



# Major Defense Acquisition Programs (MDAP)

April 4, 2007

## Advanced Planning Briefing to Industry

**MR. EDWARD C. WACK**  
**DIRECTOR, FUTURE ACQUISITION**  
Joint Program Executive Office  
for Chemical and Biological Defense  
*Edward.Wack@jpeocbd.osd.mil*

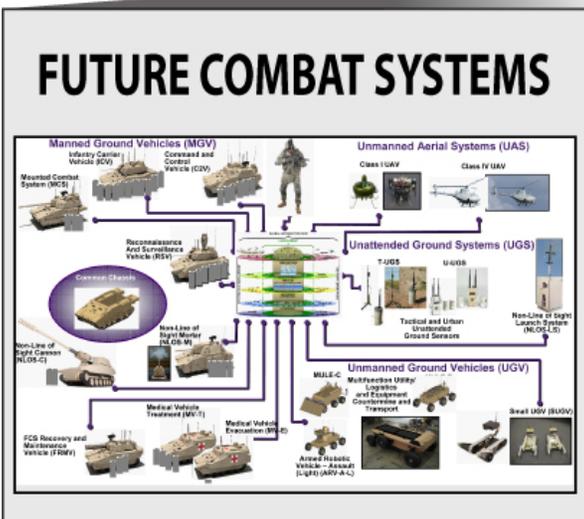


# Topics

- **Background**
  - Gaps
- **Enabling Concepts**
  - CCSI
  - Modularity
  - Information Management
- **Opportunities**

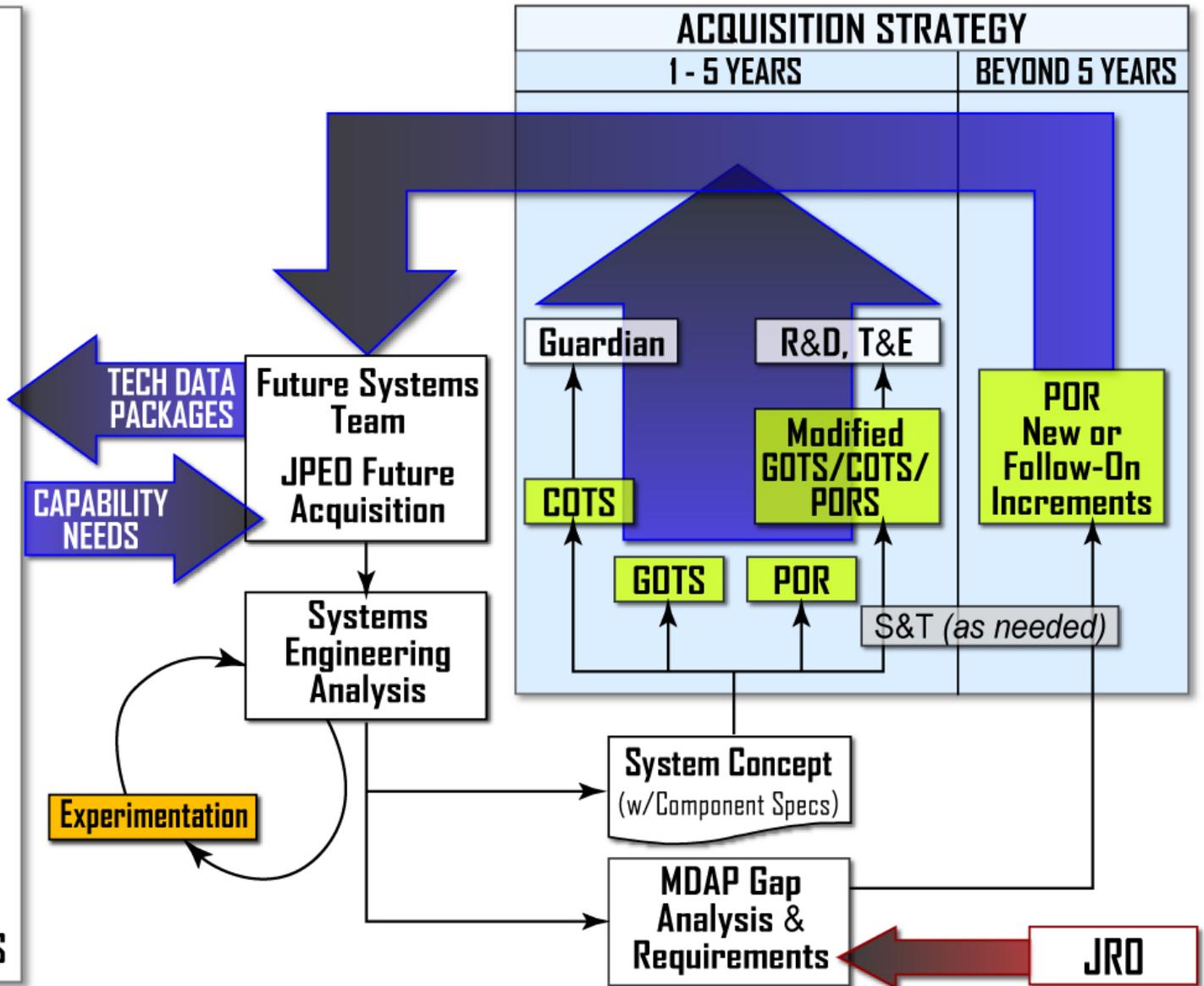
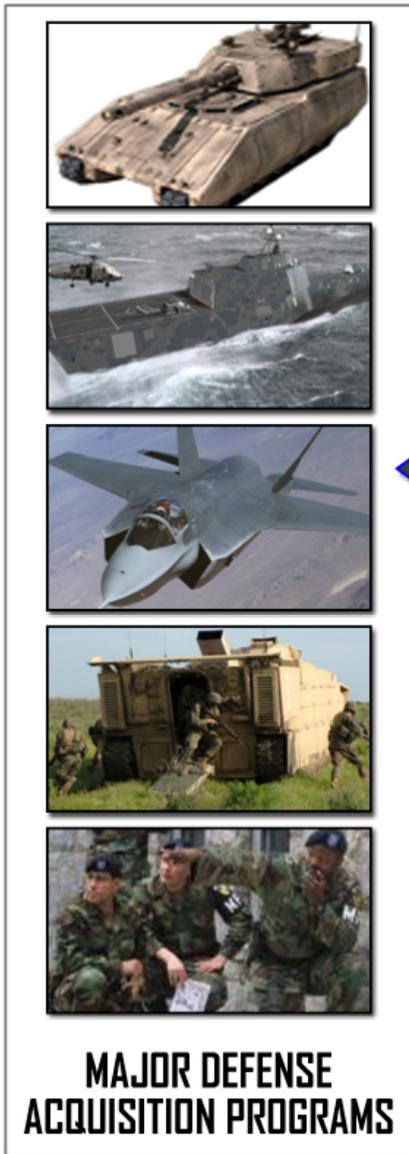


# Major Defense Acquisition Program Chemical/Biological Defense Program Support



**OTHERS  
Bradley, THAAD,  
UAV...**

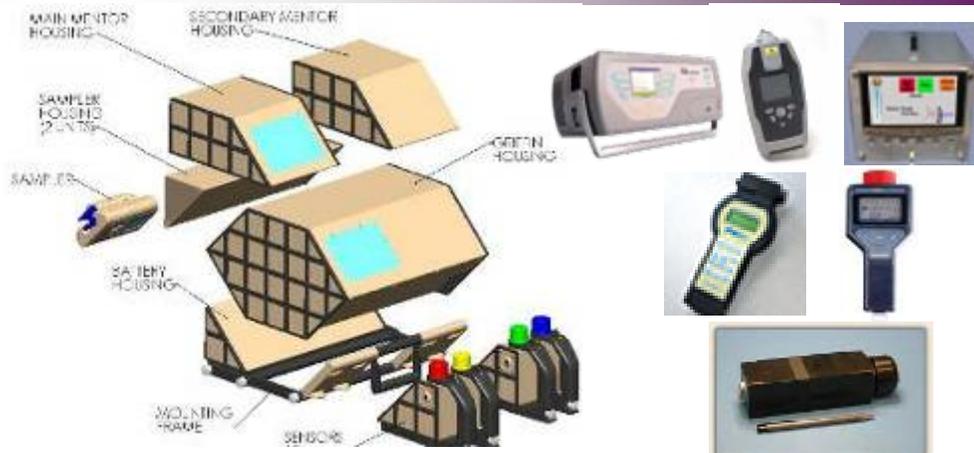
# Future Systems





# JCDRS Limited Objective Experiment

- Employment of Mature, Enabling Technologies (Plug-n-play, Interface Standards, Wireless, GPS, ...) to Provide Net-centric and Modular Capability
- Integrated Components Designed for Mounted and Dismounted Operation
- Standardization of Data Formats, Communications Protocols, and Sensor/Hardware Packaging to Drive Commonality Throughout Industry



## Sensor Modularity / Tailorability

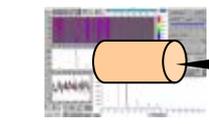
### Communications

Sensor Pack

Pack

Battery Pack

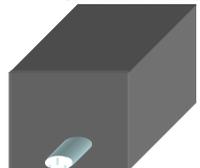
Display Pack



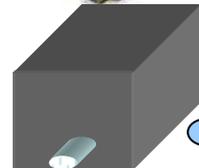
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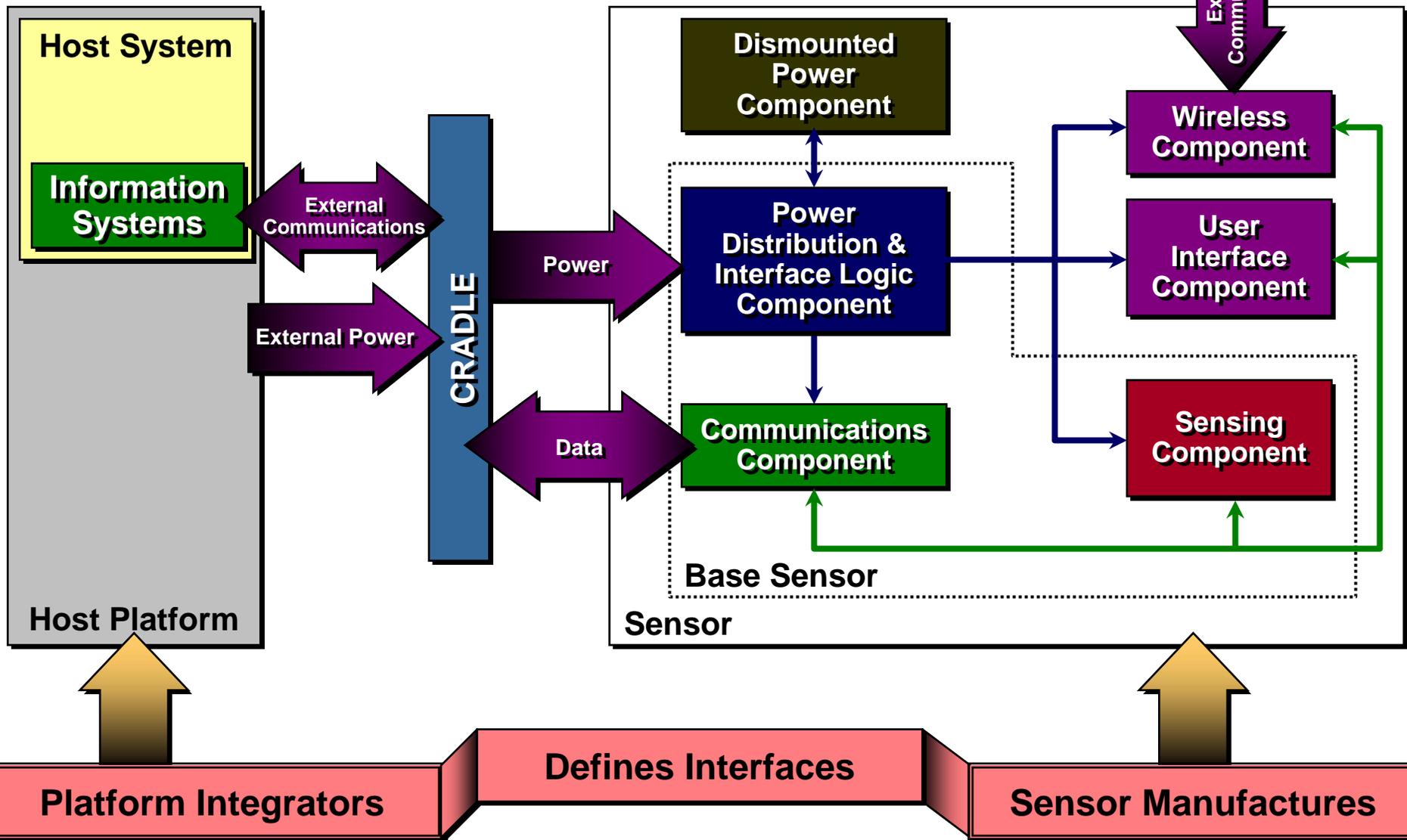


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# Common CBRN Sensor Interface (CCSI) The "Holster"





# Modularity

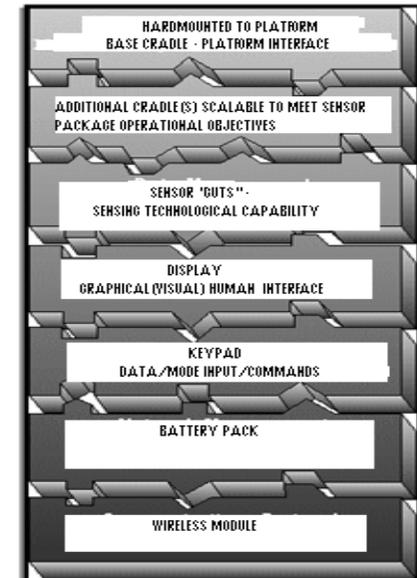
- **Component**

- A Base Detection/Processing Module
- Human Interface Module(s)
- Power Modular
- Communications Module(s)

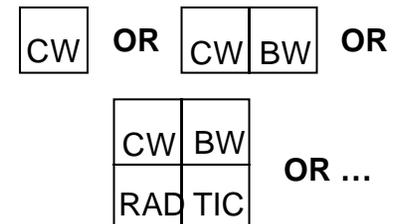
- **System**

- Standard Interface (CCSI)
- Plug and Play
  - Tailored Mission Packages
  - Component Upgradeability

## *Component Modularity*



## *System Modularity*





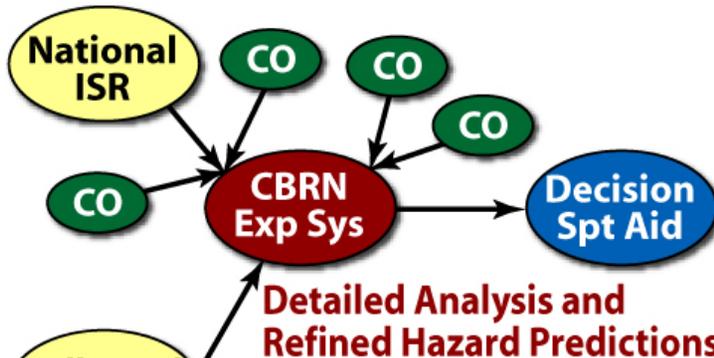
# Levels of CBRN Data Fusion and Situation Awareness

## LEVELS

## FUSION

## SA

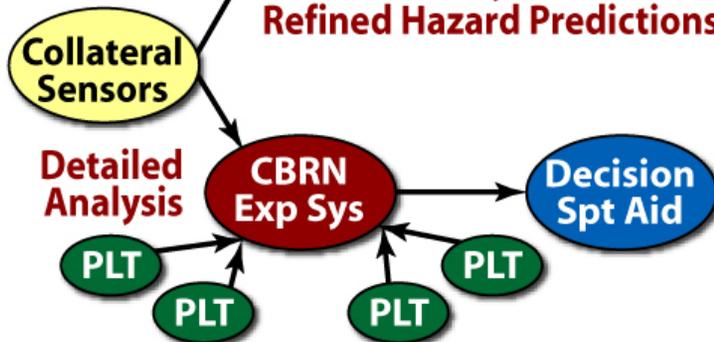
**BCT**



3, 4 & 5  
Interpret, Determine,  
Predict, Assess and  
Visualize

3  
Projection in BCT AO

**Battalion**



3, 4 & 5  
Interpret, Determine,  
Predict, Assess and  
Visualize

3  
Projection in Bn AO

**Company**



2 & 3  
Aggregate, Interpret,  
Determine and Predict

2  
Comprehension

**Platoon**



0, 1 & 2  
Organize, Correlate and  
Aggregate

1  
Perception

**Platform**



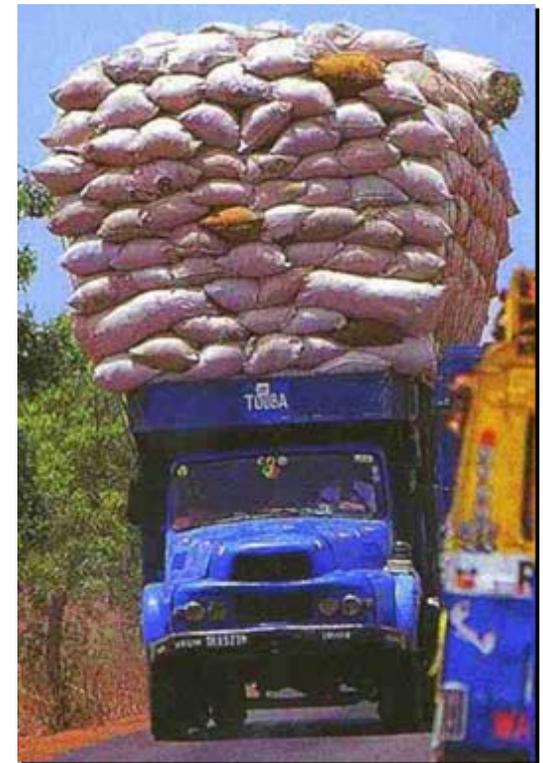
0 & 1  
Organize and Correlate

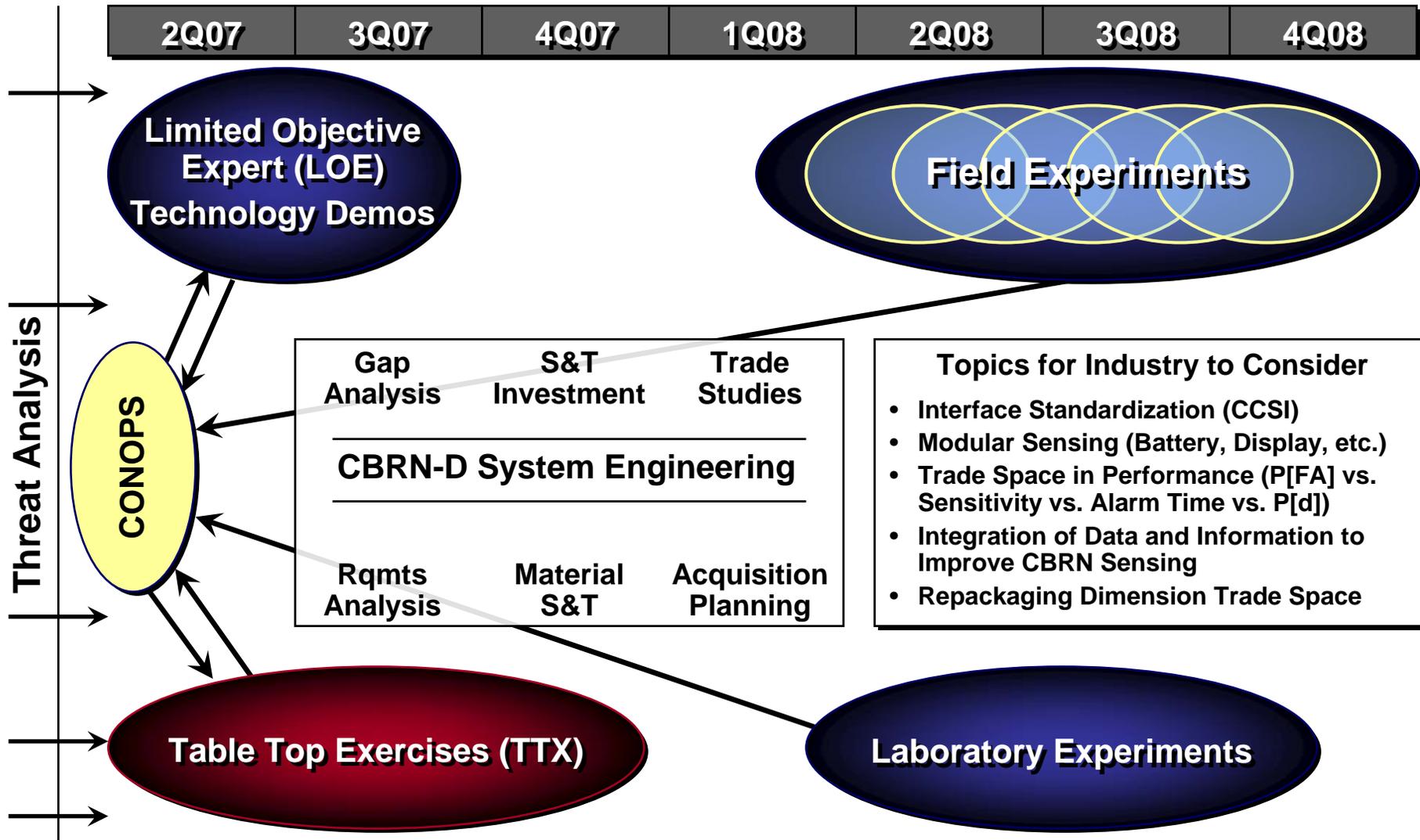
React to Protect



# Challenges

- **MDAP Schedules**
- **Platform Constraints**
- **Noted Capability Gaps**
  - **Coatings – Improved Material Coating for Effective and Rapid or Self Decontamination After CBRN Exposure**
  - **Detection of Liquid, Solid, Aerosol and Very Low Volatility Vapor States of Chemicals**
  - **Tactical Bio**
  - **Decon – Small, Lightweight Operational Decontamination to Mitigate Incapacitation After Exposure Toward Optimizing OPTEMPO**
- **Commonality Across Mission Space**
- **Information Management**
  - **Force Structure Changes**
  - **Actionable Information**
  - **Decision Support Tools**





 = Best Opportunities for Industrial Participation. CBRN-D Solutions Fitting Within the JPEO-CBD MDAP Support Construct will be Solicited for Experimentation.



# Potential for Industry

- **KC-X**
  - 3 to 4 Year System Development for CBRN Capabilities
- **FCS**
  - 18+1+1 (Now 14 +1+1) Different Platforms Within a Brigade
    - 322 Manned Ground Vehicles with CBRN Sensors
    - 300+ Unmanned Systems with CBRN Sensors (UGV, UAS, and UGS)
  - 18 Brigades
  - Spinout of Concepts to Current Force
- **EFV**
  - Will Leverage FCS for CBRN Solutions
- **JLTV**
  - Early Program Phase, CBRN Solutions Sought
- **Naval Systems**
  - Several New Ship Designs with Multiple Applications Per Ship
    - LCS = 39; JMAC = TBD; DDG-1000 = 7; JHSV = 3; LHA-6 = 1; LHA-7 = 1; MPF(F) LHA(R) = 2; MPF(F) MLP = 3; MPF(F) LMSR = 3; CVN-78 = 3