

CRITICAL MANUFACTURING SECTOR-SPECIFIC AGENCY OVERVIEW, RESOURCES, AND ACTIVITIES



Jenny Margaros
Section Chief (A), Critical Manufacturing Sector
Stakeholder Engagement Division, CISA
Jenny.Margaros@cisa.dhs.gov

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16 Critical Infrastructure Sectors



Chemical Sector

The Department of Homeland Security is designated as the Sector-Specific Agency for the Chemical Sector.



Communications Sector

The Communications Sector is an integral component of the U.S. economy, underlying the operations of all businesses, public safety organizations, and government. The Department of Homeland Security is the Sector-Specific Agency for the Communications Sector.



Dams Sector

The Department of Homeland Security is designated as the Sector-Specific Agency for the Dams Sector. The Dams Sector comprises dam projects, navigation locks, levees, hurricane barriers, mine tailings impoundments, and other similar water retention and/or control facilities.



Emergency Services Sector

The Department of Homeland Security is designated as the Sector-Specific Agency for the Emergency Services Sector. The sector provides a wide range of prevention, preparedness, response, and recovery services during both day-to-day operations and incident response.



Financial Services Sector

The Department of the Treasury is designated as the Sector-Specific Agency for the Financial Services Sector.



Government Facilities Sector

The Department of Homeland Security and the General Services Administration are designated as the Co-Sector-Specific Agencies for the Government Facilities Sector.



Information Technology Sector

The Department of Homeland Security is designated as the Sector-Specific Agency for the Information Technology Sector.



Transportation Systems Sector

The Department of Homeland Security and the Department of Transportation are designated as the Co-Sector-Specific Agencies for the Transportation Systems Sector.



Commercial Facilities Sector

The Department of Homeland Security is designated as the Sector-Specific Agency for the Commercial Facilities Sector, which includes a diverse range of sites that draw large crowds of people for shopping, business, entertainment, or lodging.



Critical Manufacturing Sector

The Department of Homeland Security is designated as the Sector-Specific Agency for the Critical Manufacturing Sector.



Defense Industrial Base Sector

The U.S. Department of Defense is the Sector-Specific Agency for the Defense Industrial Base Sector. The Defense Industrial Base Sector enables research, development, design, production, delivery, and maintenance of military weapons systems, subsystems, and components or parts to meet U.S. military requirements.



Energy Sector

The U.S. energy infrastructure fuels the economy of the 21st century. The Department of Energy is the Sector-Specific Agency for the Energy Sector.



Food and Agriculture Sector

The Department of Agriculture and the Department of Health and Human Services are designated as the co-Sector-Specific Agencies for the Food and Agriculture Sector.



Healthcare and Public Health Sector

The Department of Health and Human Services is designated as the Sector-Specific Agency for the Healthcare and Public Health Sector.



Nuclear Reactors, Materials, and Waste Sector

The Department of Homeland Security is designated as the Sector-Specific Agency for the Nuclear Reactors, Materials, and Waste Sector.



Water and Wastewater Systems Sector

The Environmental Protection Agency is designated as the Sector-Specific Agency for the Water and Wastewater Systems Sector.



Critical Manufacturing Sector

- Primary focus:

Build, sustain, and leverage public-private partnerships to enhance critical infrastructure security and resilience

- Established in March 2008
- Only sector defined in the Federal Registrar – core components [circa 2008] are:
 - Primary Metals Manufacturing
 - Machinery Manufacturing
 - Electrical Equipment, Appliance, and Component Manufacturing
 - Transportation Manufacturing



Critical Manufacturing Sector (cont.)

■ General Profile:

- Manufacturing facilities are geographically concentrated around coastal ports, positioned for massive importing and exporting of materials and products. This may magnify geographic risks and the effects of local disasters.
- 60% of U.S. exports are produced by the manufacturing industry.
- Global supply chains have grown longer and more complex — increasing susceptibility to a range of global hazards, but improving production agility.
- Supply chains focus on efficiency, not redundancy. Lean inventories and just-in-time practices increase vulnerability to long-term disruptions.

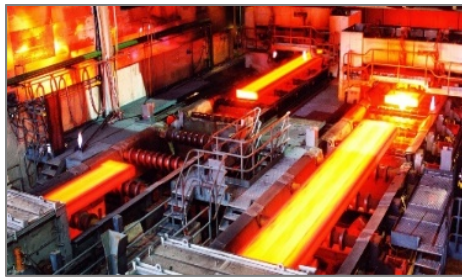


Critical Manufacturing Sector (cont.)

- **Sector Components:**

- **Primary Metals Manufacturing**

- Primary metals manufacturers convert raw materials into assemblies, intermediate products, and end products. These products can include sheet metal, bar stock, I-beams, slabs, or pipes.
 - The 4,556 manufacturers in this component area were responsible for \$270B in U.S. shipments.



Iron and Steel Mills & Ferro-Alloy Manufacturing



Alumina and Aluminum Production & Processing



Non-ferrous Metal Production & Processing



Critical Manufacturing Sector (cont.)

- **Sector Components (cont.):**

- **Machinery Manufacturing**

- Machinery manufacturers produce engines, turbines, and power-transmission equipment. These large, specialized products support infrastructure and primary operations in a number of critical U.S. industries.
 - The 24,124 manufacturers in this component area were responsible for \$408B in U.S. shipments.



Engine & Turbine
Manufacturing



Power Transmission
Equipment



Earth Moving, Mining,
Agricultural, & Construction
Equipment



Critical Manufacturing Sector (cont.)

Additional commodities being considered:

- **Primary Metals Manufacturing**
 - Steel
 - Piping
 - Powdered metals (Aerospace & Additive Manufacturing)
- **Machinery Manufacturing**
 - Roller bearings
 - Valves
 - Fasteners



Critical Manufacturing Sector (cont.)

- **Sector Components (cont.):**
 - **Electrical Equipment, Appliance, and Component Manufacturing**
 - Electrical equipment manufacturers produce specialized equipment, assemblies, intermediate products, and end products for power generation.
 - The 5,765 manufacturers in this component area were responsible for \$124B billion in U.S. shipments.



Electric Motor
Manufacturing



Transformer
Manufacturing



Generator
Manufacturing



Critical Manufacturing Sector (cont.)

- **Sector Components (cont.):**
 - **Transportation Manufacturing**
 - Transportation manufacturers produce cars and trucks, aircraft and component parts, aerospace products and parts, railroad cars and other railroad products, and other transportation equipment.
 - The 11,814 manufacturers in this component area were responsible for \$793B in U.S. shipments.



Vehicle & Commercial Ships



Aerospace Products and Parts



Locomotives, Railroad and Transit Cars, and Rail Track Equipment



Critical Manufacturing Sector (cont.)

Additional commodities being considered:

- **Electrical Equipment, Appliance, and Component Manufacturing**
 - Wire & cable
 - Breakers
 - Batteries/lithium
- **Transportation Manufacturing**
 - Diesel engine parts
 - Public transit



Critical Manufacturing Sector (cont.)

- **Sector Components (cont.):**

- **Electricity Generation**

- When your end product is Electricity – the CM Sector assists:



Nuclear Power



Fossil Fuels



Hydro Power



Wind Power



Solar Power



Geothermal Power



Critical Manufacturing Sector (cont.)

Additional “core” components being considered:

- **Cybersecurity Supply Chain**
 - Telecommunications
 - Microelectronics



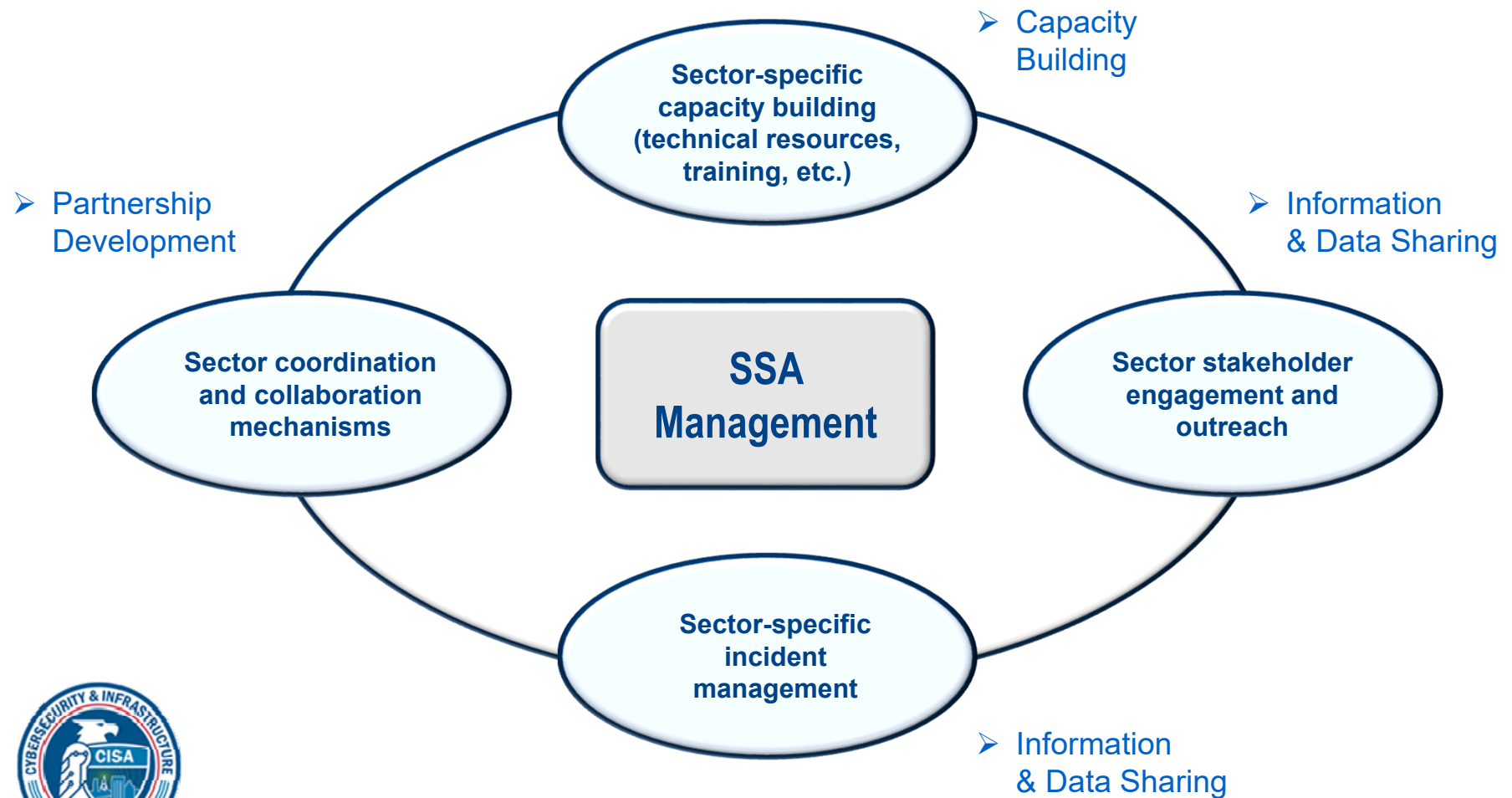
Sector Partnership Environment

Critical Manufacturing Sector Partnership



Sector Partnership Environment (cont.)

- SSA Management Roles:



Sector Coordinating Council

- Self-organized, self-led by broad stakeholder base within sector composed of owners and operators and associations
 - Inclusive, broad sector representation once organized
- Development supported and facilitated by DHS/SSA
- Chaired by industry representatives, usually at association level
- Institutionalized process for engagement with DHS/SSA for programmatic planning, strategy, policy, implementation, and joint monitoring of progress
- Covers the full lifecycle of critical infrastructure protection from planning to response/recovery
- Option of administrative/secretariat support



Sector Coordinating Council (cont.)

- **Key Partners – SCC Executive Committee**

- Chair: **NCR Corporation**
- Vice Chair: **AGCO Corporation**
- Secretary: **Aerojet Rocketdyne**
- Additional Committee Members:
 - The Boeing Company
 - Microsoft
 - PACCAR
 - Alexion Pharmaceuticals
 - Schweitzer Engineering Laboratories, Inc.
 - ABB, Ltd.
 - View, Inc. (first alternate)



Sector Coordinating Council (cont.)

■ Key Partners – CM Sector Coordinating Council

■ Energy industry Committee Members:

- Schweitzer Engineering Laboratories, Inc.
- United Technologies Corporation
- ABB, Ltd.
- United States Steel Corporation
- Raytheon Co.
- TE Connectivity, Ltd.
- Penske Corp.
- The Timken Co.
- Intel Corp.
- Cisco Systems, Inc.



Government Coordinating Council

- Counterpart to SCC for each critical infrastructure sector
- Leverages complementary resources within government and between government and industry
 - Key Partners – GCC Members:
 - U.S. Nuclear Regulatory Commission
 - Department of Commerce
 - Department of Defense
 - Department of Energy
 - Department of Health and Human Services
 - Department of Homeland Security
 - Department of Justice
 - Federal Bureau of Investigation
 - Department of Treasury
 - Environmental Protection Agency
 - Office of the Director of National Intelligence



SSA Responsibilities

- Sector-Specific Agencies are the primary Federal entities responsible for coordinating critical infrastructure security and resilience efforts at the national level.
- Primary responsibilities:
 - Sustain effective and representative public-private partnerships.
 - Develop strategic goals to mitigate physical and cyber risks and improve resilience.
 - Support education, training, information sharing and outreach.
 - Provide support to identify vulnerabilities and mitigate incidents.
 - Develop and implement sector-specific plans in support of the National Infrastructure Protection Plan.



Sector-Specific Plan

- The *Critical Manufacturing Sector-Specific Plan (SSP)* sets the strategic direction for voluntary, collaborative efforts to improve sector security and resilience over the next four years
- Describes the Critical Manufacturing Sector's approach to risk management and national preparedness



Critical Manufacturing Sector-Specific Plan

An Annex to the NIPP 2013

2015



Sector Resources

- **Sector Profiles:**
 - Summarize the unique characteristics of each sector to include:
 - Impact on the economy,
 - Contribution to employment, and
 - Prevalence in everyday life.
 - Educates the public on the importance of each sector in their everyday lives.

Chemical Sector Profile

The U.S. Chemical Sector contributes to modern life. Several hundred manufacturers to chemical plants, complex, global supply chains, and uninterrupted production are...

Impact on U.S. Economy

The U.S. Chemical industry is... of almost all commercial and...
 The U.S. Chemical industry is...
\$768 billion enterprise that supports more...
 The U.S. Chemical industry is...
largest chemical

Generation of U.S. Employment

From research and development while creating jobs in the market...
 The U.S. Chemical industry directly employs **800,000** employees

Contribution to U.S. Exports

The business of chemistry is...
 Total value of exports per...
\$174

Critical Manufacturing Sector Profile

U.S. manufacturing comprises 270,000 manufacturing firms ranging from primary metals to transportation manufacturing—that are involved in the mechanical, physical, or chemical transformation of raw materials into new products. These firms provide significant contributions directly to the U.S. economy and trading power on a global scale. Manufacturing is also one of the country's largest employers, both within the sector and in the jobs it creates across other interdependent sectors. These contributions mean that **manufacturing is vital to U.S. national and economic security.**

Impact on U.S. Economy

U.S. manufacturing is an essential component of the U.S. economy, contributing nearly 12 percent of the total GDP.

Manufacturing contributes **\$2.3 trillion** of total U.S. GDP, **11.9%** of total U.S. GDP.

\$1.00 spent in manufacturing = **+\$1.90** added to the economy

U.S. manufacturing alone would be the **8th largest economy in the world**

The majority of U.S. manufacturing firms are **small and medium enterprises**

270,000 U.S. manufacturing firms → **90%** have < 500 employees → **75%** have < 20 employees

Generation of U.S. Employment

The U.S. manufacturing industry is one of the largest employers in the U.S., providing more than 12.5 million well-paying jobs directly in manufacturing while supporting millions of jobs in other sectors.

The manufacturing industry is the **6th largest** employer in the U.S.

18.5 million jobs are supported by U.S. manufacturing

On average, manufacturing workers annually earn **\$82,300**

Contribution to U.S. Exports

The manufacturing value chain extends beyond domestic production and plays a major role in global trade.

Total value of U.S. domestic manufacturing exports **\$1.1 trillion**

The manufacturing industry contributes **84%** of the value of all U.S. exports → **89%** in value since 2002



Sector Resources (cont.)

■ Sector Landscapes:

- Summarize the primary security and resilience issues of importance to and within the context of the sector.
 - Natural Hazards
 - Technological Hazards
 - Cybersecurity
 - Criminal Activities and Terrorism
 - Other (aging infrastructure, dependencies, supply chain, workforce issues)
- Enable owners and operators to consider the issues within their own unique operating environments and risk profiles.
- Inform sector partnership (e.g., SCC, GCC) activities.



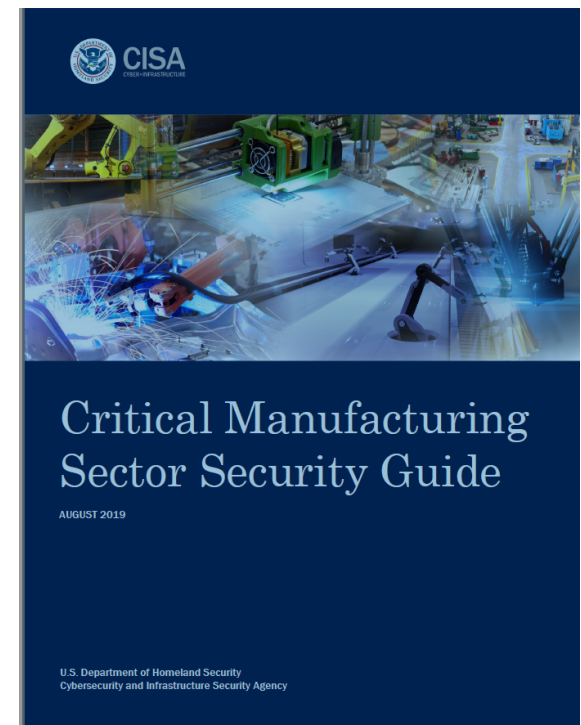
Sector Resources (cont.)

- **SSA Incident Management and Coordination Playbooks:**
 - Describes operational and administrative practices and provides easy-to-access tools and resources.
 - Assists the organization (in its role as SSA for the sector) in preparing for, responding to, and recovering from an all-hazards incident or event impacting the sector.
 - Applies to both advance-notice and no-notice physical or cyber events that trigger a coordinated response between the organization and its sector partners.



Sector Resources (cont.)

- **Critical Manufacturing Sector Security Guide (ongoing)**
 - Consolidates industry practices, tools, templates, and checklists regarding major security and resilience issues of interest to the sector.
 - Physical Security
 - Cybersecurity
 - Personnel Security
 - Supply Chain Security
 - Enables owners and operators to select and implement assessments and security measures related to their unique operating environment and risk profile to improve their facility's security and resilience.



Sector Resources (cont.)

■ Annual National-Level In-Person Events

■ Critical Manufacturing Security Conference (*Spring*)

- 2019 Conference held in Milwaukee, WI and hosted by SCC member Briggs and Stratton.
- Typically includes a demonstration of host company's capabilities or products.

■ Critical Manufacturing Road Show (*Fall*)

- Introduces members of industry to Federal departments and regional agencies.
- Demonstrates government capabilities in mitigation, response, and recovery.
- Provides an opportunity for classified briefings.





Critical Manufacturing Sector Road Show 2019
San Antonio, TX

Drury Plaza Hotel San Antonio Riverwalk
September 25 - 26, 2019 | 8:00 AM - 5:00 PM



Sponsored by the Cybersecurity and Infrastructure Security Agency and open to all Critical Infrastructure Stakeholders

This free-to-attend event features expert-lead presentations including:

- Customs Trade Partnership Against Terrorism Overview
- Fukushima Lessons Learned
- Regional Threat Panel
- No-Host Voluntary Networking Social
- Supply Chain Security
- Critical Infrastructure Partnership Advisory Council Meeting
- Classified Threat Briefing *
*Open to those with proper clearance level only

The event is free, but registration is required.

Registration link is below or use your browser to search "2019 Critical Manufacturing Road Show" on GovEvents
[Critical Manufacturing Sector Road Show](https://www.govevents.com/details/33704/2019-critical-manufacturing-sector-road-show/)
(<https://www.govevents.com/details/33704/2019-critical-manufacturing-sector-road-show/>)

Drury Plaza Hotel San Antonio Riverwalk
105 South St. Mary's Street | San Antonio, TX 78205
A room block for attendees is being held at the Drury Plaza until September 3rd.
Reservations may be made by calling 1-800-325-0720 and refer to group number 2388494. Or, visit the following link: [DHS Critical Manufacturing Sector Road Show](https://www.druryhotels.com/bookandstay/newreservation/?groupno=2388494)
(<https://www.druryhotels.com/bookandstay/newreservation/?groupno=2388494>)

Questions? Please contact: criticalmanufacturing@hq.dhs.gov

Sector Resources (cont.)

- **Regional-Level In-Person Events:**
 - **Critical Manufacturing Regional Roundtable**
 - Purpose: To create locally accessible forums and address and mitigate regional-specific concerns, best practices, and information sharing.
 - Audience: Approximately 30 private sector regional critical manufacturing owners and operators from small, medium, and large organizations; as well as state, local, and Federal partners from the region.
 - Outcome: Through dialogue, facilitated discussions, and information sharing, identify ongoing and trending security concerns for the region.
 - Upcoming roundtables:
 - Detroit
 - Cleveland
 - Austin
 - Seattle





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

Questions?
criticalmanufacturing@hq.dhs.gov

A Typical SED Year...

CISA SED FISCAL YEAR 2019 YEAR IN REVIEW

RAISING NATIONAL AWARENESS

HOSTED 8 WEBINARS INCLUDING CHINESE CYBER ACTIVITY TARGETING MANAGED SERVICE PROVIDERS REACHING 3,000 PARTICIPANTS AND 7,000+ YOUTUBE VIEWS

LAUNCHED FEDVTE C-SCRM COURSE FOR SUPPLY CHAIN INTEGRITY MONTH

LAUNCHED AND PUBLISHED 5 CISA INSIGHTS

NCSAM:

- 75% INCREASE IN NCSAM WEBSITE VISITS.*
- 17,118 DOWNLOADS OF THE 2019 CISA NCSAM TOOLKIT.*
- "OWN IT. SECURE IT. PROTECT IT." REACHED 60% MORE GLOBAL READERS.*



FORGING TRUSTED RELATIONSHIPS

NSIE MISP PORTAL ENRICHED 433,540 INDICATORS WITH VALUABLE INFORMATION OUT OF A TOTAL 1.5 MILLION SHARED

INCREASED SLTT PARTICIPATION IN AIS BY 44%

GREW HSIN-CI'S OPERATIONAL REACH TO 25,500+ USERS

CAPTURED 100+ CYBERSECURITY INSIGHTS FROM 100+ SMBs VIA JOINTLY-CREATED IT SECTOR SURVEY*

INCREASED SLTT PARTICIPATION RATE IN THE NATIONAL CYBER SECURITY REVIEW BY 257% (669 TO 2,386)*

FOSTERING INTERNATIONAL STRATEGIES

PARTICIPATED IN 271+ INTERNATIONAL ENGAGEMENTS 100+ MORE THAN LAST YEAR

LAUNCHED INTEGREE PROGRAM WITH UK'S NATIONAL CYBER SECURITY CENTRE

RECEIVED DEPARTMENT OF STATE FUNDING TO PROVIDE CYBER ASSISTANCE TO ALLIES \$3.5M FOR INDO-PAC REGION AND \$1.0M FOR UKRAINE

ENGAGED WITH INTERNATIONAL ENTITIES INCLUDING SINGAPORE ECUADOR NATO EU ISRAEL GERMANY ESTONIA NETHERLANDS UKRAINE AFRICAN NATIONS

CONVENING VALUED PARTNERS

FIRST ANNUAL ISAO CONFERENCE

CHEMICAL SECURITY SUMMIT

CRITICAL MANUFACTURING ROADSHOW

DAMS SECTOR CONFERENCE

IT AND COMMUNICATIONS ANNUAL QUAD MEETING

PUBLISHING TIMELY, THOUGHT-LEADING GUIDANCE

TWO PRESIDENTIAL REPORTS:

- NSTAC REPORT TO THE PRESIDENT ON ADVANCING RESILIENCY AND FOSTERING INNOVATION IN THE ICT ECOSYSTEM
- NSTAC REPORT TO THE PRESIDENT ON A CYBERSECURITY MOONSHOT

PUBLIC VENUE BAG SEARCH PROCEDURES GUIDE

CISA INSIGHTS:

- MITIGATE DNS INFRASTRUCTURE TAMPERING
- RANSOMWARE OUTBREAK
- REMEDiate VULNERABILITIES FOR INTERNET-ACCESSIBLE SYSTEMS
- SECURE HIGH VALUE ASSETS (HVA)

NON-RADIOISOTOPIC ALTERNATIVE TECHNOLOGIES WHITE PAPER

SSA INCIDENT MANAGEMENT AND COORDINATION PLAYBOOKS FOR SIX SECTORS

CYBER ESSENTIALS

INSIDER THREAT PROGRAMS FOR THE CRITICAL MANUFACTURING SECTOR: IMPLEMENTATION GUIDE

NICE CYBERSECURITY WORKFORCE FRAMEWORK MAPPING TOOL VIEWED 9,850 TIMES

*THIS ACTIVITY BEGAN IN FY19 AND CONCLUDED IN FY20