Office of the Deputy Assistant Secretary of Defense for Chemical and Biological Defense

## CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM ENTERPRISE STRATEGY 2024

# CBDP ENTERPRISE STRATEGY

DASD's Message 03
Strategic Environment05
What We Must Achieve 07
Strategic Priority Goals 08
GOAL 1: Generate CBD Advantages
GOAL 2: Deliver at Speed and Scale 10
GOAL 3: Optimize the Enterprise11
GOAL 4: Leverage Partnerships 12
The Way Ahead 13
Appendix A: Definitions14
Appendix B: References



## DASD's MESSAGE

The fourth decade of the Chemical and Biological Defense Program (CBDP) will be decisive. Our nearterm actions will determine the Enterprise's level of success through 2040. We must embrace change and act with urgency to outpace our adversaries and the threat. As the 2022 National Defense Strategy states, "In these times, business as usual at the Department is not acceptable."

The CBDP must acclimate to a geopolitical environment defined by strategic competition, with the People's Republic of China as the pacing challenge and Russia as an acute threat. The Total Force is embracing new operational concepts to deter or prevail in this environment, and our Enterprise must deliver operationally relevant capabilities that protect the warfighter and allow the Total Force to carry out its missions in the face of chemical and biological (CB) usage. The fast pace of technological change makes CB defense more challenging but also crucial for Total Force success, as emerging weapons will have more diverse impacts across the conflict spectrum.

The Enterprise will make calculated bets on gamechanging innovation that offer paradigm-changing payoffs. This requires doubling down on our functional greatness, relying on the sound judgment and innovation resident in our workforce as we strive to modernize the capabilities at our warfighters disposal. If operational necessity is the engine, then our science and technology (S&T) base is the oil as we harness the technology advancements and opportunities that originate from our industrial and academic partners.



It is incumbent on us to be forthright and consistent with our priorities, where we intend to take risks, and where we intend to guard against lesser outcomes. We ask our Total Force to operate in strategic environments with little certitude that singular solutions can adequately mute vulnerabilities. Still, through an Integrated Layered Defense perspective, we should invest in capability combinations that confound our adversaries' options and contribute to integrated deterrence.

In focusing on this Strategy's goals (Generate CBD Advantages, Deliver at Speed and Scale, Optimize the Enterprise, and Leverage Partnerships), CBDP will enhance our effectiveness and buttress confidence in our Service and Combatant Command partners that we will furnish the integrated capabilities they demand in operationally relevant timeframes. This Strategy replaces the *2020 CBDP Strategy* and will guide the Enterprise on the common path we must traverse.

### STRATEGIC PRIORITY

Deliver threat-informed, operationally relevant chemical and biological defense capabilities at speed and scale.

### STRATEGIC GOALS



#### GOAL 1

Generate CBD Advantages

- Increase Decision Space
- Reduce Initial Operational Impact
- Rapid Response and Recovery



#### GOAL 2

Deliver at Speed and Scale

- Accelerate Technical Enablers
- Innovate to Scale
- Pursue Incremental Fielding



#### GOAL 3

#### **Optimize the Enterprise**

- Institutionalize Reforms
- Implement Capability Portfolio Management
- Enhance Warfighter Integration



#### GOAL 4

#### Leverage Partnerships

- Support Department of Defense (DoD) and United States Government (USG) Partners
- Bolster International Partnerships
- Facilitate a CBD Ecosystem



## **STRATEGIC ENVIRONMENT**

The Chemical and Biological Defense Program (CBDP) is at an inflection point. Thirty years after the Program's establishment, increasingly rapid geopolitical changes and technological advancements make chemical and biological defense (CBD) more challenging, relevant, and critical to sustaining U.S. military power.

National strategies all support CBD's growing importance. The 2022 National Security Strategy (NSS), 2022 National Defense Strategy (NDS), and 2022 National Military Strategy (NMS) provide CBD greater weight than previous strategies. The updated 2022 National Biodefense Strategy and 2023 Strategy for Countering Weapons of Mass Destruction (CWMD Strategy) further illustrate CBD's growing centrality and define clear goals. Last year, the Department of Defense (DoD) published the first-of-its-kind Biodefense Posture Review (BPR). This document outlines the reforms necessary to posture DoD to counter biological threats whether deliberate, accidental, or naturally occurring through 2035.

#### **Geopolitical Changes**

The NDS prioritizes strategic competition with near-peer state actors, identifying the People's Republic of China as the pacing challenge and Russia as an acute threat. State actors have the resources and technical expertise to threaten the Total Force with CB weapons across domains and at greater scale, to include the homeland. CB defense can no longer be limited to small, specialized units. The *2023 CWMD Strategy* explains, "the Total Force must carry out CWMD efforts daily," and be able "to conduct large-scale joint operations in a WMD-contested environment." The Enterprise must deliver capabilities at a Total Force scale. These capabilities must integrate into emerging operational concepts that overcome the tyranny of distance and contested logistics.

### **CBDP MISSION**

Anticipate and deter future threats by developing and delivering timely chemical and biological (CB) defense capabilities that enable a resilient Total Force to prevail in CB-contested environments and protect the nation.

### **CBDP VISION**

An agile, warfighter focused Enterprise that generates decisive CB defense advantages to maximize deterrence and defend the nation.



#### **Technological Changes**

Technological advances are making CB weapons more attractive to adversaries and harder to defend against. Bioengineering, precision medicine, and synthetic chemistry are converging with other emerging technologies, including artificial intelligence, big data, and nanotechnology. CB convergence creates an increasingly diverse and dynamic threat space, with the potential for novel threats that are harder to detect, attribute, and defend against. New technologies could enable more precise and tailorable CB agents, which would make them more attractive for adversaries to use across the three phases of the competition continuum: cooperation, competition, and conflict. The warfighter requires flexible CBD capabilities that are operationally relevant for all three phases. The CBDP's job is to deliver those capabilities.



#### DEFINING THE CBDP ENTERPRISE

The Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, under the authority, direction, and control of the Under Secretary of Defense for Acquisition and Sustainment, provides oversight and management of the CBDP. The CBDP Enterprise includes:



#### **Oversight and Management**

The Office of the Deputy Assistant Secretary of Defense for Chemical and Biological Defense



Executive Agent Designated representatives of the Secretary of the Army



**Requirements** Joint Requirements Office for CBRN Defense



**Science and Technology** Joint Science and Technology Office for Chemical and Biological Defense



**Portfolio Acquisition Executive** Joint Program Executive Office for CBRN Defense



Army Test and Evaluation Office Assistant Secretary of the Army for Acquisition, Logistics, and Technology



**Program Analysis and Integration** Joint CBRN Defense Program Analysis and Integration Office

## WHAT WE MUST ACHIEVE

2024 CBDP ENTERPRISE STRAT

To achieve our mission, the CBDP's overriding Strategic Priority is to deliver threat-informed, operationally relevant chemical and biological defense capabilities at speed and scale. This Strategic Priority must drive actions and synchronize efforts across the entire Enterprise. We must uncompromisingly prioritize efforts and calibrate resources against this Strategic Priority, while divesting from activities and capabilities that no longer support the Total Force's operational reality and challenges.

To thrive in this dynamic strategic environment, the CBDP will optimize to be proactive, agile, and adaptable to confound our adversaries and outpace the threat. We must pivot away from agent- and widget-centric acquisition efforts and instead view capabilities through the concept of Chemical, Biological, Radiological, and Nuclear (CBRN) Integrated Layered Defense (ILD). CBRN ILD is an interface and means for translating mixed capability investments against NDS and Joint Warfighting Concept seams and vulnerabilities. The construct enables disciplined, evidence-based decision-making to buy down risk and close gaps against the evolving threat. The Enterprise focuses on CB ILD, which accepts there will rarely be singular material or technical solutions that can fully address capability performance. We must instead assess combinations of capabilities across portfolios, domains, time, and the competition continuum to buy down risk and deliver operationally relevant solutions to the Total Force at speed and scale.

The Enterprise will operationalize CB ILD through capability portfolio management (CPM). This still evolving process better integrates, synchronizes, and coordinates capability development processes (requirements, programming and budgeting, and acquisition) and ensures alignment against strategic guidance, operational concepts, and mission threads. The CBDP must create the necessary data sources, roadmaps, and forums to implement CPM and enable senior leaders to make the right decisions to achieve the Strategic Priority.

## STRATEGIC PRIORITY GOALS

To achieve the Strategic Priority, the CBDP will pursue four goals: Generate CBD Advantages, Deliver at Speed and Scale, Optimize the Enterprise, and Leverage Partnerships. The first two goals outline the capabilities and attributes essential to the Strategic Priority; the latter two address how the Enterprise must posture itself and engage with others to deliver threat-informed, operationally relevant CBD capabilities at speed and scale. All four goals interweave and synchronize together to best complete our mission and are a full CBD community effort.

### GOAL 1 GENERATE CBD ADVANTAGES

**Deliver Threat-Informed, Operationally Relevant Materiel Solutions.** 

Goal 1 focuses on the materiel solutions the Total Force needs to deter or prevail against CB threats. While the three sub-goals below are distinct, their integration is paramount to the ILD concept. In the missile defense space, interceptors are rendered ineffective without the ability to detect and track adversaries' missiles. The same holds true for CBD: a rapid response medical countermeasure (MCM) platform will remain idle unless we can swiftly identify and characterize novel threats. Similarly, doctrinal and materiel solutions are needed to maximize the impact of enhanced early warning. Integrating capabilities within the sub-goalssuch as various sensors other data sources (Sense), along with rapid characterization and advanced analytics (Make Sense) within Sub-Goal 1.1-enhances our understanding of the threat. This understanding creates more options for military, political, and acquisition leaders at various echelons. To generate CBD advantages, our materiel solutions will help the Total Force:

- Sub-Goal 1.1: Increase Decision Space. Provide military, political, and acquisition leaders with the right information, at the right fidelity, as early as possible to increase and accelerate available options.
- Sub-Goal 1.2: Reduce Initial Operational Impact. Enable the Joint Force to maneuver freely and fight through initial CB threat exposure.
- Sub-Goal 1.3: Rapid Response and Recovery. Restore the Joint Force's combat power at the speed of relevance.





### Pursue Technical Enablers and Approaches that Deliver Sufficient Capabilities at Speed and Scale.

As technology convergence increases threat diversity, the CBDP must invest in technical enablers and capabilities that confound adversaries, contribute to integrated deterrence, and vastly improve material performance and novel approaches. Developing solutions is only part of the challenge—rapid response must be paired with delivery to the operational frontlines now defined by the tyranny of distance, and anti-access/area-denial environments. The near-peer threat calls out for affordable capabilities that can be produced at scale, placing a premium on S&T investments that reduce per-unit costs, relieve supply chain pressures, improve maintainability, and optimize manufacturing.

Three sub-goals will help us achieve Goal 2:

- Sub-Goal 2.1: Accelerate Technical Enablers. Invest in innovative enablers—including leveraging artificial intelligence/machine learning, expeditionary manufacturing, and high-performance computing—that increase speed and confound adversary objectives.
- Sub-Goal 2.2: Innovate to Scale.

Pursue strategic investments that overcome constraints to delivering capability quantities and quality for Total Force demands by reducing costs, enhancing durability and shelf-life, expanding access, and optimizing manufacturability.

• Sub-Goal 2.3: Pursue Incremental Fielding. Deliver operationally relevant capabilities to the warfighter at speed, while allowing for spiral development, platform upgrades, and absorption of risk back into the development ecosystem for remedy.



#### Posture the Enterprise to Deliver Threat-Informed, Operationally Relevant Capabilities at Speed and Scale.

The CBDP must accelerate reforms and orient itself to maintain pace with not only our adversaries and threats, but also with our nation's acquisition framework and expectations. The Enterprise is implementing bold changes and this strategy requires institutionalizing these enhancements and adapting them as necessary. Implementing Capability Portfolio Management is essential in optimizing the Enterprise. The CBDP is uniquely postured for CPM because it already includes requirements, S&T, acquisition, and resourcing. Nonetheless, the Enterprise must develop the necessary data sources, roadmaps, and forums to empower senior leaders to make risk-based decisions that close gaps. Most important, the Strategic Priority requires deeper integration with our ultimate customer, the warfighter. Expanding relationships with the Joint Staff, Services, and Combatant Commands-including through exercises, experiments, and other touchpointswill increase Enterprise relevancy, strengthen the demand signal, and increase our understanding of the capabilities the Total Force needs to deter or prevail against CB threats.

To achieve Goal 3, the CBDP will:

- Sub-Goal 3.1: Institutionalize Reforms. Institutionalize governance and other top-down reforms to align to strategic guidance, strengthen senior-leader decision making, integrate Research, Development, and Acquisition (RDA) activities, and improve business practices.
- Sub-Goal 3.2: Implement Capability Portfolio Management.

Establish the portfolio-based framework to help senior leaders make risk-based decisions and trade-offs to achieve the Strategic Priority.

• Sub-Goal 3.3: Enhance Warfighter Integration. Strengthen relationships to update realistic requirements, expand experimentation and exercises, and integrate into Total Force operational concepts.



### Leverage U.S. Government, International, Industry and Academic Partners to Achieve the Strategic Priority.

The CBDP's mission does not take place in a silo, and we cannot achieve the Strategic Priority alone. Although we have distinct responsibilities, our work reinforces other DoD and U.S. government (USG) activities. As such, the Enterprise will support Department and interagency partners and leverage their capabilities and expertise to advance the Strategic Priority. Similarly, the NDS rightly identifies Allies and partners as critical to achieving DoD goals. The CBDP has robust international agreements with many Allies (including NATO) and partners. Many international partners are also increasingly focused on CB defense. We will work to strengthen and focus these partnerships, prioritizing RDA activities, co-production, manufacturing, and test and evaluation.

The Enterprise's work with USG and international partners can help create economies of scale and drive innovation to facilitate a CBD ecosystem. The CBDP needs an innovative, dynamic ecosystem to deliver threat-informed, operationally relevant CBD capabilities at speed and scale. We must align current performers with our future direction and cultivate new partnerships to ingest and cultivate innovation. We must become a better partner by understanding and advancing our industry and academic partners' own interests. This may require pursuing innovative acquisition approaches and contracting vehicles, including leveraging emerging authorities across DoD and USG. Nothing can change the reality that we have highcomplexity, low-density requirements and lack the resources to sustain companies or industries on our own. But we can alleviate the impact by exploiting the growing synergies between our needs and those of interagency, international, and commercial partners. Building technical enablers (Goal 2) is one way we can make the Enterprise more indispensable and advance common needs. In the end, we can only achieve the Strategy Priority by embedding ourselves into larger systems of innovation and creating economies of scale.

The three sub-goals below will help achieve Goal 4:

- Sub-Goal 4.1: Support DoD and USG Partners. Work across the USG to achieve objectives, reduce duplication, leverage capabilities, and create economies of scale.
- Sub-Goal 4.2: Bolster International Partnerships. Strengthen ties with Allies and partners, prioritizing codevelopment, RDA, manufacturing, and testing activities.
- Sub-Goal 4.3: Facilitate a CBD Ecosystem. Strengthen and expand academic and industry partnerships to propel innovation in delivering threatinformed, operationally relevant CBD capabilities at speed and scale.

## THE WAY AHEAD

These objectives will enable the Enterprise to navigate an uncertain, rapidly changing future. Confronted with geopolitical and technological upheavals, we are building the tools, flexibility, and resiliency to ensure the Total Force is combat-credible against all chemical and biological threats. This is as ambitious as it is essential for the Warfighter and, ultimately, the Nation.

This strategy will drive the CBDP's work over the critical coming years. We will use the annual Planning Guidance and annual portfolio health review under the Under Secretary of Defense for Acquisition and Sustainment to implement the four Goals in support of the Strategic Priority. At this pivotal moment in the CBDP's history, we are dispensing with business as usual. We will embrace transformation and rise to the challenge to support the Total Force and defend the nation. As always, we stand behind the warfighter and ahead of the threat.

## **APPENDIX A**

### DEFINITIONS

**Capability Portfolio Management:** A disciplined management approach to align, prioritize, and optimize investments, requirements, risks, resources, research, and developments around a set of capabilities to achieve a set of mission objectives.

**CBRN Integrated Layered Defense:** The deliberate and synergistic employment of multi-domain CBRND capabilities, arranged through time, space, and purpose, to enable the understanding of the environment, protection of the Total Force, and mitigation of risks posed by CBRN threats and hazards. This approach deters adversary use through denial of intended effects, ensuring the Total Force prevails in conflict.

**Competition Continuum:** A world of enduring competition conducted through a mixture of cooperation, competition below armed conflict, and armed conflict.

**Expeditionary Manufacturing:** The ability to produce goods at times and places that enable their delivery at the point of need in contested logistics environments.

**Incremental fielding:** An adaptive development approach that prioritizes delivering capabilities quickly while allowing for continuous and successive enhancements.

**Joint Force:** A force composed of significant elements, assigned or attached, of two or more Military Departments that operate under a single joint force commander.

**Total Force:** The organizations, units, and manpower used to meet the requirements associated with DoD missions. It includes Active Component and Reserve Component military personnel, DoD civilian employees (including foreign national direct- and indirect-hires), nonappropriated fund employees, host nation-support personnel, and contracted services.

## **APPENDIX B**

#### REFERENCES

- DoD Biodefense Posture Review, August 17, 2023
- DoD Directive 2060.02, "DoD Countering Weapons of Mass Destruction (WMD) Policy," January 27, 2017
- DoD Directive 5000.01, "The Defense Acquisition System," September 9, 2020, as amended
- DoD Directive 5134.08, "Assistant Secretary of Defense for Nuclear, Chemical, and Biological Programs (ASD(NCB))," January 14, 2009, as amended
- DoD Directive 5160.05E, "Roles and Responsibilities Associated with the Chemical and Biological Defense Program," September 8, 2017, as amended
- DoD Directive 7045.20, "Capability Portfolio Management," September 25, 2023
- DoD Instruction 5000.02, "Operation of the Adaptive Acquisition Framework," January 23, 2020, as amended
- DoD Strategy for Countering Weapons of Mass Destruction (CWMD Strategy), September 28, 2023
- National Biodefense Strategy and Implementation Plan, October 18, 2022
- National Defense Industrial Strategy, November 16, 2023
- National Defense Science & Technology Strategy, May 5, 2023
- National Defense Strategy, October 24, 2022
- National Military Strategy, December 22, 2022
- National Security Memorandum 19: Strategy to Counter Weapons of Mass Destruction Terrorism and Advance Nuclear and Radioactive Material Security, March 2, 2023
- National Security Strategy, October 12, 2022
- United States Code, Title 10
- 50 U.S. Code § 1522



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