

***Agile Acquisition Processes  
For  
Joint Capabilities***

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***-***

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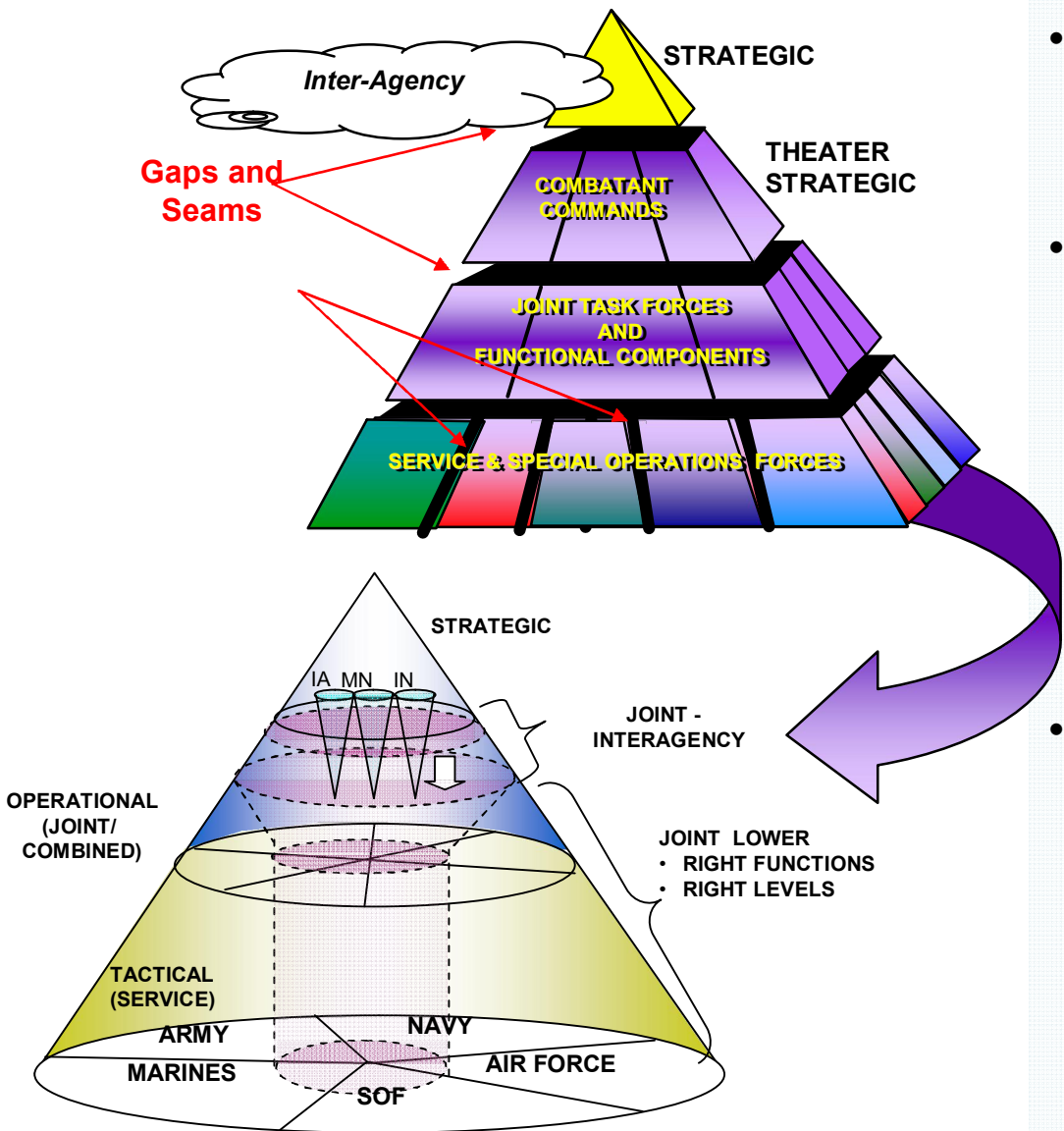
***(Advanced Systems & Concepts)***

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# OIF Underscored Role Of Joint Capabilities

ADVANCED SYSTEMS AND CONCEPTS



- *OIF lessons learned reinforce role of joint capabilities*
- *Joint capabilities initially limited to strategic level: integration of segregated component commander activities*
- *OIF lessons learned portrayed expanding requirements for core joint capabilities at strategic, operational and tactical levels*



# What are Joint Capabilities?

## Agile Acquisition Perspective



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### Unique Regional/Specified Mission Needs

*Capabilities beyond common core military elements required by warfighters to effectively function in operational environments for joint regional or specified missions.*

### Joint Enabling Capabilities

*Additional capabilities required by warfighters to exercise joint command, and to enable core military elements to function effectively as a coherent joint force.*

### Multi-Service Core Capabilities

*Common denominator Military forces provided worldwide as self-integrated, self-sustaining echelons by the Services.*

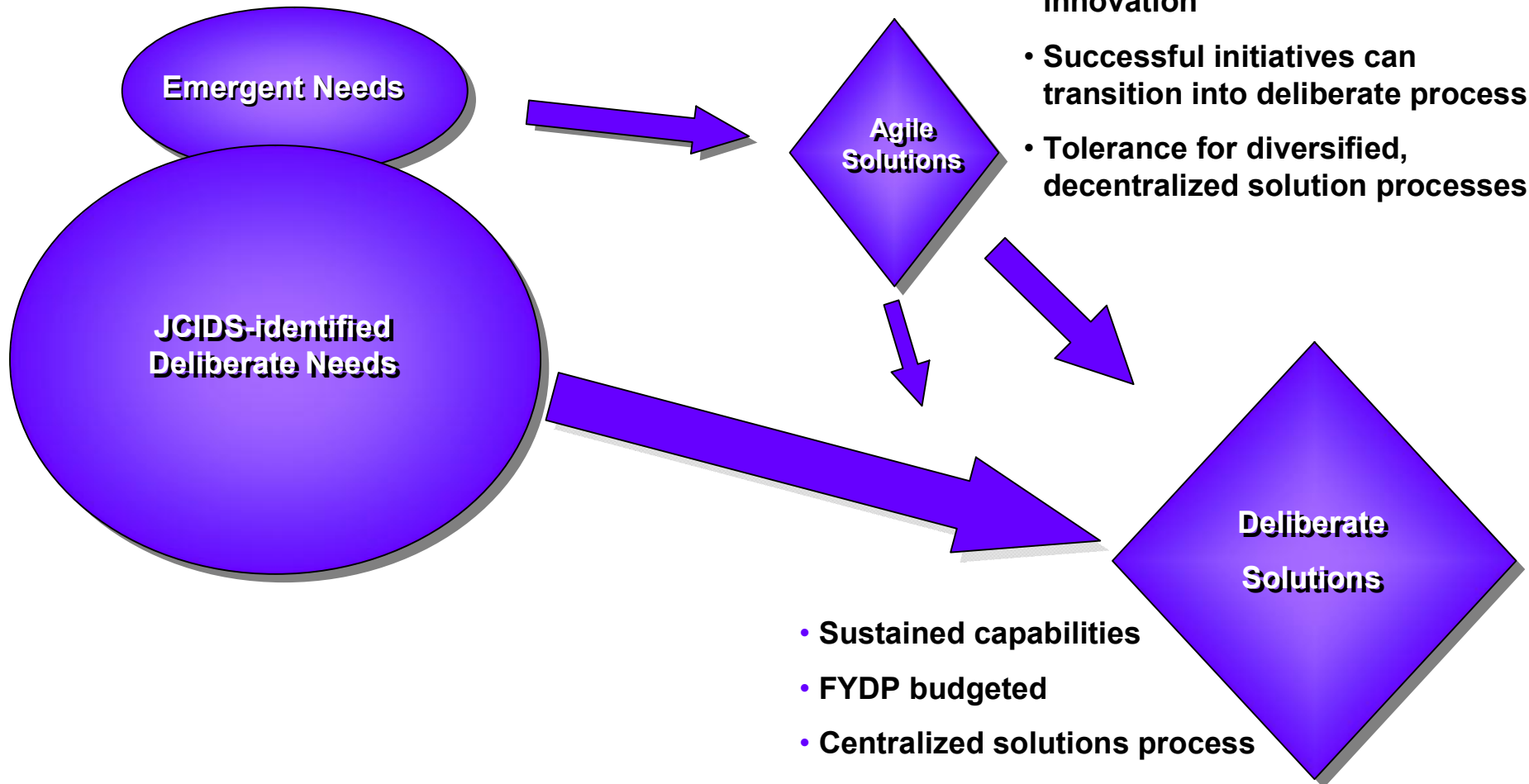




# Developing Solutions for Joint Needs: Aligning Solutions Process with Joint Realities



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# Balanced Score Card Acquisition

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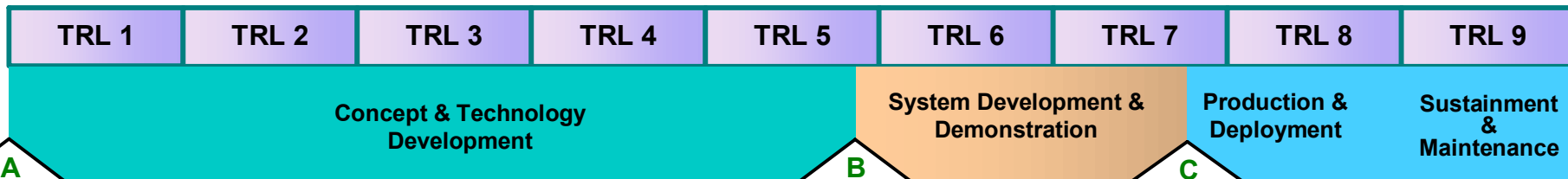
**Agile  
Solutions**

- ✓ Rapid, responsive, flexible program
- ✓ Decentralized execution
- ✓ Transformation engine; innovation enabler
- ✓ Small, non-traditional business “on-ramp”
- ✓ “Try before you buy” cost control mechanism
- ✓ Potential spiral improvement generator

- ✓ Checks & balances for accountable acquisition
- ✓ Optimized for delivery of complex systems
- ✓ Methodical oversight and synchronization
- ✓ Includes sustainment resources
- ✓ Well adapted to individual Service cultures
- ✓ Scalable for large-scale military solutions

**Deliberate  
Solutions**

# Agile Acquisition Processes



*Initial Product/ Process Capability*      *Product/Process Development*      *Product/Process Insertion*      *Product/Process Improvement & Sustainment*



*Joint/Coalition focused – Demo 2-4 yrs*



*6-12 mo fielding*



*Congressionally Directed – Tech Refresh*



*Service Driven – Test to Procure*



*Connects the commercial sector to DoD sharing the best from both for mutual benefit*





**RELEVANT      RAPID      RESPONSIVE**  
**AS&C ACTD/JCTD Program Philosophy:**



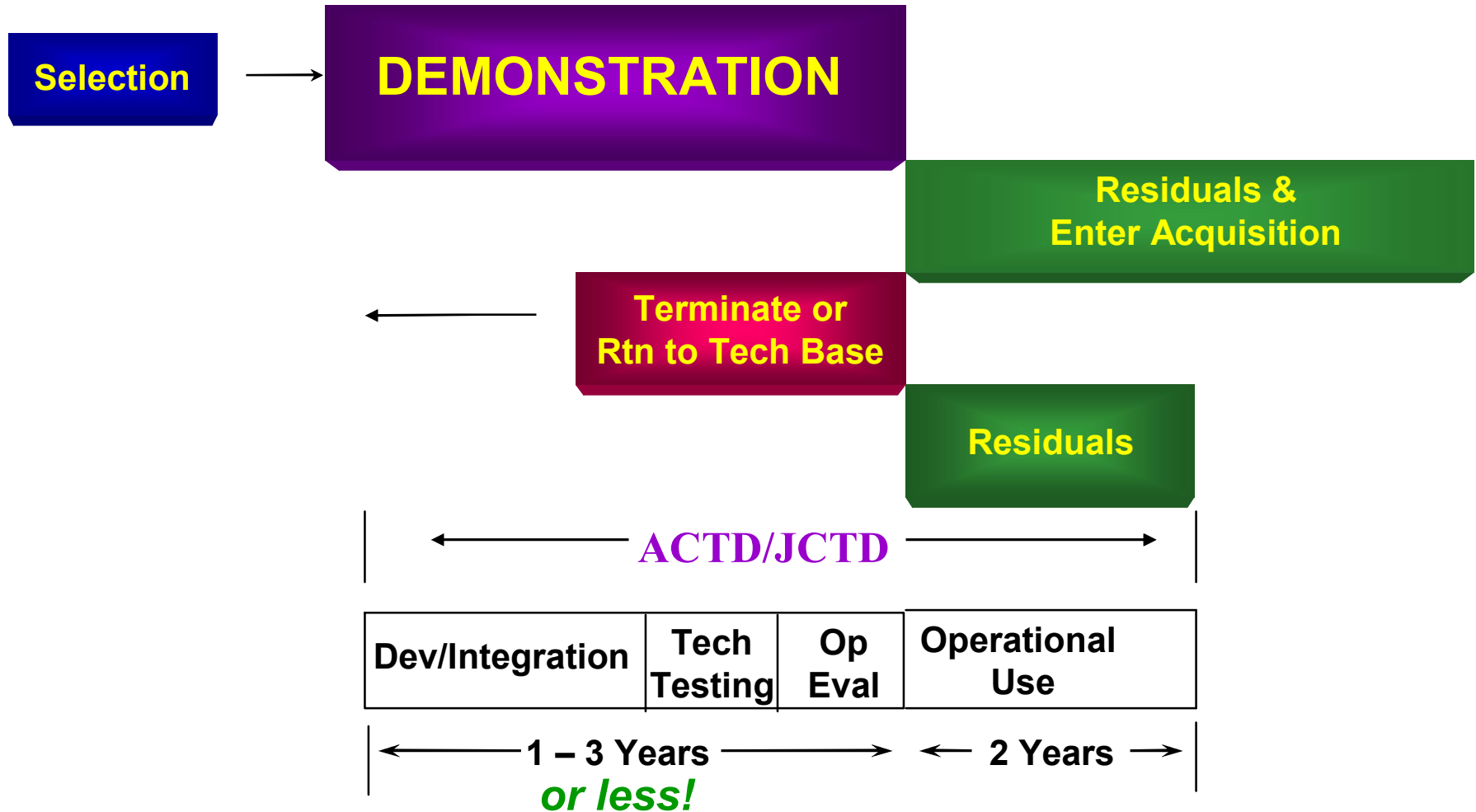
ADVANCED SYSTEMS AND CONCEPTS

- **Seek effective processes to rapidly respond to CoCom needs for capabilities providing decisive battlefield advantage**
  - **Focus on primary customers: Combatant Commanders**
    - Provide sustainable joint warfighter capabilities**
    - Emphasize transformational technology & operations**
  - **Rapidly field transformational mature technologies with complementing tactics, techniques and procedures**
  - **Generate, demonstrate and field “80% solutions”**
    - Aim for fast delivery of hands-on prototypes**
    - Keep moving - maintain rapid spiral tech insertions**
  - **Pursue coalition partnerships**
  - **Engage Services in joint ventures – and TRANSITION!**
    - Seek equitable new processes to field & sustain joint capabilities**
- Get critical joint capabilities based on emergent technology effectively fielded & sustained!**

# ACTD Timeline



ADVANCED SYSTEMS AND CONCEPTS



*Emphasis placed on spiraling out confirmed capabilities as quickly as practicable*

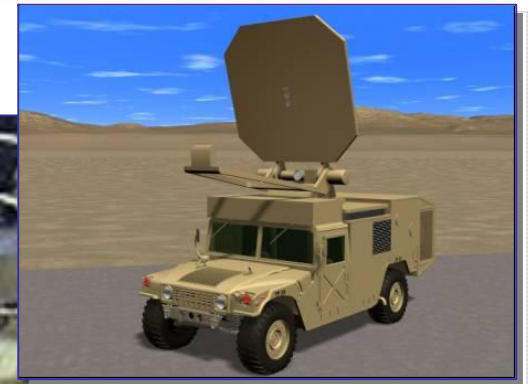




## *Where Have ACTD's Excelled?*

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- *Showcasing innovative technical & TTP solutions*
- *Nurturing concepts without established communities of interest*
- *Fielding capabilities “just in time” to address emergent threats*
- *Addressing emergent critical technology needs & opportunities*
- *Highlighting limitations of Service-centric PPBES process*
- *Forging Service/Agency partnerships to address joint needs*
- *Embracing CoCom joint and coalition warfare needs*



# ACTD/JCTD Transition Models



ADVANCED SYSTEMS AND CONCEPTS

## Transition to Program of Record

- Military utility successfully demonstrated
- Concepts adopted by warfighters
- Products transferred to Program of Record (POR) or GSA schedule
- Acquisition of additional capability funded

## Residual Meeting Need of Warfighter

- Military utility successfully demonstrated
- Concepts adopted by warfighter
- Products may or may not have been sent to a POR
- Residual quantities fully meet warfighter needs and are being maintained.

## Return to Technology Base

- Military Utility not successfully demonstrated
- Components or capabilities may be incorporated into other systems, transferred to the technology base or terminated.





# JCTDs Offer Significant Benefits

ADVANCED SYSTEMS AND CONCEPTS

## ACTDs

- Innovative & joint efforts
- Partnerships serving CoCom needs beyond core Military capabilities
- Unique perspective on challenges of transitioning proven joint capabilities into acquisition

## JCTDs

- Tailors solutions to CoCom needs
- Yields faster starts, faster deliveries
- Structures funding to permit Service participation without “breaking” programs
- Pilots “top-down” DAE process for joint acquisition
- Provides “window on joint investment”

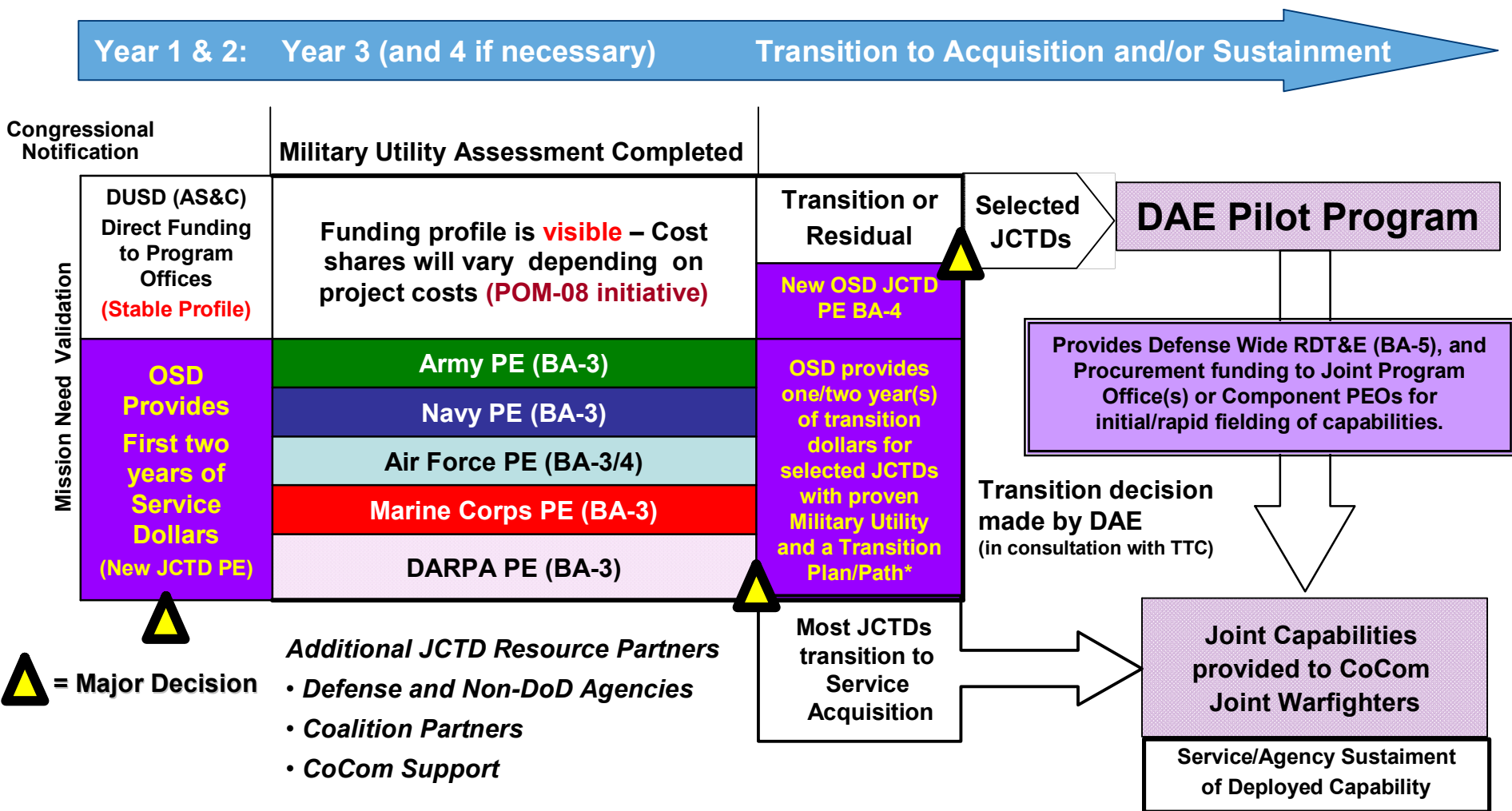
***“DoD has a long way to go to ensure that our acquisition process achieves the appropriate jointness and interoperability needed in the 21<sup>st</sup> Century” SECDEF Snowflake (2004)***



# Joint Capability Technology Demonstration View of JCTD-DAE-Transition Pilot Program

ADVANCED SYSTEMS AND CONCEPTS

9/15/05



# *Joint/Coalition Technology Challenges*

## *Recognizing the Hurdles*



### ADVANCED SYSTEMS AND CONCEPTS

- Defense S&T infrastructure is predominantly Service organizations investing in technologies supporting core Military capabilities*
- Most joint capabilities include technologies that are developed and acquired by Services as adjuncts to core Service deliverables.*
- PPBES leaves little room for exploitation of unanticipated discoveries.*
- Truly innovative joint ventures tend to become program orphans because they represent “unshared bills” to individual Services*
- Joint aspects of technology investments by Services are frequently the last adds to Service budgets – and the first to go when dollars are tight*
- CoCom perceived joint requirements are usually near-term, requiring emergent/mature technologies and tailored employment concepts.*
- Coalition efforts involve “time & complexity tax” that can delay introduction, equating to diminished technology advantage at fielding.*



# How Are Joint/Coalition Solutions Acquired & Sustained? **Success & Risks**



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**Distributed Procurement** ...multiple Services and/or agencies agree to acquire system elements with intention of combining in the field to yield a coherent joint operational capability.

Risk...Service-centric solutions migrate away from seamless interoperability.

**Trusted Service** ...Single Services tasked or volunteered to act as DoD agent for acquisition of joint systems to be used by other Services.

Risk...Joint aspects first sacrificed to emergent budget constraints



**Joint Program Office** ...JPMO formed to develop, field joint capability

Risk...Joint Offices proliferate.



**CoCom Direct Procurement** ...CoCom refines requirement, then fields and, in some cases, sustains joint capability

Risk...Duplicated efforts if coordination mechanism not emplaced



***Regardless of acquisition strategy,  
joint capabilities must still find Service home for sustainment***



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***Agile Acquisition Processes***  
***For***  
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# *Responsiveness to the Joint Warfighter: Need – Solution Dynamics*

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## **Critical Elements:**

### ■ **Needs Determination/Resource Allocation Process**

- What do joint commanders need to execute their mission?

### ■ **Funding Apportionment/Program & Budget Process**

- Does funding reflect the end warfighter needs for core military capabilities and specific joint capabilities?

### ■ **Acquisition/Solutions Process**

- Is the DoD acquisition process (writ large: life cycle) generating warfighting resources relevant to joint customer needs

*Needs without funding are just wants...*

*Acquisition without validated needs is wasteful and potentially disruptive*

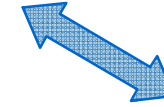
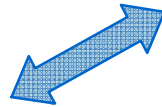


# Need to Solution: Processes & Roles



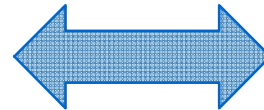
ADVANCED SYSTEMS AND CONCEPTS

## Program – Budget Process



### Need Process

1. Develop & specify needs
2. Review & comment on budget-based programming and acquisition solutions
3. Allocate resources to joint/combatant commanders



### Acquisition Solution Process

1. Consult with needs authorities in development of acquisition solutions
2. Acquire material solutions based on validated needs and budget-based programming
3. Deliver resources (acquisition products) for allocation to joint/combatant commanders

### Need Roles

CJCS/JCS  
CoComs  
Joint Staff  
Military Staffs  
CoCom/Component Cdr Staffs

### Solution Roles

USD (AT&L)/DAE  
Service Secretaries/SAEs  
OSD (AT&L) Staff  
Service Secretariat Staffs  
Systems/Materiel Commands  
Military Agencies

# CoCom Options: Needs Translation Into Solutions



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## Component Commander Advocacy (With Parent Service/Agency)

- *Needs must align with core Service/Agency military capabilities*
- *Normally, constrained to PPBES solutions/out-year solutions*

## Integrated Priority List (IPL) Submission

- *If long-standing, can be opening input to Service/Agency POM process*
- *Basis for Service program review & adjustment after Service POM closes*
- *Some execution year relief; often yield out-year solutions*

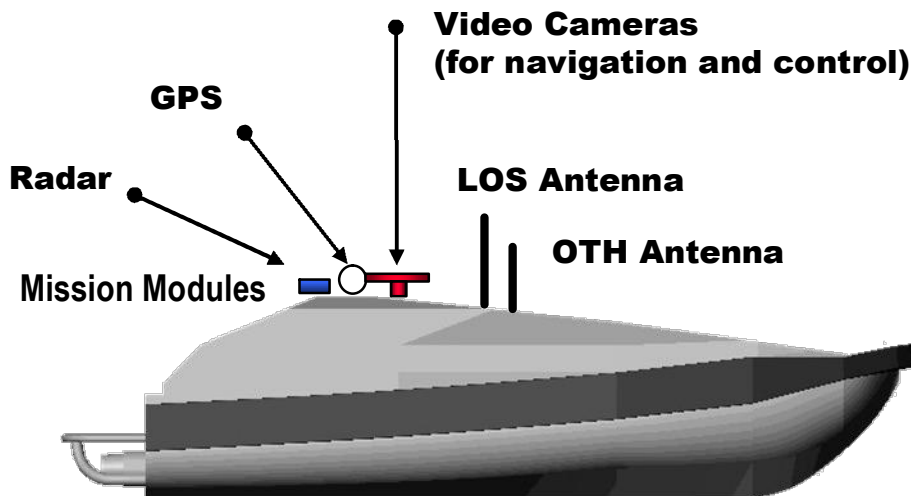
## Capability Transition Program Participation

- *Relatively rapid response (0 to 3 years); well adapted for serving joint needs*
- *Limited funding, limited capability residuals*
- *Potential on-ramp for spiral technology improvement or program initiation*
- *Bridges capability gap until PPBES delivers sustained solution*



To cap the grim day, three al Qaeda-style seaborne bombs driven by suicide killers attempted to destroy Iraq's main revenue lifeline, Basra's offshore oil terminals that have been handling up to 21.6 million barrels a day. **Two US sailors were killed and five injured intercepting one of the three lethal speedboats.** Two more blew up near the oil rig 7 miles out to sea where tankers were moored.

### SPARTAN CORE SYSTEM



- Communications link independent
- Common mission module interface
- Off-the-shelf components
- Distributed architecture
- Open source software
- Minimize effort to exchange Mission Modules
- Ensure interoperability in joint and coalition environment



# Joint/Coalition Technology Success

## Advanced Transportation: TSV



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### Increase Throughput:

- Soldiers, equipment, leaders go together
- Reduce battlespace RSO&I

### Increase Survivability:

- Threat identification system
- Active/Passive rockets/missile defense

### Increase Situational Awareness:

- Army crewed and armed
- Enroute mission planning
- Joint interoperable communications

### Increase Responsiveness:

- Rapid worldwide responsiveness
- Access to austere ports
- Increase access points within theater

### Improve Closure Rates:

- 36 to 50 knots (~31 to 58 mph)
- Sustained deployment momentum
- Offset/complement intra-theater airlift
- Provide Intermodal Operations Capability
- Shallow draft (less than 18 feet)



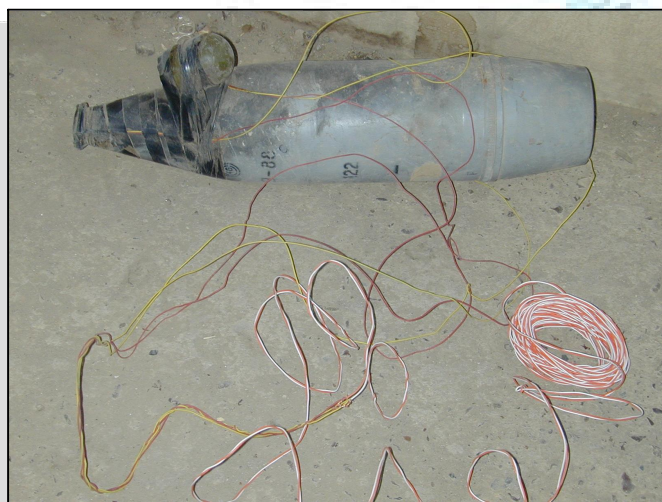


# Joint Technology Success

## Networking/Human Systems: JEOD KTOD



ADVANCED SYSTEMS AND CONCEPTS  
Advanced Systems and Concepts



BAGHDAD

Shatt al Arabi

Persian Gulf



# Joint/Coalition Technology Success

## Data Fusion: Area Cruise Missile Defense



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Advanced Systems and Concepts

### WARFIGHTER PAYOFF

- Limited “single integrated air picture” using JCTN, JDN, and host nation radar sensors
- Enhanced small, low altitude air object detect capability for cruise missile defense
- Improved Full-Dimensional Protection
- Enhanced Air Superiority

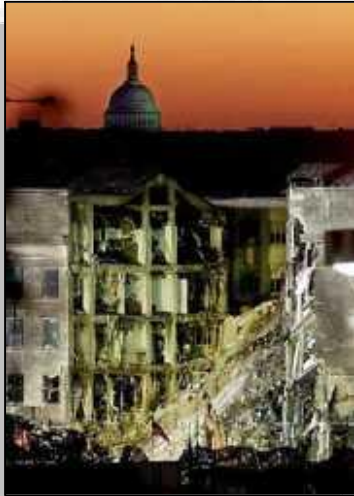


### MATURE TECHNOLOGY

- Proven radar sensors and C2 mediums.
- Maturing fusion/correlation engines.

### INTERIM (RESIDUAL) CAPABILITY

- Mobile, tactical interface with fusion/correlation engine and data link for increased interoperability.
- Test range for continued CMD testing and TTP development.

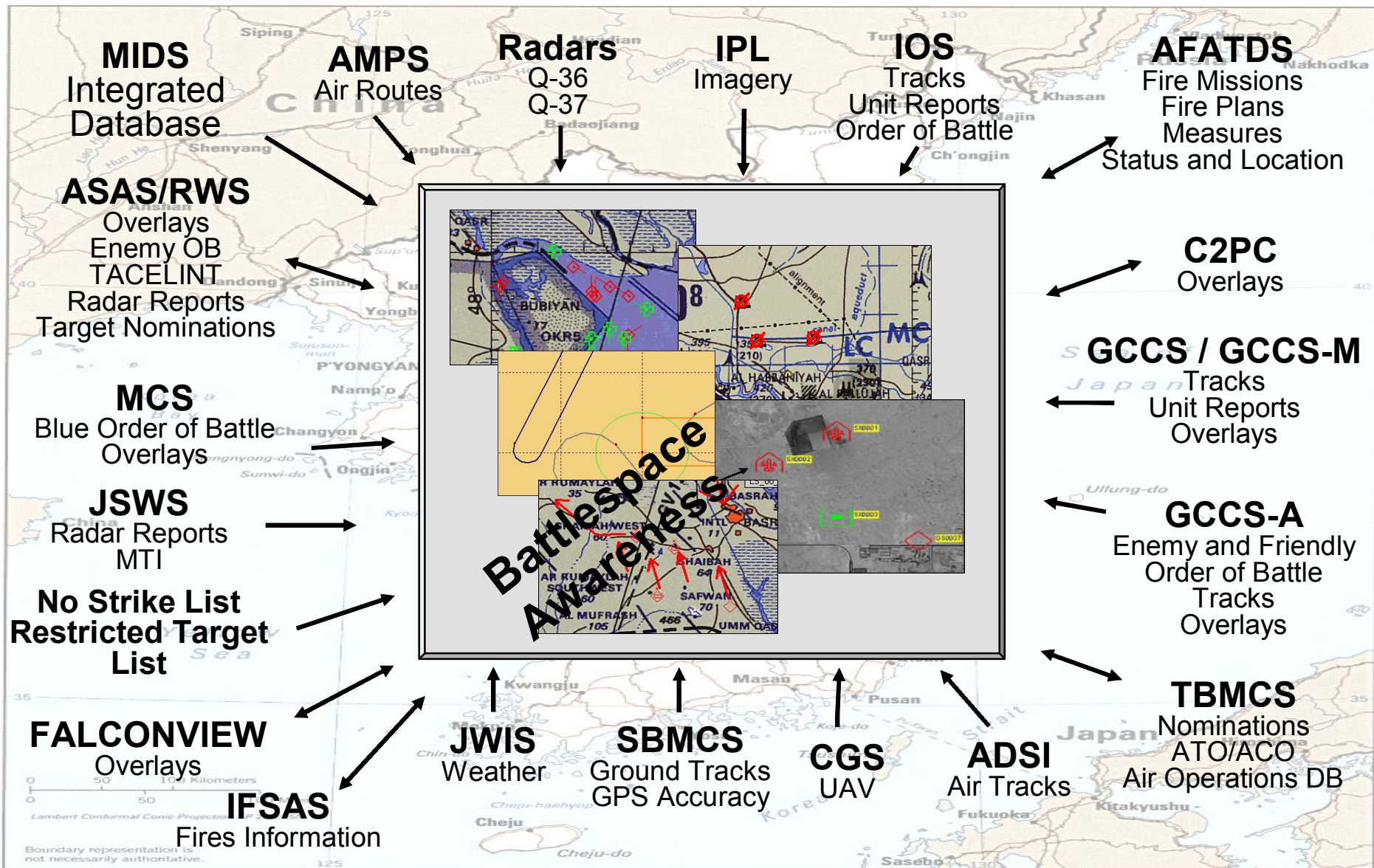


# Joint/Coalition Technology Success

## Data Integration: ADOCS



ADVANCED SYSTEMS AND CONCEPTS





# Joint Technology Success

## Non-Lethal Weapons: Active Denial System

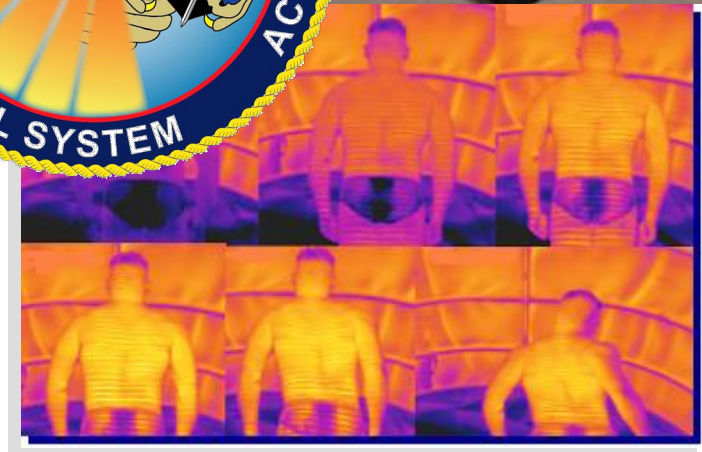


ADVANCED SYSTEMS AND CONCEPTS  
*Advanced Systems and Concepts*

The Active Denial System ACTD will produce the first non-lethal counter-personnel directed energy weapon for the battlefield.

It uses breakthrough technologies that will provide an unprecedented standoff non-lethal capability to complement lethal weapons across the military force spectrum.

The ADS will provide the warfighter a dramatically new and different non-lethal capability with unparalleled range, speed, and universal effects.





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