

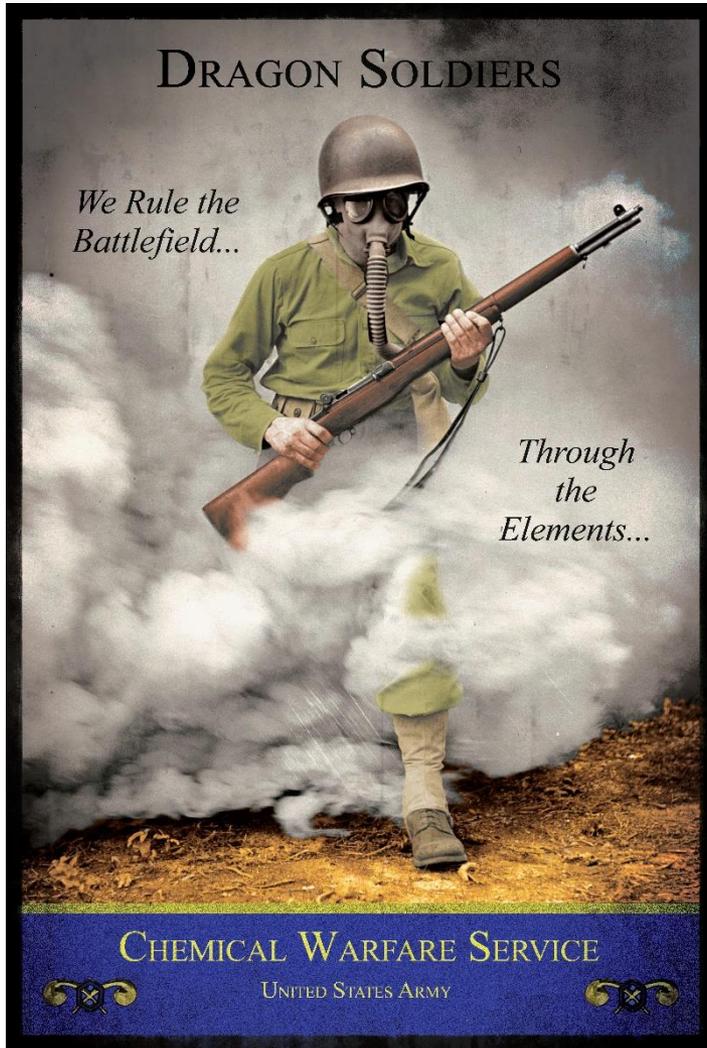
# CBRN Operations Force Modernization



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*Building CBRN operations capability to 2028 and beyond ...*



ASSESS – PROTECT – MITIGATE ... Ensuring freedom of action in complex CBRN environments

# Recent History of Modernization



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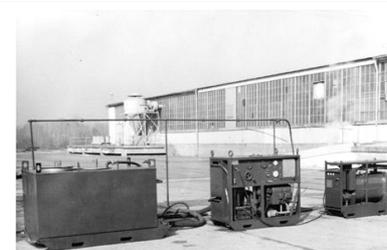


## ASSESS

## PROTECT

## MITIGATE

1980s



1990s



2000s



2010s



# A Paradigm Shift



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- Transitioned from COIN to LSGCO
- Create a culture shift to embrace innovative thinking and evolving technology – adapt and leverage both as we develop new concepts
- Shift from “react to CBRN hazards” to proactive decision making
- Embrace new ideas and processes (e.g. AFC) to build a new generation of CBRN operations capabilities
- Accelerate requirements development through early prototyping and advanced capability experiments and demonstrations



# Modernization Construct



- Purpose - Modernize CBRN operations capabilities to support the Army (and land component)
  - Conduct cross-domain maneuver
  - Fight semi-independently
  - Continuous cross-domain reconnaissance and security

*enabled by...*

- Three core competencies: CBRN Recon - Contamination Mitigation - CBRN Staff

*linked together with...*

- Three core functions: Assess – Protect – Mitigate

*...across the spectrum of S&T, concepts and DOTMLPF-P.*

- Balances modernization and readiness
- Enables new requirements and existing programmatic procedures

# Force Modernization Strategy



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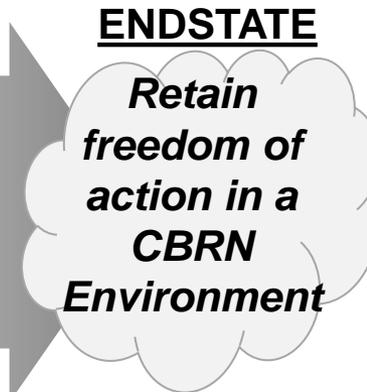


**Mission:** Enable movement and maneuver to conduct large-scale combat operations in a CBRN environment

**Core Functions**

**Objectives**

<b>Assess</b>	All-Source Information Reception	Information Assessment/Trends	Analysis & Integration	Real Time Understanding
<b>Protect</b>	Lightweight PPE	Adaptive PPE & Collective Protection	Integrated Equipment & Physiological Protection	Inherent Survivability
	Organic Collective Protection	Agile Vaccines		
<b>Mitigate</b>	Tactical Decon	Automated Decon	Resident Decon	Negate Hazard Effects
		Agile Therapies		



**Graduating levels of capability**

# Required Future CBRN Operations Capabilities



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- Real Time Understanding - Create a functionally integrated framework that enables commanders to achieve a level of understanding as early as possible to make informed risk based decisions to protect the force while retaining freedom of action in a CBRN environment. The force requires:
  - Expanded access to all sources of information and integration of CBRN information requirements into a commander's ISR collection plan.
  - CBRN centric sensing and detection capability integrated with all source information receptors and collectors.
  - The capability to assess and analyze information from ISR sources to establish knowledge of CBRN threats and hazards in the OE.
  - The capability and capacity to analyze and integrate decision support products into the commander's decision cycle to provide risk based, real time understanding of the CBRN complex environment.

***Assess to retain freedom of action in a complex CBRN Environment***

# Required Future CBRN Operations Capabilities



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- Inherent Survivability: Enabled with integrated protection individually and collectively, the force conducts large-scale ground combat operations without degradation in a CBRN environment. The force requires:
  - Integrated personal protection equipment with physiological monitoring that protects from all CBRN hazards and threats without physical degradation or loss of combat effectiveness.
  - Adaptive collective protection that allows mission command and medical activities to sustain operations without individual PPE in a CBRN environment.
  - Vaccines to protect the force from known CB hazards to reduce reliance on IPE and COLPRO.
  - Flexible and adaptable protection options against biological agents, leveraging an understanding of the OE and atmospheric conditions.

***Protect to retain freedom of action in a complex CBRN Environment***

# Required Future CBRN Operations Capabilities



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- Negate Hazard Effects: Provide commanders the flexibility to make risk informed decisions on the mitigation of residual CBRN contamination without reduction of combat power or unnecessary expenditure of time and resources. The force requires:
  - Organic/crew level mitigation capability that allows first line leaders to assess and mitigate contamination at the lowest level, focused on reducing risk to their squads and crews without reliance on CBRN enablers.
  - Automated and waterless mitigation capability to reduce logistical burden and increase responsiveness of CBRN enablers.
  - Forward diagnostic capability coupled with therapies to reduce reliance on specialized medical enablers and maintain combat power forward.

***Mitigate to retain freedom of action in a complex CBRN Environment***

# Modernization Intent



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- Understand how CBRN formations and staffs support BCTs and EAB IAW FM 3-0 and across the Warfighting Functions (WfF)
- Develop the most effective set of DOTMLPF-P solutions to support EAB and BCT formations
- Balance risk in the near, mid, and far terms through comprehensive DOTMLPF-P analysis
- Leverage a combined and synchronized approach across S&T, advanced development, and requirements determination
- Minimize programmatic risk and deliver best capability to the force



- Success measured by our ability to identify and synchronize S&T efforts with the strategy
- Plan for and execute focused experiments and demonstrations with prototypes – increase interface between user community and engineers/scientists
- Buy down operational risk more rapidly with accelerated prototyping demonstrated in the field (e.g. AWA, JWA, Perceptive Dragon, etc.)
- Leverage experimentation and demonstration success to bridge to long term programs to enable maintenance and life-cycle replacement
- Focus S&T development of future capability across DOTMLPF-P desired solutions



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# Conclusion



- The mission of the Chemical Corps now and into the future is to enable movement and maneuver in the execution of large-scale combat operations semi-independently in a CBRN environment.
- Three core functions of assess, protect and mitigate we will generate near-real time understanding of the CBRN environment, provide integral protection at both individual and collective levels, and negate CBRN hazard effects.
- Fundamental to accomplishing this modernization strategy is a vigilant focus on what we are for and who we support - enable movement and maneuver in the execution of large-scale ground combat operations in the complex CBRN environment to 2040 and beyond.
- This strategy provides vision and direction for modernizing CBRN operations and CWMD capabilities to meet the requirements for movement and maneuver formations executing operations along the Army concept of Multi-Domain Operations.

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