

# NATIONAL RISK MANAGEMENT CENTER

DHS Position Navigation and Timing Update  
CGSIC September 2021

**“DEFEND TODAY,  
SECURE TOMORROW.”**



# We are the Nation's Risk Advisor

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The Cybersecurity and Infrastructure Security Agency (CISA) is the pinnacle of national risk management for cyber and physical infrastructure.

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James Platt  
September 17, 2021

# Cybersecurity and Infrastructure Security Agency (CISA)

## VISION

Secure and resilient  
infrastructure for the  
American people.

## MISSION

CISA partners with industry and  
government to understand and  
manage risk to our Nation's  
critical infrastructure.



## OVERALL GOALS

### GOAL 1

#### DEFEND TODAY

Defend against urgent  
threats and hazards

seconds | days | weeks

### GOAL 2

#### SECURE TOMORROW

Strengthen critical  
infrastructure and  
address long-term risks

months | years | decades



CYBERSECURITY &  
INFRASTRUCTURE  
SECURITY AGENCY

# National Risk Management Center

The NRMC is a planning, analysis, and collaboration center. CISA coordinates with the critical infrastructure community to identify; analyze; prioritize; and manage risks to National Critical Functions, which are vital to the United States.

## MISSION PRIORITIES:



Analyzes most strategic risks to our Nation's critical infrastructure



Leads public/private partnership initiatives to manage priority areas of national risk



Collaborates with the private sector and other stakeholders to better understand future threats.

# NRMC's Top Initiatives



## 5G

Securing the next generation of wireless technology which transforms U.S. telecommunication networks and empowers critical services.



## Election Security

Ensuring America's election infrastructure is resilient as we #Protect2020.



## Electromagnetic Pulse & Geomagnetic Disturbance

Mitigating potential nuclear and space weather events that can affect large areas of our Nation.



# NRMC's Top Initiatives Cont'd



## ICT Supply Chain Risk Management

Reducing risk of vulnerabilities in the ICT supply chain, that if exploited, can affect all users of that technology.



## Pipeline Cybersecurity

In-depth review and evaluation of the control system's network design, configuration, and interdependencies for more than 2.7 million miles of pipelines.



## Positioning, Navigation, and Timing

Understanding how positioning, navigation, and timing services is used across all NCFs.



# Critical Infrastructure Risks

In today's rapidly evolving threat environment, sources of strategic risk are widespread and include:



CYBER AND PHYSICAL SECURITY THREATS



MISINFORMATION AND DISINFORMATION



CONVERGENCE OF PREVIOUSLY SILOED THREAT VECTORS



NATION-STATE AGGRESSION



INSIDER THREATS



PANDEMICS AND NATURAL DISASTERS



MALICIOUS EXPLOITS OF EMERGING TECHNOLOGY



SUPPLY CHAIN VULNERABILITIES



# National Critical Functions Set

## CONNECT



- Operate Core Network
- Provide Cable Access Network Services
- Provide Internet Based Content, Information, and Communication Services
- Provide Internet Routing, Access and Connection Services
- Provide Positioning, Navigation, and Timing Services**
- Provide Radio Broadcast Access Network Services
- Provide Satellite Access Network Services
- Provide Wireless Access Network Services
- Provide Wireline Access Network Services

## DISTRIBUTE



- Distribute Electricity
- Maintain Supply Chains
- Transmit Electricity
- Transport Cargo and Passengers by Air
- Transport Cargo and Passengers by Rail
- Transport Cargo and Passengers by Road
- Transport Cargo and Passengers by Vessel
- Transport Materials by Pipeline
- Transport Passengers by Mass Transit

## MANAGE



- Conduct Elections
- Develop and Maintain Public Works and Services
- Educate and Train
- Enforce Law
- Maintain Access to Medical Records
- Manage Hazardous Materials
- Manage Wastewater
- Operate Government
- Perform Cyber Incident Management Capabilities
- Prepare For and Manage Emergencies
- Preserve Constitutional Rights
- Protect Sensitive Information
- Provide and Maintain Infrastructure
- Provide Capital Markets and Investment Activities
- Provide Consumer and Commercial Banking Services
- Provide Funding and Liquidity Services
- Provide Identity Management and Associated Trust Support Services
- Provide Insurance Services
- Provide Medical Care
- Provide Payment, Clearing, and Settlement Services
- Provide Public Safety
- Provide Wholesale Funding
- Store Fuel and Maintain Reserves
- Support Community Health

## SUPPLY



- Exploration and Extraction Of Fuels
- Fuel Refining and Processing Fuels
- Generate Electricity
- Manufacture Equipment
- Produce and Provide Agricultural Products and Services
- Produce and Provide Human and Animal Food Products and Services
- Produce Chemicals
- Provide Metals and Materials
- Provide Housing
- Provide Information Technology Products and Services
- Provide Materiel and Operational Support to Defense
- Research and Development
- Supply Water

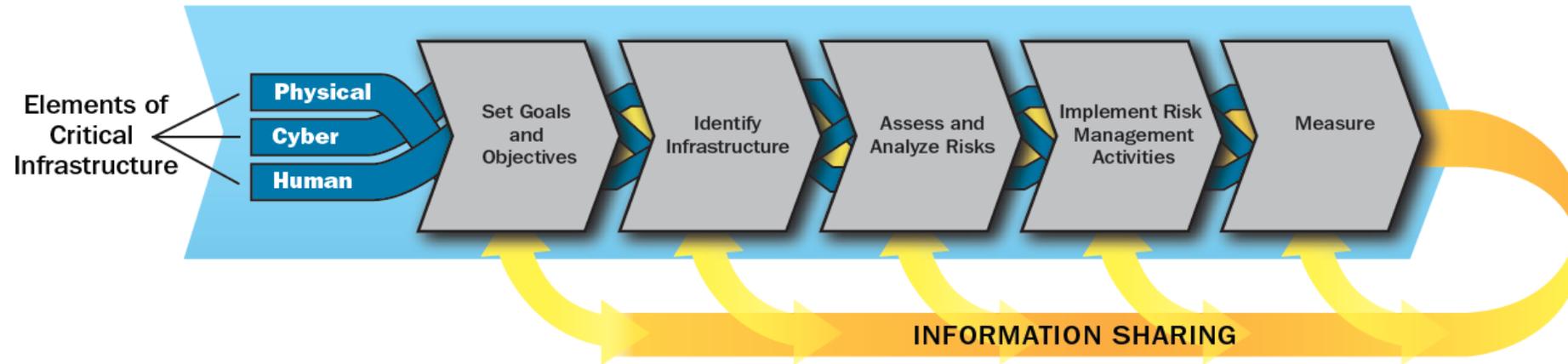
- It's less about who you are and more about the functions you produce or enable.**
- NCFs better capture cross-cutting risks and associated dependencies.**



# Considering PNT in Risk Management

- Responsible use of PNT services” means the deliberate, **risk-informed use of PNT services**, including their acquisition, integration, and deployment, such that disruption or manipulation of PNT services minimally affects national security, the economy, public health, and the critical functions of the Federal Government.

## Critical Infrastructure Risk Management Framework



# PNT EO

EO 13905: ...the Secretary of Homeland Security, in coordination with the heads of SSAs, shall develop a plan to test the vulnerabilities of critical infrastructure systems, networks, and assets in the event of disruption and manipulation of PNT services.

## Engineering Considerations

What are your critical Systems, Networks and Assets?

Do they use, or are they dependent, on external PNT sources?

What level of precision do I need?

Can you identify the disruption or manipulation of PNT services?

How do you maintain critical functions if external PNT is impaired?

# PNT EO

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## PNT SME Considerations

What sources of PNT are available?

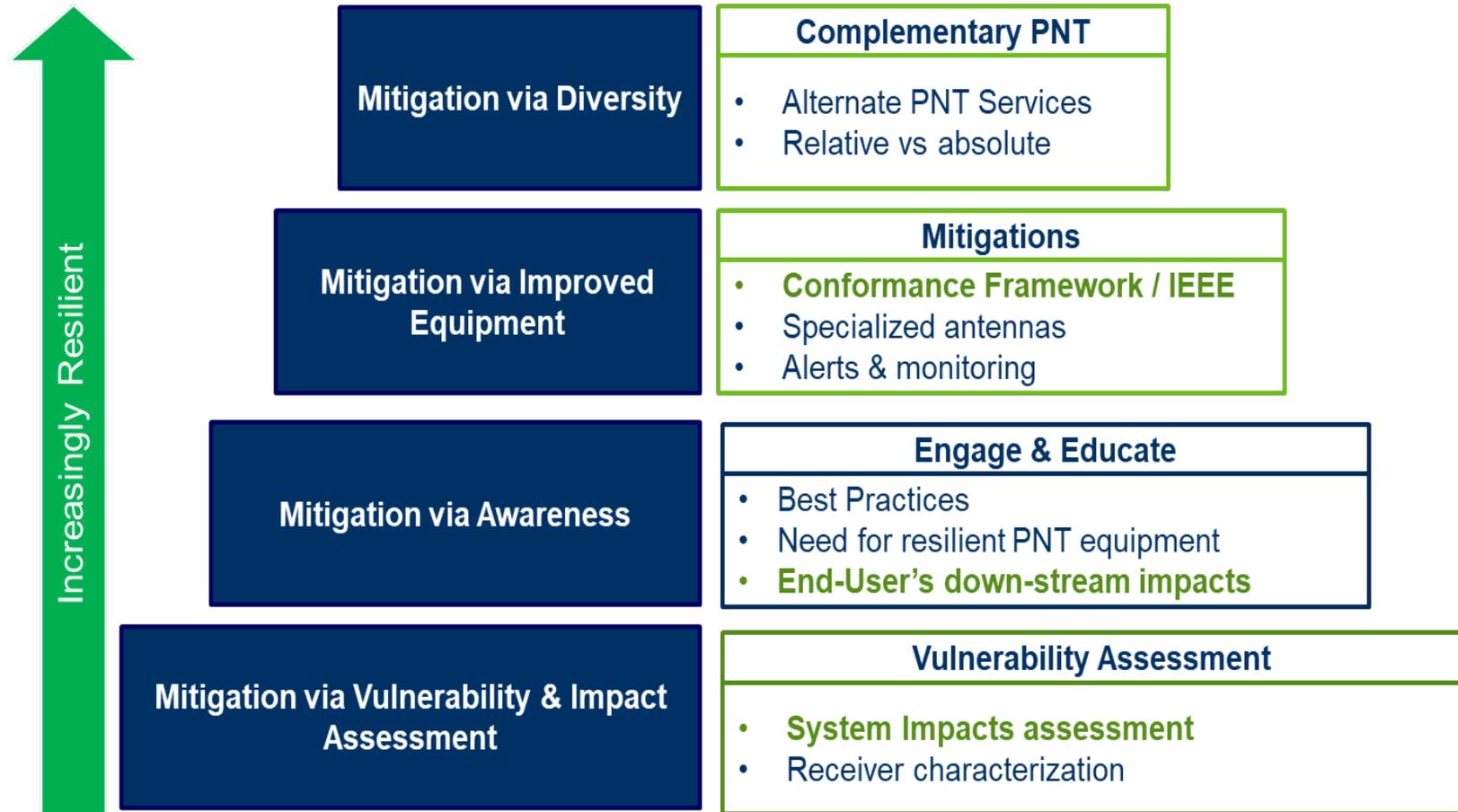
What are their performance characteristics?

Can you identify the disruption or manipulation of PNT services?

How can you make the PNT services more resilient?

# DHS Risk Management & Program Strategy

## Holistic view with a layered approach



# NRMC Resources



Visit us online:  
[www.cisa.gov/national-risk-management](http://www.cisa.gov/national-risk-management)

Download outreach  
products/resources:  
[www.cisa.gov/nrmc-resources](http://www.cisa.gov/nrmc-resources)



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For more information:  
[cisa.gov](https://www.cisa.gov)

