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Joint Program Executive Office for Chemical and Biological Defense

Meeting Major Defense Acquisition Programs **(MDAP)** Chemical, Biological, Radiological and Nuclear **(CBRND)** Survivability Requirements

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JPM Protection

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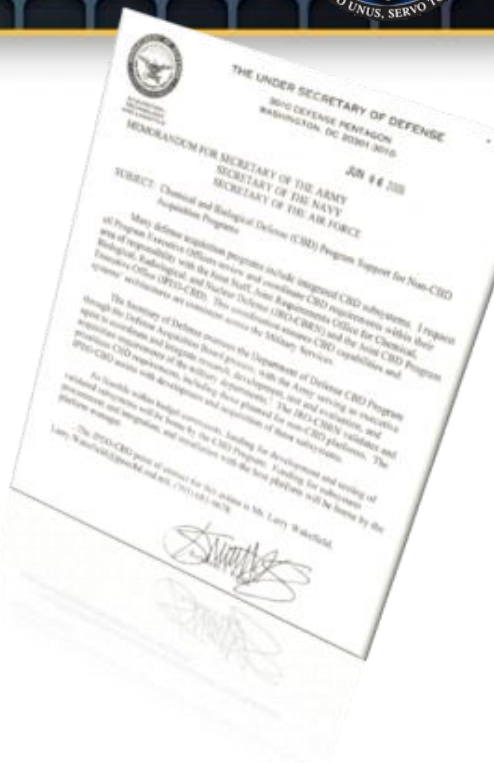
Agenda

- Background
- **MDAP** Support Concept
- **MDAP** Support Process
- **MDAP** Assistance
- **MDAP** Efforts

Background


THE UNDER SECRETARY OF DEFENSE

MEMORANDUM FOR SECRETARY OF THE ARMY
SECRETARY OF THE NAVY
SECRETARY OF THE AIR FORCE

SUBJECT: Chemical and Biological Defense (CBD) Program Support for Non-CBD Acquisition Programs

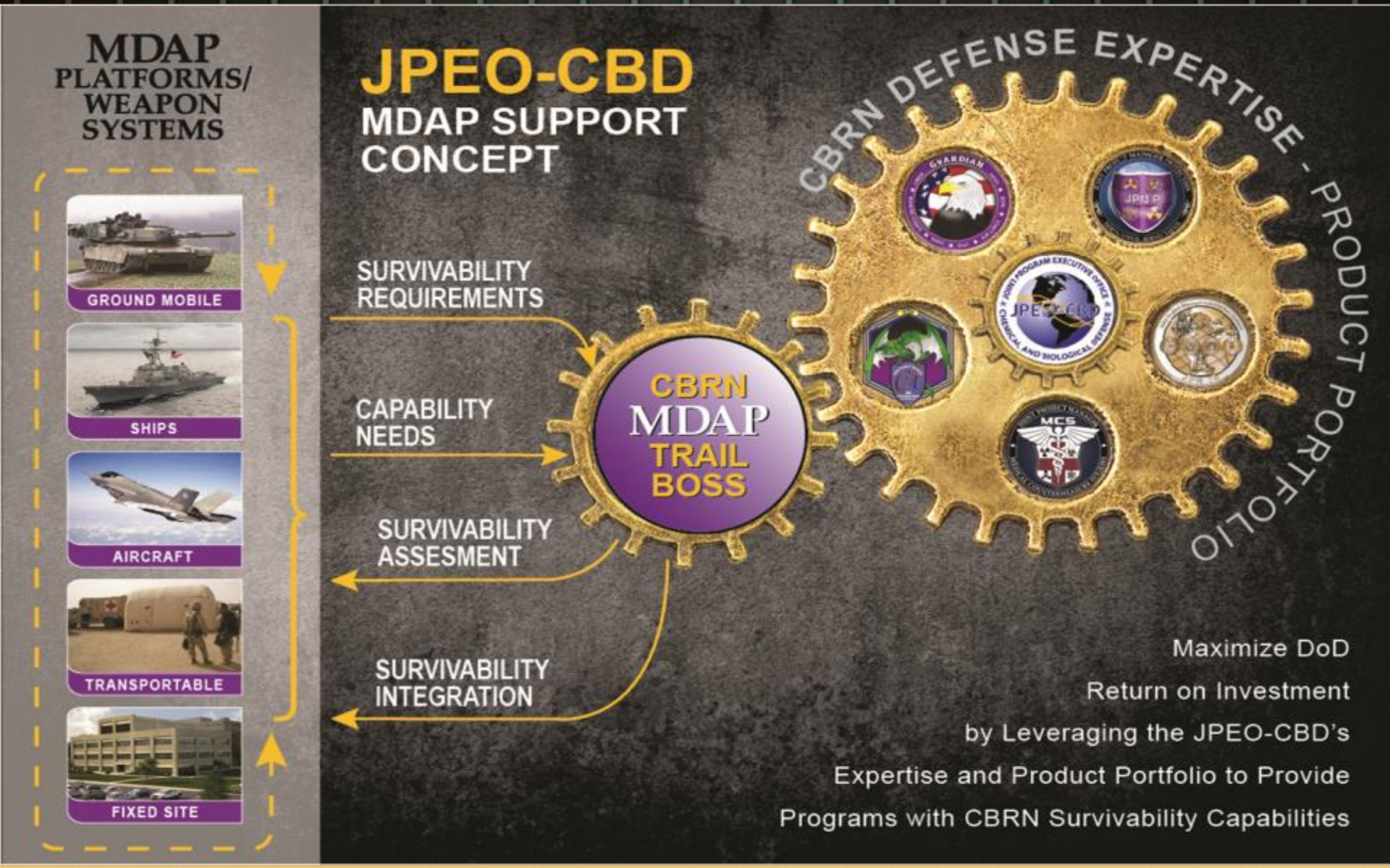
- **April 2003**: USD AT&L in accordance with Public Law 103-160, Sect. 1703 (50 USC 1522) established the Program Executive Office for Chemical and Biological Defense (JPEO-CBD) as the materiel developer for Chemical, Biological and Radiological (CBR) capability

- **June 2006:** USD AT&L directed the JPEO-CBD to assist with the development and acquisition of Chemical & Biological Defense (CBD) subsystems in support of non-CBD platforms

- **October 2009:** JPEO-CBD established the MDAP Trail Boss to maximize return on investment by leveraging JPEO-CBD expertise and product portfolios to provide non-CBD programs with CBRN Survivability and Force Protection capabilities

- **April 2015**: DoDI 3150.09 directed that CBRN mission-critical systems be CBRN survivable and requirements addressed in JCIDS documents

JPEO-CBD MDAP Support Concept



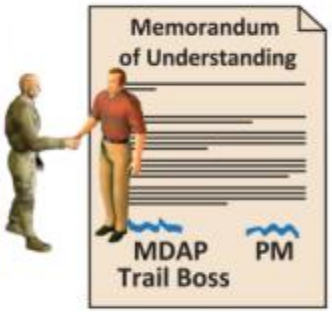
JPEO-CBD MDAP Support Process

Source: CBRN Survivability Handbook, Rev 3, May 2015

Engage With Program

Understanding of Weapon System Program's CBRN Survivability Support Needs

MOU



CBRN Defense Requirements Development

Survey of Existing CBRN Defense Solutions

Provide Recommended Set of CBRN Survivability Solutions

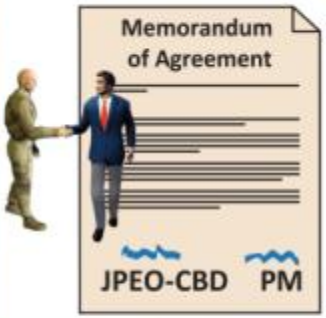
Agreed to Set of CBRN Survivability Solutions

Preliminary T&E and Logistics Planning

CBRN SME Support

IPT and Technical Review Support

MOA



Phase 1

Phase 2

Produce, Field, and Sustain CBRN Survivability Equipment

Platform-Level T&E Support

Deliver CBRN Survivability Equipment for Platform-Level Testing

Design, Fabricate, Test, and Integrate CBRN Defense Solutions

CBRN Assessment Support (Milestones B and C)

Logistics Planning Support

CBRN SME Support

IPT and Technical Review Support

MDAP Support Process, Tailored to Meet the Program's Needs

MDAP Trail Boss Assistance

- Develop MOU's/MOA's
- Coordinate CBRN SME support
- Perform systems engineering analyses to develop CBRN-specific operational and technical requirements, and/or develop recommended CBRN-specific requirements for inclusion in the program's CDD/CPD
- Perform systems engineering analyses to identify existing CBRN materiel solutions to best meet documented requirements
- Identify performance gaps between existing materiel and technical requirements
- Help address DODI 3150.09 mandates
- Develop cost and schedule estimates to remedy identified CBRN gaps
- Help develop equipment purchase plans
- Help develop TTPs to address identified CBRN gaps
- Identify, assess, and track CBRN risks
- Conduct preliminary CBRN T&E and logistics planning
- Develop CBRN defense architectures products
- Perform trade space analyses to optimize CBRN survivability capabilities within cost and schedule constraints

Provide support to non-CBD Program Managers by facilitating and coordinating pathways through CBRN requirements

Ground Mobile Systems CBRN Integration

CBRN SURVIVABILITY

- Masks
- Filters
- Standardized life support configurations
- Size Weight Power concerns
- Detection systems
- Decontamination methodologies
- Surface Coatings
- Human Systems operations
- Sustainment

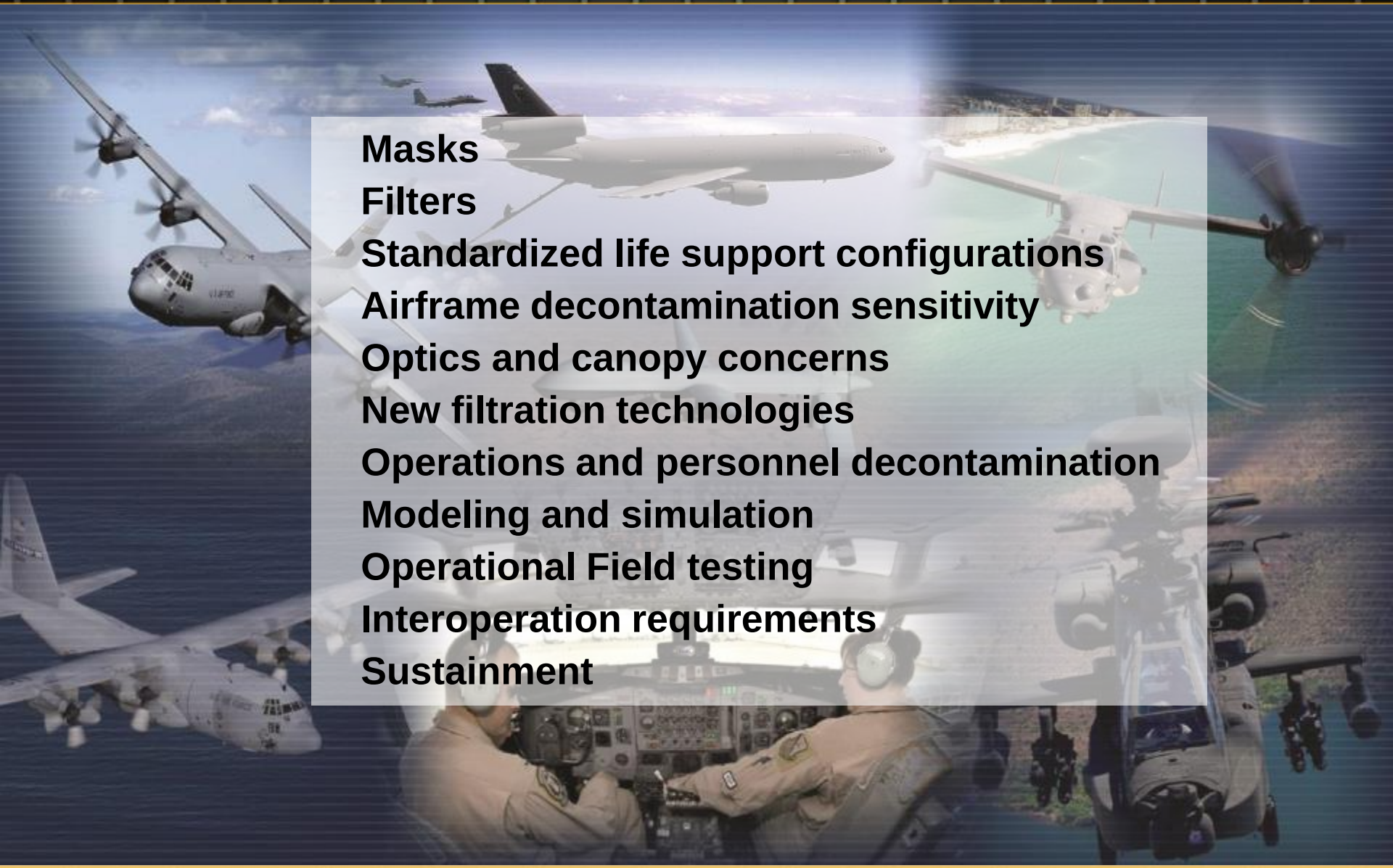
Ship Systems CBRN Integration

CBRN SURVIVABILITY

- IP Equipment
- Human Systems Operation
- Counter Measure Wash-down
- Protected Zone Configuration
- ColPro integration into HVAC system design
- Pressure sensors and alarms
- Detector placement
- New filtration technologies
- Personnel decontamination
- Patient Transfer
- Threat infiltration mitigation
- Modeling and simulation
- Operational Field testing
- Interoperation requirements
- Environmental Issues – Shock, Vibration, Seawater
- Sustainment

Aircraft Systems CBRN Integration

CBRN SURVIVABILITY



- Masks
- Filters
- Standardized life support configurations
- Airframe decontamination sensitivity
- Optics and canopy concerns
- New filtration technologies
- Operations and personnel decontamination
- Modeling and simulation
- Operational Field testing
- Interoperation requirements
- Sustainment

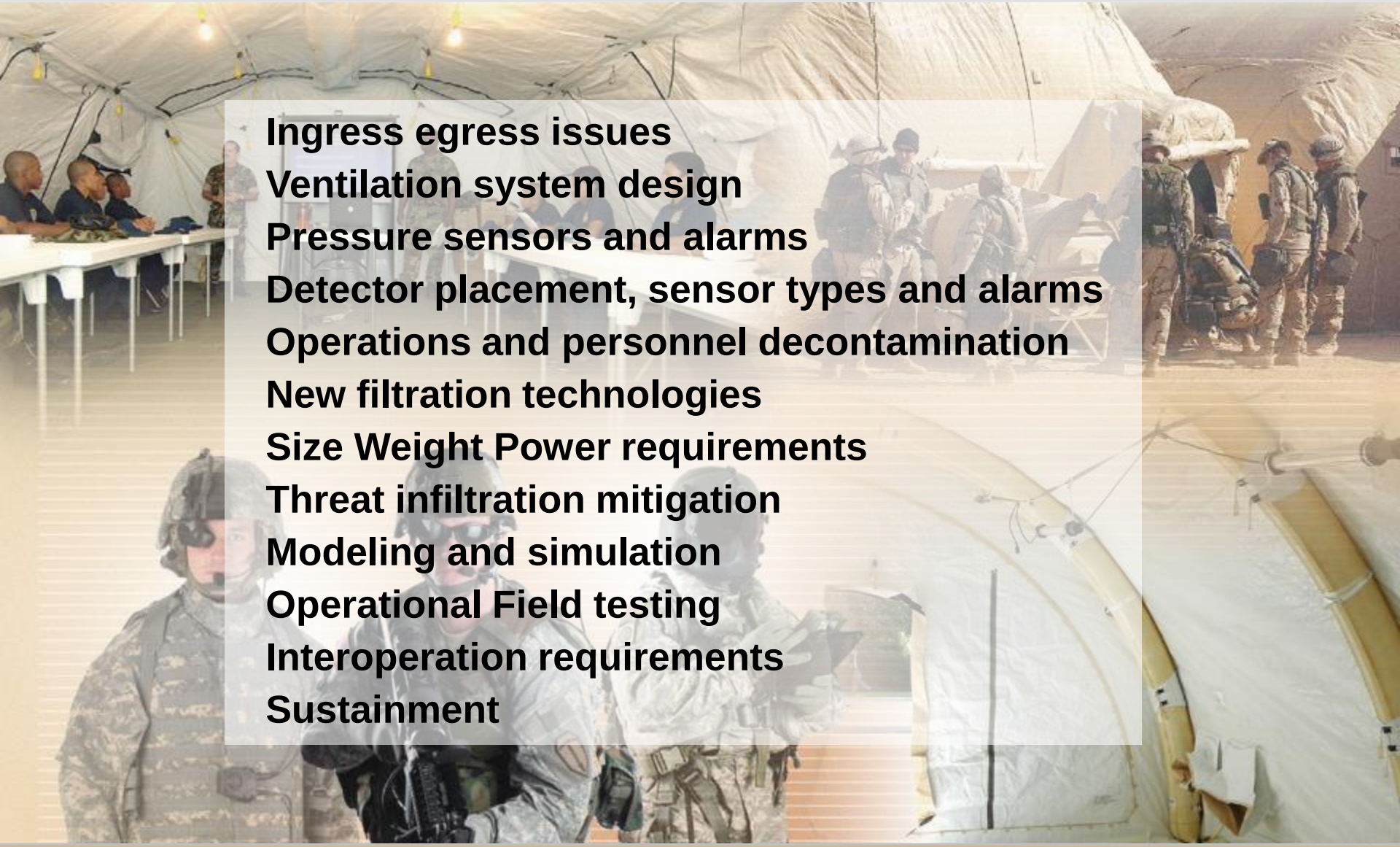
Fixed Site Systems CBRN Integration

CBRN SURVIVABILITY

- Ingress egress issues
- Ventilation system design
- Pressure sensors and alarms
- Overpressure Issues
- Size and Power issues
- Detector placement
- New filtration technologies
- Personnel decontamination
- Threat infiltration mitigation
- Modeling and simulation
- Sustainment

Transportable CBRN Integration

CBRN SURVIVABILITY



- Ingress egress issues
- Ventilation system design
- Pressure sensors and alarms
- Detector placement, sensor types and alarms
- Operations and personnel decontamination
- New filtration technologies
- Size Weight Power requirements
- Threat infiltration mitigation
- Modeling and simulation
- Operational Field testing
- Interoperation requirements
- Sustainment

Conclusion

- **MDAP Trail Boss is the "Go-To" resource for assisting CBRN Mission Critical programs in meeting their CBRN requirements**
- **Maximize DoD return on investment by leveraging JPEO-CBD expertise and product portfolio to provide non-CBD programs/organizations with CBRN Survivability capabilities**
  - Provide single access point to the full spectrum of CBRN expertise
  - Tailored services to support programs' cost, schedule, and performance requirements
  - Promotes consistency of CBRN defense capabilities and systems' architectures across Services
  - Reduce risk to CBRN solution development and integration
  - Maximize affordability
- **Weapon system programs get maximum benefit when MDAP Trail Boss Team engages early in the acquisition lifecycle**
  - Pre-CDD is the optimal time

MDAP Point of Contact

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REFERENCES:

- USD(AT&L) Memo, Chemical and Biological Defense (CBD) Program Support for Non-CBD Acquisition Programs dated 6 June 2006
- DODI 3150.09 Chemical Biological, Radiological, Nuclear (CBRN) Survivability Policy dated 8 April 2015