Tomorrow's Technologies

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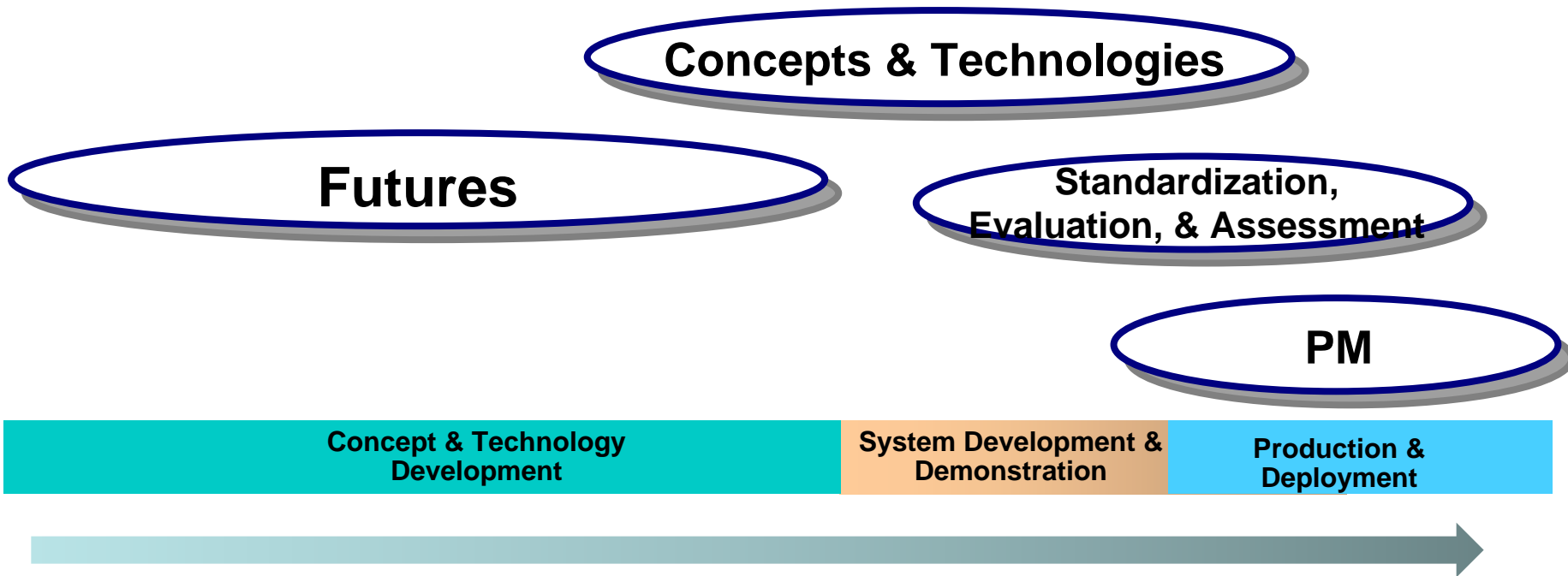Lisa.Swan@hqda.army.mil
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Purpose

BTF's involvement in developing tomorrow's biometric technologies

Concepts & Technologies

Futures

Standardization, Evaluation, & Assessment

PM

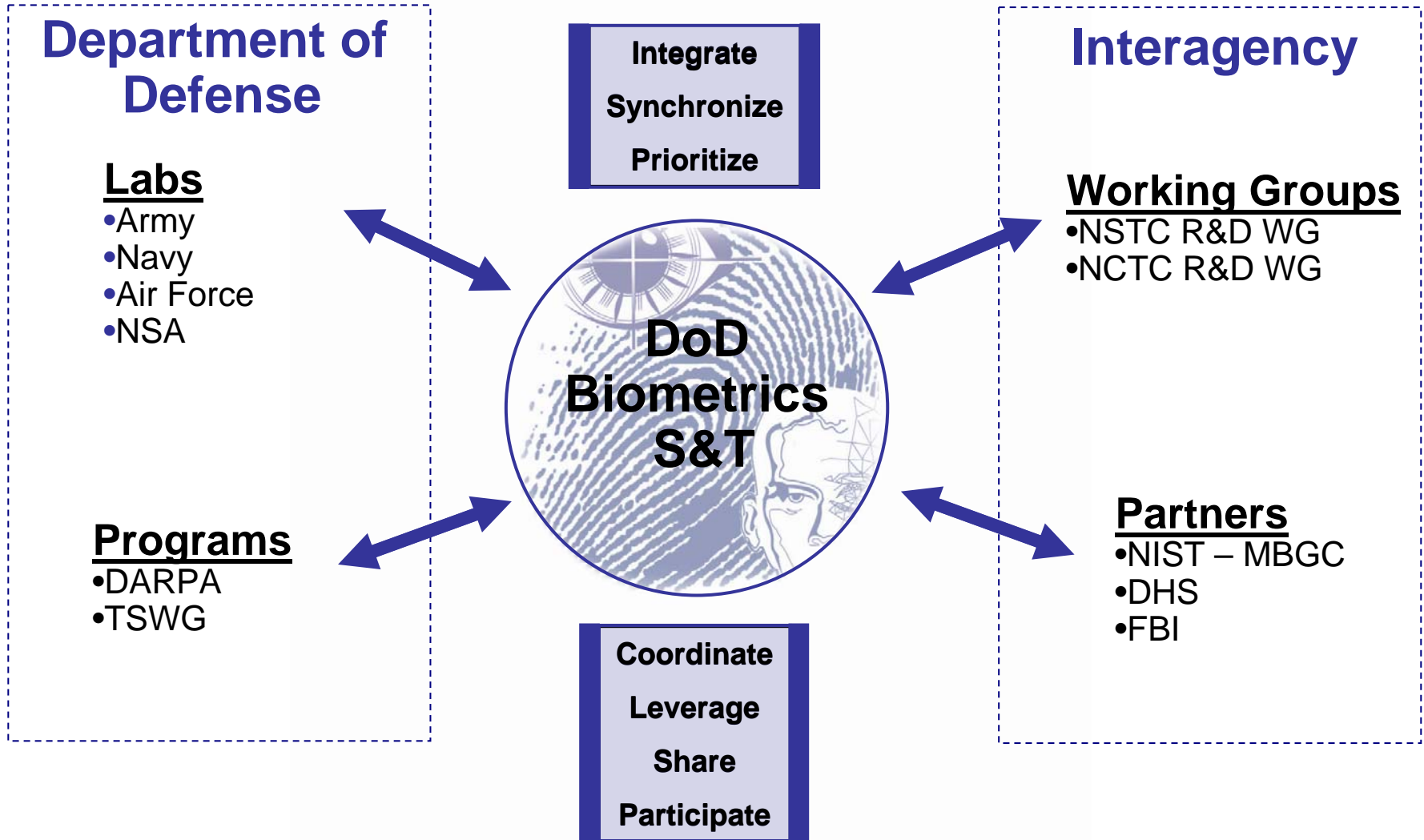| Concept & Technology Development	System Development & Demonstration	Production & Deployment

Futures

Identify and guide development and transition of biometric technologies to enhance DoD capabilities

Objectives:

- Coordinate efforts across DoD and share information with other departments and agencies

- Leverage the best technology available from both government and commercial sources to develop capabilities and maintain the advantages that our warfighters need throughout the life of developed systems

- Transition technology into new and current systems with minimal burden to the warfighter

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Biometrics S&T Partners

Department of Defense

Labs
- Army
- Navy
- Air Force
- NSA

Programs
- DARPA
- TSWG

Integrate
Synchronize
Prioritize

DoD Biometrics S&T

Coordinate
Leverage
Share
Participate

Interagency

Working Groups
- NSTC R&D WG
- NCTC R&D WG

Partners
- NIST – MBGC
- DHS
- FBI

NOTE: Not all inclusive

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S&T Requirements Generation

- ## Requirements Pull
  - Operational Challenges
    - Link to warfighter and user requirements
  - Technical Challenges
    - Link to acquisition program

- ## Technology Push
  - Disruptive Innovation
    - Emerging technologies that are used in new or novel ways
  - Challenge Statements
    - Pushes the limits of what is available today

Concepts & Technology

Leverage mature and experimental technologies to produce new capabilities that address operational requirements

Objectives:

- Interface with government, industry, and academia to develop and assess new biometric capabilities

- Provide technical expertise in support of DoD and other USG biometric technology activities

- Provide education and awareness support as biometrics training is institutionalized throughout DoD

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Example C&T Products

- ## DoD Biometric Test Database (DBTDB)
  - Multimodal Matching

- ## Technology Experimentation and Pilots

- ## Educational Materials

- ## Remote Examination Services

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Current Efforts

- ## Ongoing Support for DoD Biometrics C&T

  - ➤ Collection Systems
  - ➤ Sub-Optimal Data Enhancement
  - ➤ Next Generation Algorithms
  - ➤ Biometrics Data Fusion
  - ➤ Biometrics Architecture

  - ➤ Enterprise Level Data Sharing
  - ➤ New Biometric Modalities
  - ➤ Cross-Cutting Technologies

- ## CITeR

- ## NSF and NIST

- ## Long-range Iris Research

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Standardization, Evaluation, & Assessment Laboratory

> Ensure data integrity and interoperability of biometric-enabled devices and systems for DoD

- Conduct functionality, standards conformance, and integration testing for all biometric-enabled devices and systems exchanging data with the DOD ABIS

- Provide a biometric modeling and simulation capability to support concept exploration and future capabilities experimentation

- Evaluate biometric-enabled information technology products, programs, and services to guide and support research and development, assess readiness for deployment, and monitor performance of systems in the field

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Customers

- ## DoD Warfighter/User
  - Coordinate biometric efforts with the operational community to identify, prioritize, and synchronize non-materiel solutions to resolve interoperability and supportability issues

- ## DoD Organizations
  - Provide reimbursable support to DoD test agencies and acquisition organizations for test and evaluation activities that determine system effectiveness, survivability, and suitability

- ## Industry
  - Maintain awareness of the biometric marketplace and evaluate COTS/GOTS products that may be useful to government agencies

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So What?

- ## Futures Branch
  - Understand the requirements sources to anticipate solicitations

- ## Concepts and Technologies Branch
  - Become familiar with the tools used by DoD and other departments to solicit ideas and advance technology (e.g., BAA, MURI, SBIR, STTR)

- ## SEAL
  - Products that interface with the DoD biometrics enterprise infrastructure must be approved by SEAL

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Follow-Ups

FY 07 PEG Metric P/A GOAL: 22 Completed: 30	FY 08 PEG Metric P/A GOAL: 22
▪ **Advanced Vehicle/Driver ID System (AVIDS)** ▪ **Biometric Automated Toolset (BAT) V4.0 (SP3, SP4, SP5, SP5 (hot fix))** ▪ **BAT Latent Print Capability (ESE)** ▪ **Biometric Identification System for Access (BISA) CMS 1.7.1 (Tier I)** ▪ **BISA Tier II** ▪ **BISA CMS 1.7.2 (Tier I & II)** ▪ **BISA LSMS 1.8** ▪ **Defense Biometric Identification System (DBIDS) SWA Build 2.5 S/W V 2.2** ▪ **DBIDS SWA Build 2.5 S/W V 2.5.0.9 (regression effort)** ▪ **Hand-held Interagency Identity Detection Equipment 4.0 (HIIDE)** ▪ **HIIDE 4.0 (regression effort)** ▪ **Expanded Maritime Interception Operations (EMIO) (x2)** ▪ **Cross Match MAFIS (x2)** ▪ **Retica Algorithm** ▪ **HVI Identification In-theater System** ▪ **CrossMatch Guardian V1.0** ▪ **USSTRATCOM's NextgenID 9750** ▪ **Transaction Manager x5 (LM; BISA; Prototype, Encounter Protection)** ▪ **Biometric Collection and Identification Equipment (BCIE)** ▪ **Integrated Defense Source Registry System (IDSRS)**	<u>**Completed (6)**</u> ▪ **BAT/HIIDE Latent Matching Capability** ▪ **Tactical Biometrics Collection and Matching System (TBCMS)** ▪ **AVIDS** ▪ **BISA CMS 1.8** ▪ **BISA Tier II** ▪ **BISA CMS 1.8.1** <u>**In-Progress (2)**</u> ▪ **Cogent-Blackbird Multi-Modal Handheld Device** ▪ **AVIDS (regression effort)** <u>**Planned (9)**</u> ▪ **BAT SP6** ▪ **BAT V5.0** ▪ **BISA Tier II E2E** ▪ **BISA Day Worker** ▪ **HIIDE 4.0.1** ▪ **DBIDS 2.5.1** ▪ **SOID** ▪ **TNT 08-2** ▪ **CollabID (USMC)**