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Individual and Collective Protection Capability Gaps

July 22, 2008



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JPEO CBD Integrated Product Team SHIELD Functional Area

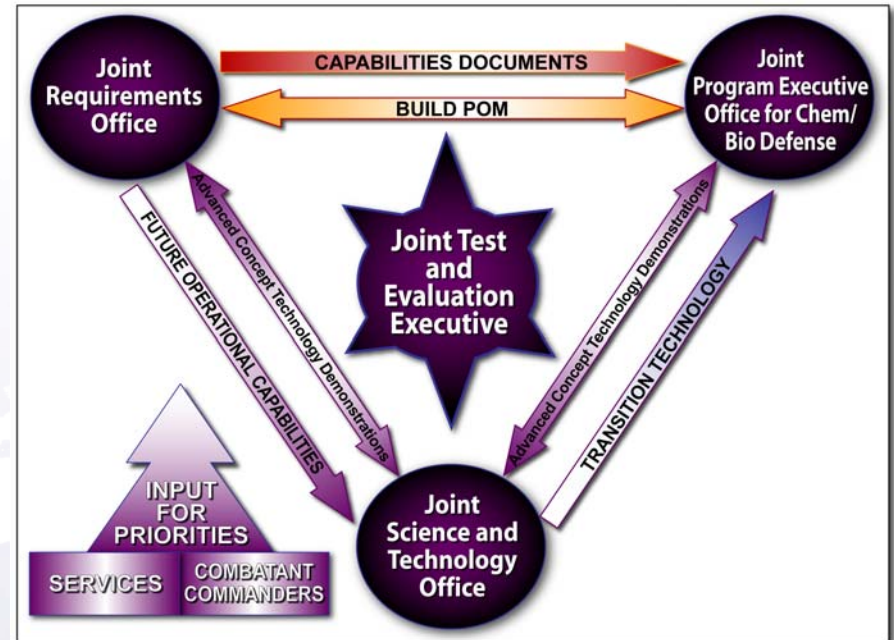


Areas of Responsibility

- Individual Protection
- Collective Protection
- Medical Prophylaxis
- Weapons of Mass Destruction Civil Support
- Installation/Force Protection

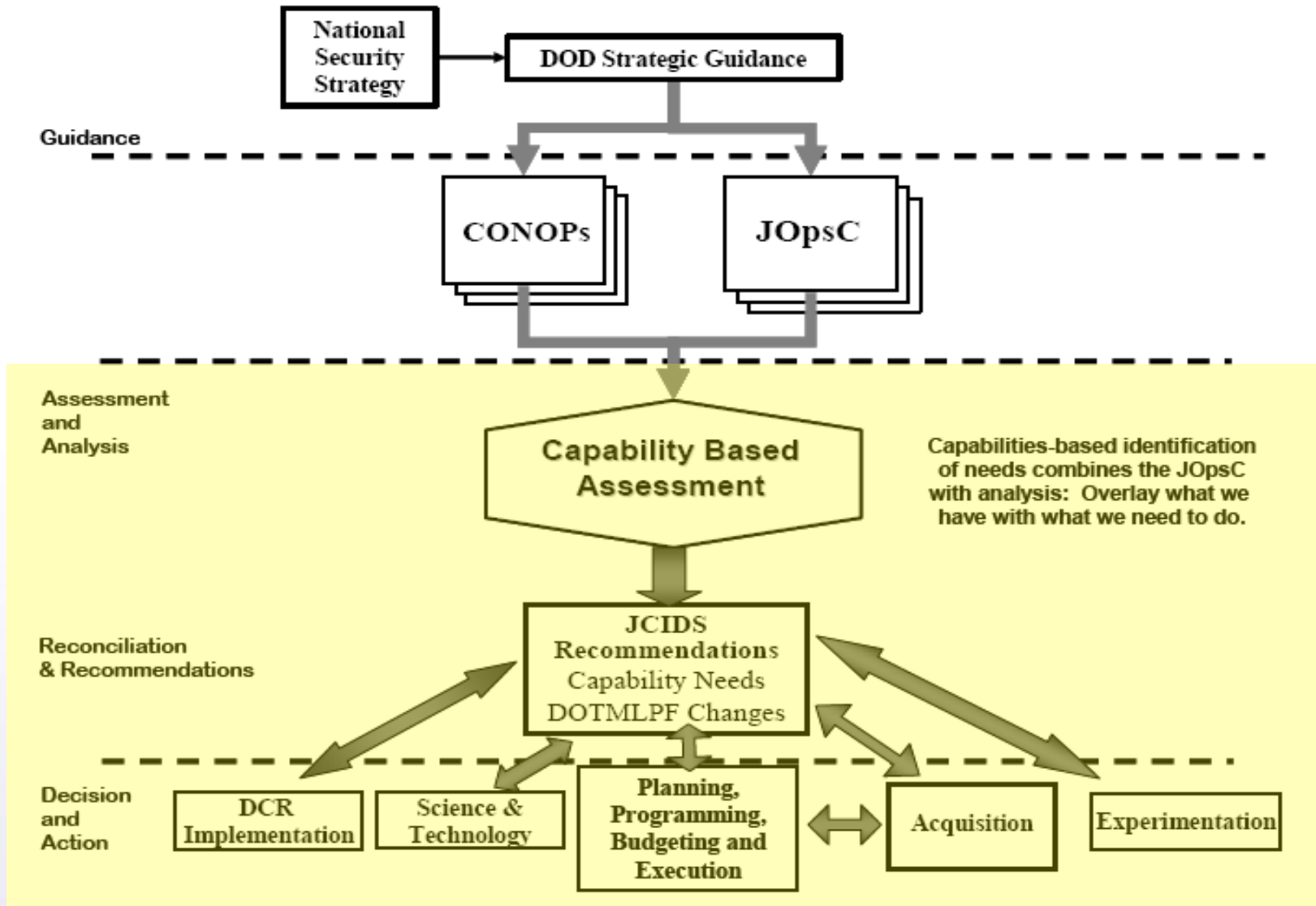
Multidisciplinary Team

- Acquisition
- Technology
- Systems Engineering
- Test and Evaluation
- Life Cycle Management
- Resources





Top Down Capability Need Identification Process





Topics

- **Operating Environment**
- **“All Hazards” Protection**
- **Human Factors**
- **Civil-Military Interoperability**
- **Interoperability/Integration**
- **Reduced Logistics Burden**





All Hazards Protection

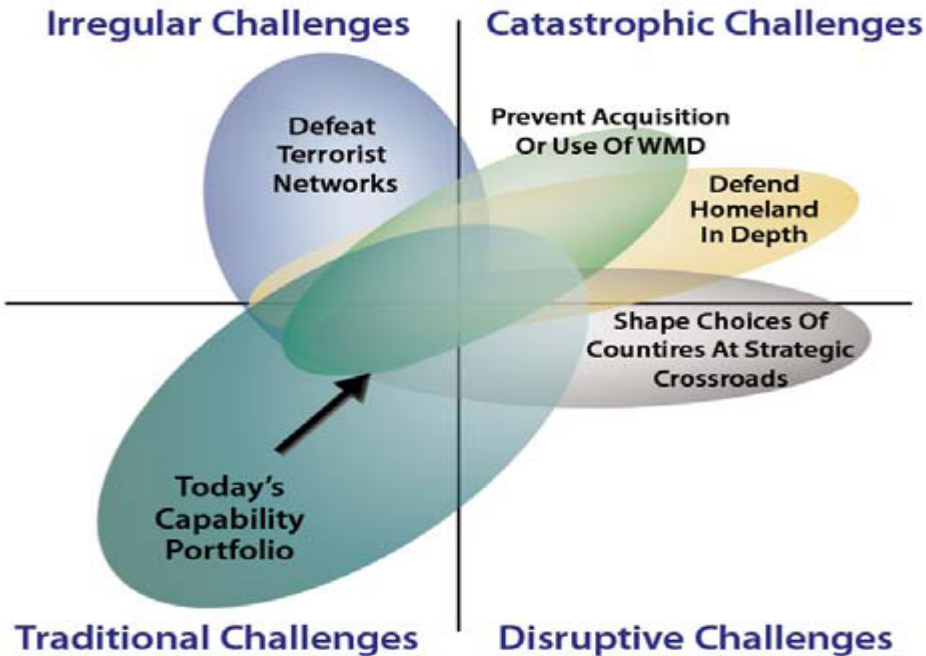


TABLE I: Some of the TIMs on the Hazard Index List

High hazard	Medium hazard	Low hazard
Ammonia	Acetone cyanohydrin	Arsenic trichloride
Chlorine	Carbonyl sulfide	Bromine
Fluorine	Chloroacetone	Chlorine trifluoride
Formaldehyde	Ethylene dibromide	Cyanogen chloride
Hydrogen bromide	Methyl bromide	Dimethyl sulfate
Hydrogen cyanide	Methyl isocyanate	Ethyl chloroformate
Nitric acid	Phosphorus oxychloride	Iron pentacarbonyl
Phosgene	Sulfuryl chloride	Isopropyl isocyanate
Sulfur dioxide	Trifluoroacetyl chloride	Nitric oxide

Source: Reference 5.



Individual Protective Equipment





Civil – Military Interoperability

- **Facilitate interoperability**
- **Promote uniformity**
 - Common understanding of performance & appropriate use of shared equipment
- **Support DoD missions and others**
- **Equipment is accepted by all parties involved in response**
- **Capability is understood by Incident Commander facilitating efficient use of resources**





CBRN Capability for Integration into Major Defense Acquisition Programs (MDAP)



Working with 17 MDAPS to Date

CBRN REQUIREMENTS

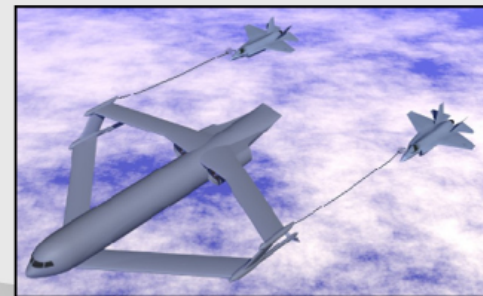
**CBR Detection
Battle Management
Integrated Early Warning
Collective Protection**

**Decontamination
Individual Protection**

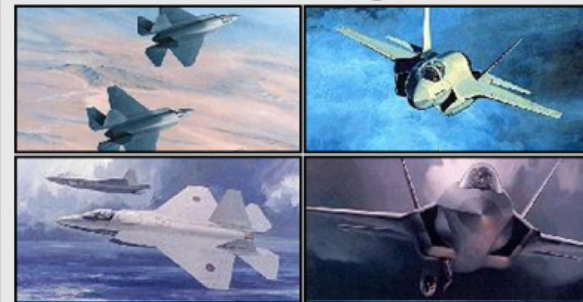
Expeditionary Fighting Vehicle



KC-X

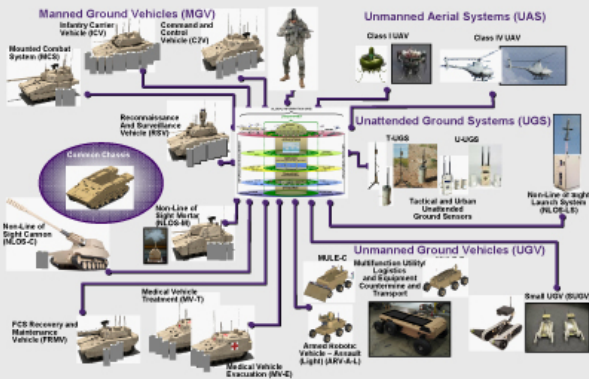


Joint Strike Fighter



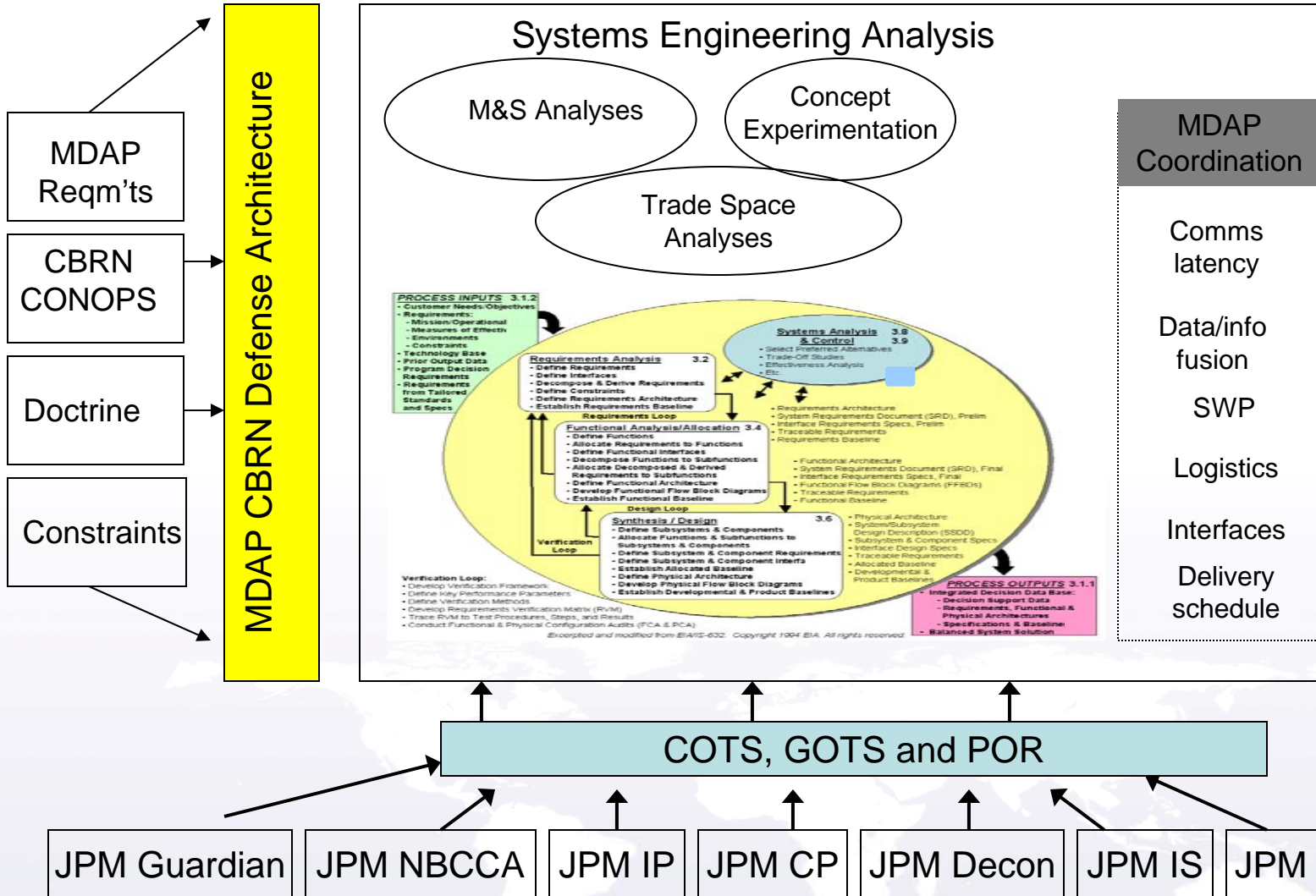
**OTHERS
JMAC, JLTV, MRAP**

FUTURE COMBAT SYSTEMS





MDAP Specific Coordination



CBRN Components for MDAP Integration and Capability Gaps



Summary

- **All hazard filtration**
 - Toxic Industrial Chemicals
 - Emerging Threats
- **Human factors**
 - Breathing resistance
 - Size
 - Weight
- **Interoperability**
 - Size, weight, power of collective protection capability
- **Reduction in cost and logistics burden**
 - Reduce frequency of filter replacement
 - Filter life indication
 - Interface standardization