

A gray silhouette of a person in a dynamic, forward-leaning pose, holding a large, white, rectangular sheet of paper that is billowing out behind them. The person's right arm is raised, and their left arm is extended forward, supporting the paper. The paper has a slight curve and a shadow underneath, suggesting it is being held up and presented.

Bioterrorism and Complex Systems Workshop

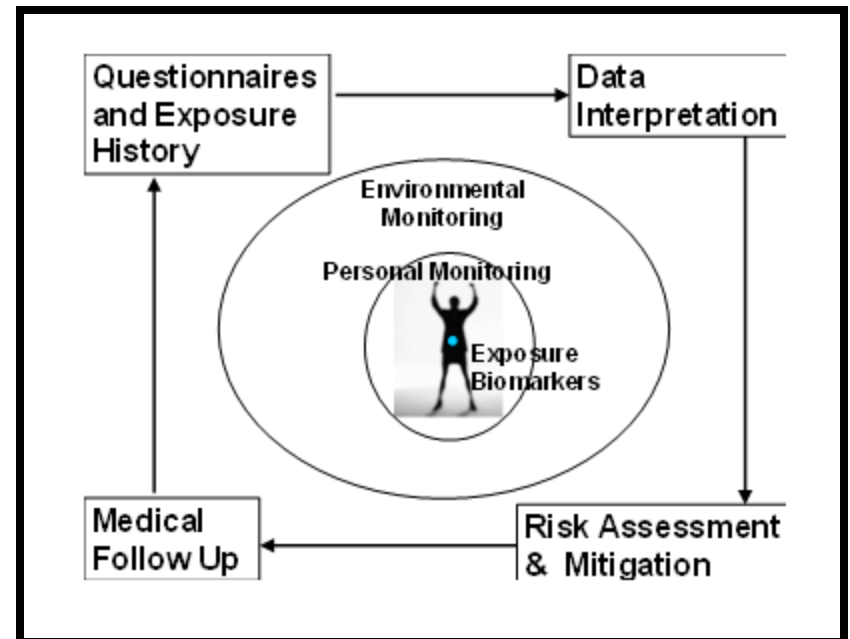
Sensing: Biomarkers, Biometrics and CBRNE Platforms

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Biomarkers

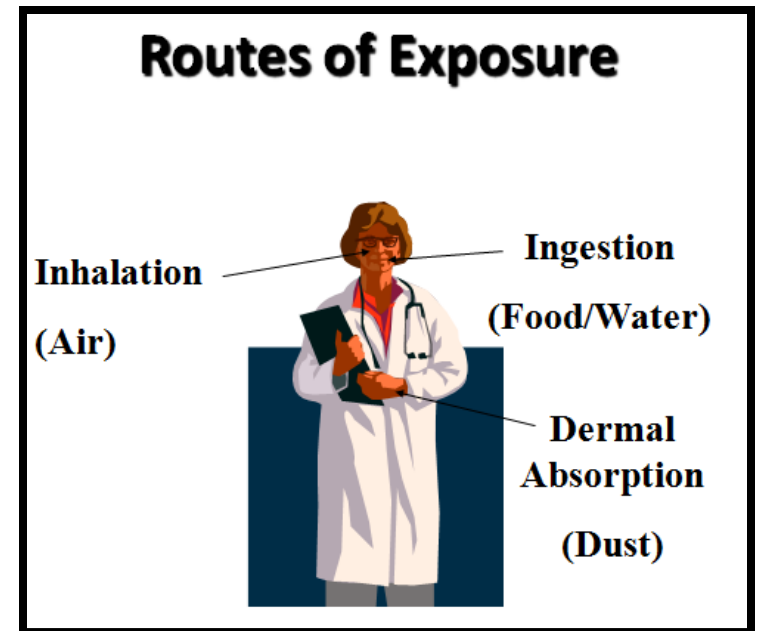
- Background & Public Health Significance
 - Demographics
 - Questionnaires
 - Environmental Samples (Air/Water/Soil)
 - Biomarkers
 - Urine
 - Blood
 - Breath
 - Hair





Biomarkers

- Three Types of Biomarkers:
 - Effect
 - Susceptibility
 - Exposure
- Measure
 - Environmental Chemicals in Media
 - Chemical Agents, Total & Isotopic Volatile Organic Compounds (VOCs), Heavy Metals
- Biological Exposure Indices (BEIs)





Biometrics

- Characteristic
 - Measurable biological (anatomical and physiological) and behavioral characteristic that can be used for automated recognition.
- Process
 - Automated methods of recognizing an individual based on measurable biological (anatomical and physiological) and behavioral characteristics.

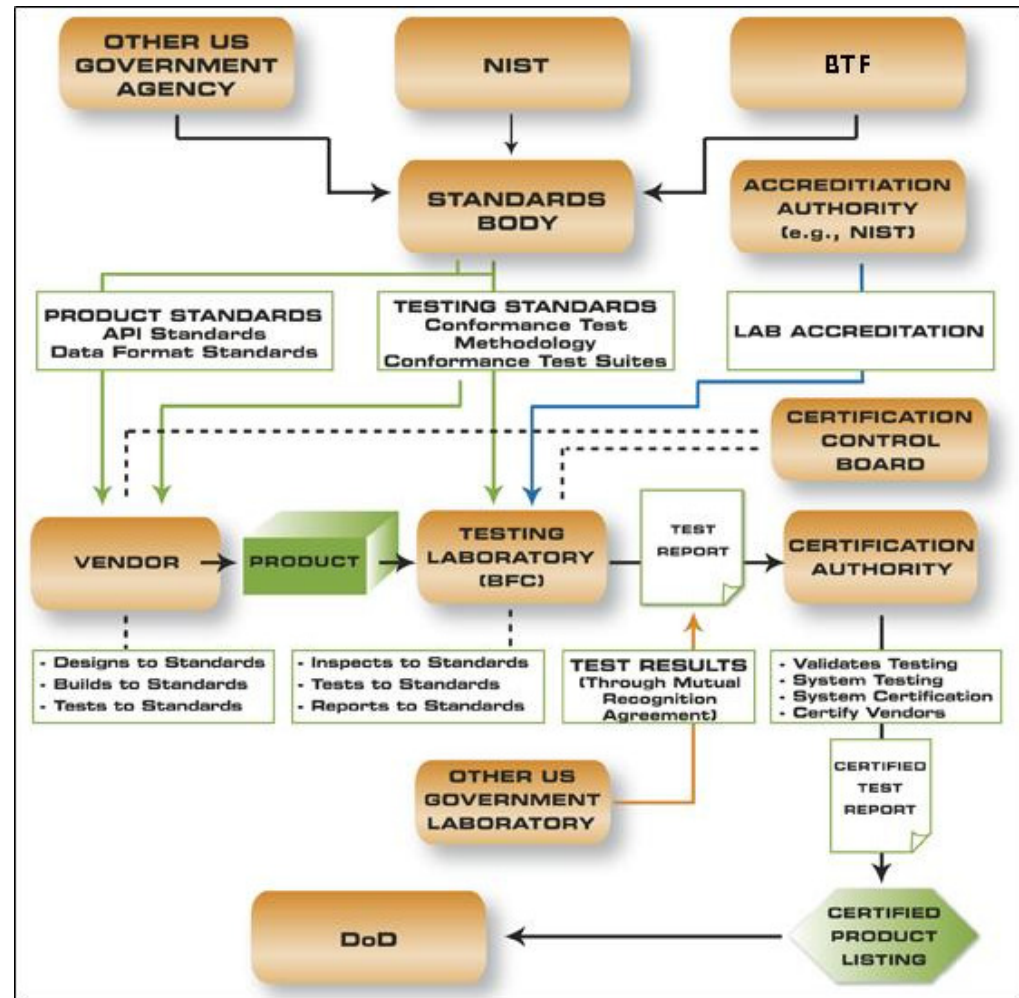
Source: NSTC Committee on Technology, Committee on Homeland and National Security, Subcommittee on Biometrics



DOD Biometrics Operational Equipment

- Fingerprint
- Iris
- Facial
- Systems

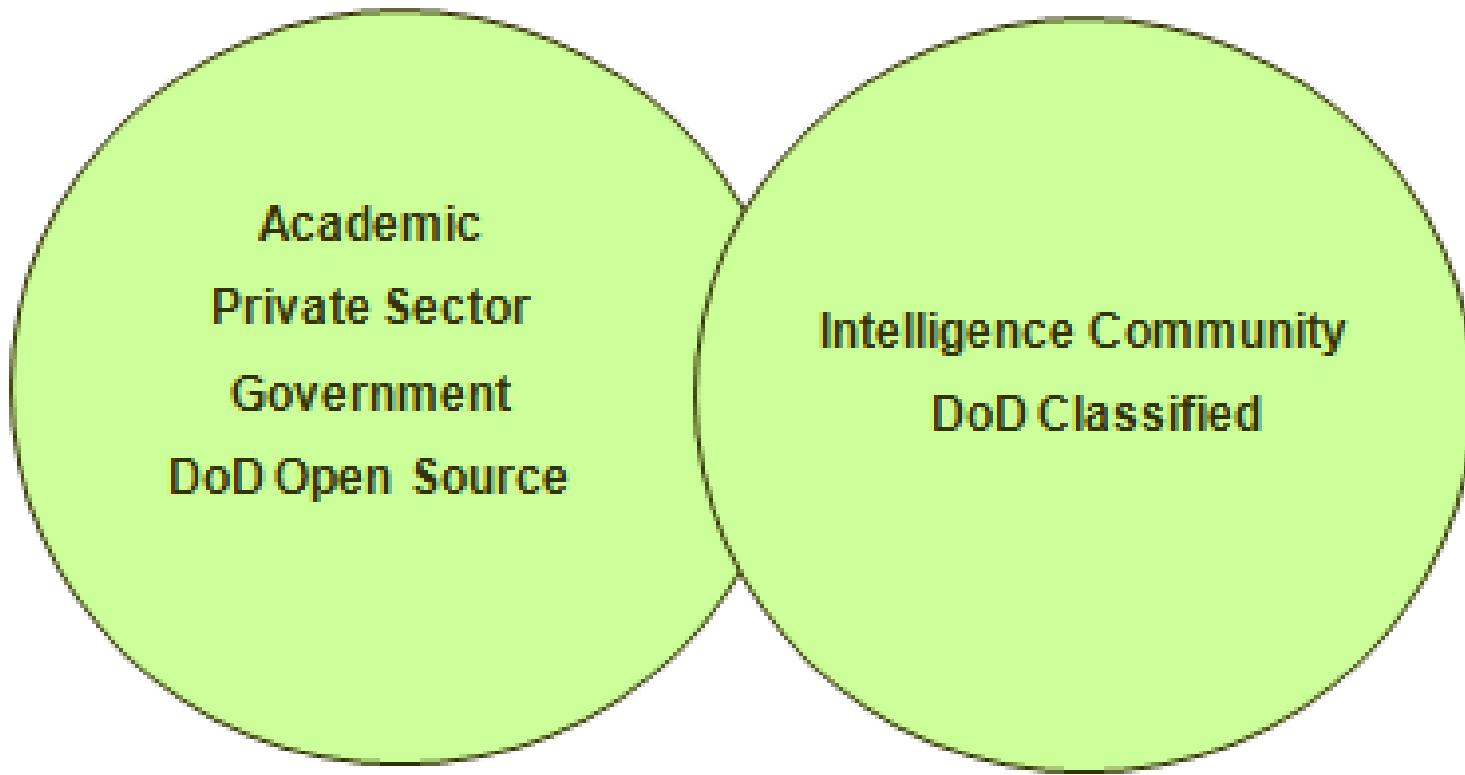
- Other:
 - Stand off Iris
 - Hyperspectral Imaging
 - DNA





Biometrics: Building Strategic Partnerships

Research Initiatives Captured





THANK YOU!

