



# NBC CONTAMINATION AVOIDANCE

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## Advanced Planning Briefing to Industry

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# Outline



- **Overview**
- **Reconnaissance and Platform Integration**
  - Science and Technology Challenges
  - Warfighter Needs / Program Overview / Acquisition Strategy
- **Sensors**
  - Science and Technology Challenges
  - Warfighter Needs / Program Overview / Acquisition Strategy
- **Test Infrastructure**
  - Science and Technology Challenges
  - Warfighter Needs / Program Overview / Acquisition Strategy
- **Schedule / Funding**
- **Upcoming Business Opportunities**
- **Contacts**



# Overview



## S&T

- **Vision**

- We will nurture a vibrant S&T organization that **CREATES** programmatic vision in **COLLABORATION** with intramural and extramural communities, and **COMMUNICATES** impact to the Warfighter as revolutionary products and capabilities are achieved.

- **Mission**

- To invest in transformational ideas, innovative people, and actionable technology development for Chemical Biological Defense solutions
- 

## JPM NBC CA

- **Strategic Vision**

- Equip and sustain the world's most capable, powerful, and respected Joint Forces with world class chemical, biological and radiological contamination avoidance products, capabilities, and services.

- **Mission**

- The Joint Project Management Team for Nuclear, Biological, and Chemical Contamination Avoidance is responsible for the development, production, integration, testing, and fielding of NBC detection, obscuration, and reconnaissance systems. We ensure that our system developments, integration efforts and services focus on the Joint Warfighters' needs within cost, schedule, performance and risk.



# JPM NBC CA Organization



- Military
- Core Civilian
- Matrix Civilian
- Contractor
- Other



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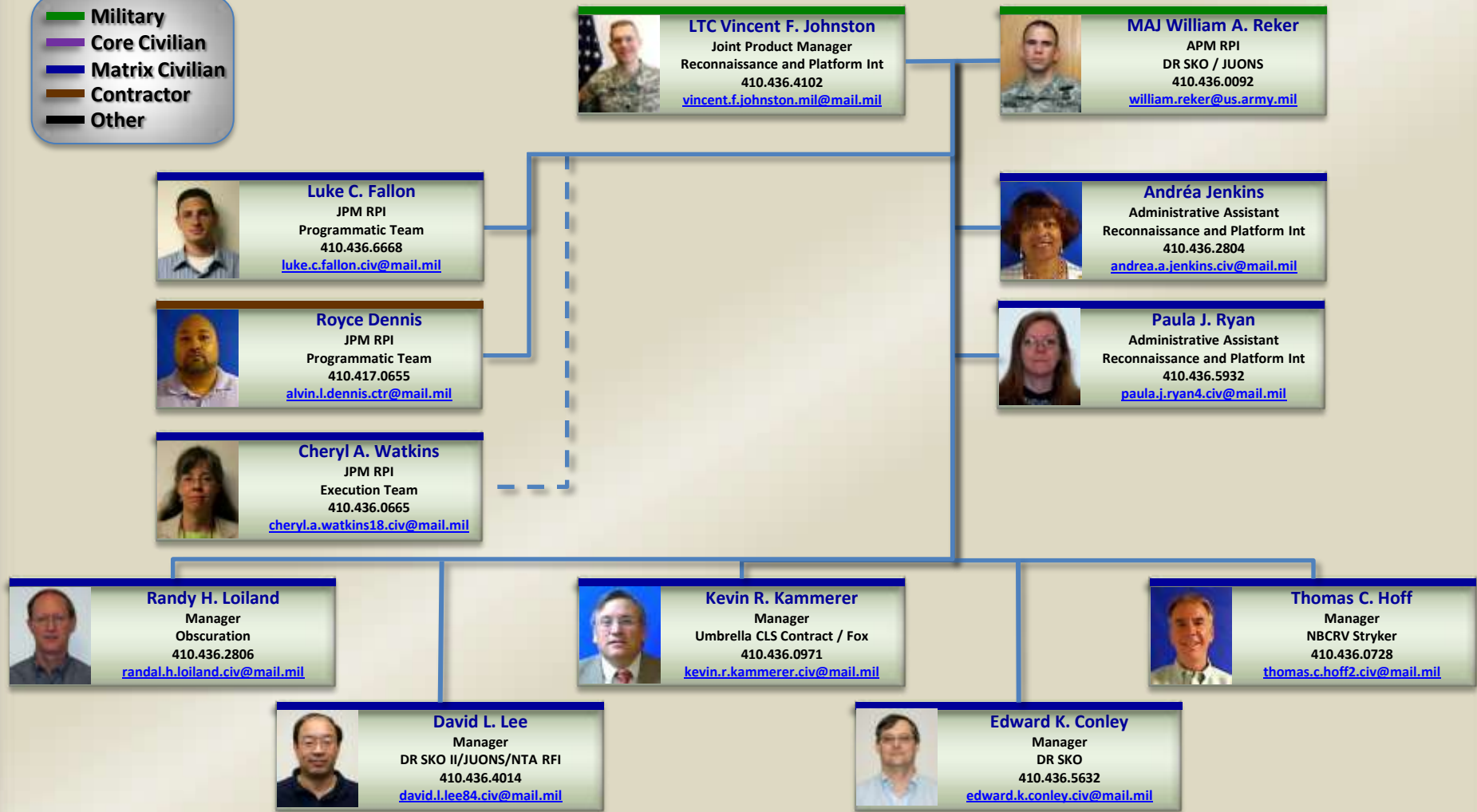
# Reconnaissance and Platform Integration



# Joint Product Manager Reconnaissance and Platform Integration



- Military
- Core Civilian
- Matrix Civilian
- Contractor
- Other





# DR/MS SKO



- **S&T Needs and Technical Challenges**

- **Non-textbook Algorithms in Signal Processing and Decision Logic**
- **Data Fusion**
  - **Organization of Data to Support Decision Making at Multiple Levels of Leadership**
- **High Performance, Low Power, Mass Produced Components**
- **Integration of Cutting Edge Technology into Harsh Environments with Sufficient Independent Testing**
- **First Principle Models on Technologies Linked with Engineering Principles to Provide a Virtual System**
- **Constant Evolutionary Improvements in Technology; How to Decide When to Continue or Terminate**



# DR SKO/DR SKO II

## DR SKO:

- Set of mission specific kits to provide full spectrum CBRNE dismantled reconnaissance capability
- Detection and identification
  - Volatile organic compounds
  - Toxic industrial chemicals/materials
  - CWAs and BWAs
  - Oxygen levels & combustible gases
- Individual personal protective equipment
- Decontamination equipment
- Marking, sampling, and reporting

## DR SKO II adds:

- Emerging Threats
- Unmanned Capabilities
- Net-centric communications



## DR SKO Events:

- |            |        |
|------------|--------|
| • MS C     | 1QFY13 |
| • FRP      | 1QFY14 |
| • IOC (N)  | 4QFY14 |
| • IOC (AF) | 3QFY15 |
| • IOC (A)  | 4QFY15 |
| • IOC (MC) | 2QFY16 |
| • FOC      | 2QFY17 |

## DR SKO II Events:

- |        |        |
|--------|--------|
| • MDD  | 2QFY14 |
| • MS A | 2QFY15 |
| • MS B | 3QFY16 |

## Status / Strategy

- Acquisition Strategy / Status
  - Single Step to Full capability
  - GOTS/COTS NDI
- Service Quantities
  - Air Force: 45
  - Army: 273
  - Navy: 11
  - Marine Corps: 27





# Summary



- **The program is looking for COTS/NDI systems for rapid integration into SKO**
- **Goal: insert the latest proven technology into the SKO**
  - **Technology needs to have independent test data; products already certified/approved by other Service program Offices a plus**
  - **Change SKO based on Increased Capability and Change in Threat**
- **Government is always looking for:**
  - **Qualified Personnel Protection Ensembles**
  - **Intrinsically Safe electronics**
  - **NTA detection, protection, decontamination**
  - **“Rugged” sensors (operate in extreme environments)**
  - **Common batteries/longer batter life**
  - **Multi-functional sensors**
  - **Enhanced Reliability, Availability and Maintainability systems**
  - **Robotics and net-centricity**



# CBRN Contractor Logistics Support



## ◆ Description:

- CBRN CLS Contract
- Provides CLS to units/sites world wide for Chemical and Biological Detection Equipment
- JPM NBC CA manages contract

## ◆ Systems Supported:

- Joint Portal Shield (JPS)
- P3I Biological Integrated Detection System (Retired)
- Joint Biological Point Detection System (JBPDS)
- Joint Biological Stand-off Detection System (JBSDS)
- Fox NBC Reconnaissance System
- CBRN Dismounted Reconnaissance System (DRS)
- Advanced Threat CBRN Dismounted Reconnaissance System (AT-DRS)

◆ **Features:** Provides one source for support of multiple CBRN systems

◆ **Users:** U.S. Army, USAR, National Guard, USAF and Navy





# Summary



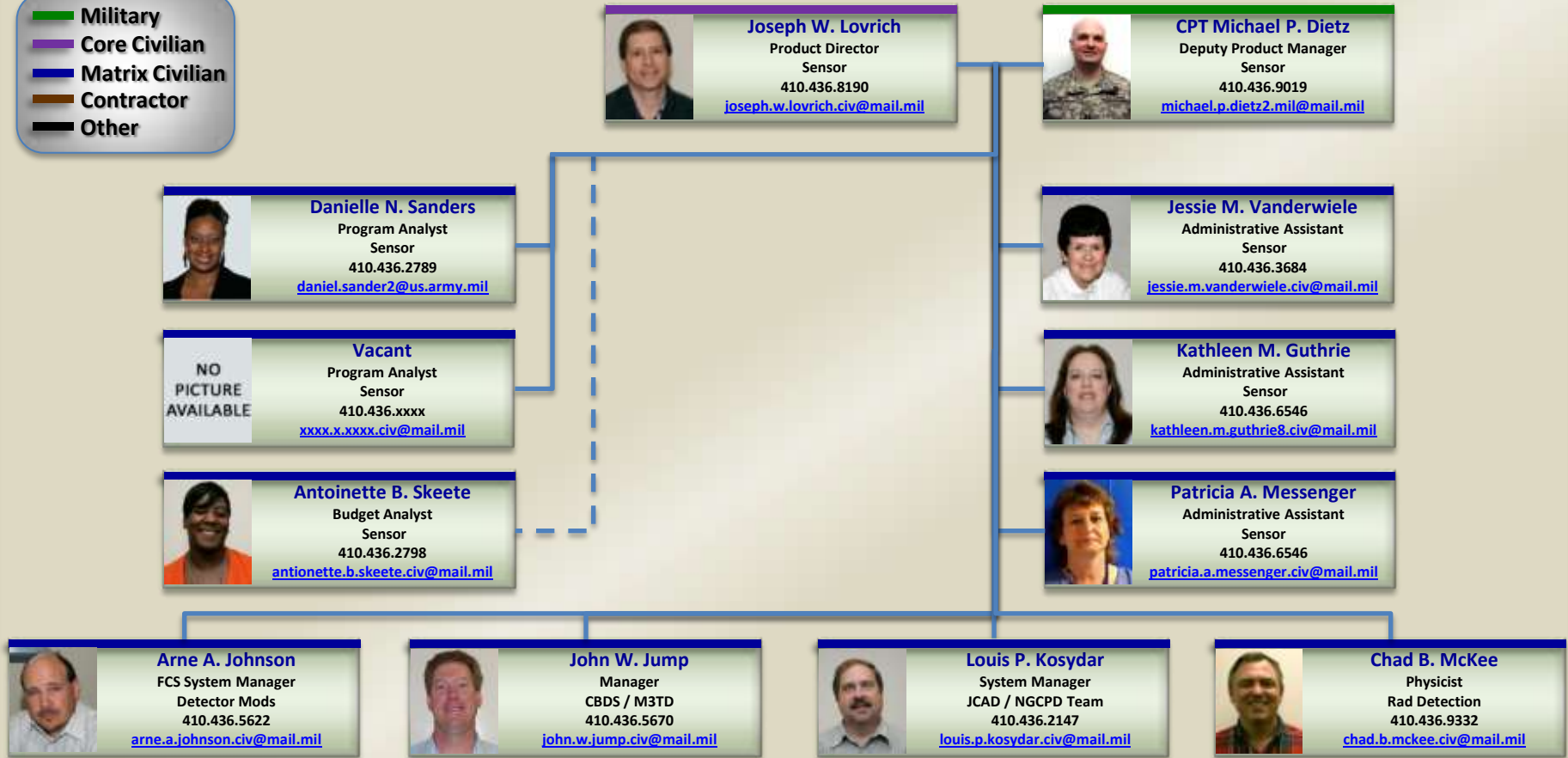
- **Seeking innovative cost-effective contractor logistics support strategies for low density, highly complex CBRN systems deployed world-wide**
- **Current Contract**
  - **Prime Contractor: Battelle Memorial Institute**
  - **Contract Number: W911SE-07-D-0011/DG01**
  - **Award Date: 3 Dec 07          Expiration Date: 31 Dec 12**
  - **Program Management Office: JPM NBC CA**
  - **Contracting Office: ACC-Warren**
- **Follow-on Contract** (*Projected, Subject to Change*)
  - **Full and Open Competition**
  - **Multiple-year Contract (1 year + renewal options)**
  - **Industry Day: 1QFY2012**
  - **Draft Request for Proposal: 1QFY2012**
  - **Release RFP: 2QFY2012**
  - **Tentative Award Date: 4QFY2012**



# PD Sensor

# Product Director Sensor

- Military
- Core Civilian
- Matrix Civilian
- Contractor
- Other





# Next Generation Chemical Point Detectors



- **S&T Needs and Technical Challenges**

- **Next Generation Chemical Point Detector**

- **Expand the Number of Detectable Compounds**
- **Vapor, Liquid, and Solids**
- **Reduction of False Alarm Rates; Improved Selectivity**
- **Increase Sensitivity**

- **S&T Capability Strategy**

- **Micro-Electro-Mechanical Systems (MEMS) Concepts**

- **MEMS Fourier Transform Infrared (FTIR) (spectroscopy), Gas Chromatograph (GC), Mass Spec**

- **Improve Component Performance**

- **Single Particle Flow thru Spectroscopy**





# Next Generation Chemical Point Detectors



## ◆ Description:

- Detect & Identify Non-Traditional Agents, CWAs, TICs, in Air and on Surfaces
- Improve CWA /TIC Selectivity and Sensitivity on Multiple Platforms and Personnel (M4E1 JCAD Capabilities + Ships & Aircraft)
- Increase Detectable TIC Compounds in Multiple Environments
- Passive Defense/Detect to Warn & Protect (Support Unmasking/Verify Collective Protection), Verify Decontamination
- Consequence Management/Survey & Reconnaissance
- WMD Interdiction & WMD Elimination/Sensitive Site Assessment
- Provide a Combination of Handheld, Mountable and/or Portable Detection of Broad Spectrum Threats in air and on surfaces

## ◆ Events:

- FY 11/12 - M3TD Tech Assessment
- FY 11/12 - MDD
- FY 12 - AoA
- FY 12/13 - MS A, Industry Day and Draft RFP
- Mid-FY 13 - Contract Award

## ◆ Strategy

- No COTS/NDI Technologies available to meet entire NGCPD requirements
- M3TD effort IDs available tech; assesses application to NGCPD, feeds AOAs
- CBDS and NTAD / NTA RFI informs NGCPD
- NGCPD develops NTA Detection; and provides NTA detection capability to MS SKO

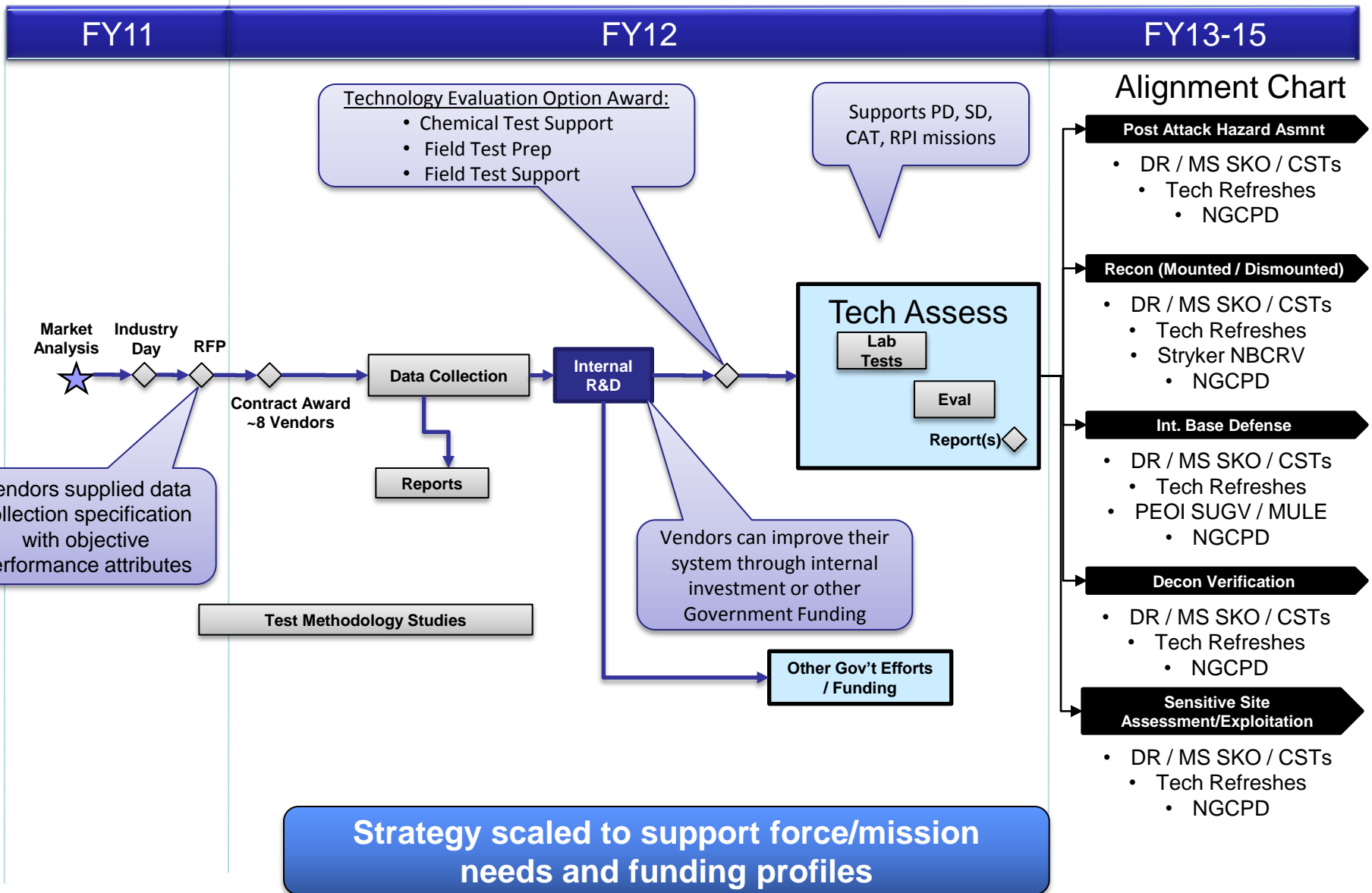
## ◆ Requirements Status

- ICD FEB 06

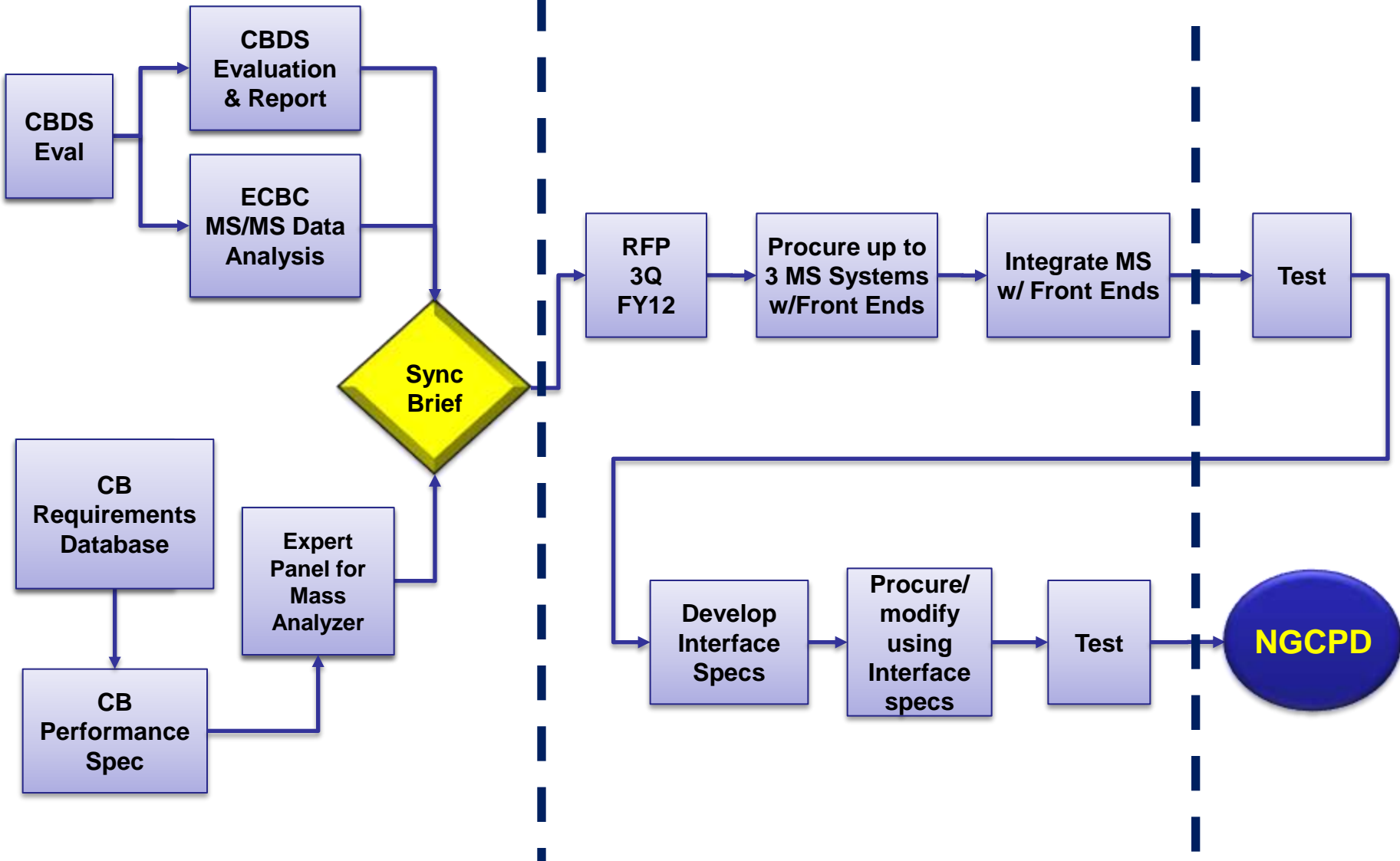
## ◆ Acquisition Strategy / Status

- Leverage M3TD effort
- Full and Open Competitive Development Contracts (FY13)
- Follow on Paths Being Considered
  - Options for EMD, LRIP, and FRP
  - Re-compete at EMD – Requires independent data
  - Re-compete at LRIP – Using government TDP

# M3TD Execution Strategy



# Future Opportunities





# Test and Evaluation Infrastructure

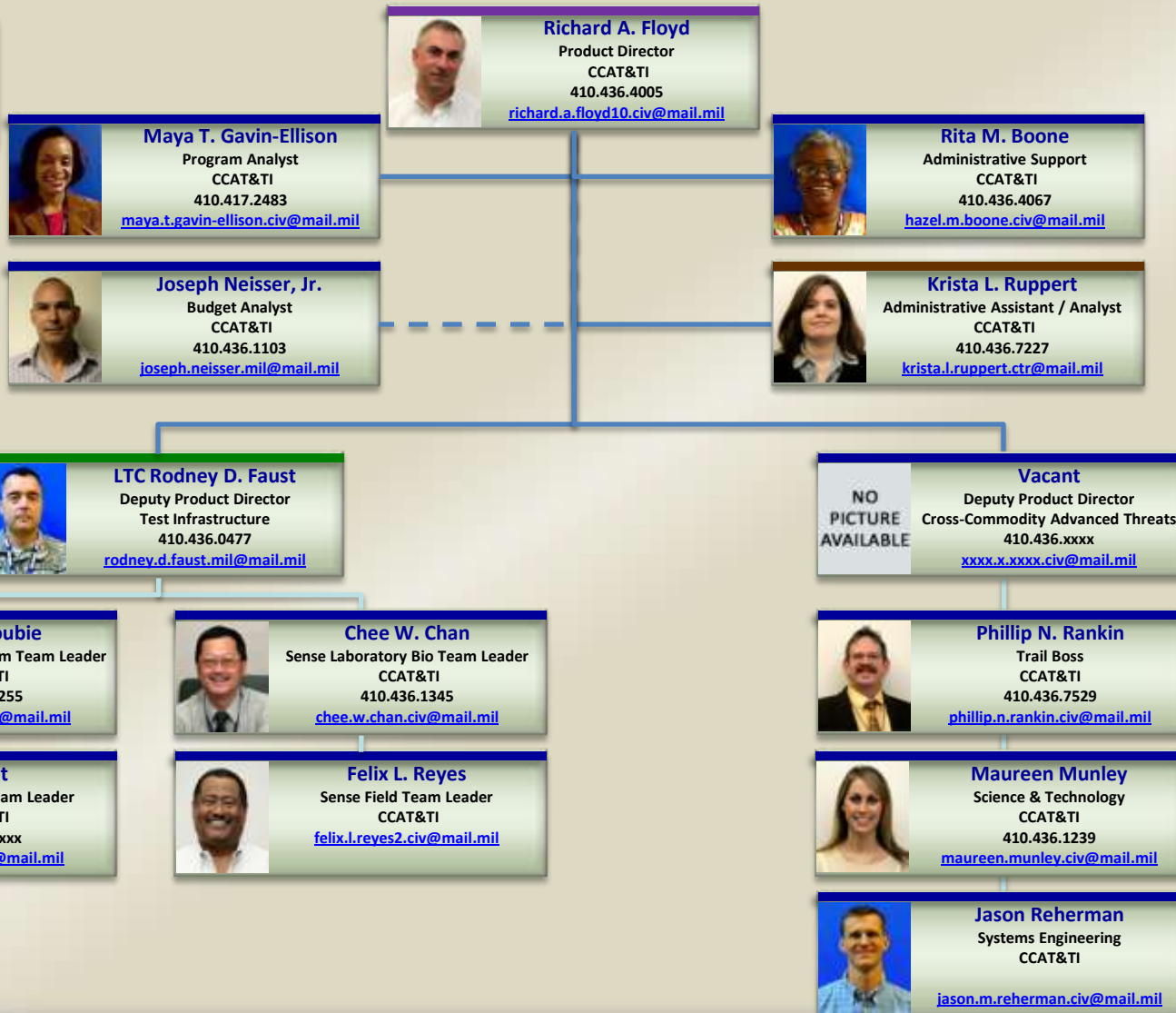


# Product Director

## Cross-Commodity Advanced Threats & Test Infrastructure



- Military
- Core Civilian
- Matrix Civilian
- Contractor
- Other





# Warfighter Needs



- **Biological Standoff Test Chamber**
- **Chemical Biological Agent Resistance Test (CBART)**





# Biological Standoff Test Chamber



- **Program Overview**
  - **Effort Description:**
    - Design and fabricate a BSL3 facility to conduct cross section measurements of live agent testing of bio standoff detection systems
    - Capability Located: TBD
  - **Schedule: FY12 – FY14**
  - **Acquisition Approach: Contract to fabricate and install the system in FY12**
    - Request for Proposal: 3QFY12
    - Industry Day: 2QFY12
    - Draft RFP: 2QFY12
- **Program Technical Challenges**
  - Develop technology to conduct cross section measurements in a BSL3 environment.
- **Program Acquisition Strategy**
  - **Contract Strategy**
    - DPG Contracting (Full & open competition)



# Chemical Biological Agent Resistance Test (CBART)

- **Program Overview**

- **Effort Description:**

- **Design and Fabricate an Improved Material Swatch Test Fixture for Agent Resistance Testing of Barrier Materials Over a Range of Controlled Environmental Conditions**
- **Located at Dugway Proving Ground**

- **Schedule: FY13-FY16**

- **Acquisition Approach: Contract**

- **Request for Proposal: 1QFY13**
- **Industry Day: 2QFY12**
- **Draft RFP: 3QFY12**



- **Program Technical Challenges**

- **Design and Fabrication of a Swatch Test Fixture That Operates Over a Wide Range of Controlled Environmental Conditions.**

- **Program Acquisition Strategy**

- **Contract Strategy**

- **RDECOM Acquisition Center (Full & Open Competition)**



# S&T Schedule



Fiscal Year	FY10	FY11	FY12	FY13	FY14	FY15	FY16
Algorithm Development	[RDTE]						
Next-Gen Chem Point	[RDTE]						

■ RDTE ■ PROC ◆ MS



# Program Schedules



PD/JPM	Program	FY12	FY13	FY14	FY15	FY16	FY17
RPI	NBCRV Stryker	PROC	PROC	Sustainment	Sustainment	Sustainment	Sustainment
RPI	JSLSCAD	PROC	PROC	Sustainment	Sustainment	Sustainment	Sustainment
RPI	CBMS	PROC	PROC	Sustainment	Sustainment	Sustainment	Sustainment
RPI	DR SKO / DR SKO II	6.5	6.5	6.5	6.5	6.5	6.5
Point	NGCPD	Sustainment	6.4	6.4	6.4	6.4	6.5
Point	JCAD	PROC	PROC	PROC	PROC	PROC	PROC
Point	JCBRAWM Inc 2	Sustainment	Sustainment	Sustainment	Sustainment	6.4	6.4
Standoff	SSI	6.5	Sustainment	Sustainment	Sustainment	Sustainment	Sustainment
TESS	TESS	6.4	6.4	6.4	6.4	6.4	6.4
CAT	NTA Detect	6.5	6.5	Sustainment	Sustainment	Sustainment	Sustainment





# S&T Funding (\$M) (FY12 President's Budget)



<b>YEAR/ RTDE</b>	<b>FY12</b>	<b>FY13</b>	<b>FY14</b>	<b>FY15</b>	<b>FY16</b>	<b>TOTAL FY12-16</b>
<b>6.2</b>	<b>24.9</b>	<b>18.8</b>	<b>20.4</b>	<b>19.7</b>	<b>24.7</b>	<b>108.5</b>
<b>6.3</b>	<b>15.3</b>	<b>26.2</b>	<b>21.2</b>	<b>21.2</b>	<b>21.7</b>	<b>105.6</b>
<b>TOTAL BUDGET</b>	<b>40.2</b>	<b>45.0</b>	<b>41.6</b>	<b>40.9</b>	<b>46.4</b>	<b>214.1</b>



# Program Funding (\$M)



<b>YEAR/ RTDE</b>	<b>FY12</b>	<b>FY13 <i>(notional)</i></b>	<b>FY14 <i>(notional)</i></b>	<b>FY15 <i>(notional)</i></b>	<b>FY16 <i>(notional)</i></b>	<b>FY17 <i>(notional)</i></b>	<b>TOTAL FY12-17</b>
<b>6.4</b>	<b>5.4</b>	<b>36.5</b>	<b>51.5</b>	<b>57.6</b>	<b>51.5</b>	<b>17.1</b>	<b>219.6</b>
<b>6.5</b>	<b>58.2</b>	<b>37.3</b>	<b>26.3</b>	<b>21.1</b>	<b>34.2</b>	<b>74.4</b>	<b>251.5</b>
<b>Proc</b>	<b>110.3</b>	<b>159.8</b>	<b>68.2</b>	<b>107.2</b>	<b>123.4</b>	<b>118.5</b>	<b>687.4</b>
<b>CLS (OMA)</b>		<b>250-375</b>					
<b>TOTAL BUDGET</b>	<b>173.9</b>	<b>233.6</b>	<b>146.0</b>	<b>185.9</b>	<b>209.1</b>	<b>210.0</b>	<b>1158.5</b>

Funding pending FY12 Appropriations and approval of FY13-FY17 POM





# S&T Business Opportunities



OPPORTUNITY	TIME-FRAME
<b>Algorithm Development (Annual)</b>	
– NSF BAA <a href="http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503427">http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503427</a>	<b>Open now</b>
<b>CB Defense Physical Science and Technology (Bi-annual) BAA</b>	
– For New Start Projects (FY10-15)	<b>November 2011</b>
<b>CB Defense Small Business Innovation Research (SBIR)</b>	
– <a href="http://www.acq.osd.mil/sadbu/sbir/homepg.htm">http://www.acq.osd.mil/sadbu/sbir/homepg.htm</a>	
– For New Start Projects (FY10-15)	<b>Mid-Nov 2011</b>



# Program Business Opportunities



<b>OPPORTUNITY</b>	<b>TIME-FRAME</b>
<b>Sensors</b>	
– TRE	FY11/FY12
<b>Biological Standoff Test Chamber</b>	
– RDECOM Acquisition Center (Full and Open Competition)	RFP 3QFY12
<b>Chemical Biological Agent Resistance Test (CBART)</b>	
– RDECOM Acquisition Center (Full and Open Competition)	RFP 1QFY13
<b>Dismounted Reconnaissance – Sets, Kits and Outfits (DR SKO)</b>	
– Tech Refresh Opportunities	FY14
<b>CB Contractor Logistics Support</b>	
– Re compete Opportunity	RFP 2QFY12
<b>Next Generation Chemical Point Detection (NGCPD)</b>	
– RDECOM Acquisition Center (Full and Open Competition)	2QFY13



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