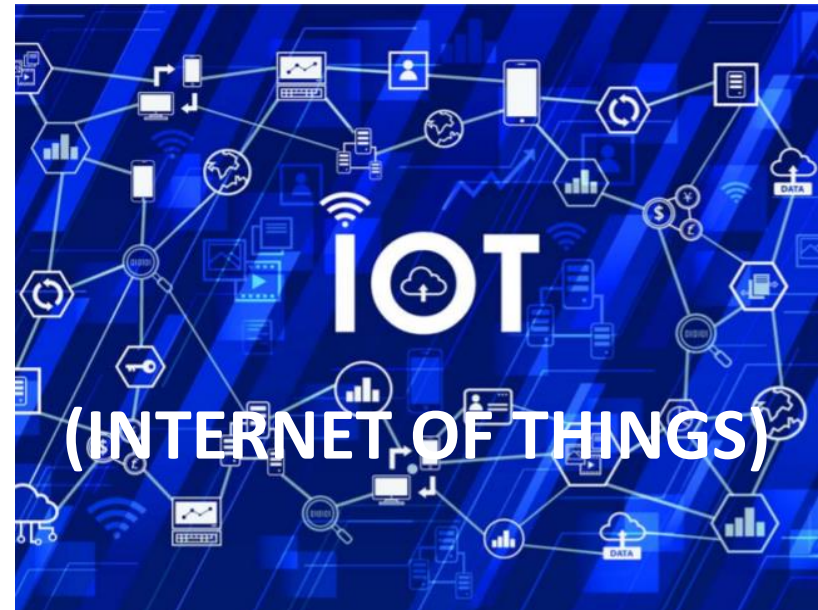
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Implement Cybersecurity Measures



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Implement Cybersecurity Measures



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Implement Cybersecurity Measures



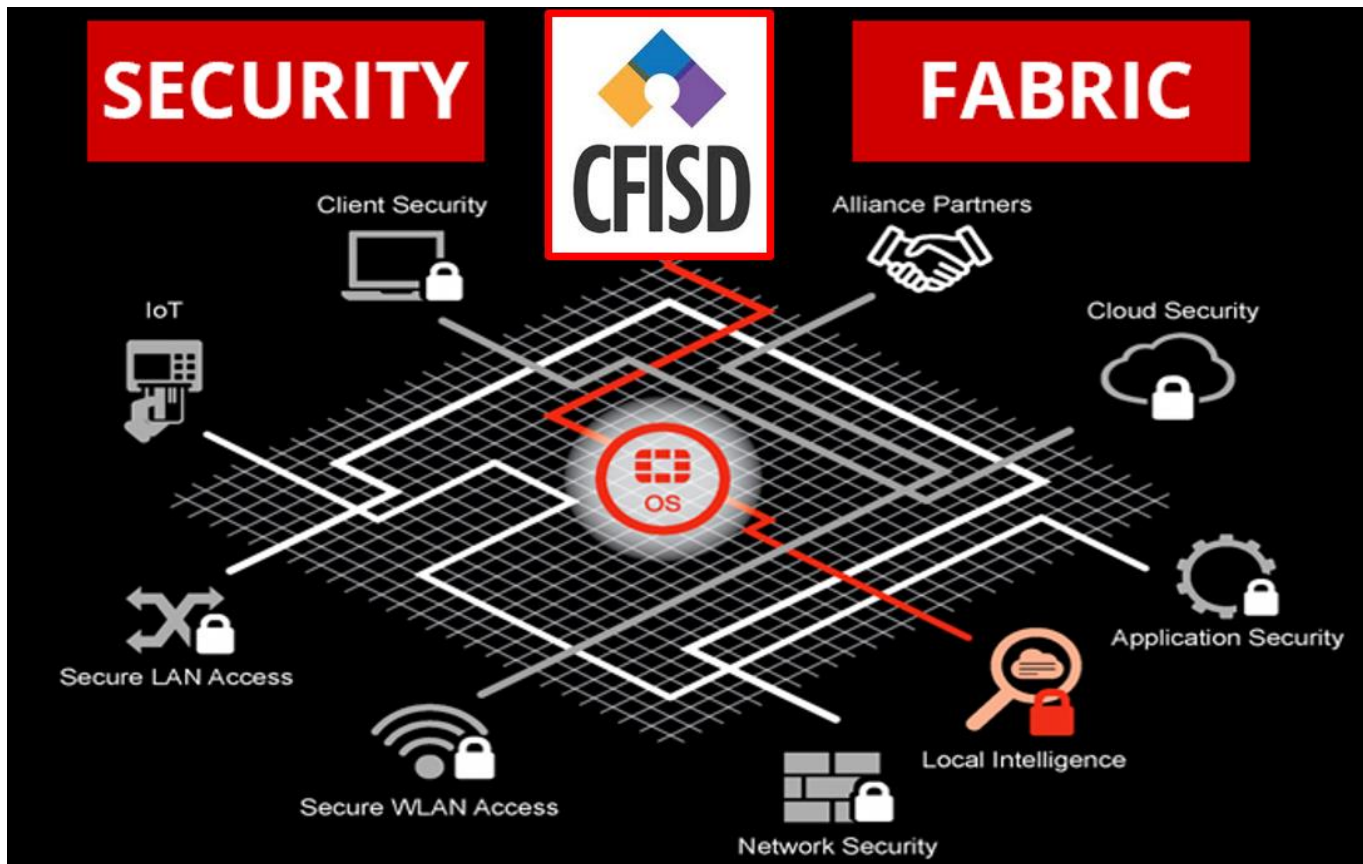
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Implement Cybersecurity Measures



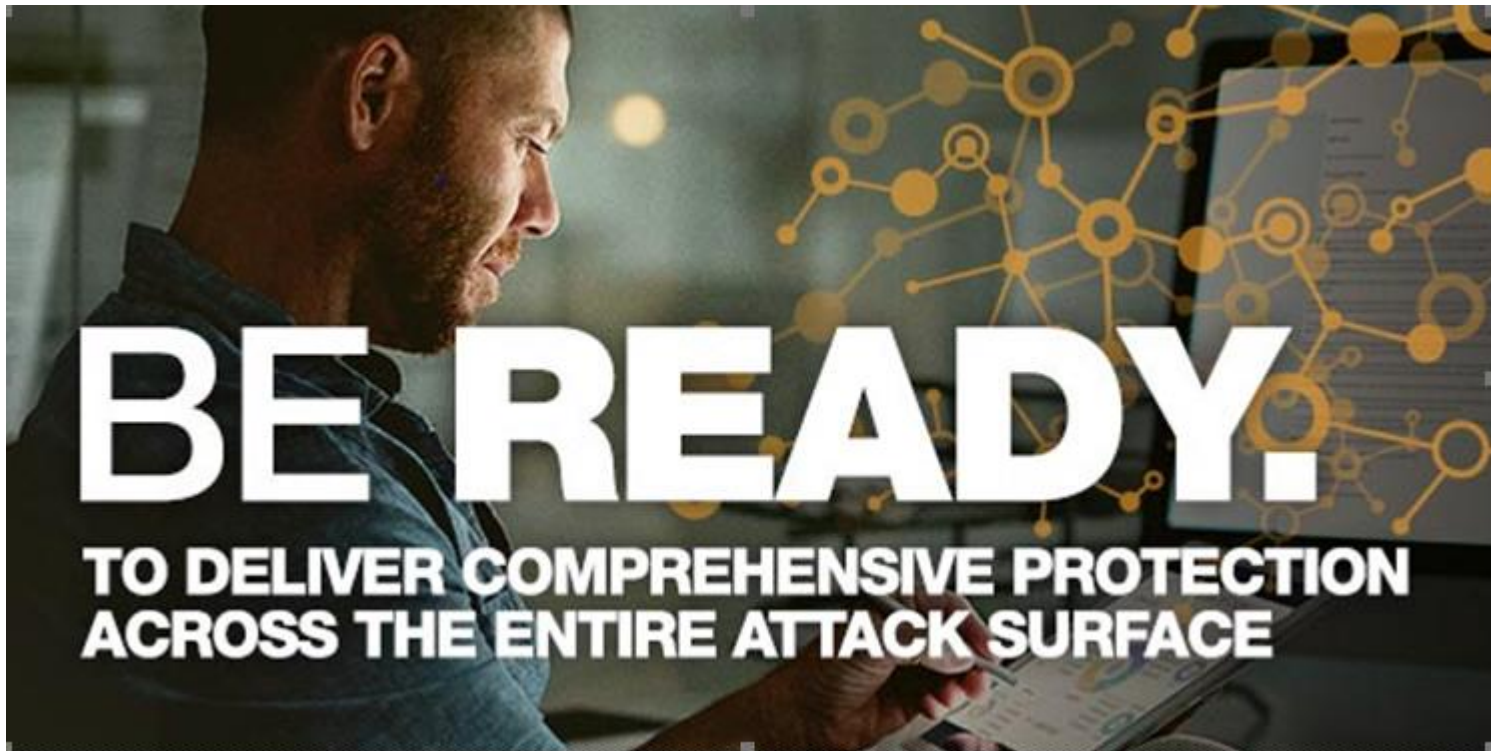
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Implement Cybersecurity Measures



LONG-RANGE PLANNING COMMITTEE
TECHNOLOGY SERVICES

Implement Cybersecurity Measures



LONG-RANGE PLANNING COMMITTEE TECHNOLOGY SERVICES

Technology Services

Goal	Description	Cost
1	Support Instructional Technology	\$ 5,581,881.37
2	Refresh Technology Infrastructure	\$ 68,861,621.86
3	Provide Technology for New Sites	\$ 7,400,367.07
4	Implement Cybersecurity Measures	\$ 1,716,224.50
5	Design Contingency	\$ 5,849,206.64
Grand Total		\$ 89,409,301.44

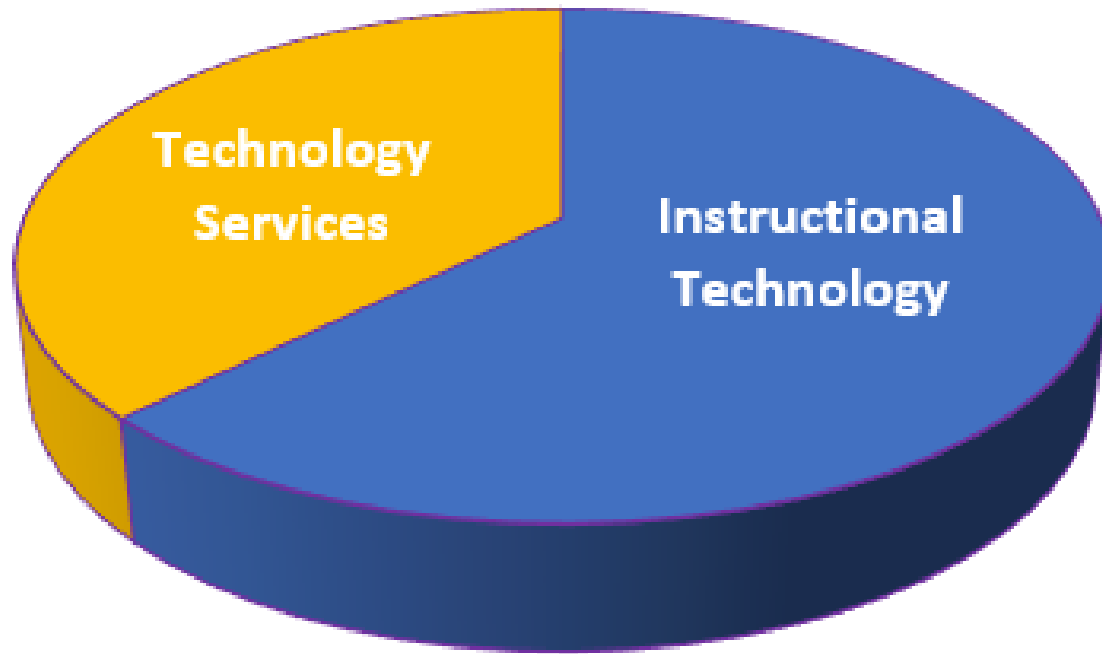
LONG-RANGE PLANNING COMMITTEE COMPLETE TECHNOLOGY

Instructional Technology & Technology Services Recommendations

Goal	Description		Cost
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4	Implement Cybersecurity Measures	\$	1,716,224.50
5	Design Contingency	\$	5,849,206.64
Total Technology Services Request		\$	89,409,301.44
Total Technology Request			\$239,113,312.62

LONG-RANGE PLANNING COMMITTEE
COMPLETE TECHNOLOGY

**Instructional Technology & Technology Services
Recommendations**





QUESTIONS
