

# CHEMICAL SECTOR - 101

**Eric Choy**

Chemical Sector-Specific Agency

**Matt Fridley**

Chemical Sector Coordinating Council



**CISA**  
CYBER+INFRASTRUCTURE



CHEMICAL SECTOR  
COORDINATING COUNCIL

# Agenda

- What is Critical Infrastructure?
- Who is the Chemical Sector?
- What is a Sector-Specific Agency?
- What is the public-private partnership?



**CISA**  
CYBER+INFRASTRUCTURE



CHEMICAL SECTOR  
COORDINATING COUNCIL

# Critical Infrastructure and Sectors

**Assets, systems, and networks, whether physical or virtual, are considered so vital to the United States that their incapacitation or destruction would have a debilitating effect on security, national economic security, national public health or safety, or any combination.**

- Presidential Policy Directive 21 (PPD-21): Critical Infrastructure Security and Resilience, signed in 2013, identifies **16 critical infrastructure sectors**.
- **Advances** a national policy to strengthen and maintain secure, functioning, and resilient critical infrastructure.
- **Designates** the Department of Homeland Security as the overall lead Federal agency for critical infrastructure security and resilience.
- **Identifies** a Federal lead for each of the 16 critical infrastructure sectors – **Sector-Specific Agencies** (SSA).



**CISA**  
CYBER+INFRASTRUCTURE



**CHEMICAL SECTOR  
COORDINATING COUNCIL**

# Critical Infrastructure Sectors

## Department of Homeland Security

1. Chemical
2. Commercial Facilities
3. Communications
4. Critical Manufacturing
5. Dams
6. Emergency Services Sector
7. Information Technology
8. Nuclear Reactors, Materials, and Waste Sector

## General Services Administration

9. Government Facilities (Co-Lead with DHS)
  - (NEW) Elections Infrastructure Subsector

## Department of Transportation

10. Transportation Systems (Co-Lead with DHS)

## Department of Defense

11. Defense Industrial Base

## Department of Energy

12. Energy

## Department of Treasury

13. Financial Services

## Department of Agriculture

## Department of Health and Human Services

14. Food and Agriculture

## Department of Health and Human Services

15. Healthcare and Public Health

## Environmental Protection Agency

16. Water and Waste Water Systems



**CISA**  
CYBER+INFRASTRUCTURE



**CHEMICAL SECTOR  
COORDINATING COUNCIL**

# Chemical Sector



## Functional Areas of the Chemical Sector

### Manufacturing Plants

Convert raw materials into intermediate and end products



### Transportation Systems

Transport chemicals to/from manufacturing plants, warehouses, and end users



### Warehousing/Storage

Provide downsized repackaging and bulk storage



### End Users

Typically consume the chemical purchased

Chemical distributors deliver more than **9 tons** of chemical sector products **every 8.4 seconds**



**CISA**  
CYBER+INFRASTRUCTURE



CHEMICAL SECTOR  
COORDINATING COUNCIL

# Chemical Sector

... the uninterrupted production and transportation of chemicals essential for national and economic security ...

## Impact on U.S. Economy

The U.S. chemical industry is responsible for more than a quarter of the U.S. GDP, supports the production of almost all commercial and household goods, and is essential to economic growth.

The U.S. chemical industry is a **\$768 billion** enterprise that supports more than

**25%**  
of total  
U.S. GDP



of U.S. goods in 2016 were manufactured using Chemical Sector products



The U.S. chemical industry is one of the world's **largest chemical producers**

**15%**

of the world's chemicals come from the U.S.

## Generation of U.S. Employment

From research and development to manufacturing, the U.S. chemical industry employs nearly 800,000 people, while creating jobs in the many other industries it touches.



The U.S. Chemical Sector directly employs nearly **800,000 employees**



Every job created by the business of chemistry generates **6.8 jobs elsewhere**

**6 million**  
U.S. jobs created



**CISA**  
CYBER+INFRASTRUCTURE



**CHEMICAL SECTOR  
COORDINATING COUNCIL**

# Chemical Sector - Regulatory

## Department of Homeland Security Cybersecurity and Infrastructure Security Agency



Chemical Facility Anti-Terrorism  
Standards

**3,355** facilities regulated  
(as of 2018)

## Department of Transportation Pipeline and Hazardous Materials Safety Administration



**13,829** shippers covered by  
the security plan and training  
requirements (as of 2017)

## Transportation Security Administration



Rail Transportation Security  
Final Rule

**46** key urban areas covered  
by secure chain-of-custody  
inspections

## Department of Health and Human Services Food and Drug Administration



**\$1 trillion** worth of products  
regulated per year including drugs,  
cosmetics, and medical and  
consumer products

## U.S. Coast Guard



Maritime Transportation Security  
Act of 2002

**3,200** facilities of all types  
covered (as of 2013)

## Department of Labor

### Occupational Safety and Health Administration



**700** enforcement inspections  
of chemical manufacturing  
facilities in 2017

## Environmental Protection Agency



**800,000**  
regulated facilities  
(as of 2018)

## Department of Justice

### Bureau of Alcohol, Tobacco, Firearms and Explosives



**9,815** licensee/permittees  
are subject to security  
rules (as of 2017)



**CISA**  
CYBER+INFRASTRUCTURE



CHEMICAL SECTOR  
COORDINATING COUNCIL

# Cybersecurity and Infrastructure Security Agency (CISA)

- CISA executes DHS's PPD-21 roles and responsibilities.
- CISA coordinates security and resilience efforts using trusted partnerships across the private and public sectors, and delivers technical assistance and assessments to federal stakeholders as well as to infrastructure owners and operators nationwide.

## *Mission:*

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

## *Vision:*

*Secure and resilient infrastructure for the American people*



**CISA**  
CYBER+INFRASTRUCTURE



CHEMICAL SECTOR  
COORDINATING COUNCIL

# SSA Responsibilities

- Sector-Specific Agencies are the primary Federal entities responsible for coordinating critical infrastructure security and resilience efforts at the national level.
- Voluntary through Public-Private Partnerships
- 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.

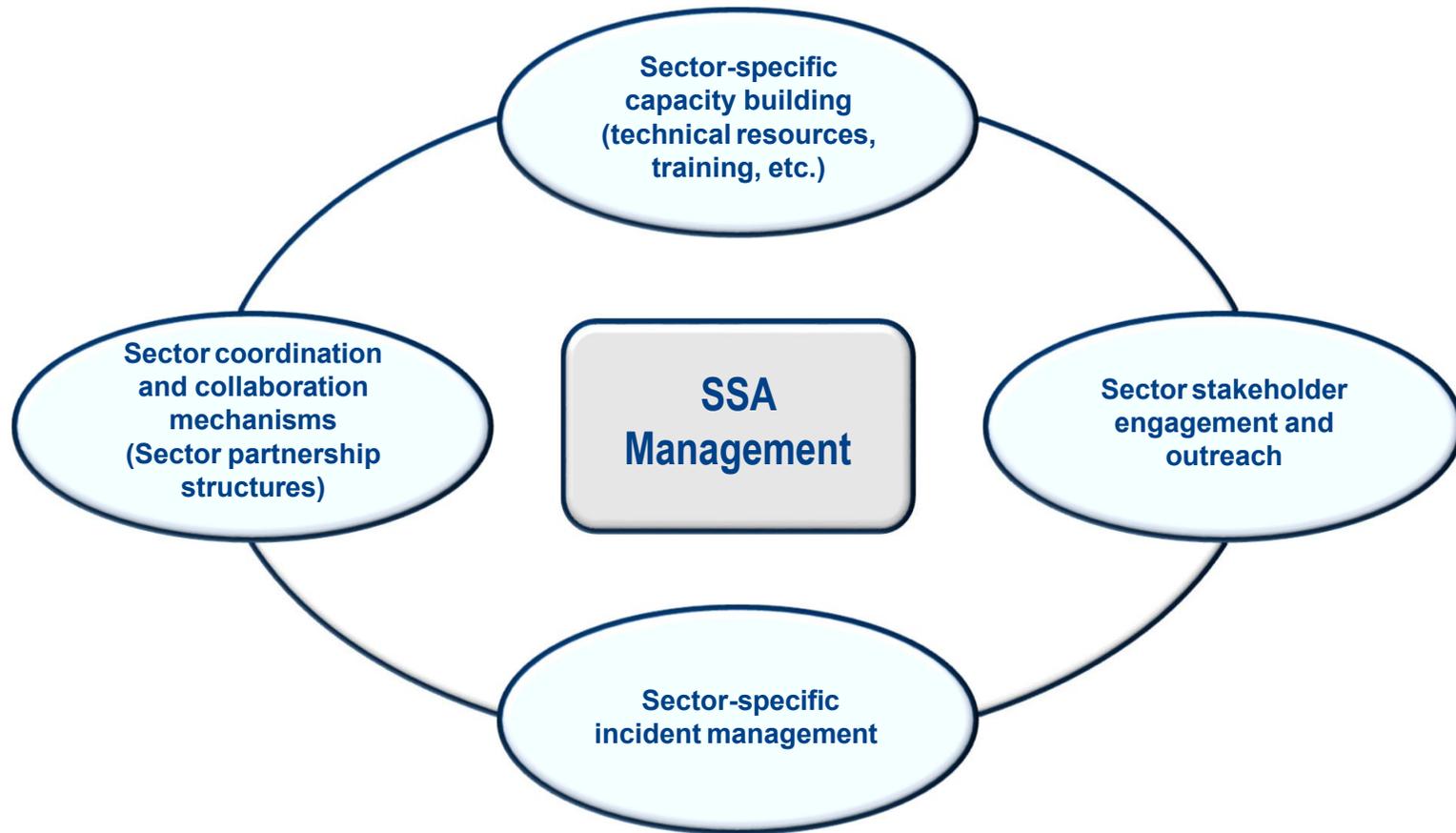


**CISA**  
CYBER+INFRASTRUCTURE



**CHEMICAL SECTOR  
COORDINATING COUNCIL**

# SSA Management



**Sector Coordinating Council**  
**Government Coordinating Council**



**CISA**  
CYBER+INFRASTRUCTURE



CHEMICAL SECTOR  
COORDINATING COUNCIL

# Chemical Sector Coordinating Council

- The mission of the Council is to advance the physical and cyber security and emergency preparedness of the nation's chemical sector infrastructure.
- This mission will be accomplished through voluntary actions of the infrastructure owners and operators represented in the Council, as set forth in Presidential Policy Directive (PPD) 21 and related authorities.



**CISA**  
CYBER+INFRASTRUCTURE



**CHEMICAL SECTOR  
COORDINATING COUNCIL**

# Chemical Sector Coordinating Council

- Serve as the primary liaison between the chemical sector and federal agencies, including the Department of Homeland Security (DHS), concerning chemical facility security and emergency preparedness issues;
- Facilitate sharing of information about physical and cyber threats, vulnerabilities, incidents, and potential protective measures;
- Coordinate with DHS and the Government Coordinating Council (GCC) to establish a system, outside of regulatory frameworks, to address potential threats and emergency response; and
- Represent the chemical sector in discussions with other infrastructure sectors as well as with the GCC on matters of threat, security, risk analysis, emergency preparedness and response, and other related matters.



**CISA**  
CYBER+INFRASTRUCTURE



**CHEMICAL SECTOR  
COORDINATING COUNCIL**

# Chemical Sector Coordinating Council

## ▪ Executive Committee

- Chair (Industry)
- Vice Chair (Industry)
- Assistant Vice Chair (Upstream Association)
- Assistant Vice Chair (Downstream Association)
- Immediate Past Chair (Industry)

## ▪ Members (Trade Associations or Industry)

- Agricultural Retailers Association
- American Chemistry Council
- American Coatings Association
- American Fuel & Petrochemical Manufacturers
- Council of Producers & Distributors of Agrotechnology
- Compressed Gas Association
- CropLife America
- Institute of Makers of Explosives
- International Institute of Ammonia Refrigeration
- International Liquid Terminals Association
- Louisiana Chemical Association
- National Association of Chemical Distributors
- Society of Chemical Manufacturers and Affiliates
- The Chlorine Institute
- The Fertilizer Institute



**CISA**  
CYBER+INFRASTRUCTURE



**CHEMICAL SECTOR  
COORDINATING COUNCIL**

# Chemical Sector Coordinating Council

- Contact your industry association representative to inquire about various committees that you can participate in.
- Based on committee participation, inquire about attending a council meeting.



**CISA**  
CYBER+INFRASTRUCTURE



CHEMICAL SECTOR  
COORDINATING COUNCIL