



# AI & SE: Enabling Civilian Harm Mitigation and Response

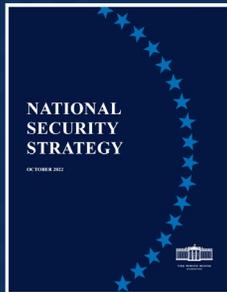
**Civilian Protection Center of Excellence (CP CoE)**

*- Dan Mahanty: Division Director for Learning, Civilian Protection Center of Excellence*

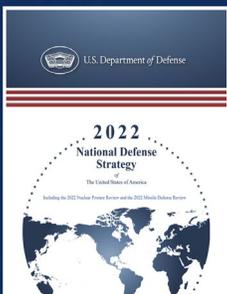
# Civilian Harm Mitigation in US and DOD Policy

“Today, we recognize the importance of redoubling our efforts to protect civilians in armed conflict worldwide... Today, the United States reaffirms its commitment to these standards.”

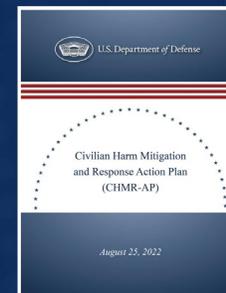
Ambassador Robert Wood  
during UNSC Debate on PoC



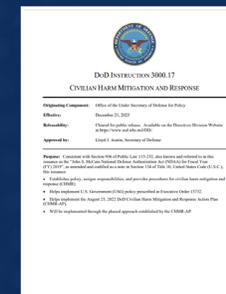
“Where necessary, we will use force... and **do so consistent with domestic and international law and in a manner that minimizes civilian casualties, while promoting greater transparency and accountability.**” NSS



“In addition, longstanding U.S. policy is to not purposely threaten civilian populations or objects, and the **United States will not intentionally target civilian populations or objects in violation of LOAC.**” NDS



“Protecting civilians from harm in connection with military operations is **critical to achieving long-term success** on the battlefield. Hard-earned tactical and operational successes may ultimately end in strategic failure if care is not taken to **protect the civilian environment as much as the situation allows.**” CHMR-AP



“CHMR efforts reflect U.S. and professional military values, including the importance of protecting and respecting human life and treating civilians with dignity and respect. **CHMR supports U.S. national security interests, including by furthering strategic objectives to achieve long-term strategic success**, enhancing the effectiveness and legitimacy of military operations and demonstrating moral leadership.” DODI 3000.17



# DoD Policy Definition of Civilian Harm

## DoDI 3000.17 Civilian Harm Mitigation and Response (CHMR), December 2023:

**“Civilian casualties and damage to or destruction of civilian objects (which do not constitute military objectives under the law of war) resulting from military operations.**

As a matter of DoD policy, other adverse effects on the civilian population and the personnel, organizations, resources, infrastructure, essential services, and systems on which civilian life depends resulting from military operations are also considered in CHMR efforts to the extent practicable.

These other adverse effects do not include mere inconveniences.”

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**Personnel:** People critical to the operation of an essential service such as the operations and maintenance staff.

**Resources:** Includes consumables that are needed to provide a critical service such as fuel and medicine.

**Essential Services:** Clean water and sanitation, food, shelter, electricity/fuel, etc.

**Organizations:** Organizations such as political, cultural, social, or religious groups that are critical to the working of a city.

**Infrastructure:** Hardware and equipment that are critical to an essential service.

**Systems:** Urban services are interconnected and therefore the civilian environment must be thought of as a system of systems.





# Political Declaration on Responsible Military Use of AI and Autonomy

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## Political Declaration on Responsible Military Use of Artificial Intelligence and Autonomy

BUREAU OF ARMS CONTROL, DETERRENCE, AND STABILITY

NOVEMBER 9, 2023

An increasing number of States are developing military AI capabilities, which may include using AI to

... be ethical, responsible, and consistent with applicable international law, including States' obligations under international humanitarian law. Military use of AI capabilities should be governed by a responsible framework that includes the following principles:

... unintended bias and accidents. States should ensure that senior officials effectively and appropriately oversee the development and deployment of military AI capabilities with high-consequence applications, including, but not limited to, such weapon systems. States should take proactive steps to minimize unintended bias in military AI capabilities.

B. States should take appropriate steps, such as legal reviews, to ensure that their military AI capabilities will be used consistent with their respective obligations under international law, in particular international humanitarian law. States should also consider how to use military AI capabilities to enhance their implementation of international humanitarian law and to improve the protection of civilians and civilian objects in armed conflict.

C. States should ensure that senior officials effectively and appropriately oversee the development and deployment of military AI capabilities with high-consequence applications, including, but not limited to, such weapon systems.

D. States should take proactive steps to minimize unintended bias in military AI capabilities.

B. States should take appropriate steps, such as legal reviews, to ensure that their military AI capabilities will be used consistent with their respective obligations under international law, in particular international humanitarian law. States should also consider how to use military AI capabilities to enhance their implementation of international humanitarian law and to improve the protection of civilians and civilian objects in armed conflict.



# Connection to Responsible Military use of AI

## Responsible, equitable, traceable, reliable, governable

- **Responsible:** DoD personnel will **exercise appropriate levels of judgment and care**, while remaining responsible for the development, deployment, and use of AI capabilities.
- **Equitable:** The Department will take deliberate steps to minimize **unintended bias** in AI capabilities.
- **Traceable:** The Department's AI capabilities will be developed and deployed such that relevant personnel possess an appropriate understanding of the technology, development processes, and operational methods applicable to AI capabilities, including with **transparent and auditable methodologies, data sources, and design procedure and documentation.**



# Connection to Responsible Military use of AI

## Responsible, equitable, traceable, reliable, governable

- **Reliable:** The Department's AI capabilities will have explicit, **well-defined uses, and the safety, security, and effectiveness of such capabilities will be subject to testing and assurance** within those defined uses across their entire life-cycles.
- **Governable:** The Department will design and engineer AI capabilities to fulfill their intended functions while possessing the ability to detect and **avoid unintended consequences**, and the ability to disengage or deactivate deployed systems that demonstrate unintended behavior.

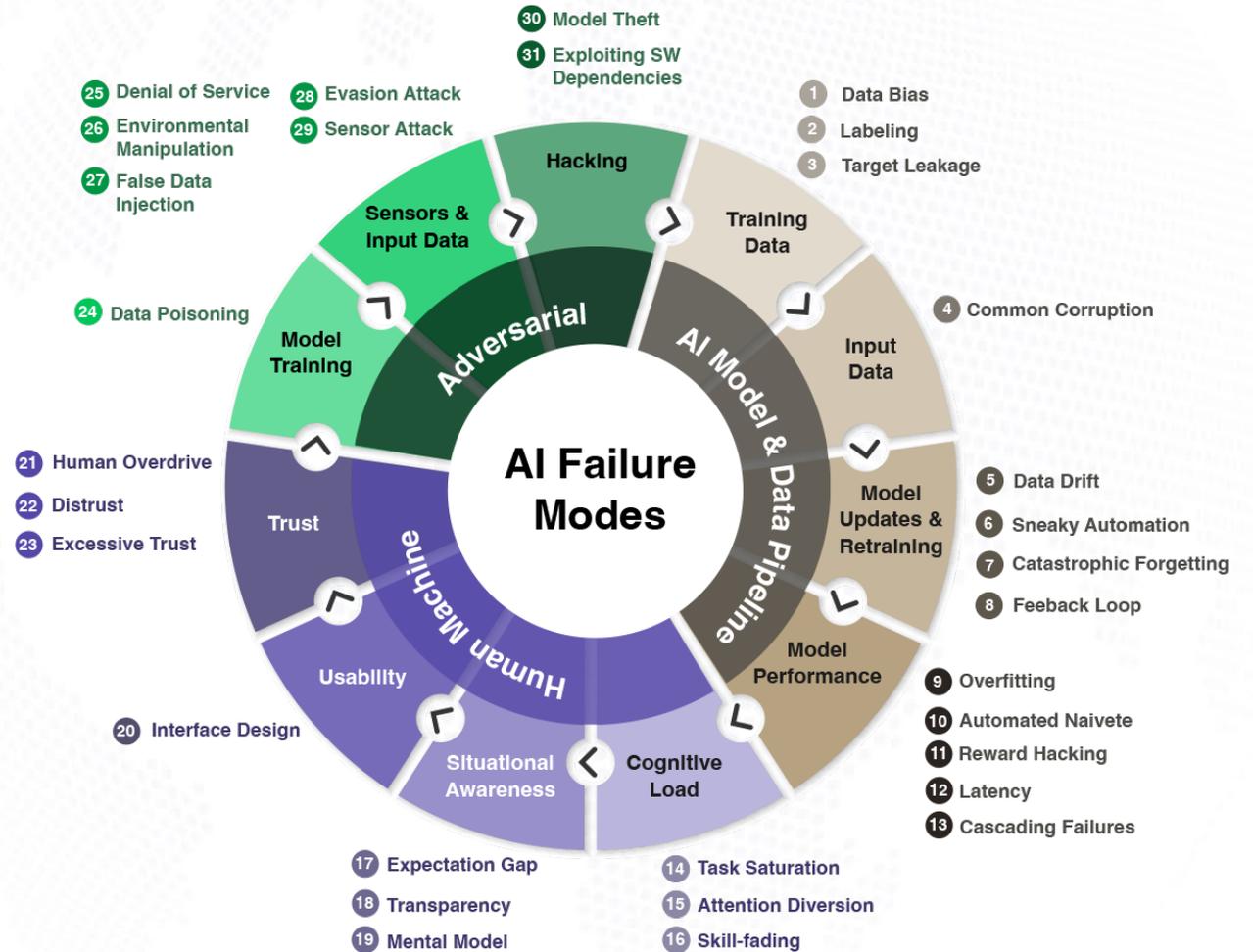


# Connecting CHMR to AI



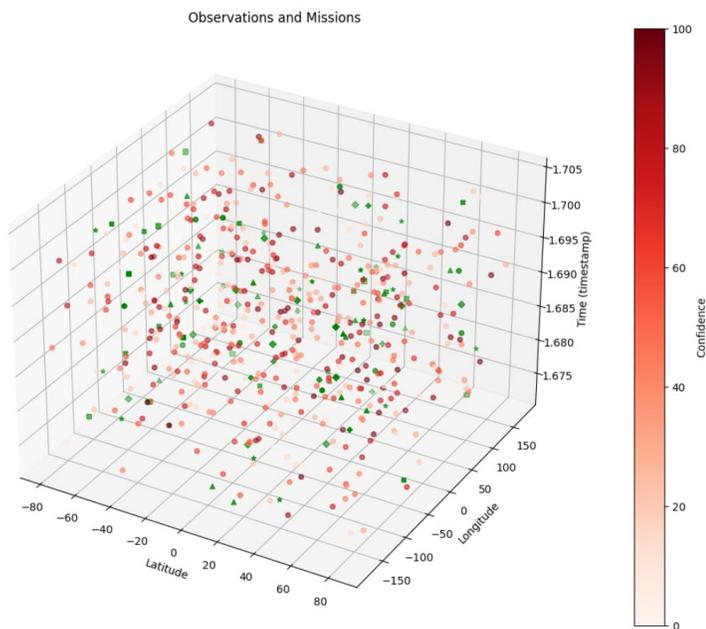
# Failure Modes and Civilian Harm

- **Data:**
  - Incidental correlations
  - False positives
  
- **Human Machine:**
  - Lack of transparency
  - Excessive trust
  
- **Adversarial:**
  - False data injection
  - Environmental manipulation





# CHMR AI Opportunities



## Prevention

- More accurate, dynamic understanding of civilian environment
- Improved modeling of critical infrastructure systems and assets

## Mitigation

- Object Identification & Monitoring
- Real time information processing (e.g. population density and displacement)
- Humanitarian notification systems
- Alert Systems

## Response

- Rapid analysis of operational and public data for harm detection
- Trend and pattern analysis of harm to inform planning and lessons learned

## Allies and Partners

- Governance (Ethical and Legal framework)
- Data Sharing & Interoperability
- Translation of data
- Standardization & Best Practices



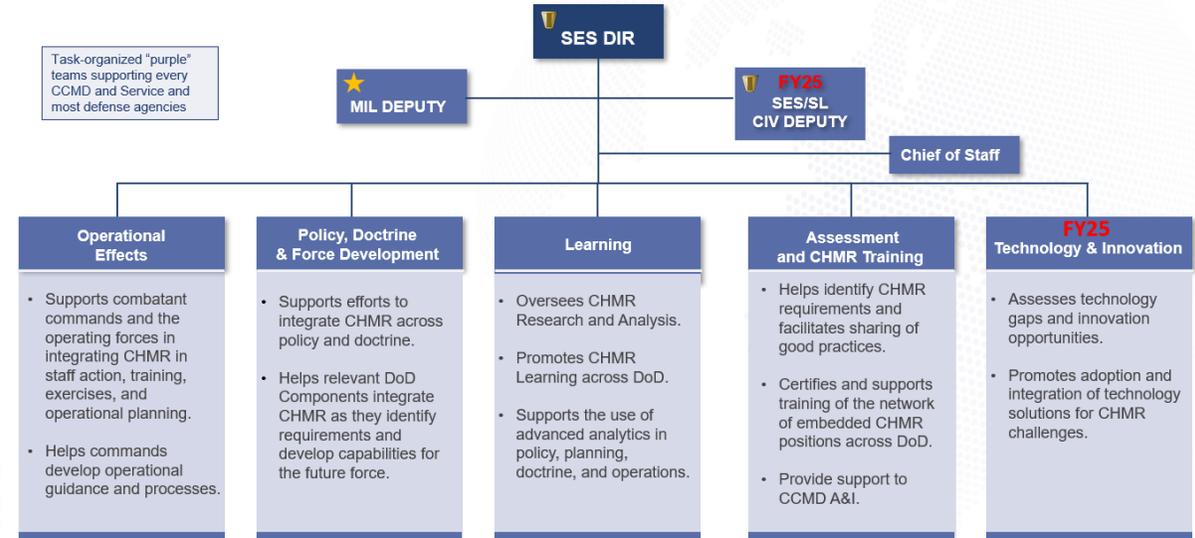
# Where do we go from here?

- **Understanding and anticipating policy and doctrinal changes and requirements**
- **Connecting “failure modes” and risk management more explicitly to civilian harm risks**
- **Innovating novel solutions**
- **Clarifying CHMR performance attributes and parameters of AI applications**
- **Using data from performance monitoring to adapt design and SOP**
- **Ensuring that design, training, testing, evaluation, include CHMR considerations**
- **Engaging with the CP CoE**



# Introduction to CP CoE

**Mission:** The **Civilian Protection Center of Excellence (CP CoE)** leads the advancement of DoD's **Civilian Harm Mitigation and Response (CHMR)** efforts in preparation for, during, and following military operations. It informs military planning, doctrine and policy; facilitates exercises, training, and education; conducts analysis to support learning; and connects stakeholders. It provides operationally-informed products and expertise that **enable the force to mitigate and respond to civilian harm**, enhance operational effectiveness, and reinforce strategic success.



**Vision:** The CP COE is the premiere institution for CHMR. It serves as DoD's repository of CHMR expertise and catalyst for identifying and operationalizing effective CHMR practices.