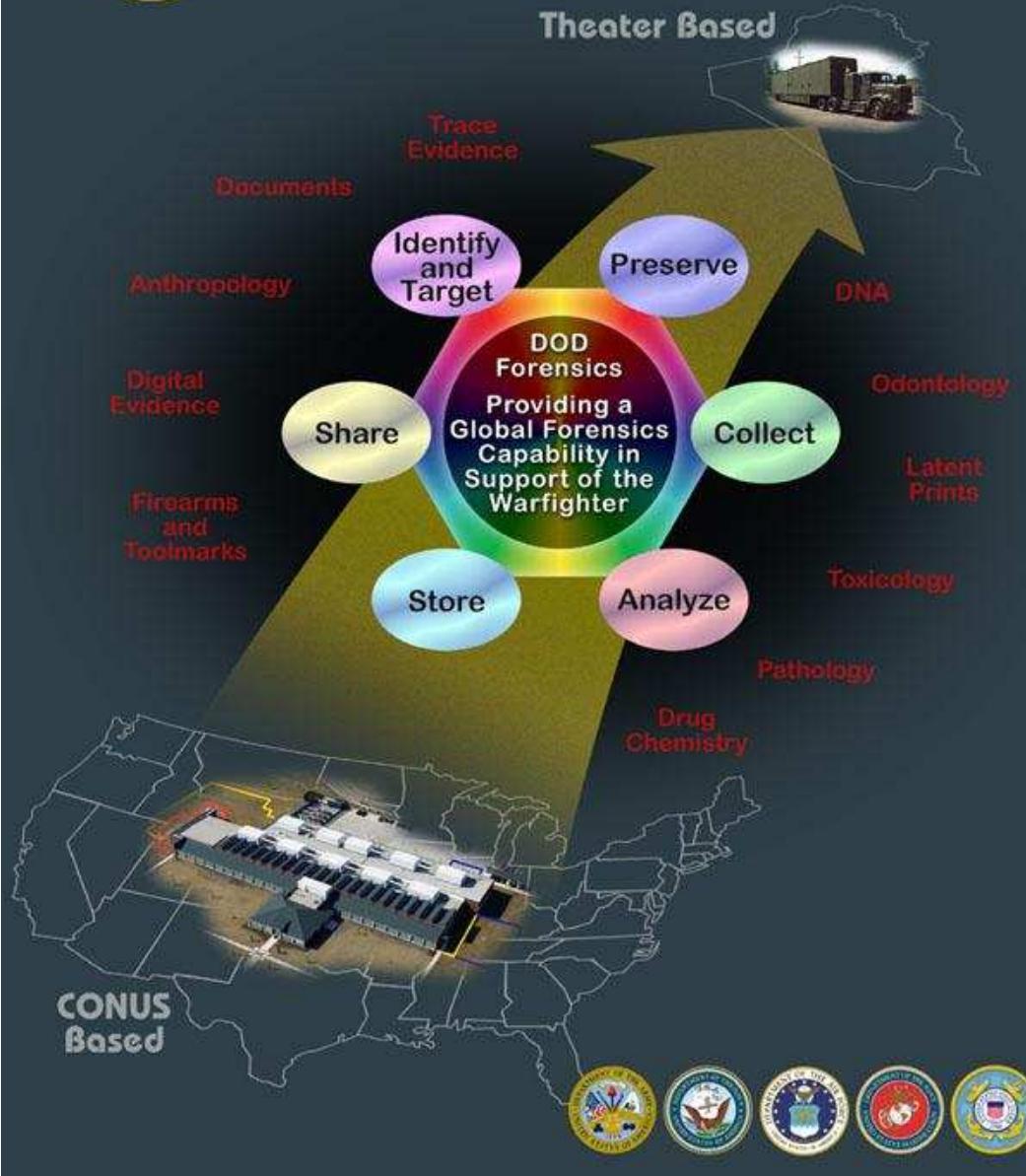




DOD Forensics Workshop

Developing a Full Spectrum Capability



CID Command
US Army Criminal Investigation Laboratory



Defense Forensic Enterprise System

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The National Academies
Needs of the Forensic Science Community
Woods Hole, Massachusetts
September 21, 2007

Defense Forensics Overview

- DoD Forensic Future Vision
- How did we get here?
 - Warfighter Needs — Interim Solutions
 - Requirements Driven
- Defense Forensics Enterprise System (DFES)
- Next Steps and Homeland Security Implications



DoD Forensics Transformation



Traditional:

- Criminal Investigations
- Casualty Identifications
- Medical Examiner
- Network Intrusions
- Forensic Expert Testimony
- Repositories
- Research & Development
- Consulting Services

Emerging/Non-Traditional:

- Intelligence
- Counter-Intelligence
- Support to GWOT
- Expeditionary Forensics
- Foreign Language Forensic Documents Capability
- Sensitive Site Exploitation
- Support to “significant” investigations
- Education/Training
- Contract Theater Forensics

Future:

- DOD Forensics CONOPS
- DOD level leadership
- DOD/Fed Agency Integration
- DOD/Intl Agency Integration
- DOD/National Databasing
- Forensics/Biometrics Organic Capability
- Support to WMD
- Technology Transfer
- Long-Term Evidence Storage



Goal: Coordinate forensic science expertise across DOD for criminal investigation and warfighter operations

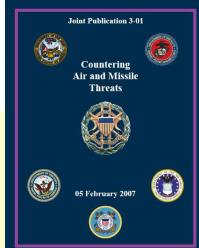
Why Battlefield Forensics?

“Combat Identification ... is the process of attaining an accurate characterization (so) that a high confidence, timely application of tactical options, and weapons resources can occur.”

“... tactical decisions that must be made...characterization will be at least... "friend," "enemy," or "neutral."

“Combat identification functions encompass cooperative and non-cooperative identification capabilities.”

Joint Pub 3-01, 5 Feb 2007



Biometrics allows us to identify...

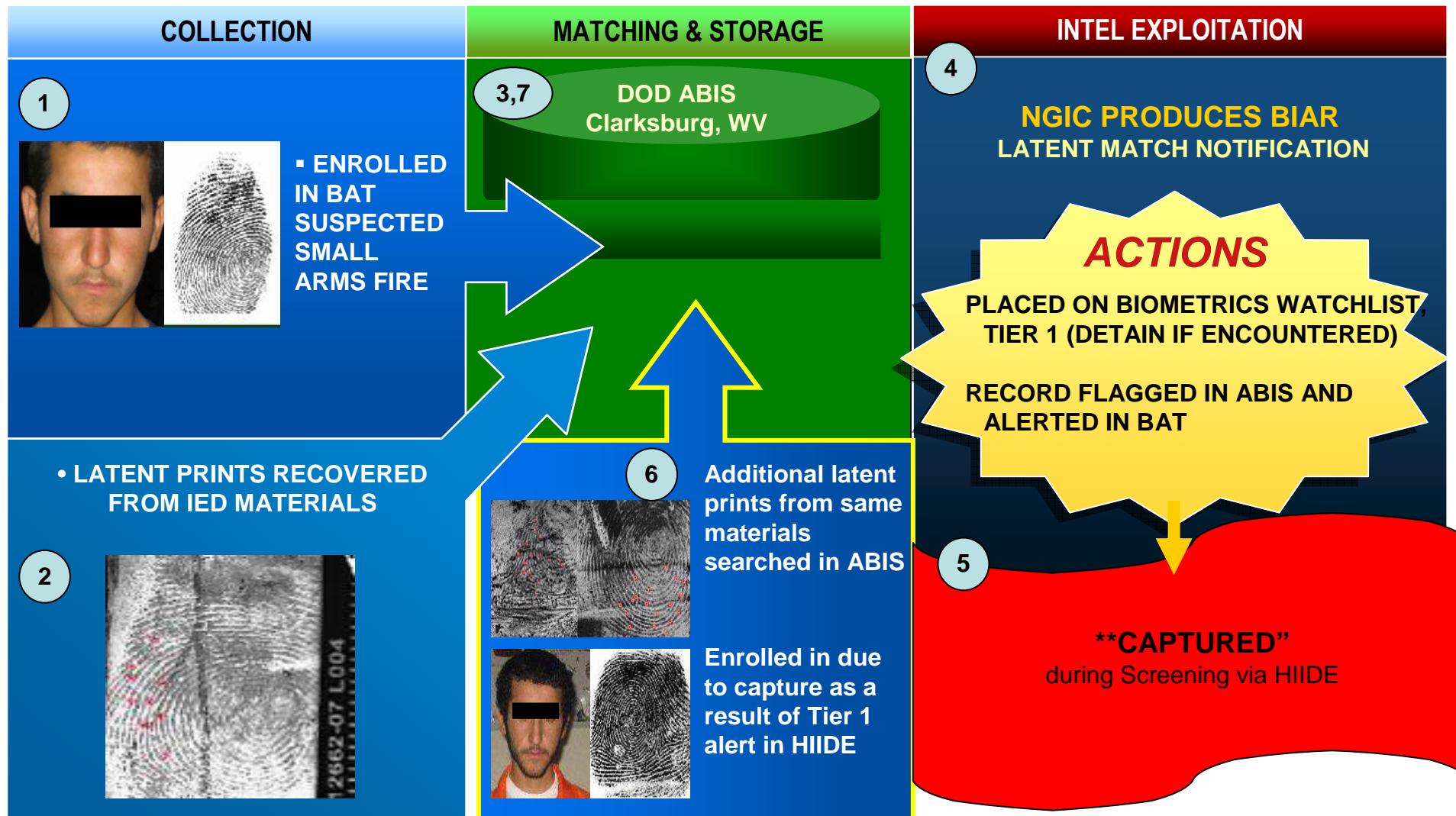
Forensics (and intel) allow us to “characterize”



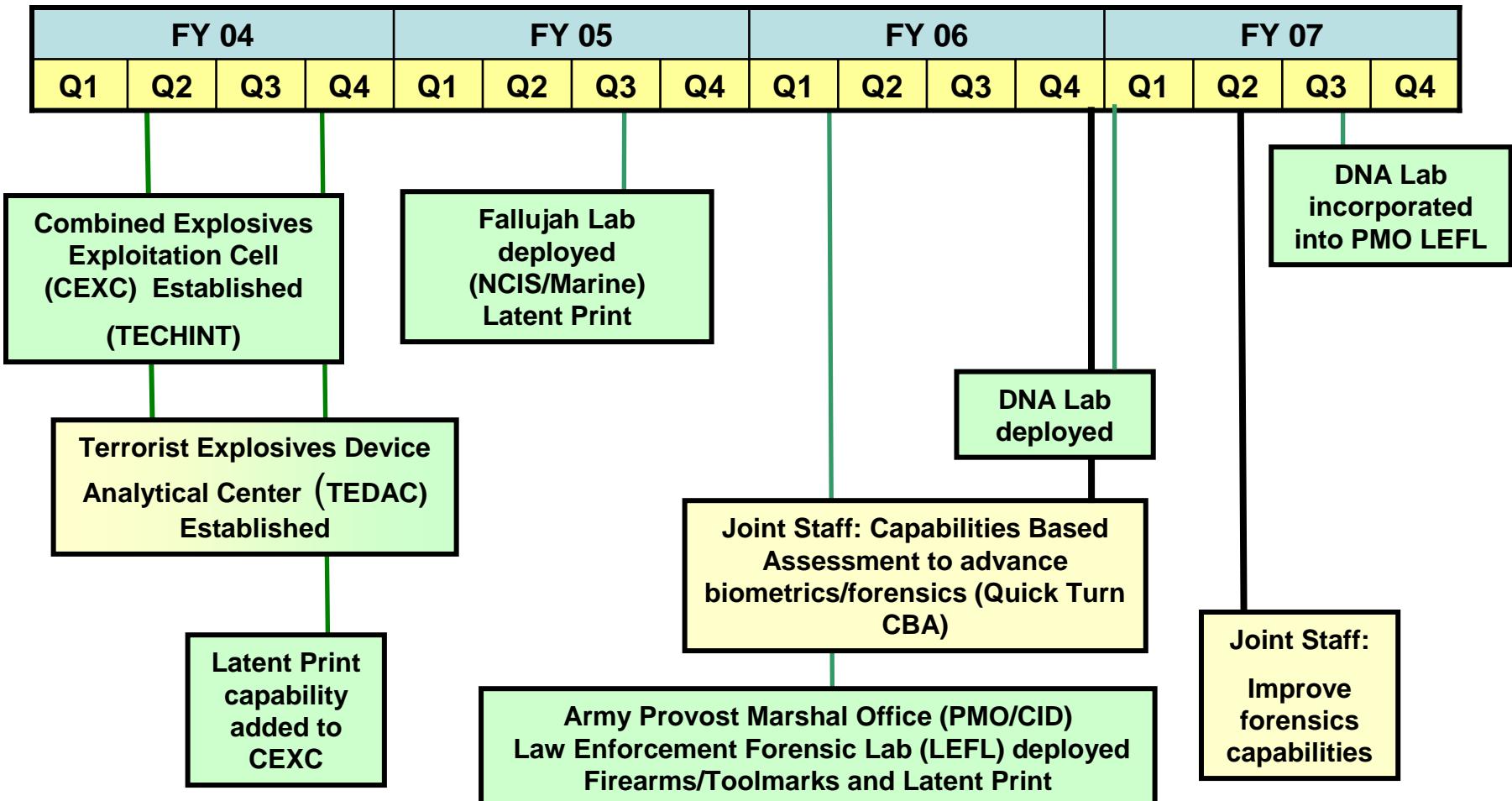
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Forensic Value



Biometrics / Forensics Timeline



Multiple Initiatives by Multiple Communities

DoD Forensic Community Challenges

- ***Forensics Lacks Definition –***
 - No DoD Concept of Operations (CONOPS)
- ***Forensic Limited by Perception***
 - Traditionally viewed as “law enforcement”, not warfighting
- ***Forensics Community Lacks Central Management and Strategy***
 - No DoD level leadership and resource advocate
- ***Role Transformation for Warfighter Support***
 - Criminal Justice vs. Combat Operations (site exploitation/targeting)
 - Asymmetric Needs — Thoroughness/accuracy vs. Speed for Combat Intelligence



Expeditionary Forensics Challenges

- Expeditionary & warfighter support — emerging forensic needs
- Independently deployed labs to fill operational in-theater void
 - Law Enforcement Forensics Lab (LEFL) (Counter sniper / DNA)
 - CEXC (Watch list targeting / Counter IED)
 - Navy/NCIS (Latent print)
 - DIA (CBRNE)
- Efforts not integrated, uncoordinated



Expeditionary Forensics Challenges (cont.)

- Costly, narrowly focused and not sustainable
- Do not leverage DoD forensic expertise/capability potential
- Areas of Coordination for Interoperability and Quality Assurance
 - Training — Technical Staff & Combatant Commanders
 - Laboratory Accreditation/Staff Certification
 - Databasing — Integration
 - Evidence Triage — Intel through Rule of Law uses
 - Appropriate Analysis Protocols/Quality Control
- Rotational Base(s) for Deployment Needed

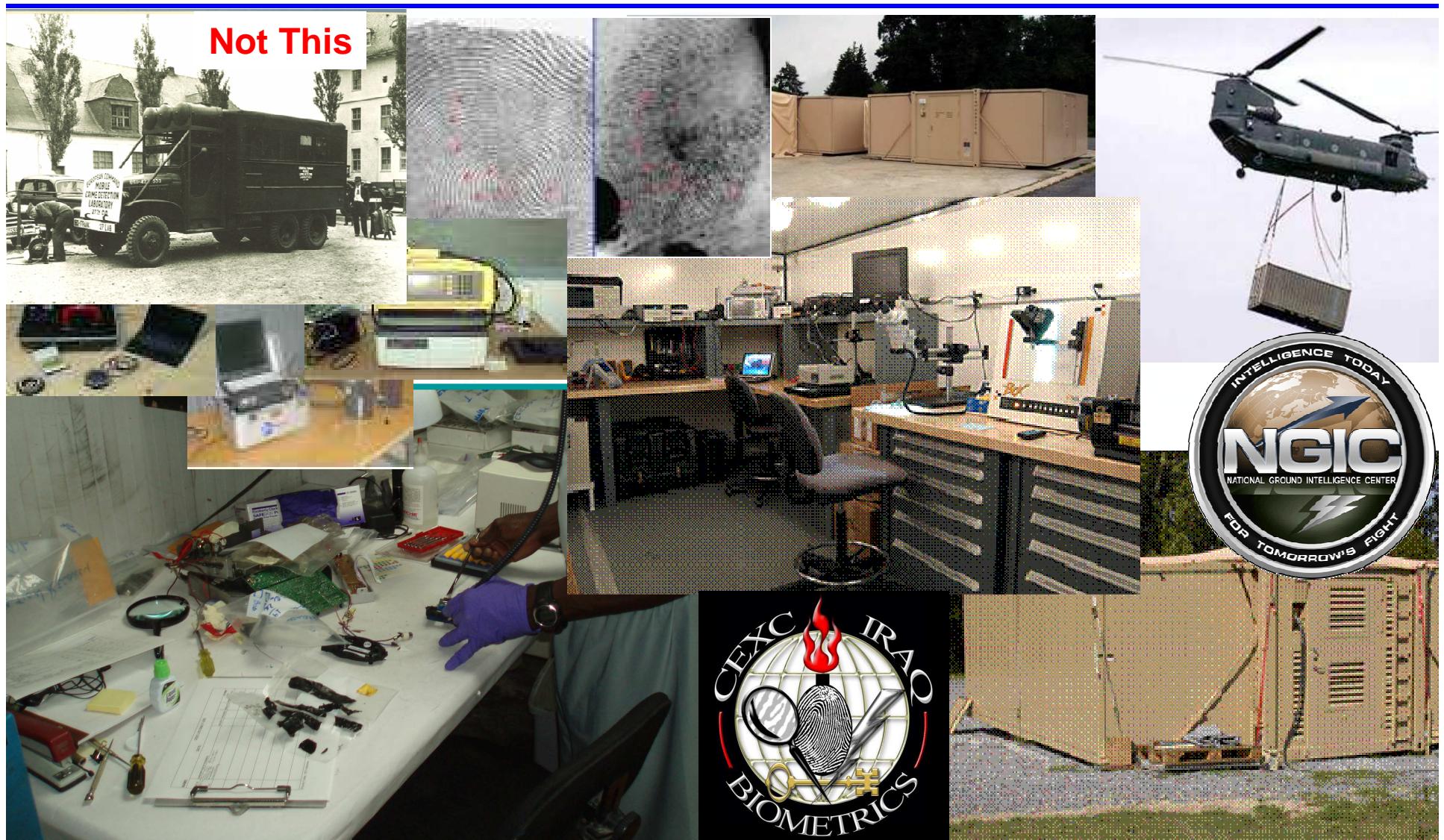


Joint Expeditionary Forensic Facilities (JEFF) Way Ahead

- **Modular for expansion to full-spectrum (Latent prints, ballistics, digital, DNA etc.)**
 - Joint design for interoperability within services
- Full forensic support to both targeting (Intel) and rule of law
 - Labs are integrated by inter-lab protocols
 - “Customer oriented”, with automatic feeds into policing systems
- Forensic “items” managed for “chain of custody” use; triaged for intel use
- Reach back to United States Army Criminal Investigation Laboratory (USACIL) for all-agency coordination

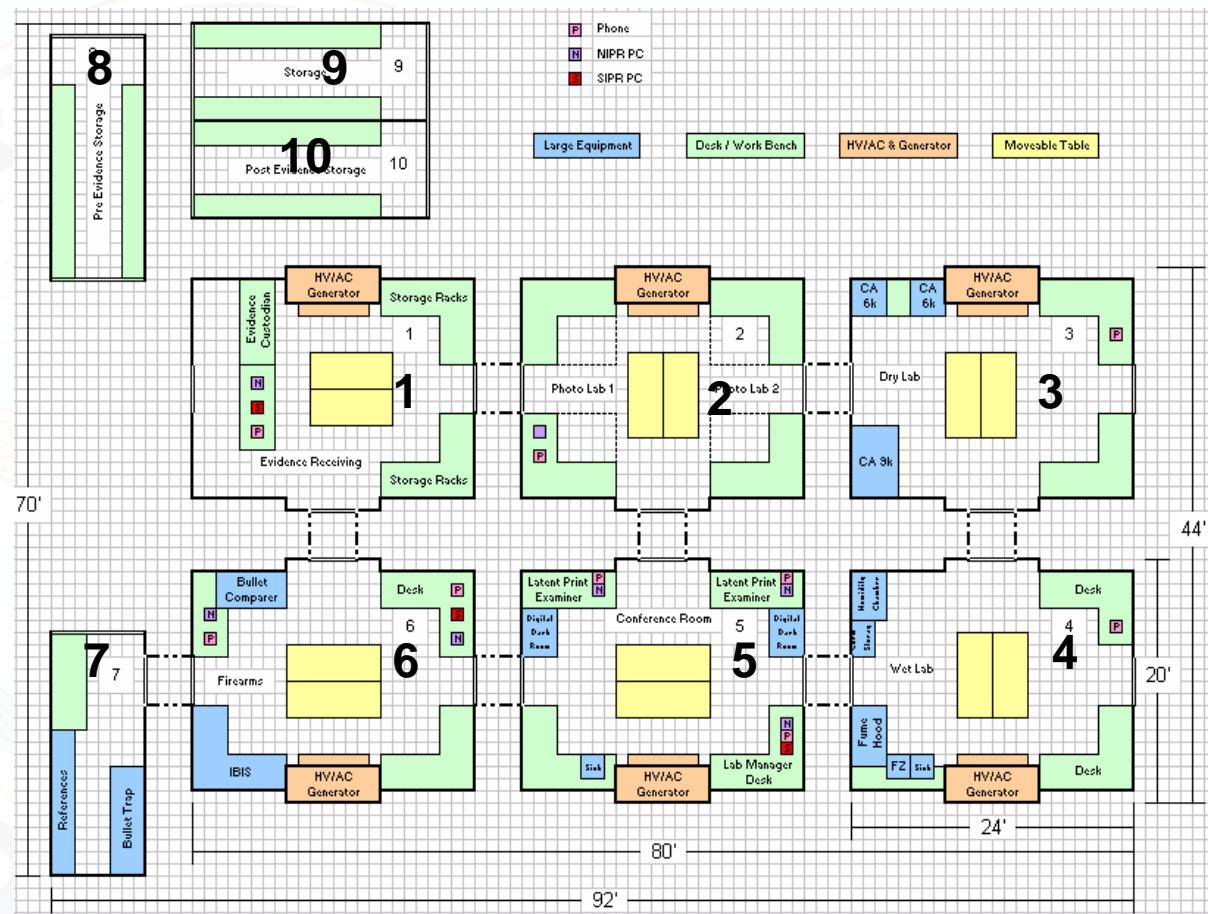


JEFF Examples



Joint Expeditionary Forensic Facilities (JEFF) Way Ahead

- 1) Evidence Receiving
- 2) Photo Laboratory
- 3) Dry Laboratory (Non Porous)
- 4) Wet Laboratory (Porous)
- 5) Conference Room / Office
- 6) Firearms Examination (IBIS)
- 7) Firing Bay & Ref. Library
- 8) Un-Processed Evidence storage
- 9) Storage
- 10) Processed Evidence Storage

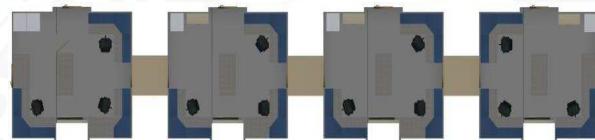


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Deployable Examples

- **Leverages Previous Success & Concepts**

- NAVEODTECH
- CEXC
- NIJ/NFSTC

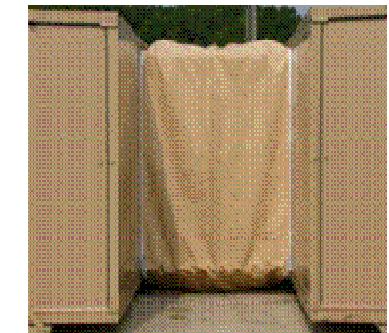
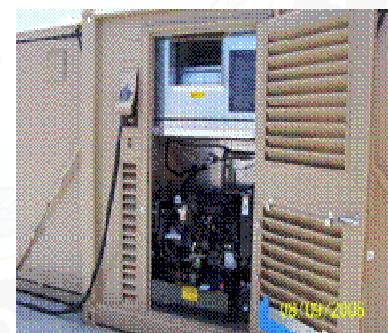


- **Internal access via causeways**

- **Configured for shore power with emergency generator backup**

- **Each shelter unit ~400SF**

- **Transportable**



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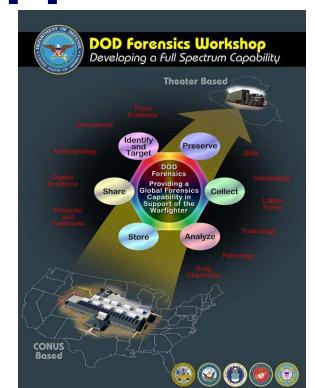
Defense Forensics Enterprise System (DFES)

Way Ahead (1 of 2)

- Synchronizes DOD's forensic capabilities in all operational environments
- Defense Forensic Network (DFN) connects DOD forensic operations virtually
 - electronically share all forensic operations information
 - link U.S. forensic, biometric, law enforcement, medical, and intel systems and databases to support DOD, U.S. governmental agencies, and allies to maximize effectiveness



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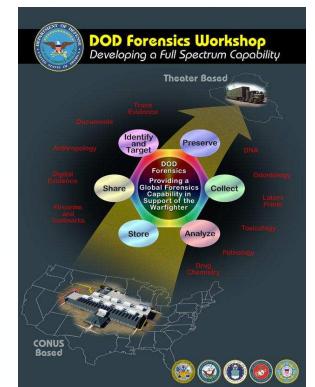
Defense Forensics Enterprise System (DFES)

Way Ahead (2 of 2)

- Provides rapidly deployed forensic capabilities anywhere in the world
- Synchronizes world-wide DOD forensic operations
 - identification and collection of items wherever found
 - analysis, storing and sharing of forensic information and reports throughout DOD, U.S. inter-agencies, and our allies



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Defense Forensic Enterprise System

Strategic
National
(DOD)

Defense Forensics Program Office:

- Forensics Policy, Doctrine & Tech Supv HQ
- Integration & Interoperability of Forensic databases
- Validates, prioritizes & directs deployable mission requirements
- Develops strategic forensic plans & programs

Defense
Forensics
Program Ofc

FBI
TEDAC
OTHER

Defense Forensic Training & Research Academy:

- Provides trained forensic examiners & technicians to DOD
- Develops forensic courses to support operational needs
- Serves as the R&D center for DOD forensics

AFME/AFDIL DIA DCFL/ NMEC USACIL JPAC-CIL OTHER?

Defense Institutional Forensic Laboratories:

Provide the sustainment, rotational, and training base, and reach-back for worldwide forensic analyses.

Strategic
Theater

Forensic Exploitation Cell:

- Tech Supv of JEFFs
- Forensic Plans
- Forensic Case Mgmt

Theater
JEFF

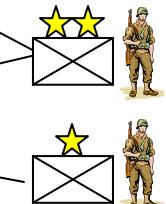


Operational

Joint Expeditionary Forensic Facilities (JEFF):

- Provide in-theater forensic analyses support
- Modular, tailorable
- Reach-back to institutional forensic laboratories for full forensic and databasing capabilities

Regional
JEFF (s)



Tactical

AFDIL/AFME	DNA	Tox	Anth	Odon	Path
DIA/NGIC	WIT	FD	DC		
USACIL	DNA	FA	LP	TE	DE
DCFL/NMEC	DE	IA	AV		
JPAC-CIL	DNA	Anth	Odon		

- Rotational Base
- Comp/Prof Testing
- Training Base
- Research & Dev
- Hiring / Prof Dev
- Forensic Contracting
- Forensic Programmatics
- Quality Mgmt

CMD	DNA	FA	LP	AV	?	Anth	WIT
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Forensic Science Advisors:

Provide forensic advice to the senior warfighter.

Unit Forensic Collection Teams:

Provide warfighters with surge capacity, presumptive tests, and in-transit storage and visibility

- Modular
- Standardized
- Shared LIMS
- Reach-back Capable
- Shared Data-basing
- Accredited
- Airlift Capable
- Interoperable Protocols & Equipment

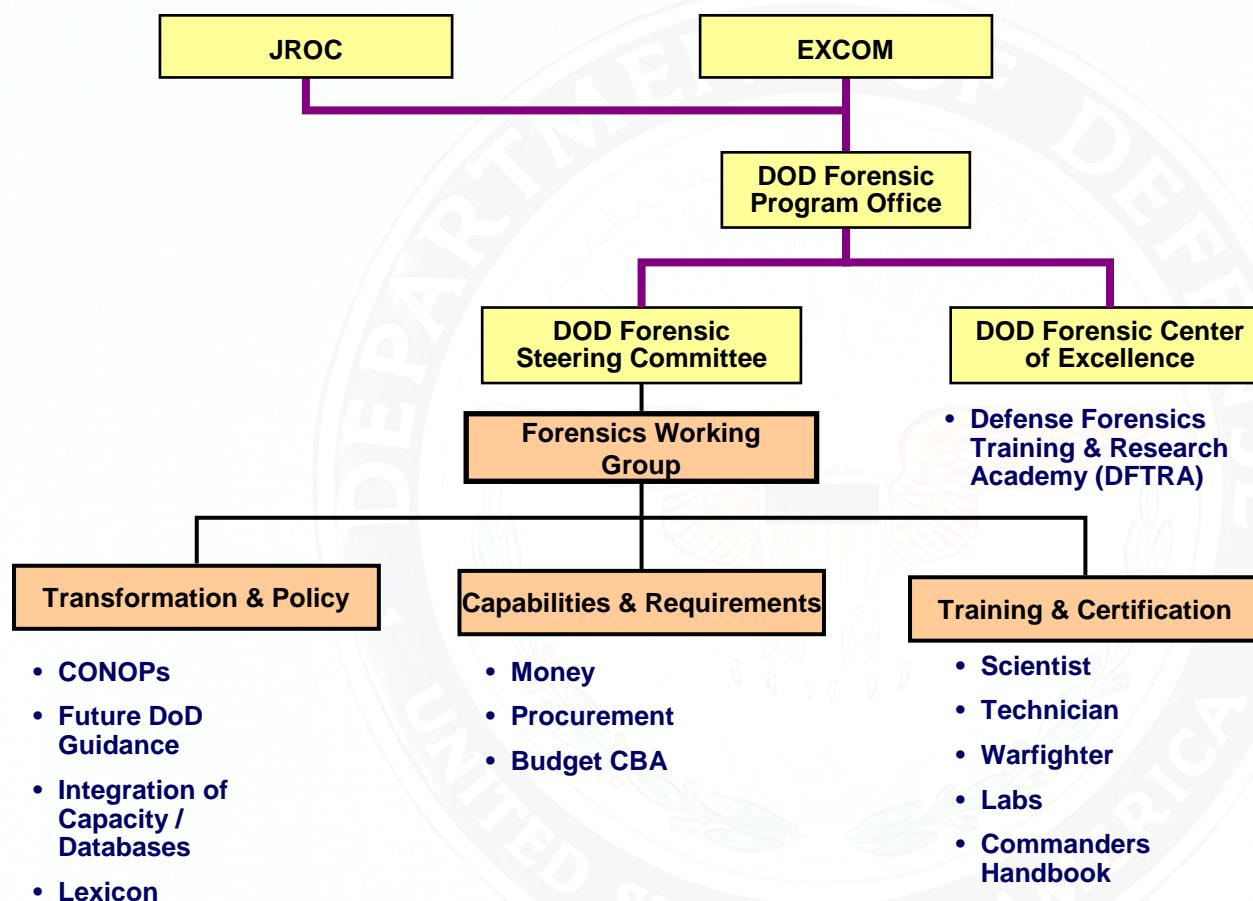
Tech/Spl Collection Teams :

Provide warfighters specialized collection capabilities

Individual Collection:

Provide warfighters with standard collection capabilities

DOD Forensic Enterprise Management



DOD FORENSICS PROGRAM OFFICE:

- Policy, Doctrine & Tech Supv HQ with National level, authoritative databases or access
- Validates, prioritizes & directs deployable mission requirements
- Develops strategic forensic plans & programs
- In Direct Support of DOD/JCS

DOD FORENSIC STEERING COMMITTEE:

- Supports EA as an advisory body
- Vets requirements and standards
- Vets strategic plans & programs



Defense Forensics Training & Research Academy

Way Ahead (1 of 2)

Training:

- Responsible for all DOD forensic examiner training
- DOD's forensic examiner and technician certification authority, ensuring a common threshold of expertise throughout DOD
- Administers competency and proficiency testing
- Provides laboratory specific forensic training to others:

DOD Senior Leaders	Military & Host-Nation Lawyers
Military & Host-Nation Judges	Forensic Science Advisors
Forensic Science Officers	Specialized Collection Teams



Defense Forensics Training & Research Academy

Way Ahead (2 of 2)

Research & Development:

- DOD's forensic research and development center
 - Conducts in-house forensic R&D
 - Partner with academia, industry, DOD & government agencies
 - Collaborate with the National Forensic Science Technology Center (NFSTC) to leverage their work in deployable forensic instrumentation and technologies
 - Collaborate with the National Institute of Justice (NIJ) and the Forensic Resource Network (FRN) on technology transfer strategies, methodologies and initiatives.



Homeland Security Implications

- Deployable JEFFs for U.S. use
 - Critical incidents
 - Disasters (e.g. Katrina)
- Database evolution and linkage toward integrated intel systems (e.g. global identify management)
- Creation of FORSINT — forensic intelligence for COIN and criminal intel
- Technology transfer to criminal justice
- Standardizing forensic training



Defense Forensics Summary

- DoD Forensic Future Vision
- Created by Warfighter Needs
- Defense Forensics Enterprise System (DFES)
 - Leadership
 - Training
 - Reachback
 - Integration
- Homeland Security Implications
 - Theater to homeland transition



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Backup Information Slides



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Historical JEFF Perspective

Building a Capability



Tactical Optics Kit
(See the threat)



Field Forensic Collection Kit
(Evidence Against Threat)



WIT Team Training

Lab Training Facility
(Analysis Forward)



CEXC bound for Iraq



CEXC Afghanistan



DOD FORENSICS MANAGEMENT

DOMAINS	DOD FORENSIC PROGRAM
Doctrine	<ul style="list-style-type: none">• Establish DOD policy & doctrine for forensics• Provide technical oversight for forensic operations• Develop DOD accreditation and certification standards• Maintain DOD forensic databases• Prioritize & obtain funding for forensics• Establish DOD Forensic LIMS or LIMS interoperability• Establish collection policy, standards & doctrine• Program Management with acquisition discipline
Organizations	<ul style="list-style-type: none">• Develop standardized org templates are used to ensure interoperability• Standardize deployable modules for shared forensic specialties• Establish DOD wide forensic database(s)
Training	<ul style="list-style-type: none">• Designates forensic training school(s)• Standardizes POIs by forensic discipline• Standardizes certification & proficiency standards by forensic discipline• Establishes collection training needs and courses
Materiel	<ul style="list-style-type: none">• Establishes forensic equipment standards for institutional labs and JEFFs• Prioritizes & POMs for forensic equipment requirements• Establishes collection equipment needs• Establishes a WG to chart future Forensics/Biometrics integration solutions.
Leader Development	<ul style="list-style-type: none">• Establishes leader development requirements for DOD/Service leaders.
Personnel	<ul style="list-style-type: none">• Establishes forensic examiner hiring & retention standards• Centralizes/streamlines forensic hiring procedures• Obtains HDLD designation for all forensic examiner positions
Facilities	<ul style="list-style-type: none">• Establishes forensic facility standards• Establishes forensic facility strategic plans (e.g., long term repository)• Prioritizes & POMs for forensic facility requirements

Defense Forensic Enterprise Management

Way Ahead (1 of 2)

Create **DOD Level Defense Forensics Program Office** to:

- Promulgate forensic policy across DOD
- Develop and integrate forensic capabilities across DOD to create a sustainable, holistic suite of forensic capabilities
- Supports judicial, medical, and operational requirements
- Ensures interoperability with U.S. and international agencies and standards



Defense Forensic Enterprise Management

Way Ahead (2 of 2)

- Synchronizes forensic institutional labs and JEFFs
- Integrate forensics and biometrics into complementary, supportive capabilities
- Integrate and maintain DOD forensic databases and integrate these with applicable biometric, investigative, intelligence, and USG databases
- Identify future forensic applications and solutions

