



HINSDALE TOWNSHIP
HIGH SCHOOL DISTRICT 86

Technology Services Update

12-15-2022



Topics



- **Historical Perspective**
- **Current State of Technology**
- **Fiscal Responsibility**
- **Data Privacy**
- **Cybersecurity**
- **Future Strategic Plan Initiatives**
- **National Presence**

Strategic Plan Alignment



Strategic Plan Goal 5

Challenges & Opportunities

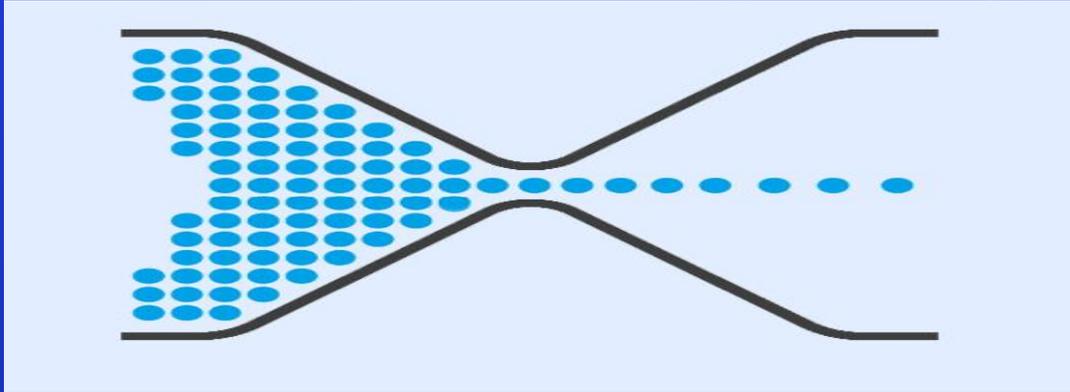


- **Technology Organizational Chart did not effectively support the needs of the District - 2019-20 SY**
 - **Evaluated and brought a recommendation to the BOE**
 - **Information Management Team**
 - **Building-level supervisors**
 - **Focus on end user support**
 - **Cross trained staff**
 - **Opportunities for professional development**
 - **Evaluate the organizational structure every 3 years**
 - **Started process and systems alignment**

Challenges & Opportunities



- Evaluated infrastructure - 2019-20 SY
 - Numerous bottlenecks in the network

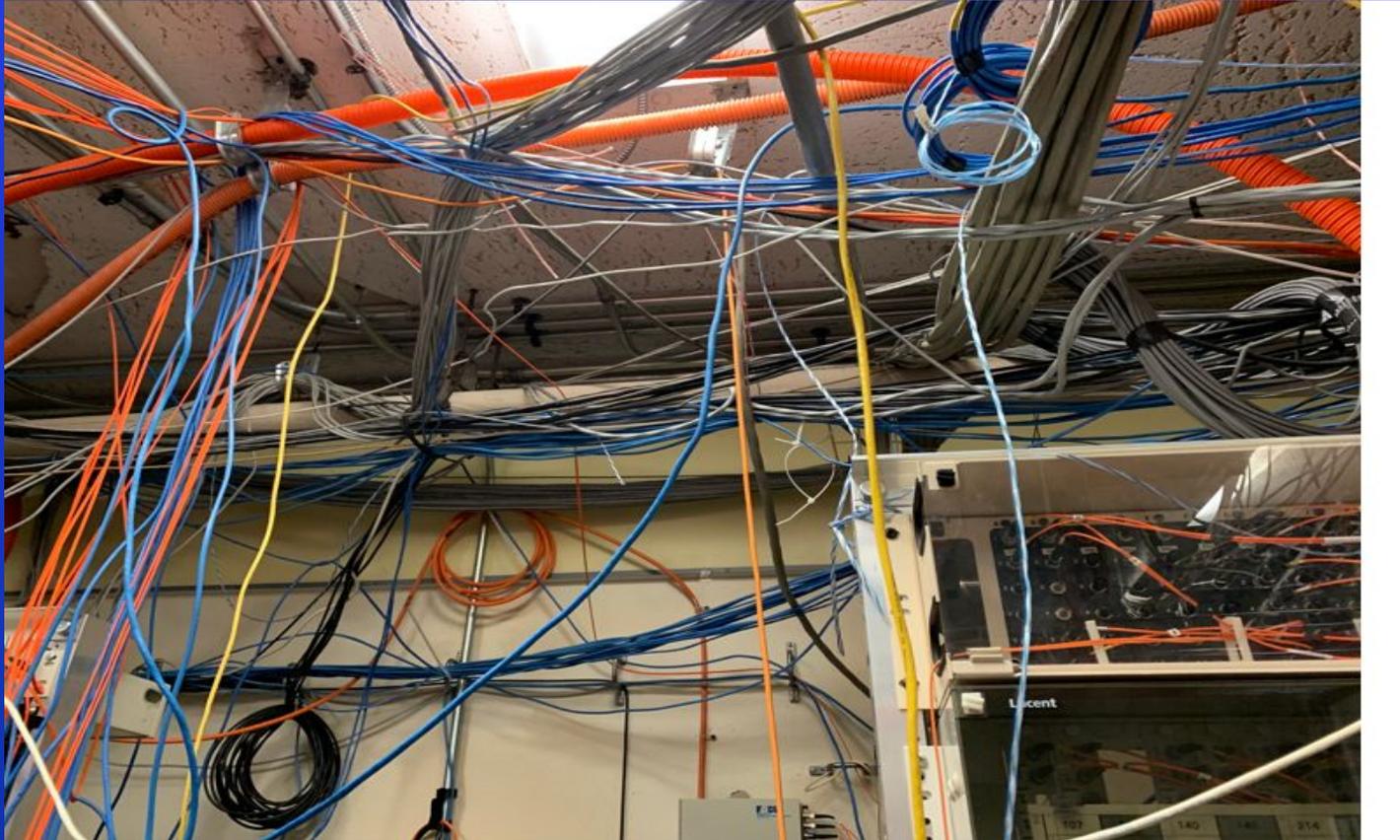


Challenges & Opportunities



- **No technology or infrastructure replacement plan**
 - Developed a five-year replacement plan - 2019-20 SY
- **Fiber and cable dating back to 1998**
- **Network switches in the ceilings throughout the schools**
 - Cooling fans were loaded with dust
- **Uninterruptible Power Supplies in the ceilings strapped to beams**
 - Electric code violation
- **Wireless Access Points in the ceilings**
 - Mounted below ceiling for better coverage
 - Expanded wireless to cover all areas of each school
- **Unmanageable cable plant**

Challenges & Opportunities



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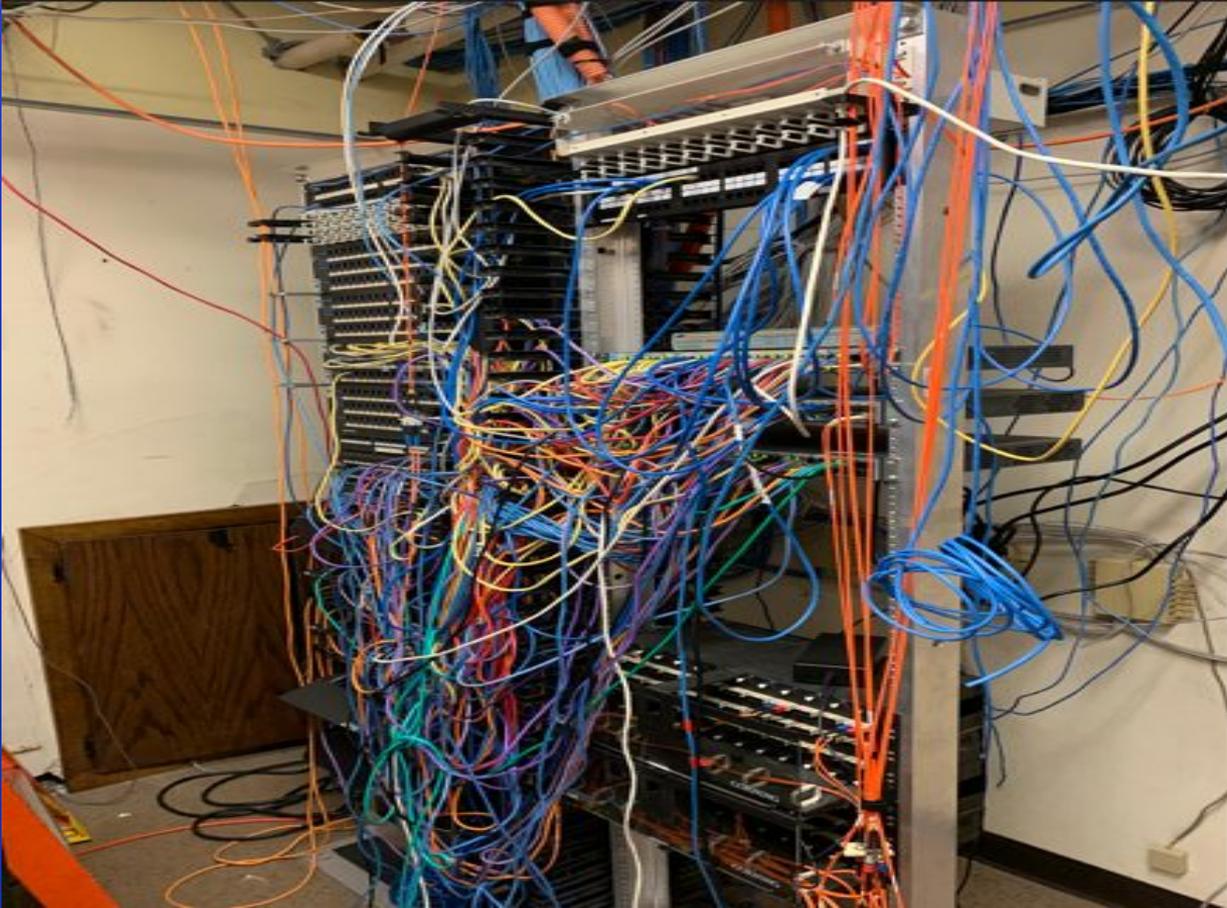
Challenges & Opportunities



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Challenges & Opportunities



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Challenges & Opportunities



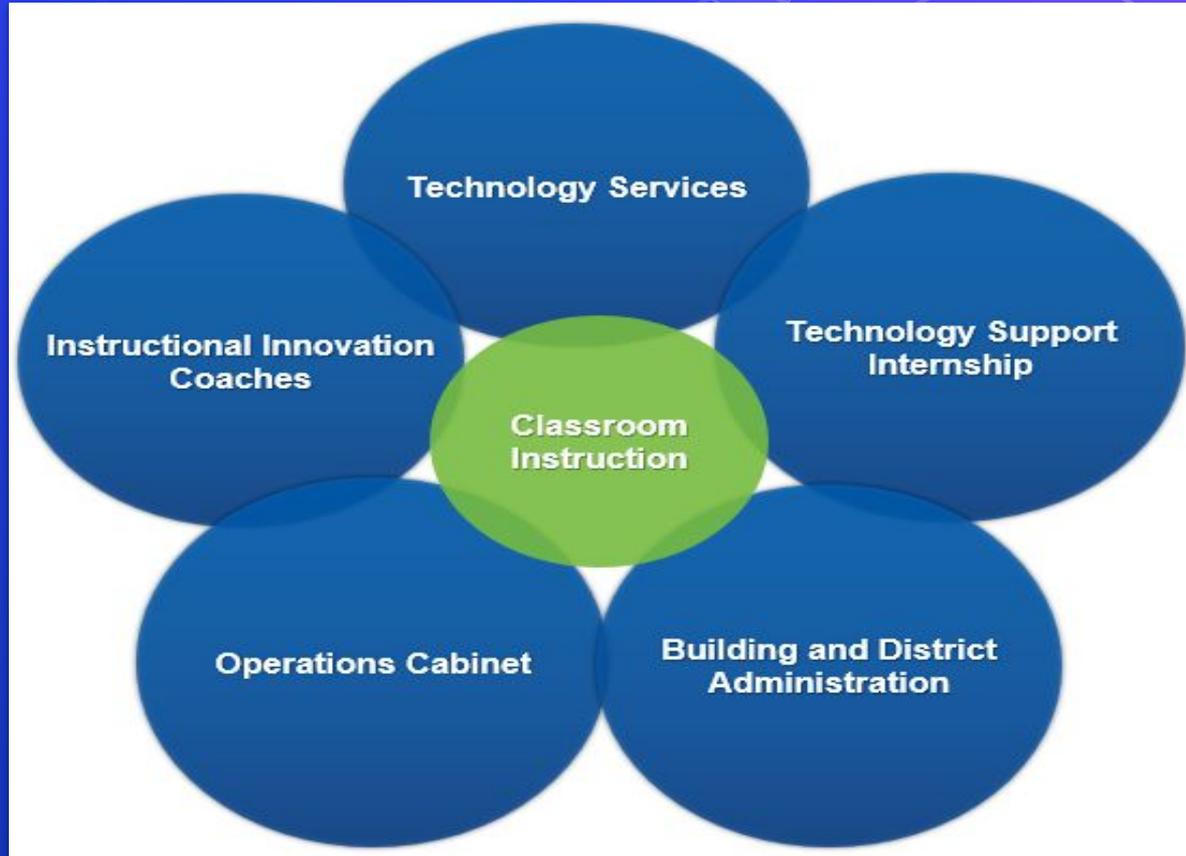
Challenges & Opportunities



- **30 plus year old intercom & clock system - many areas where intercom and clocks did not work - 2019 - 20 SY**
 - Replaced intercom system through construction
- **Few security cameras - old with very grainy video**
 - Worked with the Director of Security to evaluate and install a new system with a security command center
 - During this project an upgraded fiber network backbone was installed
- **No call buttons in classrooms**
 - Installed call buttons and emergency call buttons in every classroom and other spaces
- **Server and Storage Area Network was old and required replacement**
 - Entire infrastructure went down on the first day of finals
 - Replaced at the end of 2019 and recently renewed support for another three years

Current State of Technology

Connections and Support



Current State of Technology



Operations Cabinet

- **Focus on all building operations & instruction**
 - **Collaborate with: Academic Cabinet, Department Chairs, Technology Support Internship Program, Security, Building & Grounds, Administration, Communications Dept., Finance Office & Human Resources**

Current State of Technology



- **Through renovations, cable plant continues to be cleaned up**
 - **As ceilings are open, cabling is cleaned up and removed as needed**
 - **All large network switches have been removed from the ceiling at South**
 - **Classroom renovations at Central next summer will eliminate many more switches from the ceilings**
 - **Designed for efficient management of the network and is a best practice**
 - **Network closets are on a weekly maintenance schedule**

Current State of Technology



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Current State of Technology



- **Moved from a reactive to proactive support department**
- **Support expanded Technology Support Internship Program**
- **Updated technology systems in each classroom during renovations**
- **Active Directory Servers upgraded - main authentication mechanism for staff and students**
- **Infinite Visions - Finance & H.R. system upgraded to new virtualized servers**
- **New network switches (many were 10 - 13 years old) completed as renovations took place**
- **Automated rostering of digital text and instructional applications i.e., GoGuardian, MathXL, Remind, Naviance, Follett Library System, Zoom, etc.**

Current State of Technology



- **Infinite Campus Student Information System**
 - **Largest systems change a school district can undertake**
 - **Converted student information dating back to 1997 - 143,347 student records**
 - **Cleansed and verified data**
 - **Adjusted permissions**
 - **Integrated platforms; Fees, Online Registration & Food Service**
 - **Grade passback from Canvas to Infinite Campus**
 - **Enhanced All-in-One Parent/Student Portal**
 - **Parents can enter absences directly in portal**
 - **Add money to meal balances**
 - **View behavior incidents**
 - **View attendance**

Current State of Technology



- **Information Management coordinates delivery of all specialized data reports, state reporting, Civil Rights Data Collection, data integrations, registration processes and custom programs**
- **Single sign-on with numerous applications**
- **Provide Internet hotspots to students in need**
- **Moved to the Google Suite for email and productivity**
- **Communications systems are fed nightly from the H.R. system i.e., Blackboard, Constant Contact, Remind & BluePoint**
- **New room scheduling and Buildings and Grounds maintenance request system**

Current State of Technology



- Automated workflows for onboarding/offboarding employees
- Streamlined the yearly registration processes
- Increased bandwidth from Internet Service Providers and exceed the recommended bandwidth of 1 Gbps per 1,000 students for teaching and learning as recommended by the FCC
- Redundant Internet connections to effectively support instruction
- Storage Area Network has regularly scheduled backups
 - School-to-school backups
- Coordinated the move to the new website with the Communications Dept.
- Implemented the new Tip Line with the Deans

Fiscal Responsibility



- **Audited services - previous position did not manage systems effectively**
- **Evaluated process for software purchasing**
 - **Consolidated purchasing to maximize economy of scale**
 - **Most software agreements have a cap of a 3% increase or lesser of CPI each year**
- **Maximized Erate for both Category 1 & 2 funding. Category 2 funds of \$277,600 are completely expended after utilizing for low voltage cabling renovations.**

Fiscal Responsibility



- Audited Comcast services and found lines not being used equal to \$28,000 per year
- Audited AT&T phone lines and circuits
 - Reduced a significant amount of Plain Old Telephone System lines and circuits resulting in savings of \$42,000 per year
 - Found \$10,000 in billing errors
 - Found multiple circuits not being used resulting in savings of \$143,000 per year
- Audited security alarm systems. Found many lines from ADS that were not needed resulting in savings of \$9,000 per year.

Fiscal Responsibility



- Took advantage of the DoIT Consortium through the state to receive Internet and Wide Area Network transport
- Switched telephone service saving \$48,000 per year over the traditional service
- Renegotiated the Canon multifunction machine agreement. This resulted in a lower cost than originally negotiated.
- Applied for and received funding for the Sprint 1 Million Program - now through T-Mobile. Free hotspots for students in need.

Student Data Privacy



- **Student Online Personal Protection Act (SOPPA)**
 - **Data Privacy Agreement has to be signed by every software vendor storing student Personally Identifiable Information (PII)**
 - **Dashboard located on the District's website:**
<https://d86.app.learnplatform.com/new/public/tools>
 - **Process in place for teachers to request and vet new applications**

Student Data Privacy



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Student Data Privacy

To maintain the confidentiality and integrity of the District information and data including our student data, the District's Technology Services department has implemented targeted processes and procedures.

For more information, click on the tabs below.

▶ **How is access to student data managed?**

▶ **Where is student data held and where does it go?**

▶ **Data Services Agreement**

▶ **Student Online Personal Protection Act (SOPPA)**

▶ **Notice of Parent Rights Regarding Student Covered Information**

Student Data Privacy



Children's Internet Protection Act

Internet Safety Policy Must Address

- monitoring online activity by minors
- restricting access to harmful materials
- education of minor about appropriate online behavior
- safety using collaboration and social media tools
- hacking, unauthorized access, unlawful activities
- unauthorized disclosure of PII

Student Data Privacy



- **Release of directory information**

- Parents and eligible students may “opt out” of disclosure of directory information. No information is released without prior consent.

- **Sharing Data Internally - School Officials**

- includes teachers and other school employees who the school has determined to have a legitimate educational interest to the education records





Hackers leak 500GB trove of data stolen during LAUSD ransomware attack



Cybersecurity



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'No good options:' LRSD approves to settle a \$250,000 ransom after district cyber attack

by Desmond Nugent
Tuesday, December 6th 2022



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Cybersecurity



- **No cybersecurity practices in place prior to 2019**
- **Experienced a significant malware attack in February/March 2019**
 - **Engaged Cybersecurity Insurance**
 - **D86 paid a \$10,000 deductible**
 - **At this time, the cybersecurity company, Kroll, was charging \$600 per hour to mitigate and remedy the attack.**
- **No email security in place prior to 2019**
 - **Emails were being sent that looked like they were coming from administrators**
 - **Email accounts hacked daily**
- **D86 was a target organization and on lists of easy organizations to attack**



Cybersecurity Current State

- Information Security Policy & Incident Response Plan
- Regular Password Changes
- Self-Service Password Portal
- Timeout settings on business sensitive applications
- Send out periodic emails to staff on cybersecurity best practices
- <https://phishingquiz.withgoogle.com>
 - Raised awareness of cybersecurity practices. Staff check-in with technology staff to confirm emails are legitimate



Cybersecurity Current State

- **Storage Infrastructure is immutable to ransomware**
- **Next Generation Firewalls**
 - **Block malicious activity on computers and switch ports**
 - **Intrusion Detection and Prevention**
- **Vulnerability assessment application**
 - **Scans servers for vulnerabilities and recommends patches**
- **Multi Factor Authentication**
- **Cisco AMP for antivirus and malware protection on all PC devices and servers**
- **Cisco Umbrella DNS/URL protection**



Cybersecurity Current State

- **VPN client for remote access**
- **Subscribe to alerts for Cybersecurity Advisories from the Cybersecurity and Infrastructure Security Agency**
- **Data Loss Prevention**
- **Cybersecurity Insurance**
- **2019 - \$37,000 premium & \$10,000 deductible per incident - \$ 1 million per occurrence**
- **2022 - \$81,000 premium & \$100,000 deductible per incident - \$2 million per occurrence**
- **Email sandbox**
- **Implementing a Managed Detection and Response system**



Future Strategic Plan Initiatives

- **Schoolinks**
 - Program of Studies
 - CCRI tracking
 - College & Career planning
- **Data Warehouse connected to Infinite Campus**
 - Data analytics and dashboards to inform instructional decisions
- **Unified communication platform to take the place of Blackboard, Constant Contact & Remind**
- **Pilot scanning of student attendance in the classroom**
- **Implement student scanning in Nurses, Deans & Counseling Offices**



Future Strategic Plan Initiatives

- Replacement student ID system
- Classroom renovations at Central
- Parent/Teacher Conference Scheduler
- Honest Game
 - Assists student athletes with a personalized College Athletic Pathway
- Cybersecurity internship
 - 3.5 million cybersecurity jobs unfilled worldwide and more than 700,000 in the U.S.
 - Dual credit opportunities for students

National Presence for D86

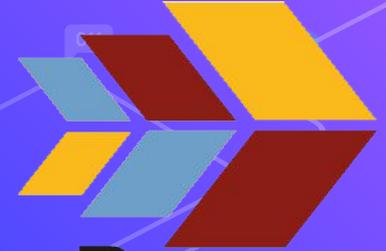


- **Board Member - Consortium for School Networking (CoSN)**
 - **CoSN is the premier membership organization designed to meet the needs of K12 education technology leaders**
 - **Committees**
 - **Executive**
 - **Chair of Finance and Audit**
 - **Bylaws and Nominations**
 - **Oversee Cybersecurity and Network and Systems Design initiatives**
 - **Direct connection to the Chairman of the FCC - Oversee the Federal Erate program**
 - **Funding for cybersecurity solutions**

National Presence for D86



- **Facilitated the Certified Education Technology Leader (CETL) certification committee to receive national accreditation from the National Commission for Certifying Agencies (NCCA)**
- **Advocacy and Policy Impacts provides a strong presence and voice in the policy debates at the national and state level serving as a champion of policies to support education technology**
- **Partnership with the National Schools Public Relations Association (NSPRA) to address social media issues in school districts**



86Forward

HINSDALE TOWNSHIP HIGH SCHOOL DISTRICT

Defining excellence.