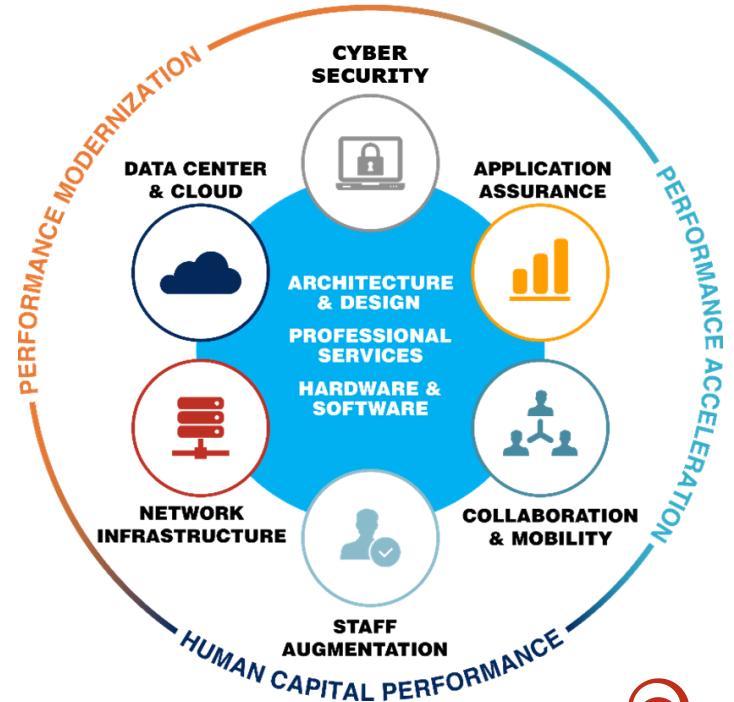# OVERVIEW

Networking For Future, Inc. (NFF)

> Founded in 1996

> Headquartered in Washington, DC

> 80+ Employees

> ISO 9001:2015 Certified

> 77% Hold Industry Certifications

Offering a performance-focused approach to transformational IT business solutions.

IT Business Solutions

PARTNERS

CLIENTS

FEDERAL GOVERNMENT

- Embassy of Australia
- The MITRE Corporation
- United Services Organizations
- US Government Agencies
  - Census Bureau
  - Court of Appeals for Veteran Claims
  - Federal Reserve System
  - Institute of Peace
  - Mine Safety/Health Review Commission
  - Occupational Safety & Health Comm.
  - Postal Regulatory Commission
  - Smithsonian Museum
  - US Surface Transportation Board
  - US Tax Court

STATE AND LOCAL GOVERNMENT

- City of Rockville, MD
- District of Columbia (DC) Agencies
  - DC Courts
  - Chief Technology Officer (OCTO)
  - Chief Financial Officer (OCFO)
  - Child and Family Services
  - Dept. of Behavioral Health
  - Dept. of Employment Services
  - Dept. of General Services
  - Dept. of Human Services
  - Dept. of Motor Vehicles
  - Fire and EMS
  - Homeland Security Agency
  - Metropolitan Police Department
  - Office of the DC Auditor
  - Office of Unified Communications
- Montgomery County, Maryland
- Prince William County, Virginia
- Virginia Smart Community Testbed
- West VA. Dept of Environ. Protection
- West VA. Division of Financial Institutions
- West VA. Office of Technology (WVOT)

EDUCATION AND LIBRARIES

K-12 AND LIBRARIES

- District of Columbia (DC)
  - Public Schools (DCPS)
  - Public Libraries (DCPL)
- French International School
- Prince George's County Memorial Library System
- Prince William County, VA Library
- Saint Stephen's & Saint Agnes School
- The Boy's Latin School of Maryland
- Trinity Christian School of Fairfax
- Tyler County West VA. Public Schools
- Washington International School

HIGHER EDUCATION

- Allegany College of Maryland
- George Mason University
- Georgetown University
- Georgetown University Law Center
- Marshall University
- Marymount University
- Montgomery College
- Morgan State University
- New Jersey Institute of Technology
- Notre Dame of Maryland University
- The Catholic University of America
- University of Maryland
  - Applied Research Laboratory for Intelligence and Security
  - Center for Environmental Science
  - Maryland Research & Education Network (MDREN)
- University of the District of Columbia

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CLIENTS

NON-PROFIT

- American Alliance of Museums
- American Nurses Association
- District of Columbia (DC)
  - ➢ Bar Association
  - ➢ Housing Authority
- Metropolitan Washington Council of Governments
- National Academy of Sciences
- National Association of College and University Attorneys
- National Parks Conservation Assn
- NeighborWorks America
- Radio Free Asia
- The American Institute of Architects
- United Way
- Virginia Housing Development Authority
- Virginia Innovation Partnership Corporation

COMMERCIAL AND ENTERPRISE

- Cisco Systems
- Riverbed
- ManTech
- Perdue Farms, Inc
- CSSI Inc.
- United Parcel Service (UPS)
- Newseum
- Coleman Power Sports
- Donohoe Construction
- Polinger Company
- Incapsulate, LLC
- FEI Construction Company
- Hughes Network Systems
- Smoot Construction

TRANSPORTATION AND UTILITIES

- District of Columbia (DC)
  - ➢ Dept. of Transportation
  - ➢ Water and Sewer Authority
- Maryland Dept. of Transportation
- Metropolitan Washington Airports Authority
- Prince William County Va. Service Authority
- Washington Metropolitan Area Transit Authority
- Washington Suburban Sanitary Commission

HEALTHCARE

- Ascend Healthcare Systems LLC
- District of Columbia Dept. of Health
- District of Columbia Dept. of Health Care Finance
- District of Columbia Health Benefit Exchange Authority
- Novant Health Systems
- United Medical Center

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CONTRACT VEHICLES

Federal and National

- **GSA Schedule 47QTCA21D0047**
- **NASPO ValuePoint Contract #AR3227**
- **USAC E-Rate SPIN # 143030044**
- **OMNIA Partners**
- **National Cooperative Purchasing Alliance (NCPA)**
- **Equalis Group**

Maryland

- **Md. Education Enterprise Consortium (MEEC)**
- **Md. Consulting and Technical Services (CATS+)**
- **Md. Dept. of Information Technology (DoIT) Hardware Master Contract**
- **Prince George's County Consulting and Technical Services (CATS II)**
- **Baltimore County Public Schools IT Security Services and Solutions**

CONTRACT VEHICLES

› Virginia

- **Fairfax County Public Schools**
- **Virginia Higher Education Procurement Consortium (VHEPC)**

› District of Columbia

- **District of Columbia Supply Schedule (MOBIS and ITES)**
- **Metropolitan Washington Airports Authority (MWAA)**
- **Washington Metropolitan Area Transit Authority (WMATA)**

› Certifications

- **District of Columbia Certified Business Enterprise (CBE)**
- **MWAA Local Disadvantaged Business Enterprise (LDBE)**
- **U.S. Small Business Administration Certified Small Business**

EDUCATION TECHNOLOGY PRACTICE

Leadership Team

K-12 EDUCATION
Executive Education Consultant
Pete Cevenini
https://www.linkedin.com/in/petecevenini/

HIGHER EDUCATION
Chief Strategy Officer
Chris Peabody
https://www.linkedin.com/in/chrispeabody/

SECURITY
Executive Education Consultant
Alan Edwards
https://www.linkedin.com/in/alan-j-edwards/

SMART CAMPUS
Executive Education Consultant
Michael Cannon
https://www.linkedin.com/in/michael-cannon-8949957/

- E-Rate hardware, software and solutions support
- vCIO, vCISO and full/part-time staff augmentation
- Network and security architecture and engineering professional services
- Micro-segmentation
- Comprehensive security and digital transformation roadmap development
- Smart Campus Solutions

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K-12 RECENT PROJECTS

District of Columbia Public Schools
- School Modernization Network Refresh
- Conference Room Upgrade
- Multi-year E-rate Contract

Trinity Christian School (1987, Fairfax, Virginia)
- Campus-wide Network, Security, and Wireless Refresh
- Managed Services Client
- Design and Management of Cloud Security Infrastructure
- Exchange Online Remediation
- NetActive Professional Services

St. Stephen's & St. Agnes School
- Cisco ISE Design and Implementation
- Completed Security Audit (Vulnerability Assessment and PEN testing)
- Managed Services Client
- Design and Management of Cloud Security Infrastructure
- NetActive Professional Services

Rochambeau, The French International School
- Campus-wide Fiber Deployment
- Wireless Heatmap Services for New Campus

Washington International School
- Design and Management of Cloud Security Infrastructure

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RECENT PROJECTS

GEORGETOWN UNIVERSITY

- Campus-wide Network Refresh
- Google Cloud Migration
- Smart-Campus Wireless Upgrades
- NetActive Professional Services

NJIT — New Jersey Institute of Technology

- Campus-wide Network & Security Refresh
- Micro-segmentation
- Firewall Upgrade Professional Services
- InTune Design and Implementation

THE CATHOLIC UNIVERSITY OF AMERICA

- Campus-wide Storage Upgrade
- Wireless Architecture for Nursing School
- Firewall Upgrade Professional Services
- Campus-wide Network Professional Services

MARYMOUNT UNIVERSITY

- Campus-wide Network Refresh
- Cyber Security Vulnerability Assessment
- Campus-wide Network and UC Professional Services

UNIVERSITY OF THE DISTRICT OF COLUMBIA 1851

- Campus-wide Network, Security & Wireless Refresh
- Micro-Segmentation
- Campus-wide Network Professional Services

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EDUCATION TECHNOLOGY PRACTICE – USE CASES
https://www.nffinc.com/education/

EDUCATION [RE]IMAGINED — HYBRID/HYFLEX LEARNING

Maximize Student Success with NFF Campus Hybrid/Hyflex Solutions

Education is changing. Teaching, learning, and administrative decision-making don't have to take place in-person. Students are more digitally engaged than ever before. Equipped with laptops, tablets, and mobile phones, they can tap into technology driven engagements outside of physical classrooms and campus spaces. Educators can collaborate seamlessly with fellow educators and administrators and can facilitate meaningful communications with and between students through remote access and distance learning.

Synchronous · Face to Face · **Hybrid Learning** · Virtual · Asynchronous

EDUCATION [RE]IMAGINED — CAMPUS NETWORK & WIRELESS SOLUTIONS

Enhance Student Engagement with NFF Campus Network and Wireless Solutions

Education is changing. From rapid shifts in distance and hybrid learning to an evolving and transforming job market and skills landscape. From new models of teaching and student engagement to the evolving role of the campus and classroom. From barriers to access and a growing digital divide to resource constraints, and mounting security threats, today is a time of unparalleled digital transformation.

95% Of network changes are performed manually

75% Of operating expense is on changes and troubleshooting

70% Of policy violations are due to human error

EDUCATION [RE]IMAGINED — ESPORTS

Esports: Converging Academics, Athletics and Technology

Education is changing. There is a new breed of college athlete, and while these students may take the field of play from a computer screen in an electrified Esports arena, the principals of athletics remain unchanged. Esports teams participate, head-to-head, against students from every corner of the globe, creating brand awareness and generating a whole new stream of revenue for their institutions. For many universities Esports is more than an athletic event, it is also an advanced field of study where students pursue their passions towards state-of-the-art careers. This is how we meet students where they are. This is unparalleled digital transformation.

You're reinventing education in real time. The future of education is based on innovative solutions that are simple to use, empower students, and are backed by world-class support. **That's where Networking For Future (NFF) comes in.**

	Audience	Prize Pool	Monetization
2022E	275M	$413M	$3B
2019E	194M	$256M	$1.2B
	+42%	+61%	+150%

EDUCATION [RE]IMAGINED — NETWORK, ENDPOINT AND WEB SECURITY

Enhanced Security With NFF Campus Network, Endpoint and Web Security Solutions

Education is changing. From barriers to access and a growing digital divide to resource constraints, and mounting security threats, today is a time of unparalleled digital transformation.

A critical component of any zero-trust strategy is securing the workplace that students, faculty and staff connect to. NFF offers a wide range of solutions that enables a dynamic and automated approach to policy enforcement that simplifies the delivery of highly secure network access control.

$1.6M $1.6 million saved by avoiding security events over three years

200 Hours 200 fewer hours spent remediating major network security events

98% 98 percent reduction in time to implement network changes

EDUCATION [RE]IMAGINED — IDENTITY AND ACCESS CONTROL

Securing the Hybrid Multi-Cloud Campus With NFF Identity and Access Control Solutions

Education is changing. From barriers to access and a growing digital divide to resource constraints, and mounting security threats, today is a time of unparalleled digital transformation.

In today's hyperconverged and hybrid world, identity management has never been more important. From access to devices on the network, to files and applications in the cloud, ensuring who has access to your resources has never been more critical to your campus.

46% About 46% of enterprises expect work-from-home policies to expand

97% Most employees, 97%, want to feel safer when back in the office

75% By 2022, 75% of global organizations will be running containerized applications

TODAYS MESSAGE

IT-Business Collaboration Fuels the Future of Education

Five Areas That Require Partnership & Collaboration
Business Officers and Information Technology Teams

- **Cyber Insurance Cost Reduction**

- **Cyber Security – Ransomware**

- **Innovative Solutions To Advance Student Success**

- **School Safety and Security**
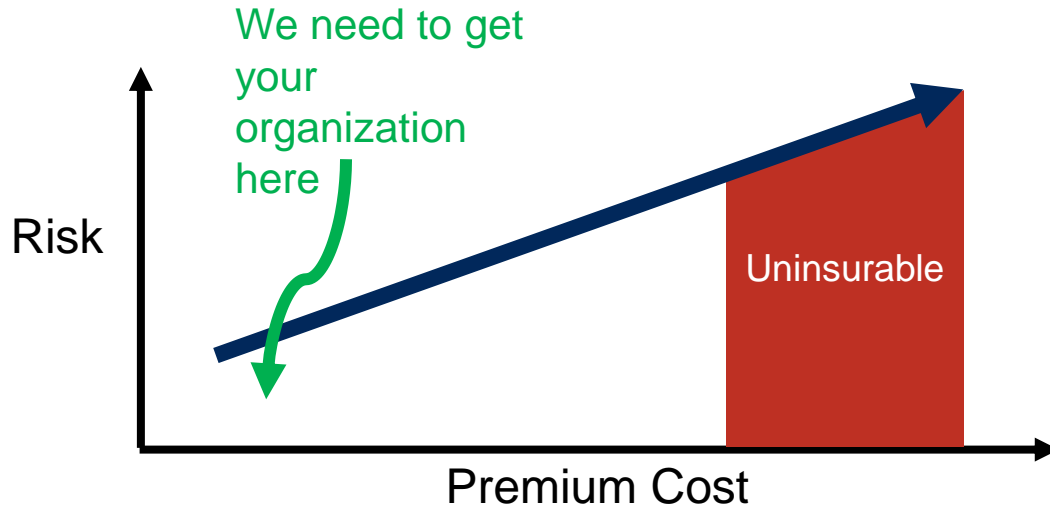
- **Smart School Technologies**

Cyber Insurance Cost Reduction
What is it: Things the insurance company wants you to do

■ **Cyber Insurance is a business**

> They make money by bringing in premiums

> They lose money when they pay claims

> The way they maximize this is by reducing their risk

> They reduce their risk by insuring less risky organizations

> They will force cyber security on your school to reduce the risk and increase their profits

We need to get your organization here

Risk

Uninsurable

Premium Cost

Cyber Insurance Cost Reduction
Why should you care as a business officer

- **Your objective as a business officer actually aligns with the cyber insurance company.**
  - **Your objective is also to reduce the risk to your organization as much as possible by facilitating the removal, reduction, or transferal of the risk.**

- **Cyber Insurance is a business**
  - **They make money by bringing in premiums**
  - **They lose money when they pay claims**
  - **The way they maximize this is by reducing their risk**

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Cyber Insurance Cost Reduction
Why do you need to work with IT?

Do not be adversarial with IT implementing cyber security measures but do be a check/balance.

They and you want to protect the school students, staff, and as a business.
(Increased cyber security is annoying, we all know that.)

- **IT people are often not business focused, so they need your help**
  - ➢ **Work with IT for the business case for funding**
  - ➢ **Translate the business issue with a cyber security proposal**
  - ➢ **Grant applications for funding are a team effort**

- **Cyber insurance forms**
  - ➢ **These are annual forms with a checklist that can take months to implement**
  - ➢ **Get the most recent questionnaire every 3 months and give it to IT as a target**

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Cyber Insurance Cost Reduction
Here's how NFF can help

- **Expertise**

- **Assessments**

- **Tabletop exercises**

- **Framework/compliance help**

- **Partnerships**

- **Net active 'bucket' for grant awards**
  - **Grants often pay a single bill**
  - **Cybersecurity is often a subscription**
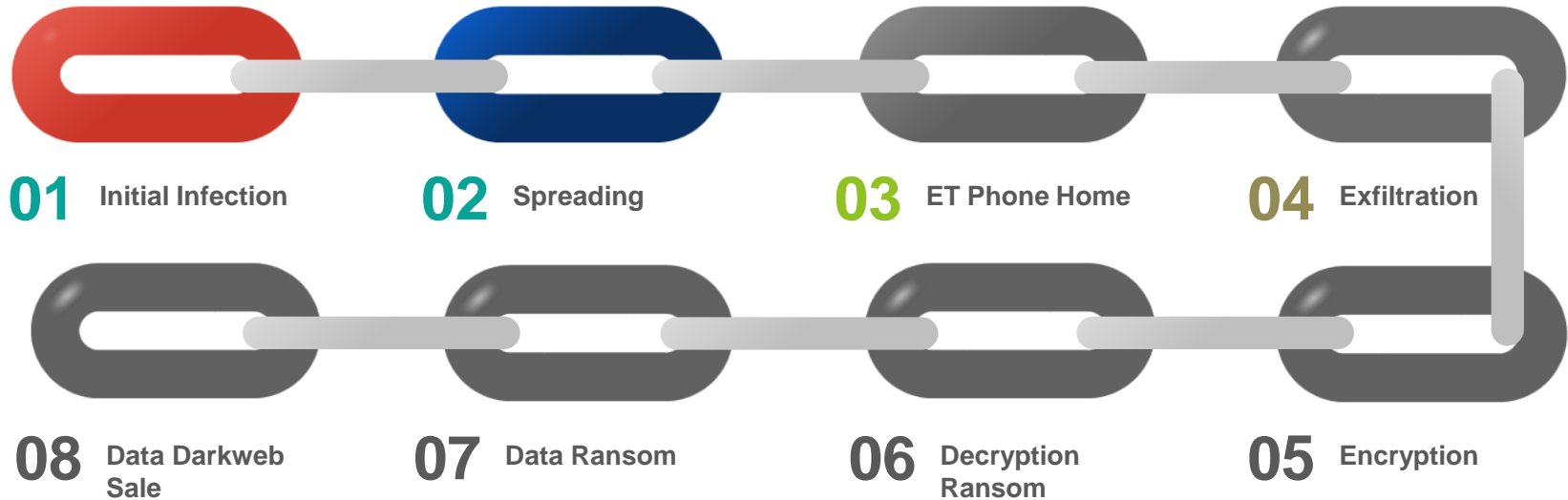 - **NetActive units can pay a subscription or labor**

You have an IT team

Let us help you win

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- Everyone should understand how a ransomware event occurs.

- You cannot protect against what you cannot understand

Ransomware for non-techs ……

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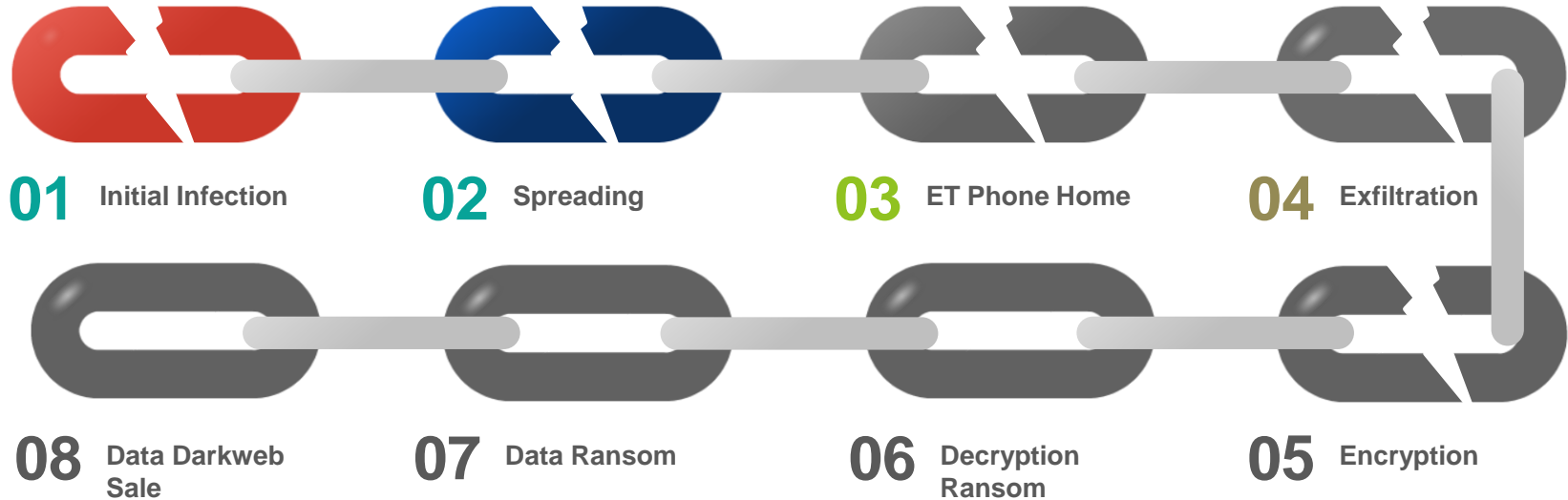# Anatomy of a Ransomware Attack

The 8 Stages of a successful attack

01 Initial Infection

02 Spreading

03 ET Phone Home

04 Exfiltration

08 Data Darkweb Sale

07 Data Ransom

06 Decryption Ransom

05 Encryption

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Anatomy of a Ransomware Attack

The 5 Stages where you can stop an attack

01 Initial Infection

02 Spreading

03 ET Phone Home

04 Exfiltration

08 Data Darkweb Sale

07 Data Ransom

06 Decryption Ransom

05 Encryption

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Anatomy of a Ransomware Attack

The 5 Stages where it is a too late

01 Initial Infection

02 Spreading

03 ET Phone Home

04 Exfiltration

08 Data Darkweb Sale

07 Data Ransom

06 Decryption Ransom

05 Encryption

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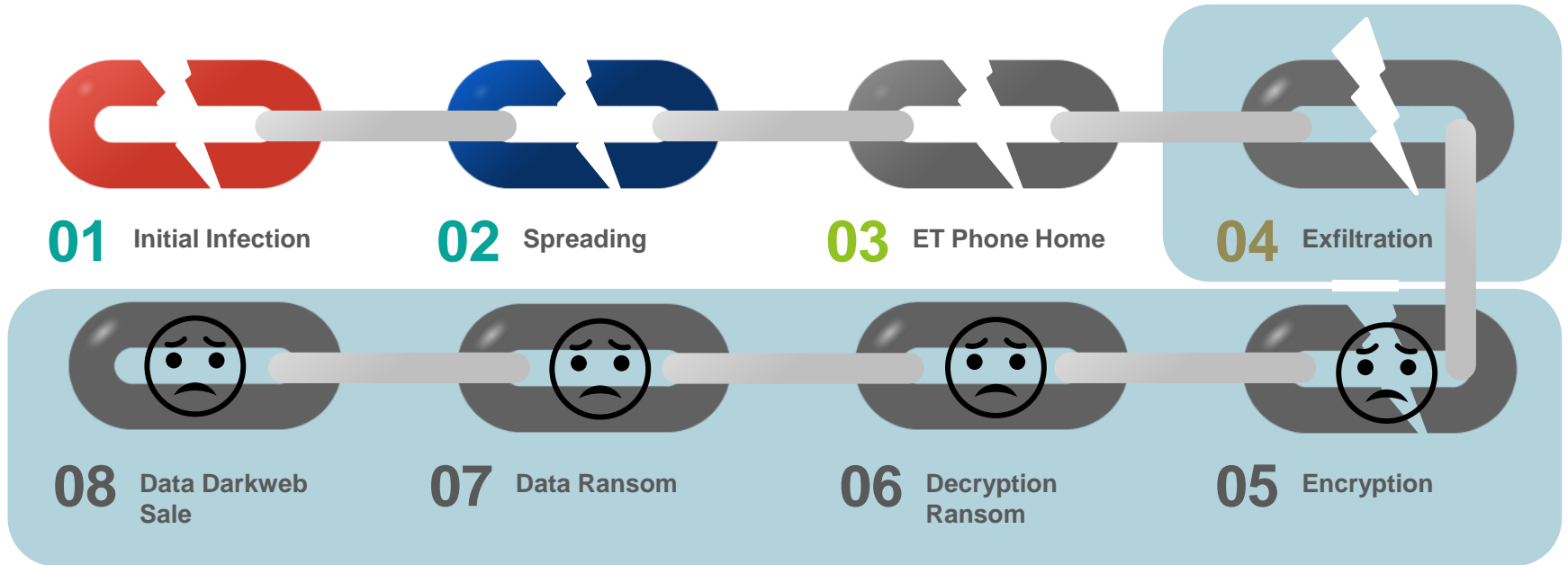
Cyber Security – Ransomware
Why should you care as the business officer

- **IT people are often not business focused, so they need your help**
  - ➢ **Work with IT for the business case for funding**

- **Common results of an attack**
  - ➢ **** Stuff stops working ****
  - ➢ **No teaching**
  - ➢ **No payroll**
  - ➢ **Student and staff data lost**
  - ➢ **Student and staff data made public**
  - ➢ **Reputation loss**
  - ➢ **Enrollment impact**
  - ➢ **Class action lawsuits**
  - ➢ **Reduced revenue**
  - ➢ **Increased costs**
  - ➢ **Layoffs and cost reductions**
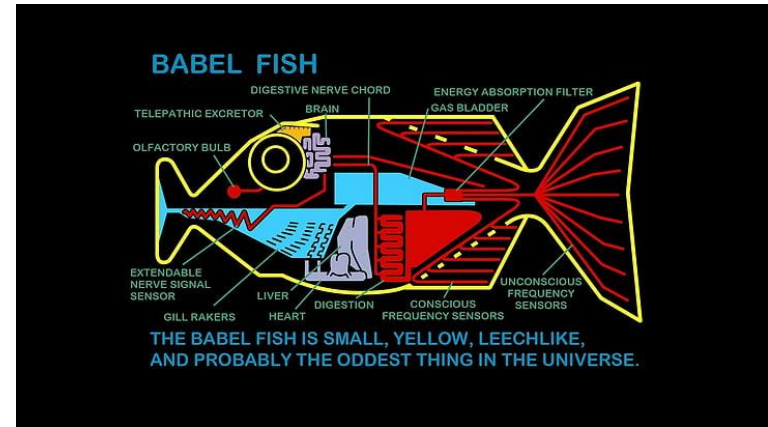

Adobe Stock | #577572294

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Cyber Security – Ransomware
Why you need to work with IT?

➢ **You understand risk vs reward – act as translator**

➢ **Work with IT for grant funding**

➢ **Security Improvement often requires**

    ➢ **Funding**

    ➢ **Political convincing**

    ➢ **Benefits explained to non-technical stakeholders**

⬆ These require a
Business Officer not
IT person for success

BABEL FISH

DIGESTIVE NERVE CHORD
ENERGY ABSORPTION FILTER
TELEPATHIC EXCRETOR
BRAIN
GAS BLADDER
OLFACTORY BULB
EXTENDABLE
NERVE SIGNAL
SENSOR
GILL RAKERS
LIVER
HEART
DIGESTION
CONSCIOUS
FREQUENCY SENSORS
UNCONSCIOUS
FREQUENCY
SENSORS

THE BABEL FISH IS SMALL, YELLOW, LEECHLIKE,
AND PROBABLY THE ODDEST THING IN THE UNIVERSE.

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Cyber Insurance Cost Reduction
Here's how NFF can help

➤ **Expertise**

  ➤ **Experienced professional with industry certifications**

  ➤ **Board Presentations / Q&A sessions**

  ➤ **Evaluations**

  ➤ **Table Top exercises**

You have an IT team

Let us help you win

NFF

School Challenges

- **Safety**
  - ➤ **Active shooters/Weapon detection**
  - ➤ **Student and faculty safety - Alerting/notifying students, faculty and public for emergencies**
  - ➤ **Security at large gatherings/events**
  - ➤ **Public access**

- **Student retention, engagement & success**

- **Enhanced connectivity – WiFi, 5G, Broadband**

- **Improved mobility – public transportation, smart parking, ride share vehicles and EVs**

- **Smart Buildings and energy management**

- **Hybrid and virtual learning environments**

- **Labs and testbeds for innovation (for students, research, public-private partnerships)**

- **VR/AR for instruction**

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School Safety and Security

- **Integrating access control, cameras and sensors**
  - ➢ **Using technology to make schools safe AND accessible**
    - ❑ **Video analytics: intrusion and theft detection - long gun detection**
    - ❑ **Sensors: gunshot detection – vaping – door/access – smart lighting**

- **Challenge:**
  - ➢ **Multiple systems with multiple groups responsible and all solutions require IT connectivity and support**
    - ❑ **School safety officer – IT – Facilities/Building Mgmt. – School Administrators**

- **How can NFF help?**
  - ➢ **Education specialists who design and manage secure integrated solutions**
  - ➢ **Single source from project initiation through ongoing operations**
  - ➢ **Federal and State funding available to improve school safety**

Ⓢignify / ·i|i·i|i· CISCO / ⫟ TRAXyL *Here to anywhere.* / eXpress-tek *EXPERTS IN TELECOMMUNICATIONS* / Ⓢ HELICORE / ◉ UNIIband

◉ NFF

Innovative School Solutions

- **Compartmentalizing access on the network (micro-segmentation)**
  - ➢ **Identity management - Secure access to resources and applications**
  - ➢ **Enables (or not) Social Media, etc…**

- **Enabling advanced infrastructure to enhance teaching and learning**
  - ➢ **Gamification makes learning fun and measurable**
  - ➢ **E-Sports helps students acquire crucial academic, social, and psychological skills**
  - ➢ **Solutions for hybrid/hyflex learning to help address impending teacher shortage**

- **Providing connectivity to areas not traditionally accessible**
  - ➢ **Connecting via new technology without digging**
  - ➢ **Using connected LED lighting outside of the building to improve lighting/public safety**

- **<u>How can NFF help?</u>**
  - ➢ **NFF and our partners build and deploy innovative and secure campus solutions**

# Smart Technologies Testbed
https://vatestbed.com/projects/

- The testbed project demonstrated how to efficiently and securely deploy a Smart connectivity grid, that includes innovative broadband fiber and wireless technologies, and Smart lighting that expands campus-wide access to the Internet and improves public services and safety.

- This infrastructure grid further enables IoT applications like sensors, meters, cameras, and building access control systems.

Smart Schools

- A smart school utilizes advanced networks and Internet-connected devices to provide supportive and engaging experiences. It joins people, devices, and applications and allows schools to make insight-driven decisions to improve security and maximize resources.

- Gartner identified intelligent campuses as one of the top 10 strategic technologies in education

- Examples of Smart Campus Technologies

    ➢ Proactively address operational issues - leaks, faulty appliances, HVAC issues

    ➢ Enhance security systems by adding gunshot sensors, and location intelligence

    ➢ Improve energy efficiency via smart lighting and HVAC performance monitoring

    ➢ Enhanced and expanded indoor and outdoor connectivity and communications

- <u>How can NFF help?</u>

    ➢ NFF and our partners build and deploy innovative and secure campus solutions

    ➢ NFF education practice specializes in smart school technologies consulting and engineering
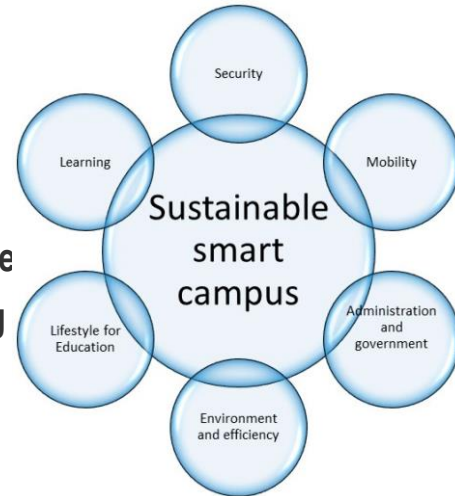
CONTACT US

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https://www.nffinc.com/education/

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