



# Joint Program Executive Office for Chemical and Biological Defense

*“Meeting Special Operations Forces’  
Chemical and Biological Defensive Needs”*

**PRESENTED TO:**  
**USSOCOM CBRN Conference**  
**Tampa, Florida**  
**December 6, 2005**  
**Open Session**

**STEPHEN V. REEVES**  
**Brigadier General, USA**  
**Joint Program Executive Officer**  
**for Chemical and Biological Defense**  
**(703) 681-9600**



# Overview

- **Who We Are**

- **What We Do**

- **Joint Warfighting Capabilities**



# Joint Service Chemical and Biological Defense Program

**JOINT REQUIREMENTS OFFICE**



**JOINT PROGRAM EXECUTIVE OFFICE**



**JOINT COMBAT DEVELOPER**



**DATSD-CBD**



**JOINT SCIENCE AND TECHNOLOGY OFFICE**

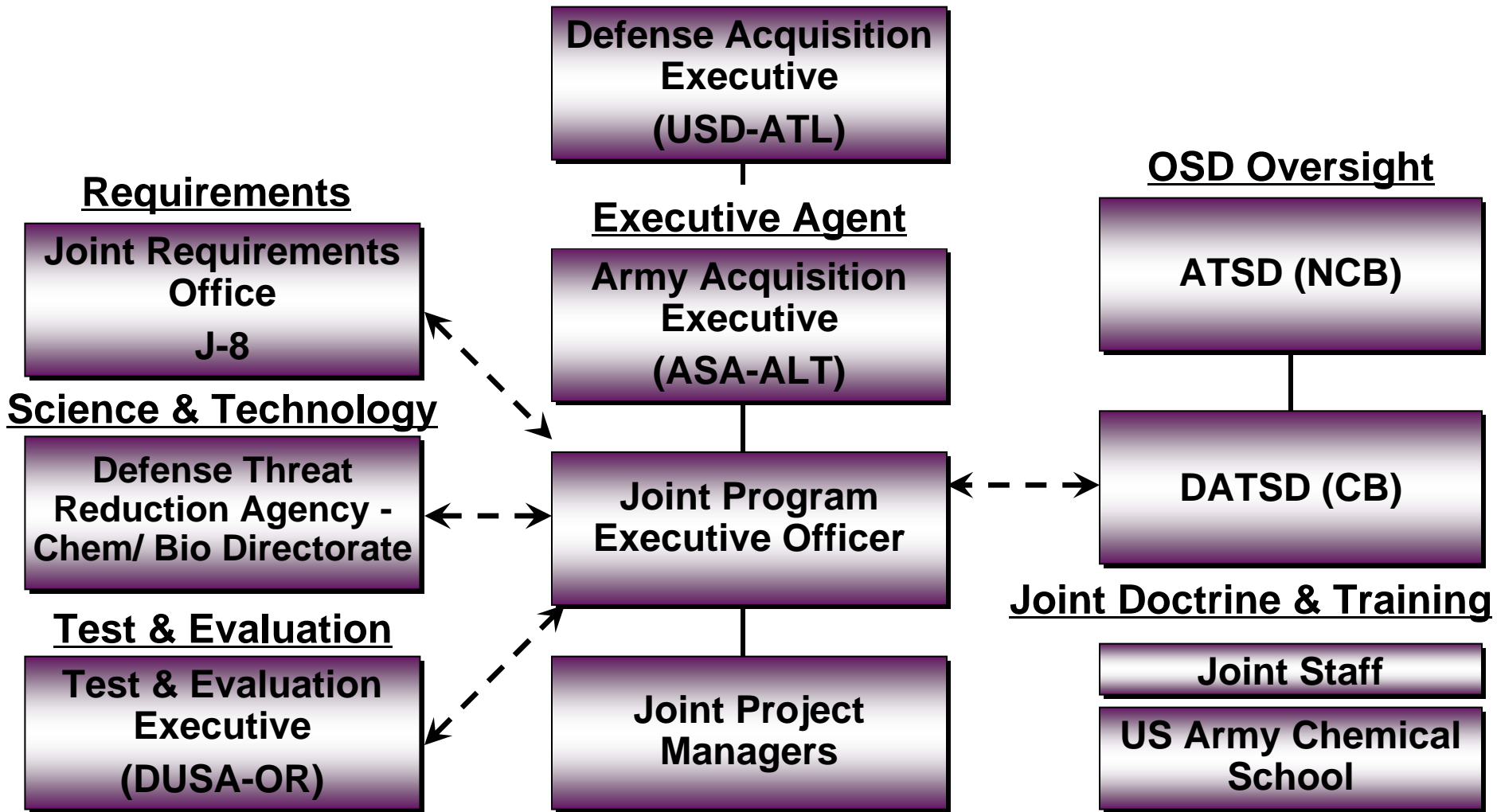
**JOINT TEST AND EVALUATION EXECUTIVE**



**Delivering Joint Warfighting Capabilities**



# Chem/ Bio Defense Program Acquisition Organizations



**50 USC 1522**



# Establishment of the Chemical and Biological Defense Program

- **50 USC 1522**
  - **Creates Assistant to Secretary of Defense for NCB to “Coordinate and Integrate Overall Program”**
  - **Assigns Army as Executive Agent to “Coordinate and Integrate RDA Programs of all Services”**
  - **Assigns Army Chemical School as Training Base**
  - **Directs all Funding be Through a Separate DoD Account**
  - **Prohibits Services from Budgeting for NBC**
  - **Requires Annual Report to Congress**

**Supplemented by OSD Implementation Plan Creating Joint Requirements, Acquisition, Testing and Training Organizations**



# Joint Program Executive Office for Chemical and Biological Defense

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## Mission

***The Joint Program Executive Office for Chemical and Biological Defense is Responsible for Research, Development, Acquisition, Fielding, and Life-cycle Support of Chemical, Biological, Radiological, and Nuclear (CBRN) Defense Equipment, Medical Countermeasures, and Installation and Force Protection Supporting the National Military Strategy***

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# Joint Program Executive Office Areas of Responsibility

**Vaccines**

**Treatments**

**Diagnostics**

**Chemical & Biological Agent Detection**

**Individual Protection**

**Collective Protection**

**Decontamination**

**Weapons of Mass Destruction – Civil Support**

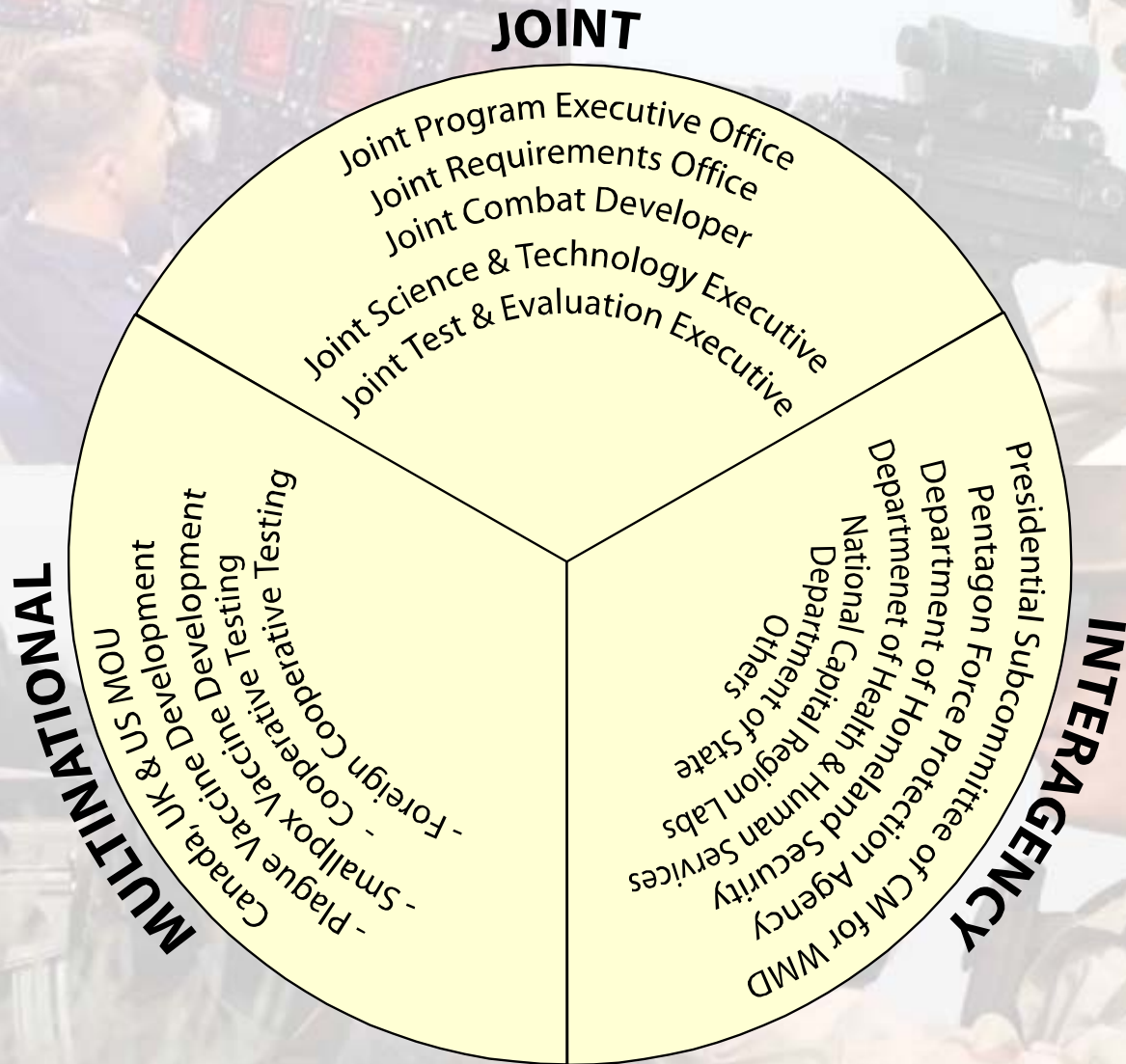
**Installation/ Force Protection**

**Information  
Systems**

**Total Life Cycle Management**



# Joint – Interagency – Multinational Responsibilities







**Biological Defense**  
Edgewood, MD  
**Col DANIEL BERRY (USAF)**



**NBC Contamination Avoidance**  
Edgewood, MD  
**COL DON BURNETT (ARMY)**



**Chemical Biological Medical Systems**  
Frederick, MD  
**COL STEPHEN BERTÉ (ARMY)**



**Information Systems**  
San Diego, CA  
**CAPT TOM O'KEEFE (NAVY)**



**Collective Protection**  
Washington, DC  
**MR STAN ENATSKY (NAVY)**

**JOINT PROGRAM EXECUTIVE OFFICER**

IN ACCORDANCE WITH DEPARTMENT OF DEFENSE DIRECTIVE 5000.1  
and  
MY APPOINTMENT, BY ORDER OF THE SECRETARY OF THE ARMY,  
as the  
**ARMY ACQUISITION EXECUTIVE**  
I hereby designate  
**BG Stephen V. Reeves**  
as the Joint Program Executive Officer for  
**Chemical and Biological Defense**

*As Joint Program Executive Officer, you will advise the Staff of issues, conduct or assist in the development and implementation of programs, and coordinate the execution of programs. You will also advise the Staff of issues, conduct or assist in the development and implementation of programs, and coordinate the execution of programs.*

*You will, as the responsible management official, provide overall direction and guidance for the development, acquisition, testing, production, and fielding of systems, and ensuring that the systems are delivered to the program. Your responsibilities include planning and executing the execution of programs and systems after approval.*

*You will ensure the timely progression of managing your programs and will report directly to me. You will keep the leadership fully advised of program status and report any matters that could affect the Army's ability to execute the program. Your responsibilities include planning and executing the execution of programs and systems after approval.*

*You will place primary management emphasis and oversight on balancing cost, schedule, performance and responsibility while ensuring an excellent value proposition. You will also ensure compliance with applicable national policies to include environmental protection and waste management programs.*

*You will lead and directly control assigned program managers. You will ensure that program managers have the necessary resources and authority to execute their programs. You will also serve as an advisor to ensure the necessary focus execution to plan to support acquisition center development programs.*

*You are hereby designated for authority as the Joint Program Executive Officer for the management of assigned programs. These include, but are not limited to, the following:*

*Stephen V. Reeves*  
Army Acquisition Executive



**Individual Protection**  
Quantico, VA  
**MR JIM NELSON (USMC)**

**JPMs Leverage Service/Installation Matrix Support**



**Guardian**  
Falls Church, VA  
**COL CAMILLE NICHOLS (ARMY)**



**Decon**  
Quantico, VA  
**Lt Col DALE TAKENAKA (USAF)**

# JPEO-CBD JOINT PROJECT MANAGERS



# Where We Are Going

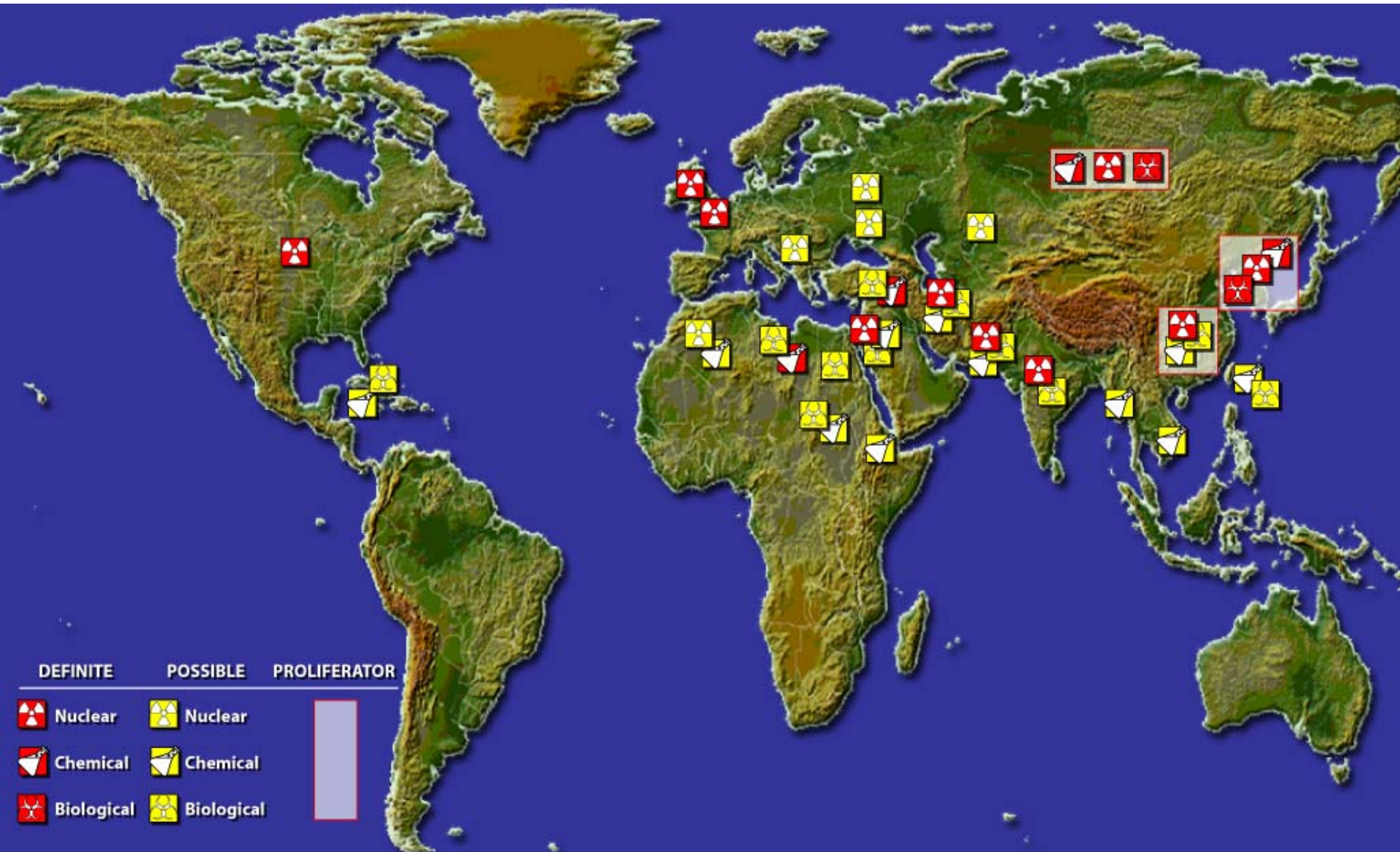


# Radical Islamists On Using CBRN

- **“use of nuclear, dirty bombs, chemical and biological weapons by martyrs is justified as part of holy war strategy” (al-Qaeda message board, 11 Aug 05)**
- **“Attacking Washington Metro with chemical weapons to achieve amazing results” (al-Qaeda message board, 11 Aug 05)**
- **“The nuclear war is the solution for destruction of the United States.” (Radical Islamist website, 26 Dec 02)**



# State Actors





# So What?

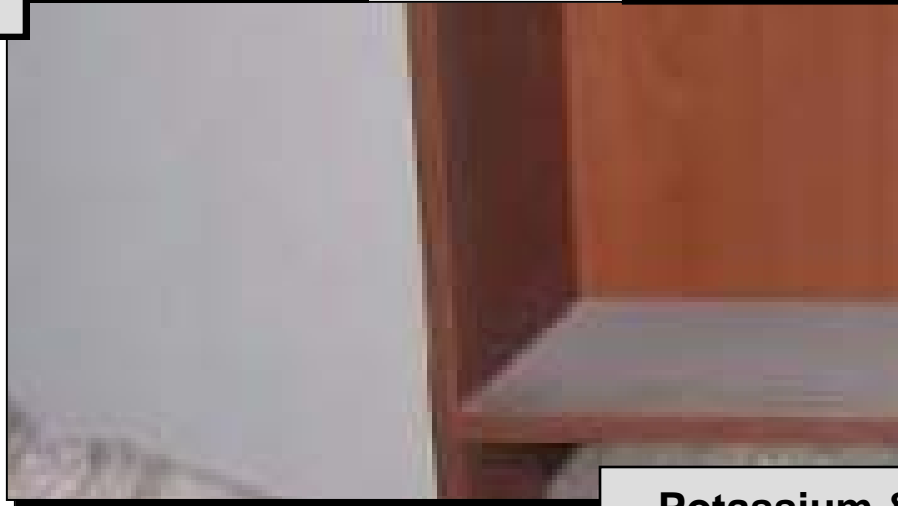
## Fallujah 2004



**Chemical Bottles**



**Potassium Cyanide**



**Potassium & Sodium Cyanide**



# DoD Chemical and Biological Defense

## Expanding Roles and Missions

Infrastructure

Power Projection

Battle Space



“Classic”  
CBW

Bio-Engineered  
And  
“Non-Traditional”  
Threats

“Threats”

Environmental  
Threats- TICs/TIMs

Environmental/  
Medical  
Surveillance  
Infectious  
Diseases

**Expanded Capabilities Required!**



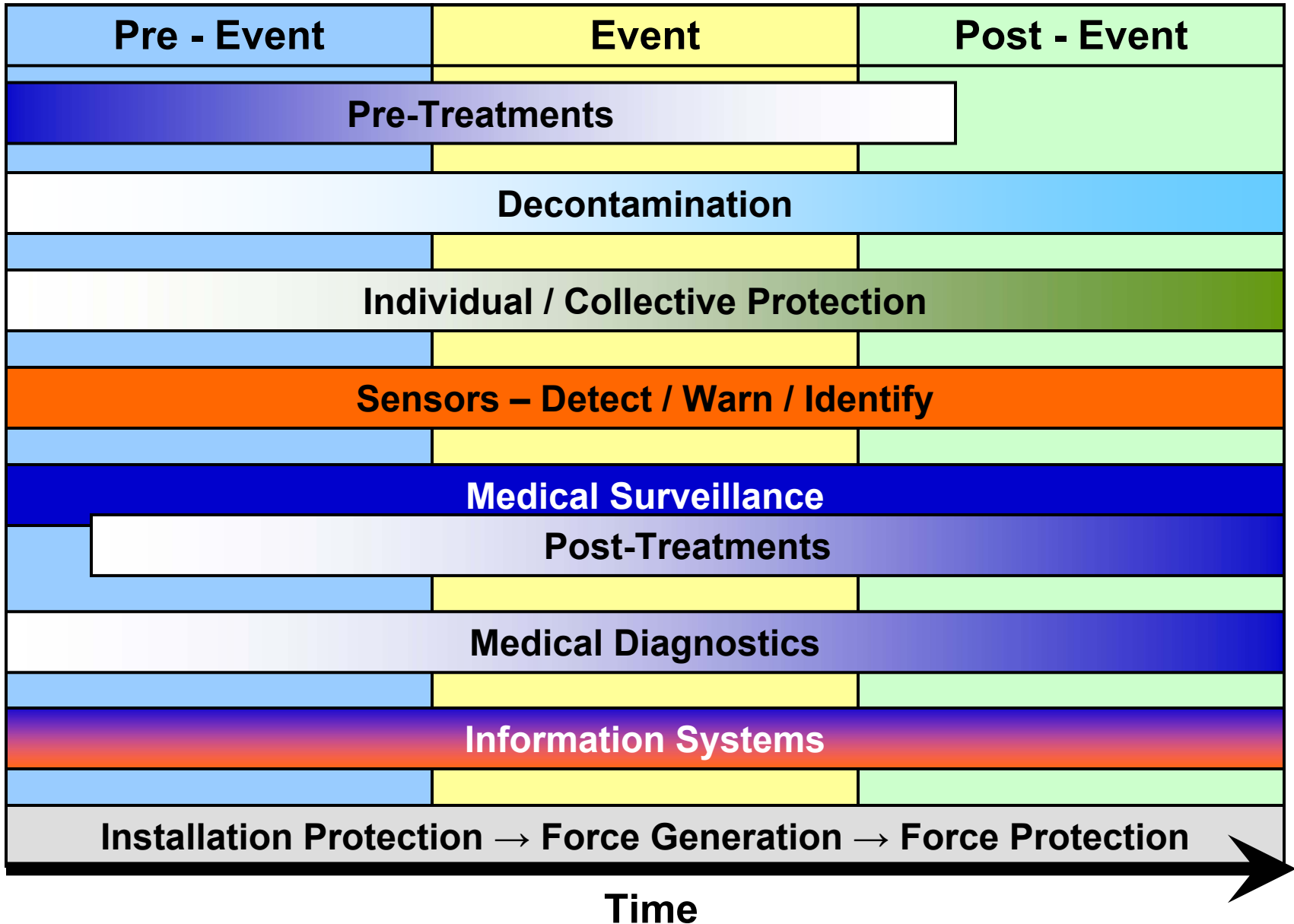
# System of Systems Approach to Counter the Threat





# Systems Solutions

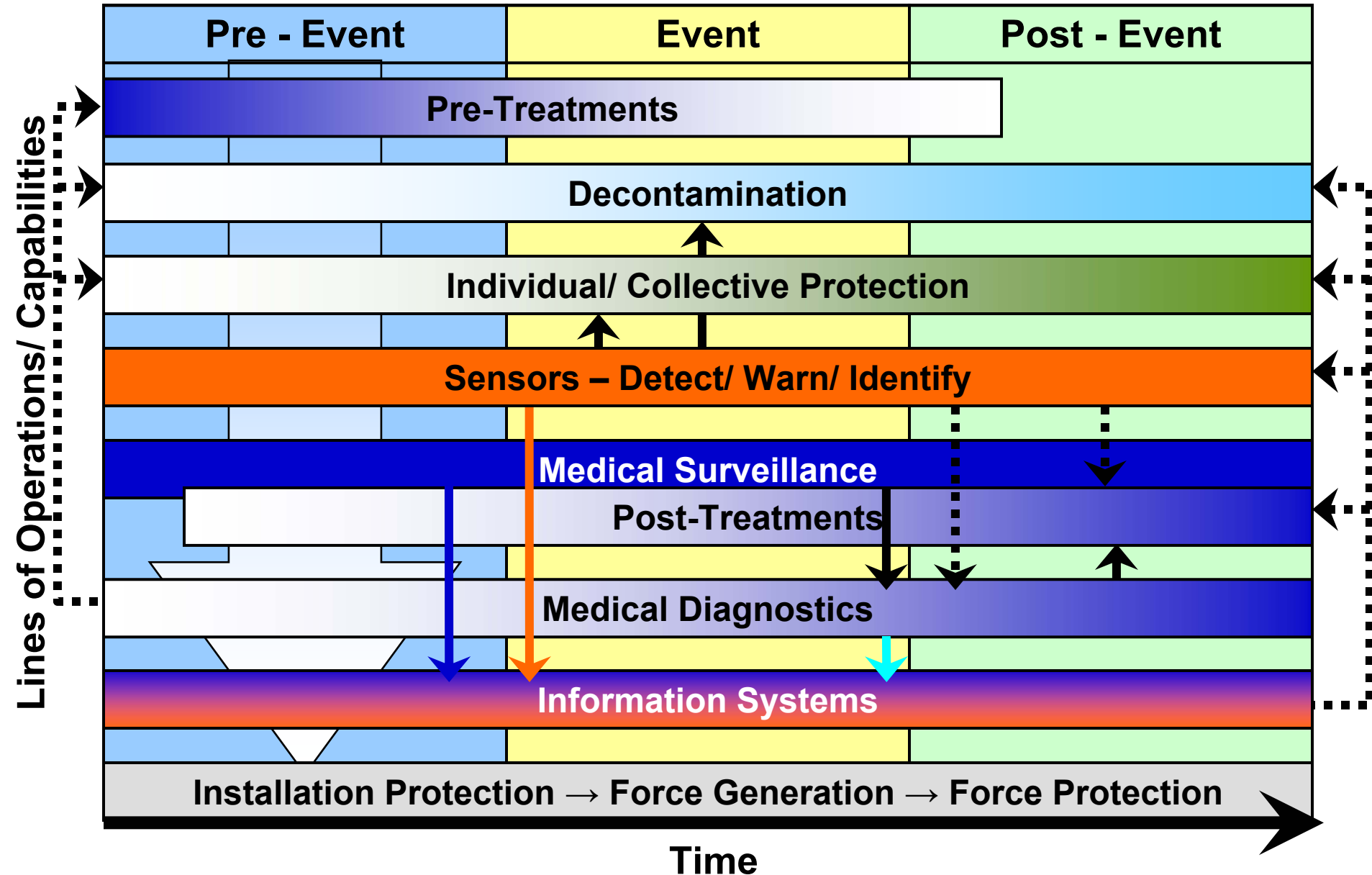
Lines of Operations/ Capabilities







# Systems Solutions

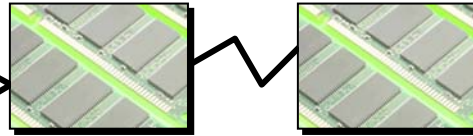




# Migrating the Interface

## Data Aggregation and Network Connectivity

2006



Sensors Use JCIDS for Communications



Sensor Acts as a Data Aggregators for Other Sensors



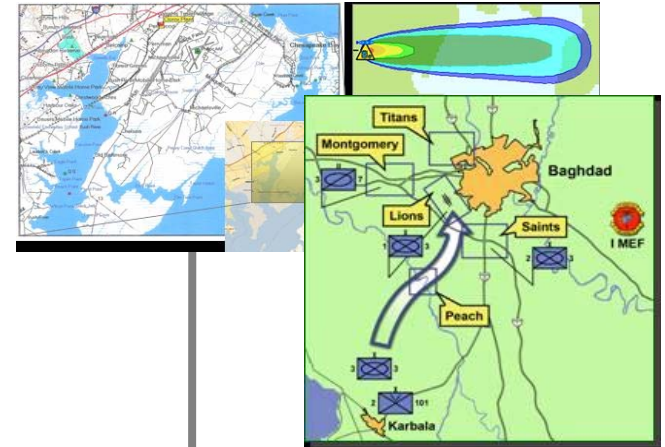
Sensor Uses RF to Connect to JCID Acting as a Gateway



Aggregating Sensor Connects Directly to the GIG Backbone



Simple Sensor Connects Directly to the GIG Backbone



C2 Systems Connect to the GIG Backbone

GIG Message Bus Backbone



# Modularity Vision – A Plug & Play CB System



## Two Key Parts:

- Multipurpose Interchangeable Detectors
- Common Interface and Communication System

- Common Mechanical I/F
- Common Signal I/F
- Common Power I/F
- Common Comms Protocols



# Where We're Going

- **Start with Net Centricity In Mind**
- **Start with Accredited Information Assurance Solutions**
- **Common Infrastructure for CBRN Sensors**
  - Bus/ Services Architecture
  - CBRN Modules

**“Systems” From Modules**

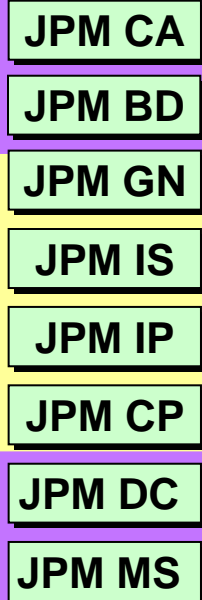
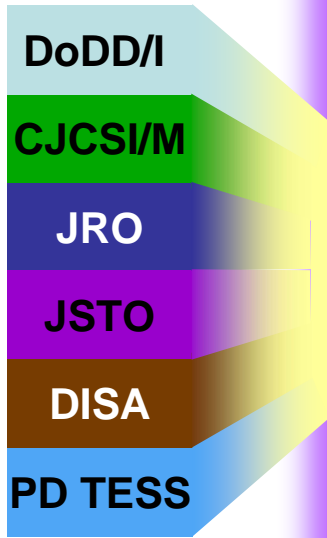


# Making It Happen Software Support Activity

Born August 2004

## CBRN-SSA VISION

### JPEO-CBD



*Software Support Activity (SSA)*



- Architecture and Data Products/ Models
- Modeling and Simulation VV&A Guidelines
- Help Desk
- Contract Language For Data Models

**SSA WORKS TO REALIZE THE VISION OF NET-CENTRIC WARFARE - FULFILLS JPEO-CBD RESPONSIBILITIES REGARDING INFORMATION ASSURANCE, DATA MANAGEMENT, and VV&A**



# Collectively How We Make It Work!

- Common, Open Standards and Architectures
- Accredited, Verified and Validated Software
- Technology Transition Agreements Between S&T and Advanced Development
- Lifecycle Modeling and Simulation Strategies
- Information Assurance In All Activities

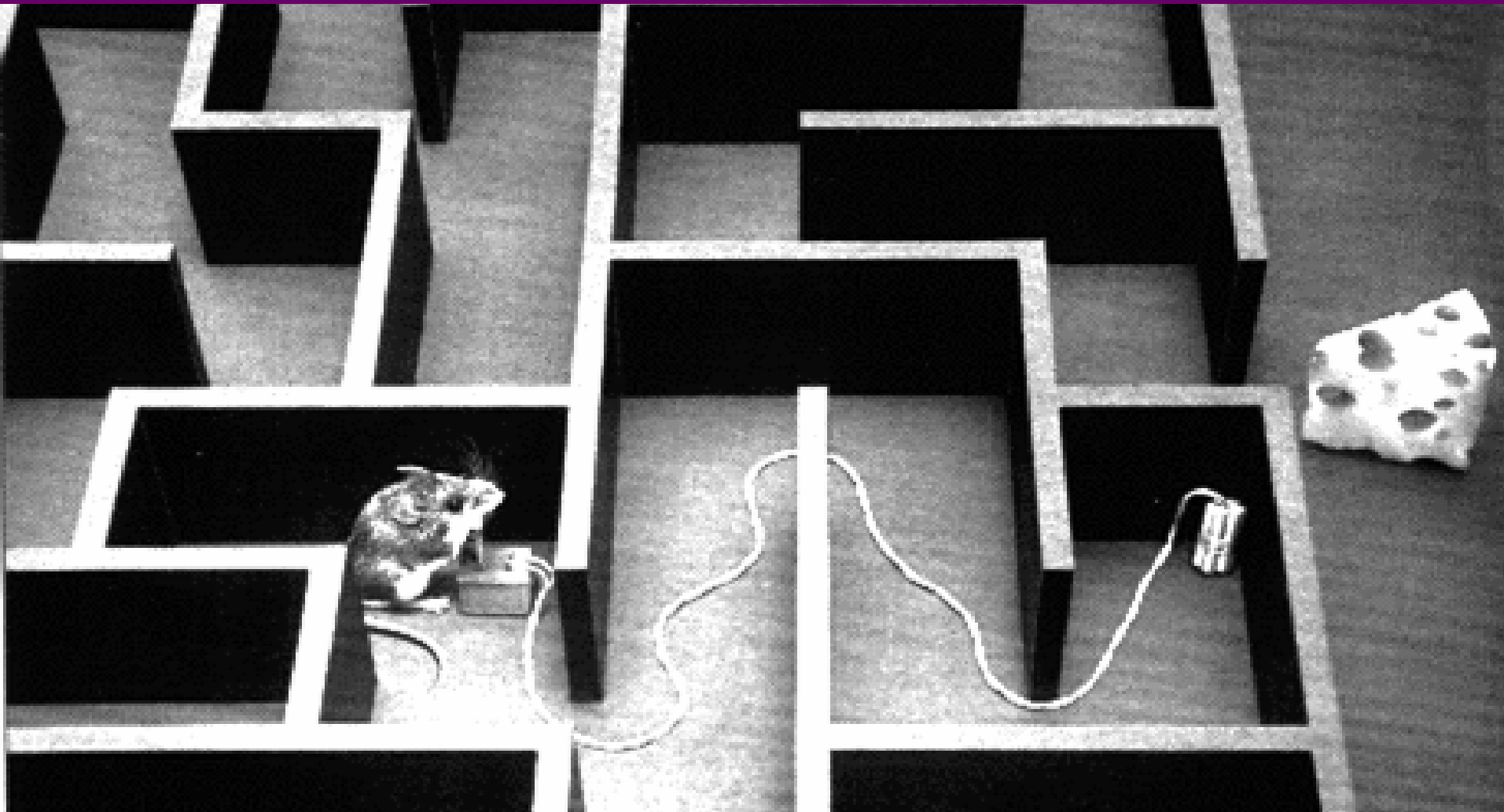


# What This Means to Delivering SOCOM Capabilities





# Leaders Who Can Work the Process



**... and Field Systems**



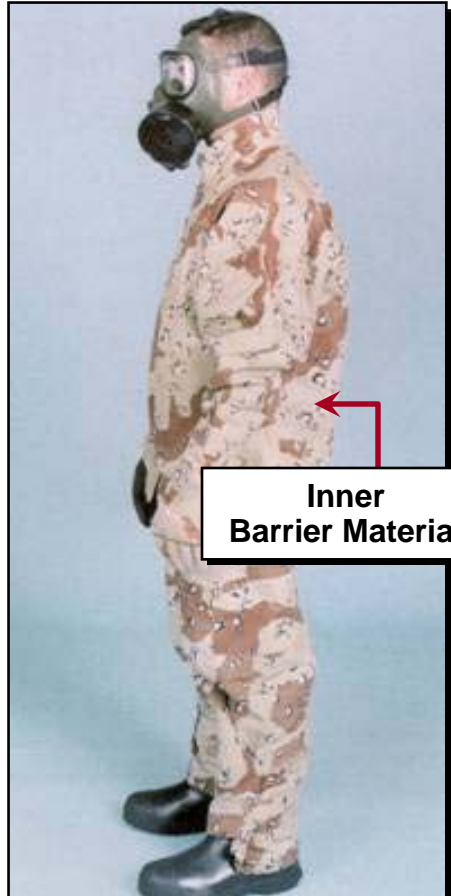


# Examples of SOF Leveraging Joint Efforts

- **M53 Chemical Biological Protective Mask**
- **Joint Service Chemical Environment Survival Mask**
- **Joint Service General Purpose Mask**
- **Joint Service Aircrew Mask**
- **Joint Protective Aircrew Ensemble**
- **Joint Block 2 Glove Upgrade**
- **Chemical Protective Overboot**
- **Joint Service Transportable Decontamination System**
- **Joint Service Sensitive Equipment Decontamination System**
- **Joint Platform Interior Decontamination**



# JPEO-CBD Equipment Used/ in Development for SOCOM



Inner Barrier Material

JSLIST Type VII



JS LIST Block 2 Gove Upgrade (JB2GU)

Alternative Footwear System (AFS)



Integrated Footwear System (IFS)



Joint Service Mask Leakage Tester (JSMLT)



All Purpose Personal Protective Ensemble (AP-PPE)



# JPEO-CBD Equipment Used/ in Development for SOCOM



**Joint Service Chemical Environment Survivability Mask (JCESM)**



**Medical Oxygen Adapter**

**M53 Chemical-Biological Protective Mask**



**M45 Mask**



**Voice Amplifier**



Mask Amp



**Joint Service General Purpose Mask (JSGPM)**

**Improved Powered Air Purifying Respirator (IPAPR)**



**Joint Service Aircrew Mask (JSAM)**



# JPEO-CBD Equipment Used/ in Development for SOCOM

**Draeger TIC Detection Kits**



**Modified Automatic Chemical Agent Alarm (ACADA)**



**Joint Chemical Agent Detector (JCAD)**

**Improved Chemical Agent Monitor (ICAM)**

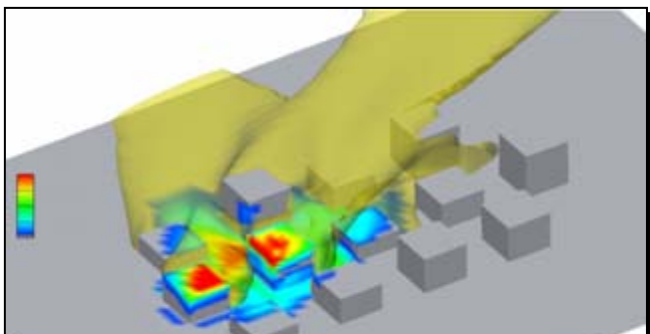


**AN/VDR-2 Radiac**

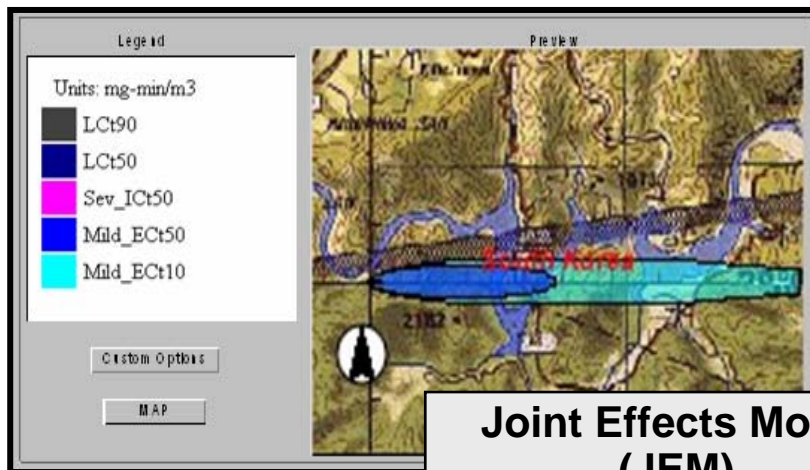




# JPEO-CBD Equipment Used/ in Development for SOCOM



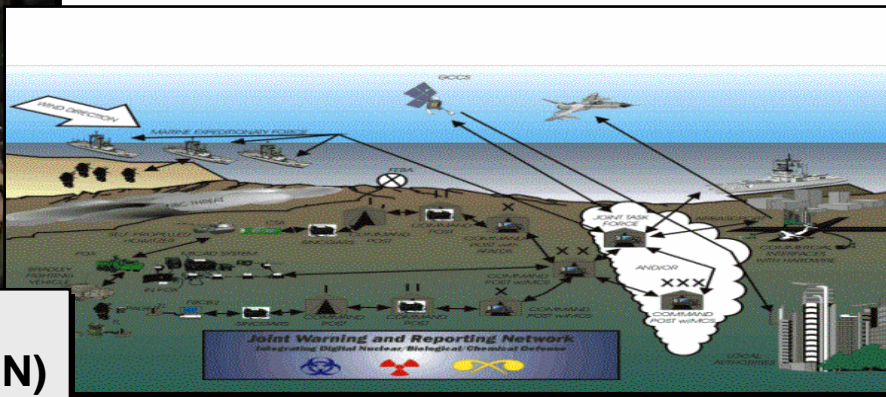
**Joint Operational Efforts Federation (JOEF)**



**Joint Effects Model (JEM)**



**Joint Warning and Reporting Network (JWARN)**





# JPEO-CBD Equipment Used/ in Development for SOCOM



**Joint Service Transportable Decon System-Small Scale (JSTDS-SS)**



**Decontamination Formulation 200 (DF200)**



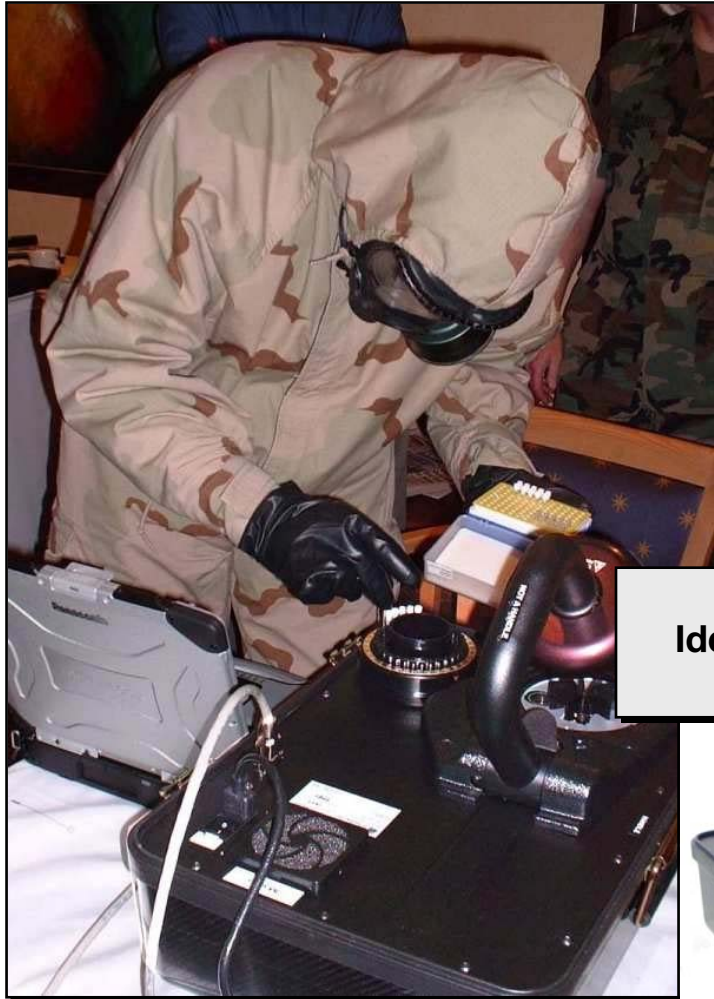
**M100 Sorbent Decon Systems**



**Joint Service Personnel Decontamination System RSDL (JSPDS)**



# JPEO-CBD Equipment Used/ in Development for SOCOM



**Skin Exposure Reduction Paste Against Chemical Warfare Agents (SERPACWA)**



**Joint Biological Agent Identification & Diagnostics System (JBAIDS)**





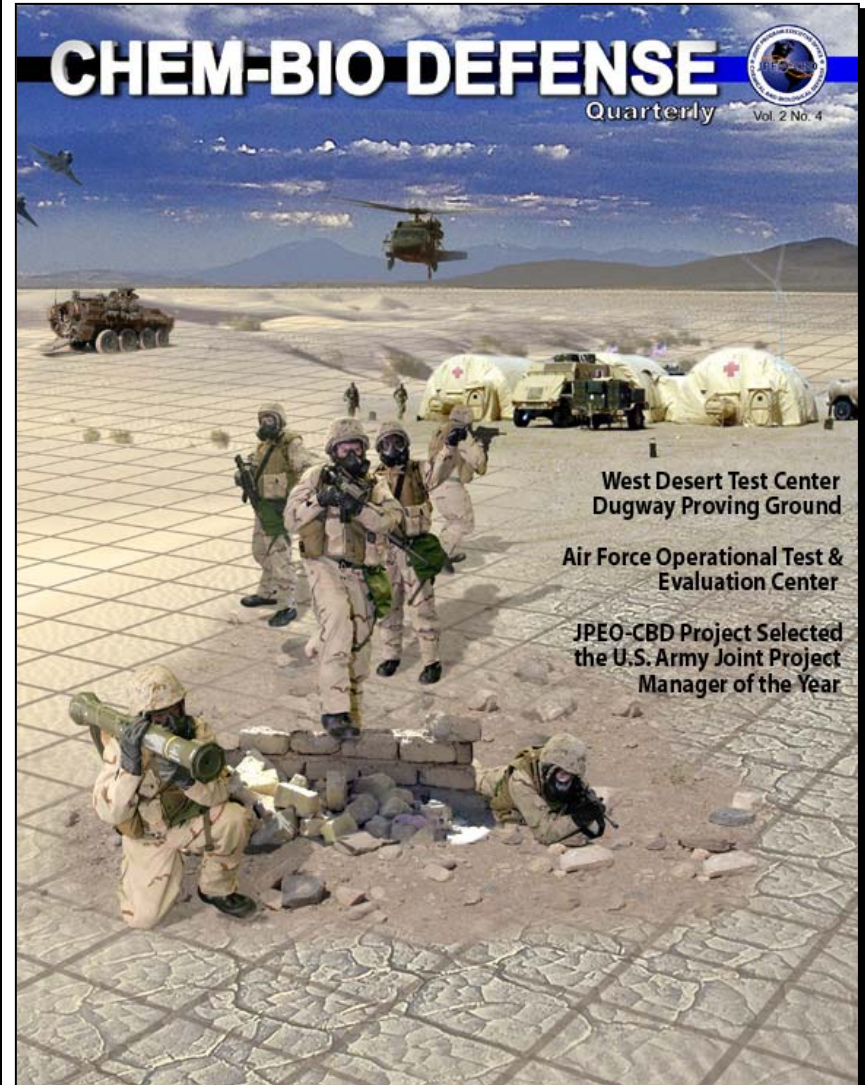
# "Shameless Advertising"

[www.jpeocbd.osd.mil](http://www.jpeocbd.osd.mil)



- News
- Business Opportunities
- JPEO Information
- Links
- New Equipment Training
- Feedback

*Quarterly Magazine*







# Summary

- **Supporting SOCOM Through Direct-support Relationship and On-site Representation**
- **Framework and Process for Collaboration and Cooperation Supporting SOF CBD Materiel Development Efforts**
- **Leveraging Joint Services R&D for the SOF Warfighter**

**Meeting SOF's Chemical – Biological Defense Needs**

# Joint Program Executive Office



# Chemical and Biological Defense