



Extension



Digital Equity  
Research Center

# NH Forum on Strengthening Cybersafety Skills & Systems

Opportunities for Collaboration

Tuesday September 6<sup>th</sup>, 2023

2:00-4:00PM Eastern



# Welcome and thanks!

## Panelists:

- Denis Goulet      NH's Chief Information Officer and Commissioner of Information Technology (and immediate past president, NASCIO)
- Bob McLaughlin      Executive Director, National Collaborative for Digital Equity
- Stephanie Turek      Assistant Vice President, Coordinated Services, Granite United Way, 211
- Gerry Hanley      Executive Director, [Skills Commons](#) and [MERLOT](#)
- Discussant**      Michael Klein, Infrastructure Fellow, Office of Educational Technology, US Department of Education



# Aims of the Webinar

Explore stellar opportunities for collaboration among state leaders to strengthen cybersafety systems and skills

- (USDOC) Federally-funded state digital equity and BEAD planning
- (DHS) Federally funded state & local cybersecurity system building
- (FCC) 211 Help Desks to point callers and visitors to essential human services
- (USDOL) Repositories of curated open educational resources for economic inclusion: SkillsCommons and MERLOT
- (ED) Statewide and local initiatives to grow digital literacy & cybersafety skills

# State initiatives to build cybersecure state & local systems

# State digital equity planning & implementation

- 5 key metrics
- Metric #4: building cybersafety skills
- Metric #5: strengthening inclusiveness & accessibility of web portals to essential public resources/services
- State's DHS-supported cybersecurity initiative
- 211 Help Desk



# 211 Help Desk



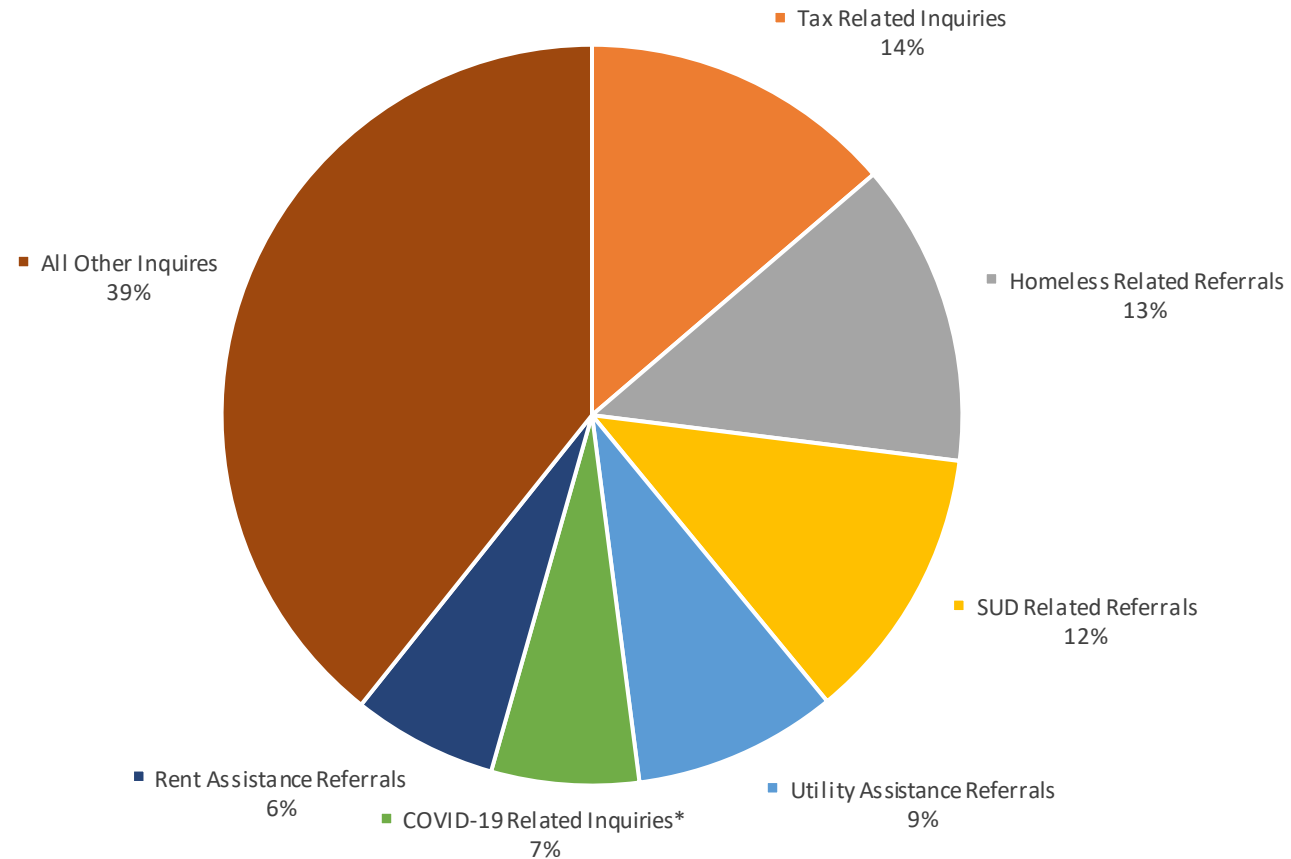
- Unique role of NH's (and the nation's) 211 Help Desks
- Strengths and limitations of NH's 211 service
- Opportunities to strengthen the 211 service

\*There were 6,941 additional COVID-19 related calls that were routed to Maximus call centers.

# Visitors to NH 211 & their Concerns

211 NH 2022 Totals	
Calls to 2-1-1	73,588
211 Website Visits	46,706
Total contacts	160,831
Top Calls - 2022	
Tax Related Inquiries	10109
Homeless Related Referrals	9741
SUD Related Referrals	8886
Utility Assistance Referrals	6551
COVID-19 Related Inquiries*	4739
Rent Assistance Referrals	4651
All Other Inquires	28911

# Commonly Encountered Concerns





# SkillsCommons and State Digital Equity & Cybersafety initiatives

Dr. Gerry Hanley

Executive director

[SkillsCommons](#) & [MERLOT](#)

# Accessibility, Access, and Inclusiveness

Not “Reinventing the Wheel” with Available Resources  
From SkillsCommons

Gerry Hanley, Ph.D.

Executive Director, MERLOT and SkillsCommons

Director, Cal State University Long Beach Center for Usability in Design and Accessibility

Professor Emeritus, Department of Psychology, CSULB

# **Speed and Effectiveness will be Key to Successful Use of Digital Equity Act Funds**

- Leveraging NH CIO leadership and IT programs
- Leveraging NH 211 leadership and programs
- Resources from Federal Programs are available for immediate use.
  - SkillsCommons: US Dept of Labor's TAACCCT funded free and open library for workforce development

# Accessibility, Access, and Inclusiveness

- **Accessibility:** Everyone including those with disabilities are able to access and use the digital content with equal effectiveness.
  - Support United Way's 211 website strategies to be WCAG (Web Content Accessibility Guidelines) compliant.
  - All the online resources referenced by United Way's 211 website need to be WCAG compliant
    - SkillsCommons and CAST created a free and open "[Accessibility Self-Service Support Center](#)"
    - There are technology tools and companies that bring exceptional expertise and capabilities.

# Build Capacities for Accessibility

## Accessibility Checkpoints and Instruction Guide



The Accessibility Checkpoints    Listen

These checkpoints are meant to ensure that the document should be uploaded to the repository.

Instruction Guide for Complete

This instruction guide provides “the SkillsCommons repository.”

## Accessibility Evaluation Manuals



The Accessibility Evaluation Manual

The accessibility evaluation manual contains short descriptions of the manual and materials provided to evaluate

### Reading Order - Digital resource layout

#### 10. Reading Order - Digital resource layout

The reading order for digital resource content logically corresponds to the visual layout of the page when rendered by assistive technology

Yes  No

#### Resources & Examples

To be accessible to non-visual readers, content must be marked up such that a logical path that excludes secondary material (e.g., endnotes, sidebars, charts, etc.) and orders the primary content can be followed by assistive technology.

[“Best Practices in Organizing OER Content”](#)

BC Open Textbook Accessibility Toolkit (BCcampus and CAPER-BC)

The resource below contains technical references with generic explanation of reading order and examples depending on the OER file type.

[EPUB3 Accessibility Guidelines](#) (International Digital Publishing Forum)

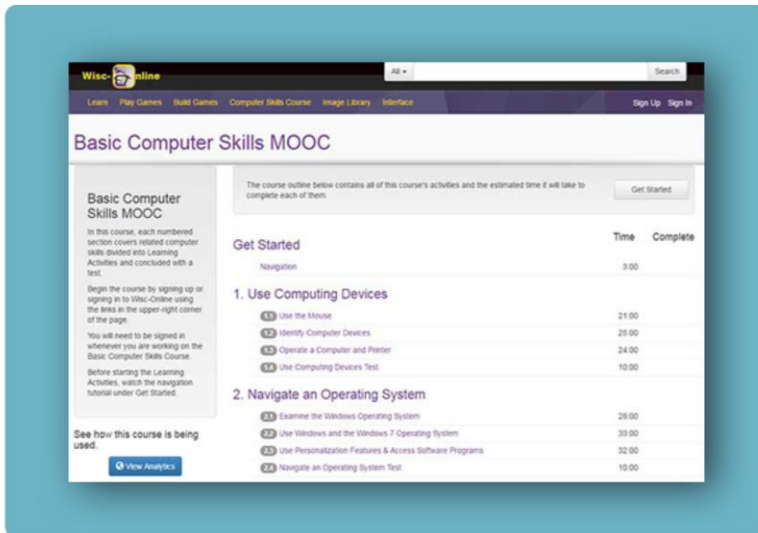
[Checking Logical Reading Order with CommonLook PDF](#) (NetCentric Technologies) Note this is from a commercial vendor

# Accessibility, **Access**, and Inclusiveness

- **Access:** Providing FREE and OPEN access to user-friendly resources
  - Both time and money are barriers to access the resources
  - Service providers can offer some of their resources free and open
    - SkillsCommons created an “[Open Licensing Support Center](#)” in collaboration with Creative Commons with a free online course.
    - SkillsCommons partnered with [CSULB Center for Usability in Design and Accessibility](#) to provide examples and guidelines on how to reuse, revise, remix open educational resources to be more user-friendly for your users.

# Build Capacities to Leverage & Create OER

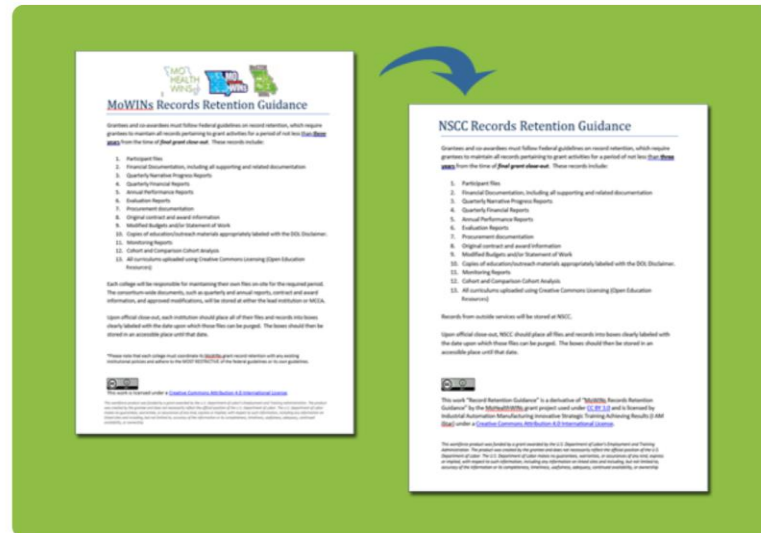
## Reuse “as is” OER



**Reuse “as is”** = no modifications were made to the original material(s). Materials accessed/downloaded from SkillsCommons and used “as is.”

[View Reuse Showcase](#)

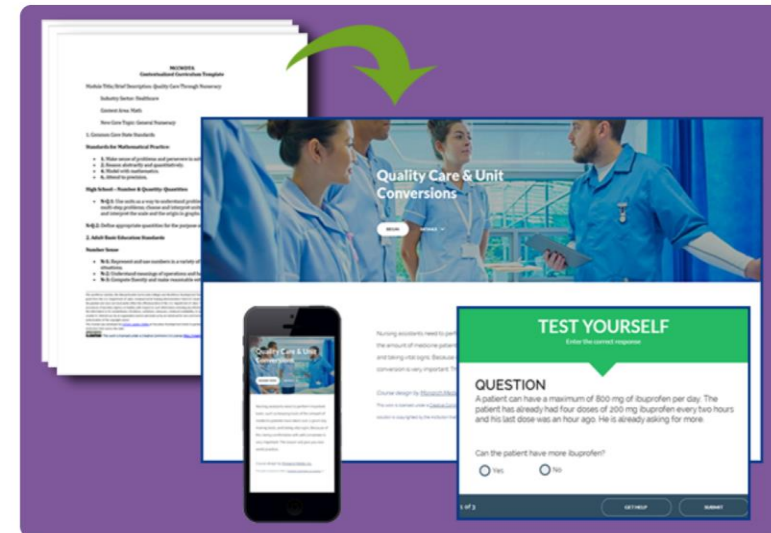
## Revise and Reuse OER



**Revise and Reuse** = Edits to the content, branding, scope, and sequence applied, while keeping authoring technology of the original material(s)

[View Revise & Reuse Showcase](#)

## Makeover OER



**Makeover** = Innovative technologies applied to original material(s) transforming them into more usable, UDL, and effective resources(s).

[View Makeover Showcase](#)

# Accessibility, Access, and **Inclusiveness**

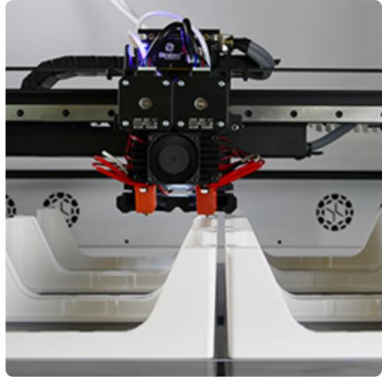
- **Inclusiveness:** There are many dimensions of inclusiveness that creates opportunities for diverse communities to achieve equitable outcomes through processes that recognize and give agency to the diverse communities.
  - **Economic Inclusiveness:** [SkillsCommons](#) can support your community members' workforce readiness skills for jobs with sustainable living wages.
  - **Digital Inclusiveness:** SkillsCommons' sister program, [MERLOT](#) provides free and open learning resources to develop people's digital literacy skills so they can "live online"



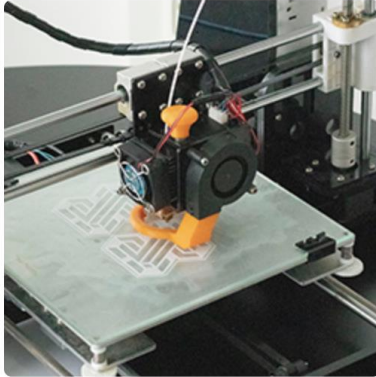
# Build Capacities for Inclusiveness

## Industry Sector Training Materials

Explore the FREE and OPEN library of materials designed for education and industry in recruitment, training and occupations across Ohio:



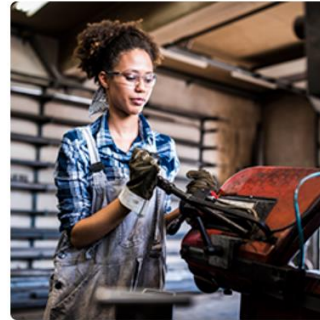
Additive MFG



Digital Fabrication



Industry



**MACHINING CAREER PATHWAY** OhioTechNet

PRODUCTION TECHNICIAN	MACHINE OPERATOR	MACHINIST 1	MACHINIST 2	MACHINE SHOP SUPERVISOR	MANUFACTURING ENGINEER
\$37,662	\$39,834	\$41,128	\$53,482	\$70,087	\$86,326
<ul style="list-style-type: none"> <li>High School Diploma or GED</li> <li>2-4 years of experience</li> <li>Ability to read blueprints</li> <li>Strong attention to detail</li> <li>Good communication skills</li> </ul>	<ul style="list-style-type: none"> <li>High School Diploma or GED</li> <li>1-3 years of experience</li> <li>Ability to read blueprints</li> <li>Strong attention to detail</li> <li>Good communication skills</li> </ul>	<ul style="list-style-type: none"> <li>High School Diploma or GED</li> <li>3-5 years of experience</li> <li>Ability to read blueprints</li> <li>Strong attention to detail</li> <li>Good communication skills</li> </ul>	<ul style="list-style-type: none"> <li>High School Diploma or GED</li> <li>5-7 years of experience</li> <li>Ability to read blueprints</li> <li>Strong attention to detail</li> <li>Good communication skills</li> </ul>	<ul style="list-style-type: none"> <li>High School Diploma or GED</li> <li>7-10 years of experience</li> <li>Ability to read blueprints</li> <li>Strong attention to detail</li> <li>Good communication skills</li> </ul>	<ul style="list-style-type: none"> <li>High School Diploma or GED</li> <li>10+ years of experience</li> <li>Ability to read blueprints</li> <li>Strong attention to detail</li> <li>Good communication skills</li> </ul>

Click Here for a Print Version of the Machining Career Pathway (PDF)

## Machining Career Pathway

Ohio Wages as reported on makingohio.com. Click on "+" for Job Requirements.

+ PRODUCTION TECHNICIAN \$37,662

+ MACHINE OPERATOR \$39,834

+ MACHINIST 1 \$41,128

+ MACHINIST 2 \$53,482

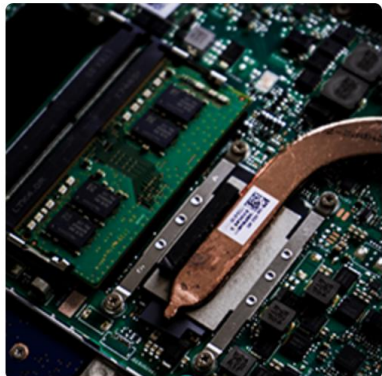
+ TEAM LEAD \$53,482

+ ENGINEERING TECHNOLOGIST \$61,809

+ CNC PROGRAMMER \$59,882

+ MACHINE SHOP SUPERVISOR \$70,087

+ MANUFACTURING ENGINEER \$86,326



Micro-electromechanical Systems



Production/Assembly/Entry-level



Automati



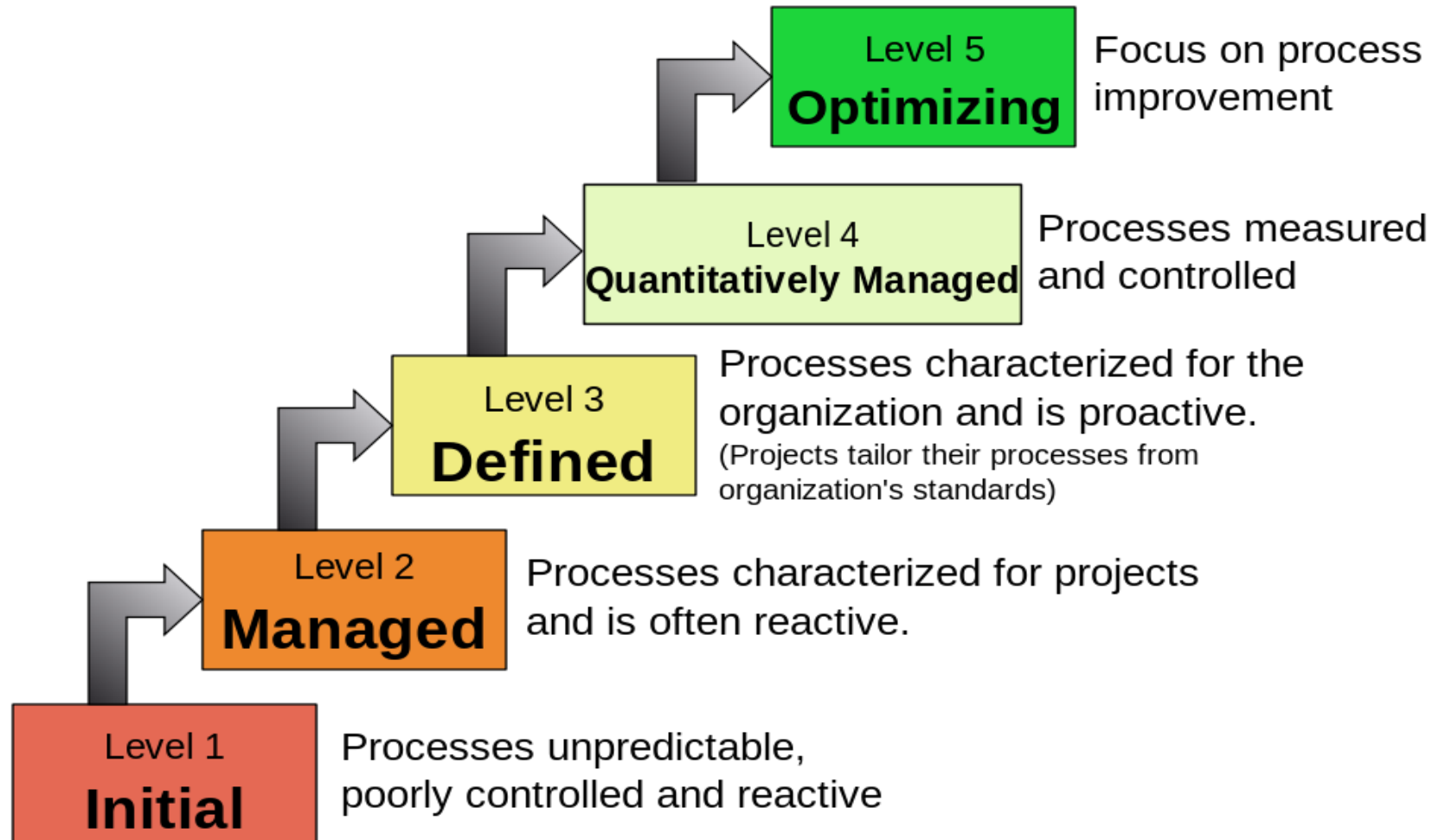
## Career Descriptions

Explore Machining careers at CareerOneStop

- Machine Feeders and Offbearers
- Office Machine Operators, Except Computer
- Continuous Mining Machine Operators
- Shoe Machine Operators and Tenders
- Computer Automated Teller and Office Machine Repairers

# Capabilities Maturity Model: Sustainability Strategy for Digital Equity Act Investments

## Characteristics of the Maturity levels



# Maturing Capabilities Begins With Where People Are Today

- **Principles of CMM**

- Assess what level your organization is currently functioning and identify the next level “up”.
- You can’t skip level.
- Your established level of operations functions as the foundation for the next level of operations
- You have to practice the operational policies, not just declare policies about how you want to operate
- Maturing operational capabilities requires the professional development and persistence of staff.
- Gradual progress should be celebrated with regular recognition

# Collaboration at the State Level is Essential for Sustainability and Success

Let SKILLSCOMMONS help you  
pave your customized Partnership Pathways



## CRITICAL CONSIDERATIONS

for Successful Workforce Pipeline Ecosystems



READINESS INDICATORS  
to Leverage the Work in Place

SkillsCommons has identified exemplary practices for state level strategies for coordinating many partners required to solve complex problems.

<https://support.skillscommons.org/paving-pathways/>

# US Dept.of Education's support for state and local digital equity & cybersafety initiatives

Michael Klein

Infrastructure Fellow

Office of Educational Technology

US Department of Education



Why should we be concerned  
about K-12 cybersecurity?

# 1,619 K-12 Cyber Incidents Between 2016-2022

## Hackers leak 500GB trove of LAUSD ransomware attack

Carly Page @carlypage\_ / 8:45 AM EDT • October 3, 2022



## Des Moines Public school year after ransomware attack

While district officials know families are returning students to class is not as simple as them down in the classroom



**Samantha Hernandez**  
Des Moines Register

Published 11:45 a.m. CT Jan. 10, 2023 | Updated 3:07 p.m. C

AP U.S. WORLD POLITICS VIDEO SPOTLIGHT ENTERTAINMENT SPORTS BUSINESS SCIENCE FACT CHECK CLIMATE HEALTH

EDUCATION

## Ransomware criminals are dumping kids' private files online after school hacks

An illustration featuring a laptop with a skull and crossbones icon on its screen, a folder with a red skull and crossbones, and several sheets of paper. To the right, there are several stylized eyes with red pupils. The background is a dark red and black grid of binary code (0s and 1s). The text 'MINNEAPOLIS PUBLIC SCHOOLS' is faintly visible at the bottom of the illustration.

1 of 3 | (AP Illustration/Peter Hamlin)ASSOCIATED PRESS

BY FRANK BAJAK, HEATHER HOLLINGSWORTH AND LARRY FENN  
Published 3:50 AM EDT, July 5, 2023

Share

## District approves ransomware



Items 7 (Darkweb)

Reply Reply All Forward

Wed 7/5/2023 2:25 AM

All of the districts rare and cybercrime gangs post/leak data from their victims. While the veracity of the claims is unknown, and reputational impacts on organizations. If the breaches are verified, they could put the sensitive data of indicative of incidents/alerts that had been previously reported.

# Pillar 1: Defend Critical Infrastructure

*WH National Cybersecurity Strategy*

“We will give the American people confidence in the availability and resilience of our critical infrastructure and the essential services it provides.”

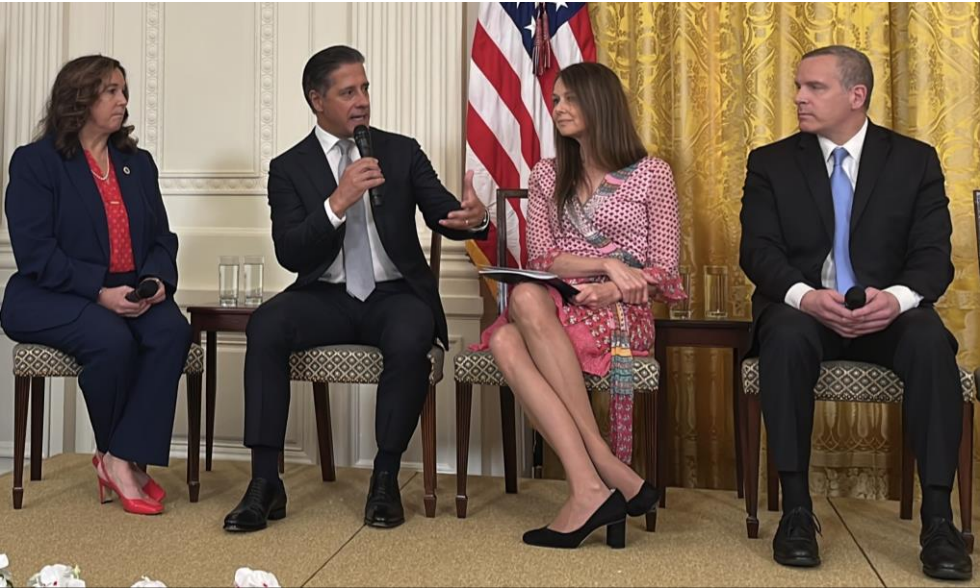
ANCD Kemba Walden: “We expect school districts to go toe-to-toe with transnational criminal organizations largely by themselves. **This isn't just unfair; it's ineffective**. The biggest and most capable and best positioned actors in our digital ecosystem can and should shoulder a greater share of the burden for managing cyber risk and keeping us all safe. And that includes the federal government.”





What steps are we taking right now?

# Step 1: Elevate Importance of K-12 Cyber



## Step 2: Establish a GCC to enable coordination

The Department will launch a **Government Coordinating Council (GCC)** to coordinate activities, policy, and communications between federal, state, local, tribal, and territorial governments that strengthen the cyber defenses and resilience of K-12 schools.

**What this means:** By facilitating ongoing collaboration between all levels of government and the education sector, the GCC will be a key first step in the Department's strategy to protect schools and districts from cybersecurity threats and for supporting districts in preparing for, responding to, and recovering from cybersecurity attacks.

### Impact:

- Fulfills #1 recommendation from the October 2022 GAO Report.
- Brings ED closer to other sectors like Election Infrastructure and Healthcare that already have GCCs with robust engagement

# Step 3: Provide Actionable Guidance

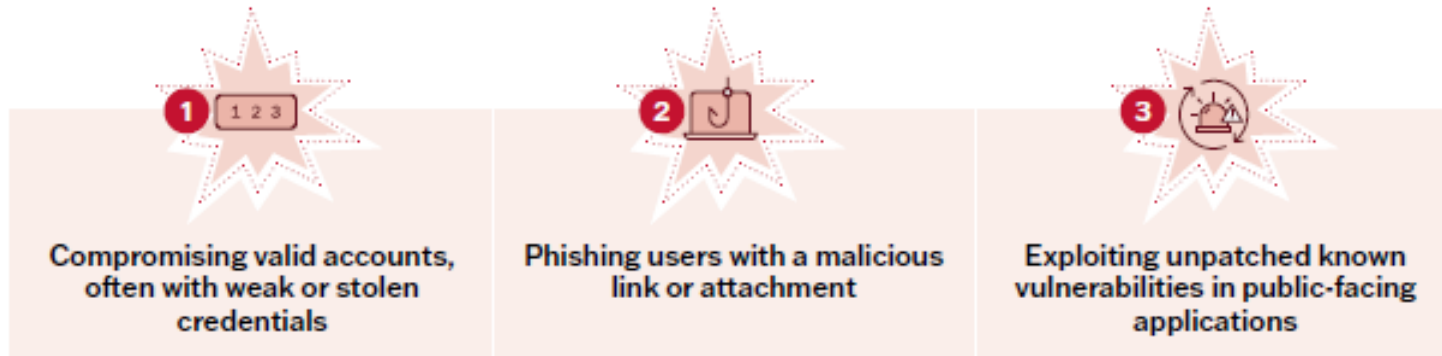
K-12 DIGITAL INFRASTRUCTURE BRIEF:

# DEFENSIBLE & RESILIENT



# High-Impact Recommendations

Prioritization of the greatest risks and mitigations can begin to address these challenges. Many malicious cyber actors gain initial access in one of three ways:<sup>14</sup>



In October 2022, ED, the U.S. Department of Homeland Security, the U.S. Department of Justice (DOJ), and the U.S. Department of Health and Human Services (HHS) jointly released a 1-page set of [Cybersecurity Action Steps for the K-12 Community](#), which details steps that districts can take to dramatically reduce their cybersecurity risk and potential liability:



# Identify: Example

## *NORTH DAKOTA'S WHOLE-OF-STATE APPROACH TO CYBER*

In April 2019, State Bill 2110 made North Dakota (ND) “the first state to authorize a central, shared service approach to cybersecurity strategy across all aspects of state government including state, local, legislative, judicial, K–12 education and higher education.” This whole-of-state approach empowered the state Chief Information Security Officer and North Dakota Information Technology (NDIT) to address third-party risk in several ways:

- **NDIT's Joint-Cybersecurity Security Operations Center (JCSOC)** protects endpoints and networks across ND and enables collaboration with at least 10 other states.
- **Lower Insurance Costs:** Entities that adopt NDIT cybersecurity shared services receive a 4 percent reduction in cost from the North Dakota Insurance Reserve Fund, the state insurance entity.
- **Third-Party Risk Assessment:** As of July 2023, all ND state agency vendors will be required to undergo a third-party risk management assessment in order to sell products or services to any of the 57 ND state agencies. Fast track options for vendors with one of three recognized cloud security certs: FedRAMP, StateRAMP, HITRUST.

# Identify: Free Action to Take

*If you only do one thing...*

## Mitigate Known Exploited Vulnerabilities (CPG 1.E)

Cybersecurity threats can feel overwhelming given limited resources in terms of time, staff, and funding. CISA and ED strongly encourage organizational cybersecurity leaders to focus on identifying and mitigating known exploited vulnerabilities: the small subset of vulnerabilities that are being actively exploited in the wild and have clear remediation actions to mitigate against that immediate harm.

As a state or district cybersecurity leader, the highest-impact action you can take to address this challenge (for Free!):

- Sign up for CISA's Cyber Hygiene Vulnerability Scanning. Vulnerability scanning helps secure internet-facing systems from weak configurations and known vulnerabilities and encourages the adoption of best practices. SEAs and local educational agencies (LEAs) that enroll get a weekly vulnerability scan and report, and, importantly, they are automatically enrolled in CISA's Ransomware Vulnerability Warning Pilot.

# Detect: Example

## *Connecticut's Approach to No-Cost Cybersecurity Services*

In addition to providing accessible and equitable pricing for broadband to 100 percent of the school districts in Connecticut, the [Connecticut Education Network \(CEN\)](#) includes a number of cybersecurity services at no additional cost. CEN provides

- Distributed Denial of Service (DDoS) monitoring and mitigation protections,
- inline and remote Children's Internet Protection Act (CIPA) filtering for all K–12 districts and libraries (which expanded to include 1:1 device initiatives during emergency remote learning and throughout the pandemic), and
- DNS firewall.



# Detect: Free Action to Take

*If you only do one thing...*

## Join the Multi-State Information Sharing and Analysis Center (MS-ISAC)

MS-ISAC is a CISA-funded Information Sharing and Analysis Center (ISAC) operated by the Center for Internet Security designed to serve as the central cybersecurity resource for the nation's state, local, territorial, and Tribal (SLTT) governments, including educational institutions. Members receive direct access to a suite of services and informational products including cybersecurity advisories and alerts, vulnerability assessments, incident response support, secure information sharing, tabletop exercises, a weekly malicious domains/IP report, and more. To learn more about the MS-ISAC program, email directly at [info@msisac.org](mailto:info@msisac.org) or visit their website at [www.cisecurity.org/ms-isac](http://www.cisecurity.org/ms-isac).

# Respond: Example

## *North Carolina's Joint Cyber Task Force*

North Carolina's whole-of-state approach provides a powerful example that combines

- information sharing,
- mandatory incident reporting, and
- real-time incident response in support of K–12 schools.

In January 2021, North Carolina built a Joint Cybersecurity Task Force that includes the FBI, National Guard, SEA, and school districts.<sup>37</sup> The task force is authorized by the governor and the legislature to mobilize the National Guard and deploy a strike force to support districts immediately upon learning of a cybersecurity incident, which all school districts and local governments are required to report based on the state's new incident reporting law. "The IT Strike Team is a group of volunteers and members of the North Carolina Local Government Information Systems Association (NCLGISA), an association of local government IT professionals. Strike team members volunteer their time and skills and, along with the National Guard, serve as boots on the ground to provide on-scene response and recovery services."

# Respond: Free Action to Take

*If you only do one thing...*

## Get to Know Local CISA and FBI Points of Contact

Cyber Incident Response is a Team Sport. There are many federal, state, regional, and local resources to support you as you navigate what may be one of the most challenging experiences of your career. In terms of federal support for incident response, your two most important points of contact are your local FBI field office and your CISA regional Cyber Security Advisor. If you are not sure how to find CISA or FBI help locally, contact your [CISA regional office](#) or [local FBI field office](#).

# Bonus High-Impact Free Action to Take

*If you only do one thing...*

Run a Tabletop Exercise with your District Leadership Team (CPGs 1.F, 4.A)

As a district leader focused on buying down cybersecurity risk, there is no bigger bang for your buck than running a 60–90-minute tabletop exercise with your executive leadership team. Drills and exercises offer a way of making infrastructure visible to the community so everyone can understand their role in protecting it and what to do in case it fails.

CISA and ED have developed K–12-specific tabletop exercises that you can use immediately or modify to meet specific needs. [CISA's K–12 Schools Tabletop Exercise Package](#) features a scenario where a threat actor targets district employees through phishing emails. Ransomware compromises the computer system with multiple impacts including exfiltration of students' PII, loss of school HVAC system control, and media inquiries.<sup>45</sup> In the [REMS-TA Cybersecurity Tabletop Exercise](#), you should imagine that you are a member of your school's emergency planning team and that you have access to only the resources and systems you currently have in place. You will discuss your response to a hypothetical cybersecurity incident, specifically a data breach that occurs because of malware.

# Q & A with our panelists

## Panelists:

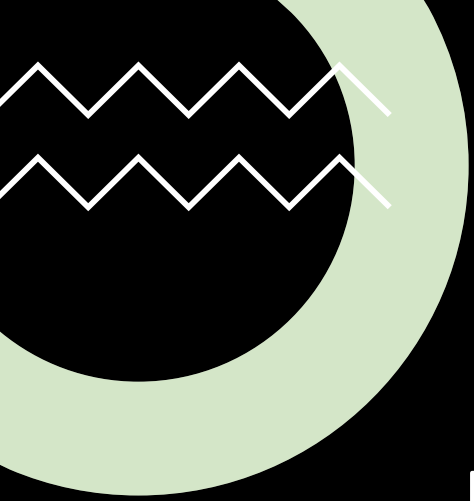
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## Framing the Challenge

