Wisconsin Procurement Institute

AN APEX ACCELERATOR

APEX ACCELERATORS

CYBER FRIDAY:

Protecting the Data

March 24, 2023 @ 11:00 am - Noon

Presented by Matt Frost, WPI

Wisconsin Procurement Institute

AN APEX ACCELERATOR

Cyber Friday

Webinar Etiquette

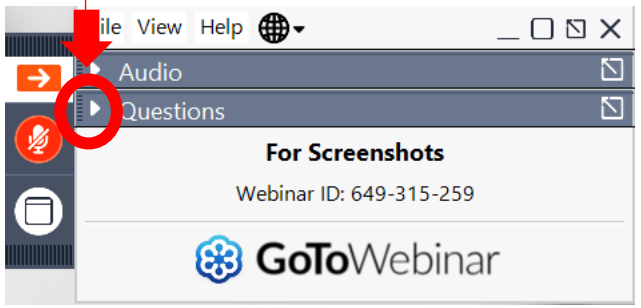
PLEASE

- Log into the GoToWebinar session with the name that you registered with online
- Place your phone or computer on MUTE
- Use the QUESTIONS option to ask your question(s).
  - We will share the questions with our guest speaker who will respond to the group

THANK YOU!

OPENING THE QUESTIONS BOX

Click here to access within the Control Panel



USING THE QUESTIONS BOX

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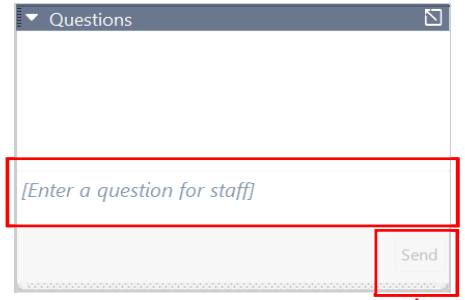


Click Send when ready to submit a question

WPI is Wisconsin's APEX ACCELERATOR

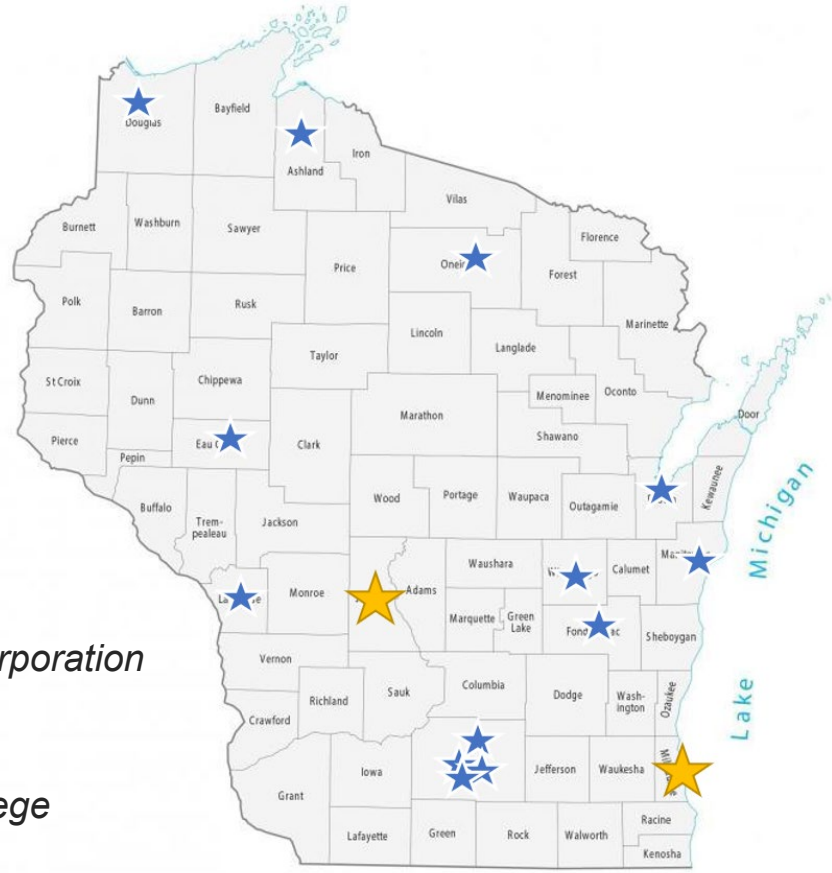
The APEX Accelerators program, under management of the Department of Defense (DOD) Office of Small Business Programs (OSBP), plays a critical role in the Department's efforts to identify and engage with a wide range of businesses entering and participating in the defense supply-chain. The program provides the education and training that all businesses need to participate to become capable of participating in DOD and other government contracts.

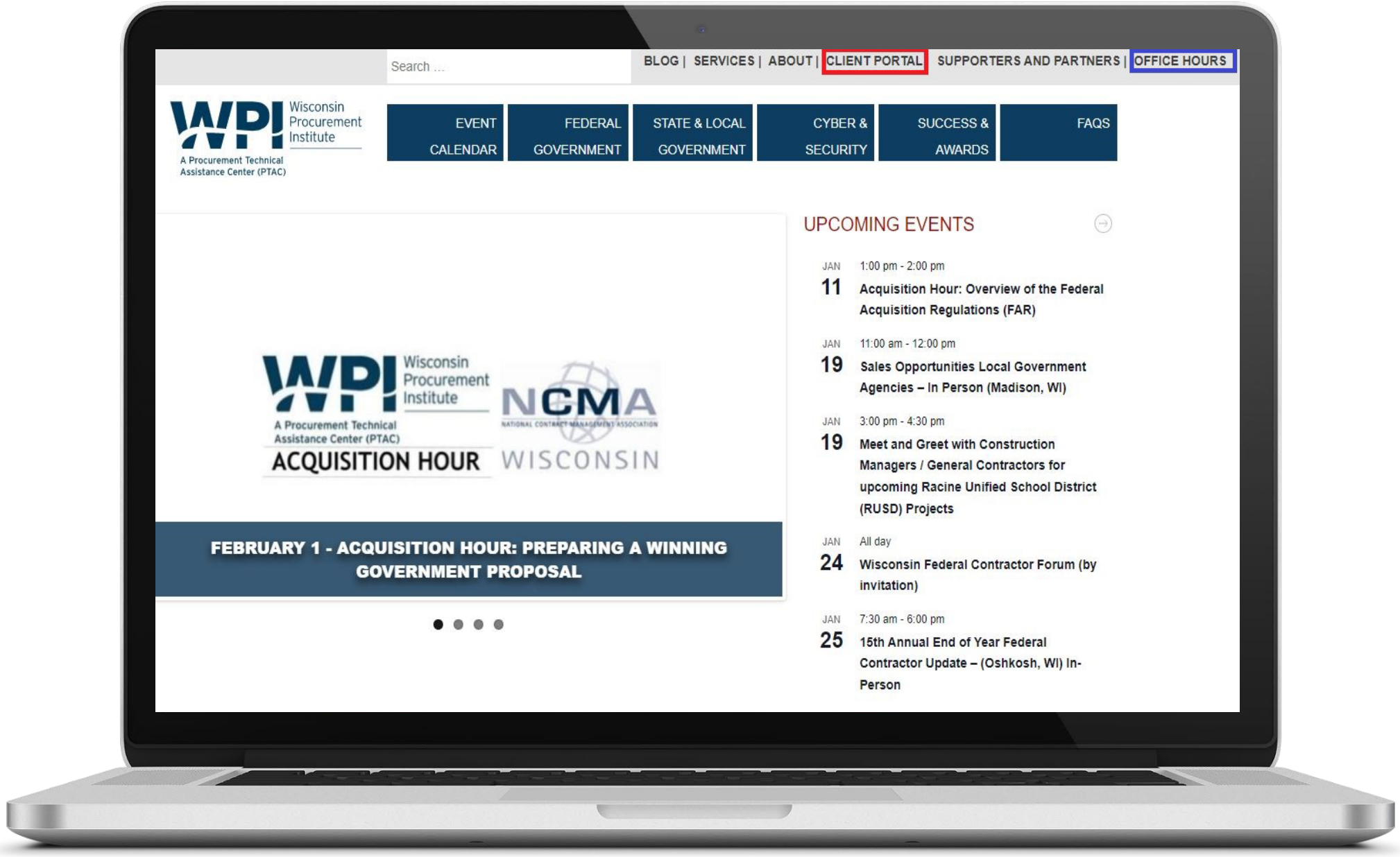
More about WPI

- WPI provides services to all of Wisconsin's 72 counties
  - Individual counseling at our offices, client's facility or virtually
  - Small group training – webinars and workshops
  - Conferences including one on one buyer meetings – Marketplace, The Contracting Academy, Small Business Academy, Wisconsin Federal Contractor Forum, Acquisition Hour, Cyber Fridays, DOD Roadmap series, Government Opportunities Business Conference, End of Year Federal Contractor Update, Annual DOD Contract Management Update, Evening FAR sessions and more……
- Last year WPI sponsored or participated in over 80 events
- Last year WPI provided technical assistance to over 1300 companies
- The APEX Accelerator is funded in part through a cooperative agreement with the Department of Defense
- WPI is also funded by the Wisconsin Economic Development Corporation (WEDC), contributions and in-kind

WPI OFFICE LOCATIONS

- **MILWAUKEE**
  - *Technology Innovation Center*
- **MADISON**
  - *FEED Kitchens*
  - *Dane County Latino Chamber of Commerce*
  - *Wisconsin Manufacturing Extension Partnership (WMEP)*
  - *Madison Area Technical College (MATC)*
- **ASHLAND**
  - *Ashland Area Development Corporation*
- **CAMP DOUGLAS**
  - *Juneau County Economic Development Corporation (JCEDC)*
- **EAU CLAIRE**
  - *Western Dairyland*
- **FOND DU LAC**
  - *Envision Greater Fond du Lac*
- **GREEN BAY**
  - *NWTC Startup Hub*
- **LACROSSE**
  - *Veterans in Professions*
- **MANITOWOC**
  - *Progress Lakeshore*
- **OSHKOSH**
  - *Greater Oshkosh Economic Development Corporation*
- **RHINELANDER**
  - *Nicolet Area Technical College*
- **SUPERIOR**
  - *Small Business Dev Center; UW Superior*

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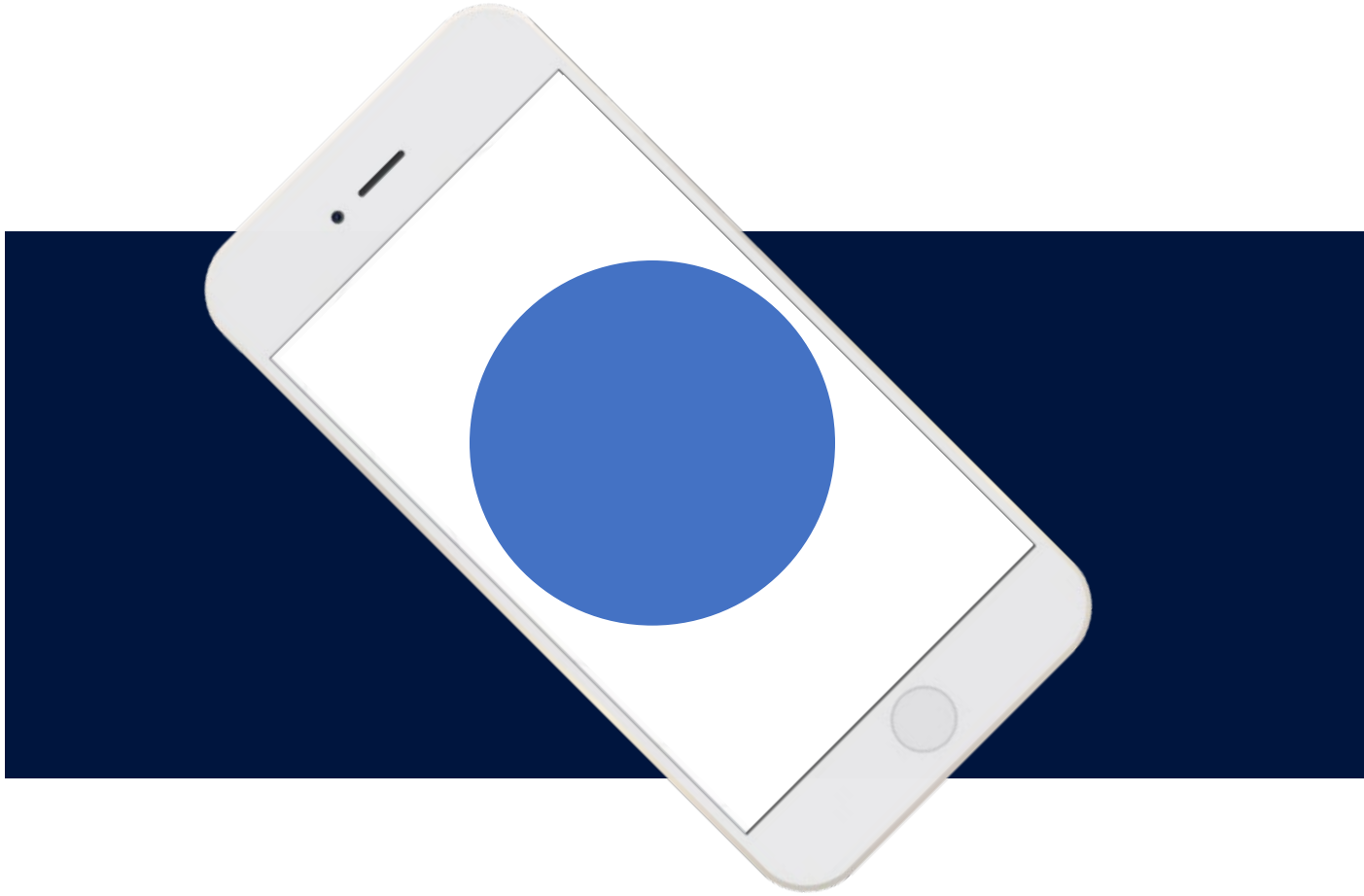
FEBRUARY 1 - ACQUISITION HOUR: PREPARING A WINNING GOVERNMENT PROPOSAL
UPCOMING EVENTS
JAN 11 1:00 pm - 2:00 pm Acquisition Hour: Overview of the Federal Acquisition Regulations (FAR)
JAN 19 11:00 am - 12:00 pm Sales Opportunities Local Government Agencies – In Person (Madison, WI)
JAN 19 3:00 pm - 4:30 pm Meet and Greet with Construction Managers / General Contractors for upcoming Racine Unified School District (RUSD) Projects
JAN 24 All day Wisconsin Federal Contractor Forum (by invitation)
JAN 25 7:30 am - 6:00 pm 15th Annual End of Year Federal Contractor Update – (Oshkosh, WI) In-Person

Protecting the Data: Encryption

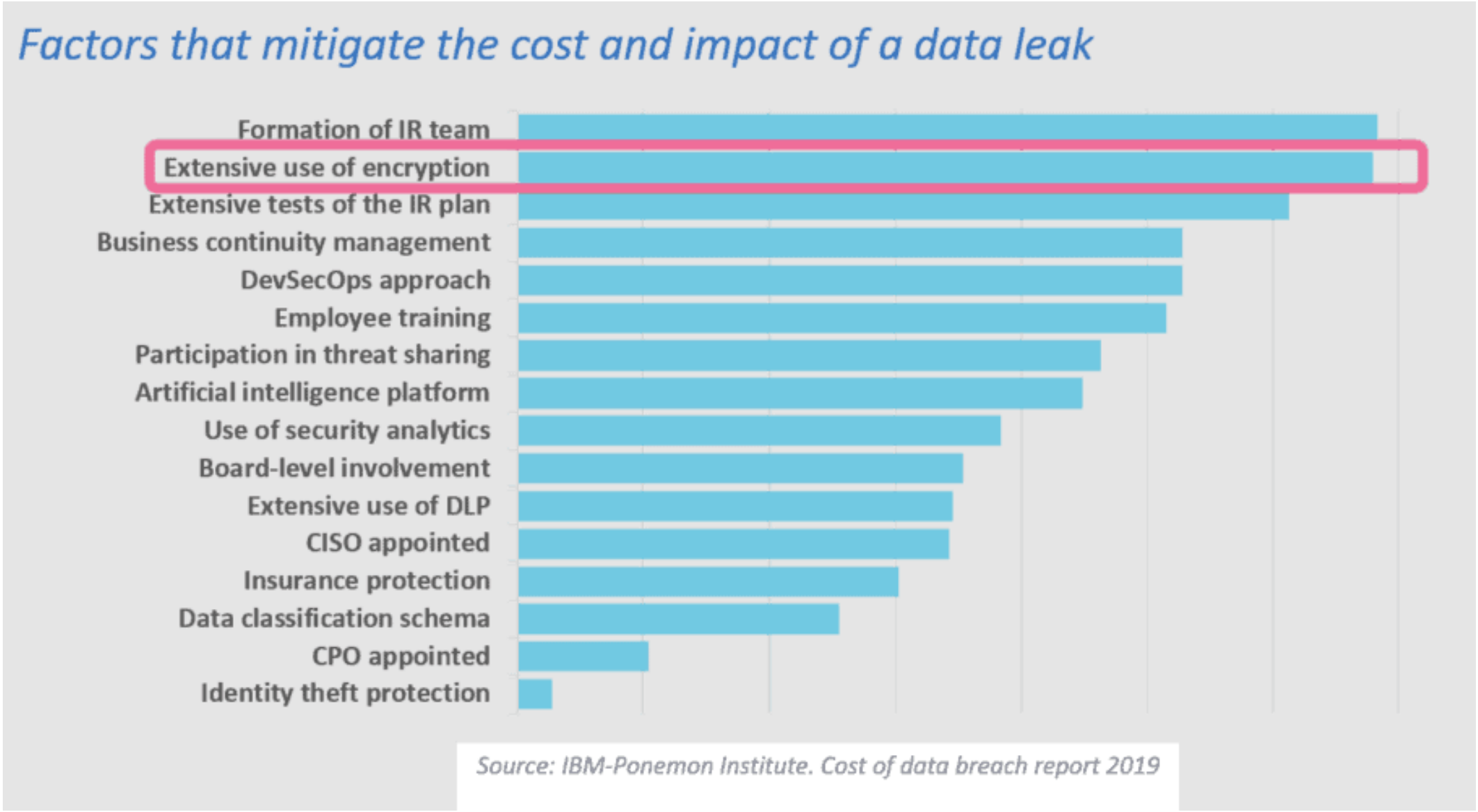
Wisconsin Procurement Institute

AN APEX ACCELERATOR



CYBER FRIDAY SESSIONS – March 24th, 2023

Why encrypt?


Factors that mitigate the cost and impact of a data leak
Formation of IR team
Extensive use of encryption
Extensive tests of the IR plan
Business continuity management
DevSecOps approach
Employee training
Participation in threat sharing
Artificial intelligence platform
Use of security analytics
Board-level involvement
Extensive use of DLP
CISO appointed
Insurance protection
Data classification schema
CPO appointed
Identity theft protection
Source: IBM-Ponemon Institute. Cost of data breach report 2019

DFARS 252.204-7012

The Contractor shall implement NIST SP 800-171, as soon as practical, but not later than December 31, 2017.

3.13.11
Employ FIPS-validated cryptography when used to protect the confidentiality of CUI.

When the Contractor discovers a cyber incident that affects a covered contractor information system or the covered defense information residing therein, or that affects the contractor's ability to perform the requirements of the contract… the Contractor shall rapidly report cyber incidents to DoD.

National Institute of
Standards and Technology
U.S. Department of Commerce

NIST Special Publication 800-175B Revision 1

Guideline for Using Cryptographic Standards in the Federal Government:

Cryptographic Mechanisms

1. NIST SP 800-175r1
   NIST Special Publication 800-175 Revision 1 Guideline for Using Cryptographic Standards in the Federal Government
2. FIPS PUB 140-3
   Federal Information Processing Standards Publication 140-3 Security Requirements for Cryptographic Modules
3. NIST SP 800-171A
   NIST Special Publication 800-171A Assessing Security Requirements for Controlled Unclassified Information

Protecting The Data

1 — NIST SP 800-175

2 — NIST SP 800-171r2

3 — FEDRAMP

NIST SP 800-175

FIPS

- ❑ Mandatory Compliance
- ❑ Governed by Testing Requirements

Algorithms

- ❑ Hash Functions
- ❑ Symmetric Algorithms
- ❑ Assymetric Algorithms

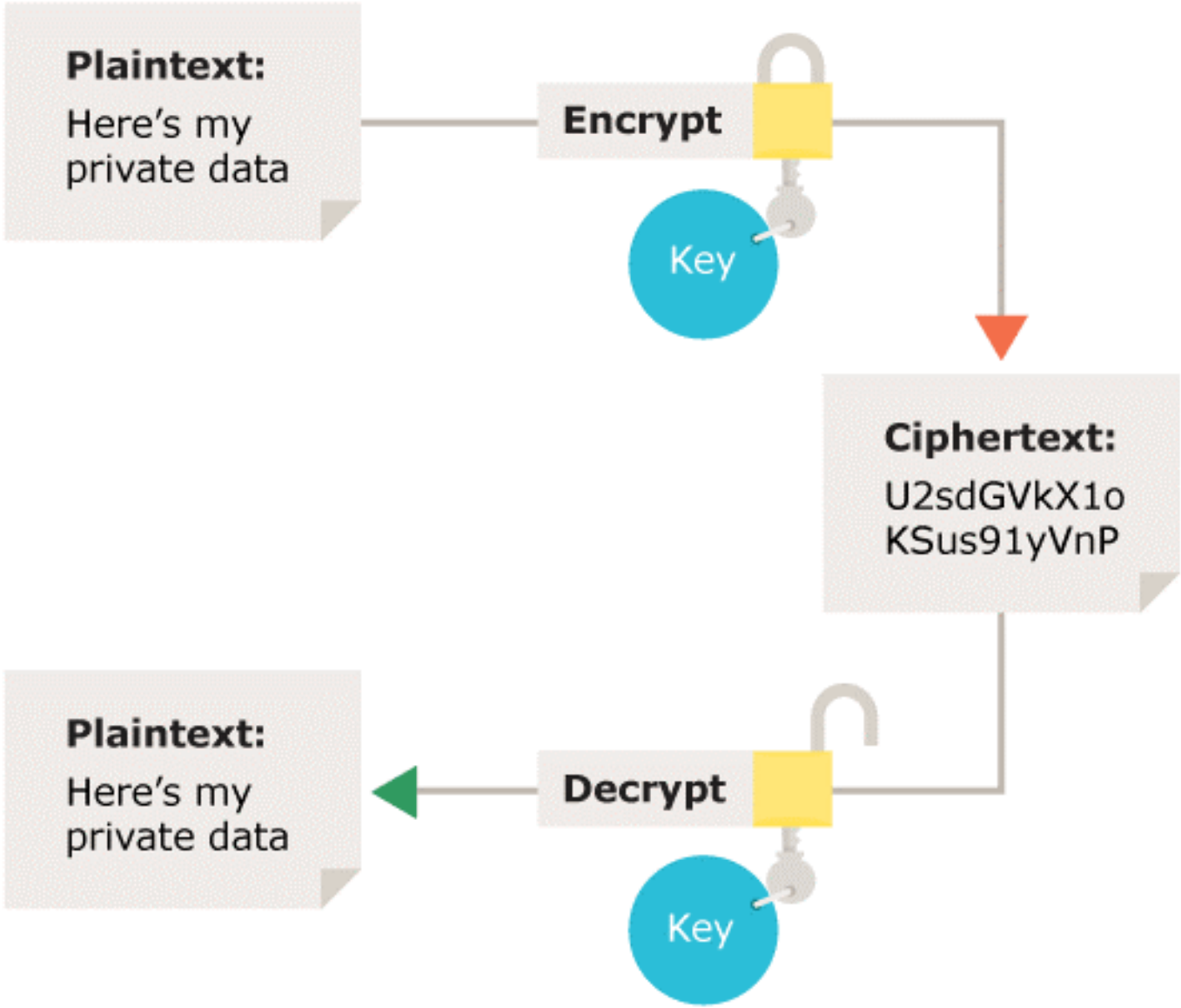
Cryptographic Services

- ❑ Data Confidentiality
- ❑ Data Integrity Authentication
- ❑ Source Authentication
- ❑ Support for Non-Repudiation

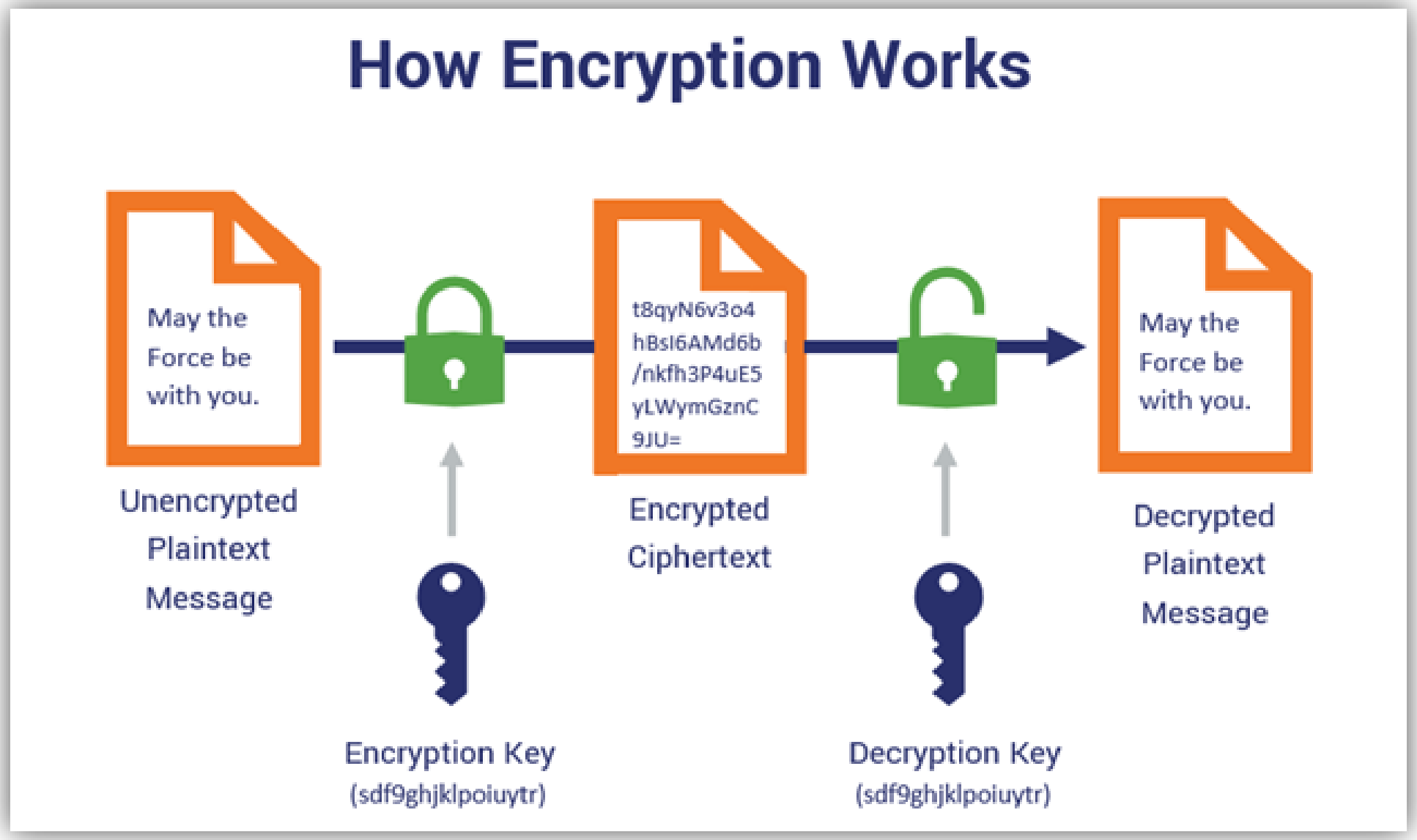
Key Management

- ❑ Securing the Keys
- ❑ Key Life-Cycle
- ❑ Key backup, archiving, recovery
- ❑ Changing Keys
- ❑ Cryptoperiods
- ❑ Key compromise Recovery

Symmetric vs Asymmetric



Symmetric vs Asymmetric



The Key to Keys

Symmetric Encryption

- Faster Performance
- Payment Applications
- Validations
- Every use of the “key” can contribute to its recreation
- Difficult to Manage, no embedded MetaData

Asymmetric Encryption

- SSL/TLS 1.2 (or higher)
- Public Key and Private Key Generated Together
- Mathematically Related
- Digital Signature Metadata
- Keys never have to be transmitted or exchanged
- Slow and Demanding on environments

Protecting The Data

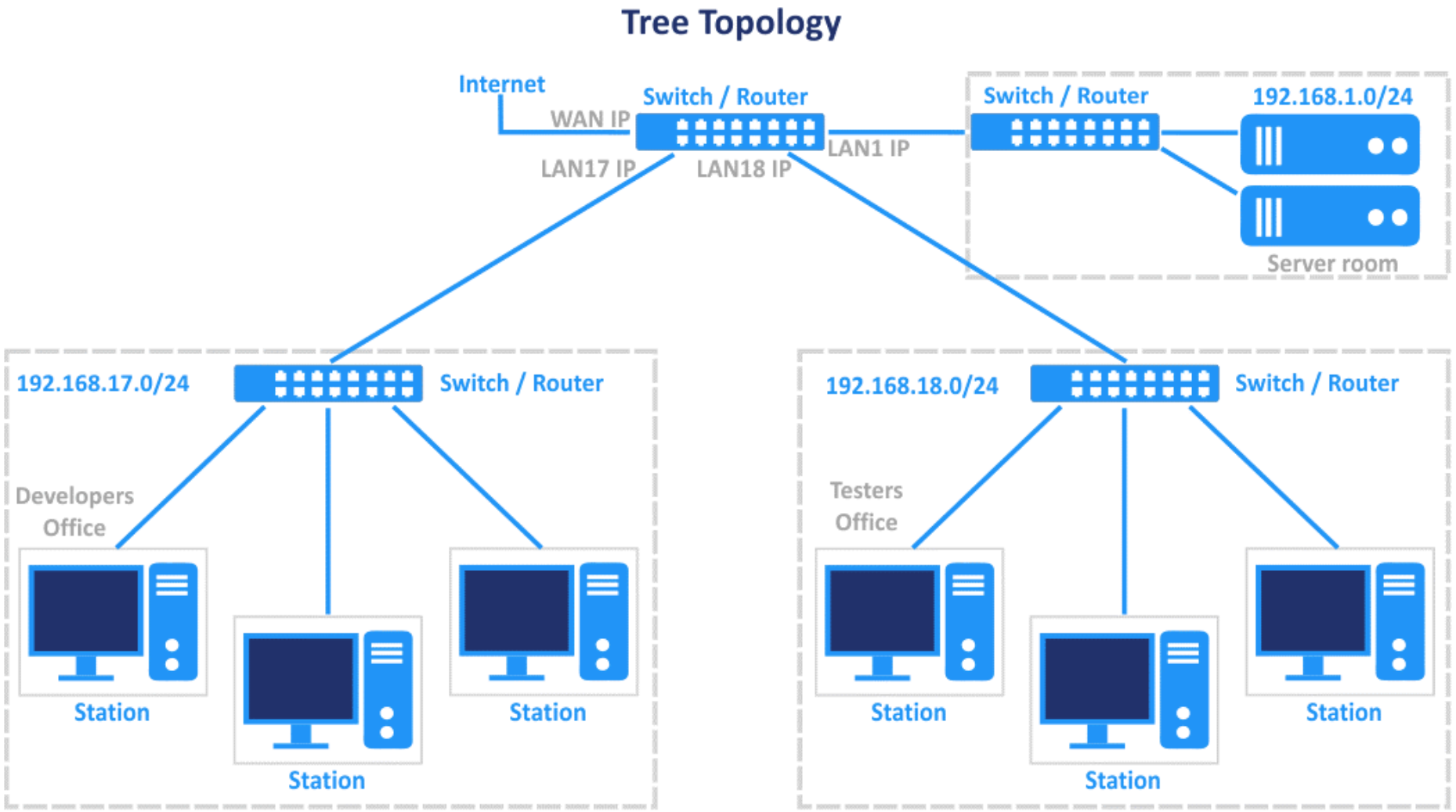
1 NIST SP 800-175

2 NIST SP 800-171r2

3 FEDRAMP

Encryption Requirements

The Visual


Tree Topology
Internet
WAN IP
Switch / Router
LAN17 IP
LAN18 IP
LAN1 IP
Switch / Router
192.168.1.0/24
Server room
192.168.17.0/24
Switch / Router
Developers Office
Station
Station
Station
192.168.18.0/24
Switch / Router
Testers Office
Station
Station
Station

Encryption In-Transit

NIST Controls

- ❑ 3.1.13 Employ cryptographic mechanisms to protect the confidentiality of remote access sessions.
- ❑ 3.1.17 Protect wireless access using authentication and encryption.
- ❑ 3.13.8 Implement cryptographic mechanisms to prevent unauthorized disclosure of CUI during transmission unless otherwise protected by alternative physical safeguards.

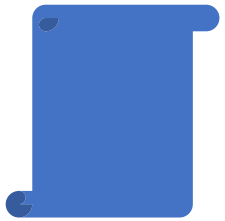
Common Technologies

- ❑ HTTPS (TLS 1.2 or HIGHER)
- ❑ Encrypted RDP
- ❑ VPN
- ❑ SSH (Version 2)
- ❑ WPA2 or WPA3

Develop a Business Process Flow

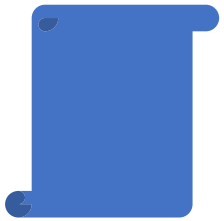
You are expected to understand where, and how, CUI moves through your environment. Develop a Business Process Flow in order to accurately define areas and methods of transit!

NIST SP 800-171 Encryption At Rest



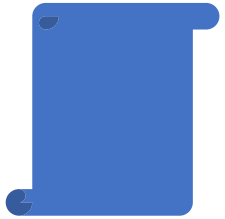
3.1.19 Encrypt CUI on mobile Devices and computing platforms

- ❑ MDM Software if Available
- ❑ Encrypted, Company-Owned Devices
- ❑ Easier to Avoid



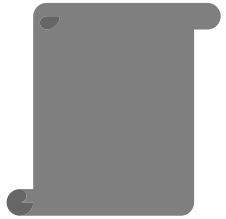
3.13.11 Employ FIPS-validated Cryptography when used to protect The confidentiality of CUI.

- ❑ Limit Storage Locations
- ❑ Be aware of applications/vaults
- ❑ Cloud Services



3.13.4 Prevent unauthorized And unintended transfer via Shared system resources.

- ❑ ERP, SQL, etc.
- ❑ Easiest to try and restrict
- ❑ Very difficult/consequence laden implementation



3.13.16 Protect the confidentiality Of CUI at rest.

- ❑ BITLocker (Endpoint Encryption)
- ❑ Physical Protections

Protecting The Data

1 — NIST SP 800-175

2 — NIST SP 800-171r2

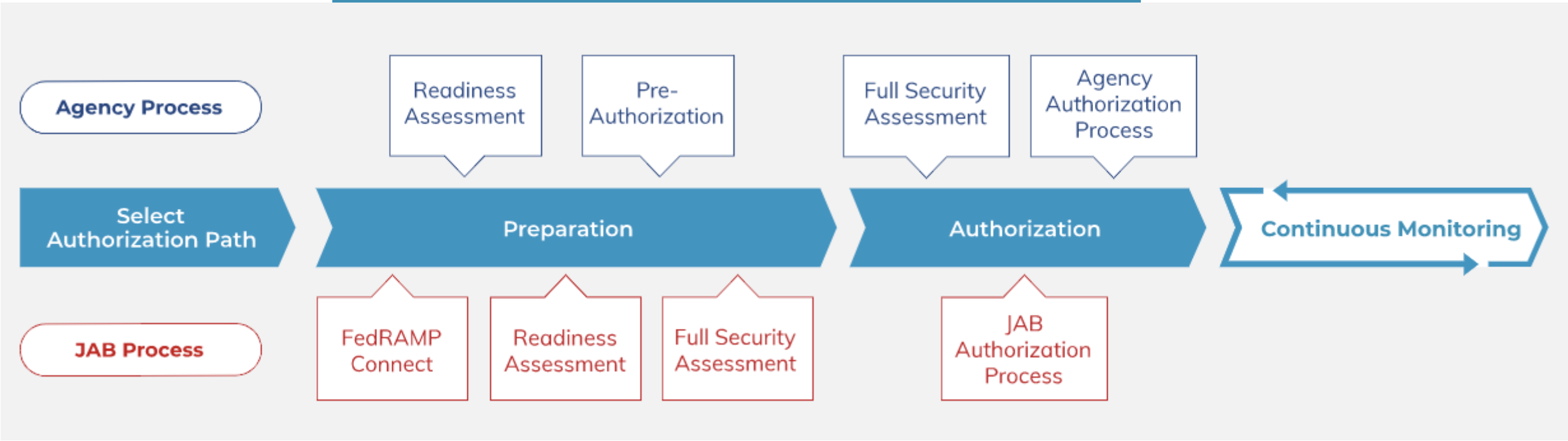
3 — FEDRAMP

What is FedRAMP?

SECURING CLOUD SERVICES

FOR THE FEDERAL GOVERNMENT

The Federal Risk and Authorization Management Program (FedRAMP®) provides a standardized approach to security authorizations for Cloud Service Offerings.



Cloud Providers

Which Cloud Providers are FedRAMP Certified?

As of today, more than 250 FedRAMP-certified vendors are listed on the FedRAMP Marketplace. Remember, however, that it's the service – not the service provider – that gets authorized. This means a CSP may have to pursue multiple authorizations if it offers more than one cloud-based solution.

Matthew Frost

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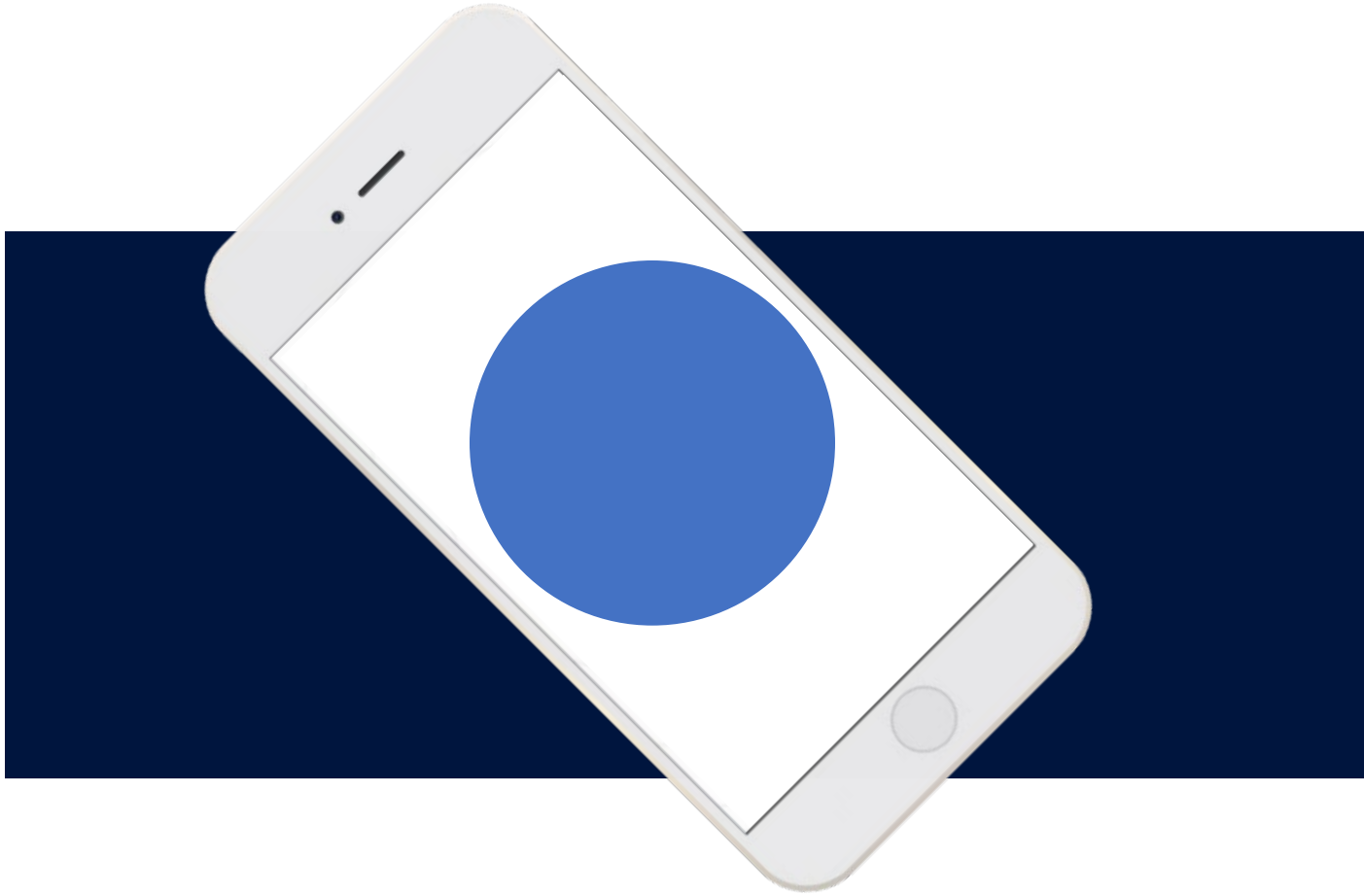

QUESTIONS?

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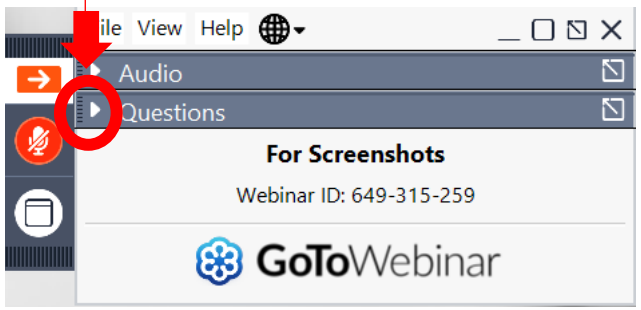

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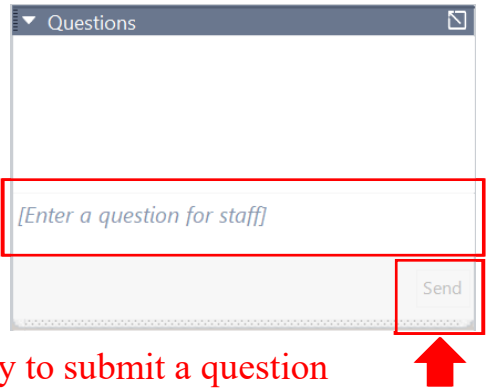

Click Send when ready to submit a question

UPCOMING TRAINING - EVENTS

ACQUISITION HOUR LIVE WEBINAR SERIES

- April 5
  Overview of Contractor Performance Assessment Reporting System (CPARS)
- April 19
  No-Cost Federal Market Research Tools: SAM.gov, DSBS, and USA Spending
- May 9
  The Procurement Integrated Enterprise Environment (PIEE) – Wide Area Workflow (WAWF)
- June 6
  Government Furnished Property

…More information and registrations at wispro.org/events

CYBER FRIDAY LIVE WEBINAR SERIES

- March 24
  Protecting the Data

- April 14
  The Forensic Record

- April 28
  Culture of Security

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Cyber Friday

TECHNOLOGY INNOVATION CENTER at Research Park

NCMA National Contract Management Association WISCONSIN

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SURVEY

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March 24, 2023

APEX ACCELERATORS

CONTINUING PROFESSIONAL EDUCATION

This webinar is eligible for 1 CPE credit.
For a certificate of this credit please contact:

Caroline Boettcher
carolineb@wispro.org

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