



2008 NIOSH Direct-Reading Exposure Assessment Methods (DREAM) Workshop

November 13 - 14, 2008 ♦ Hilton Crystal City in Washington, D.C.



NIOSH

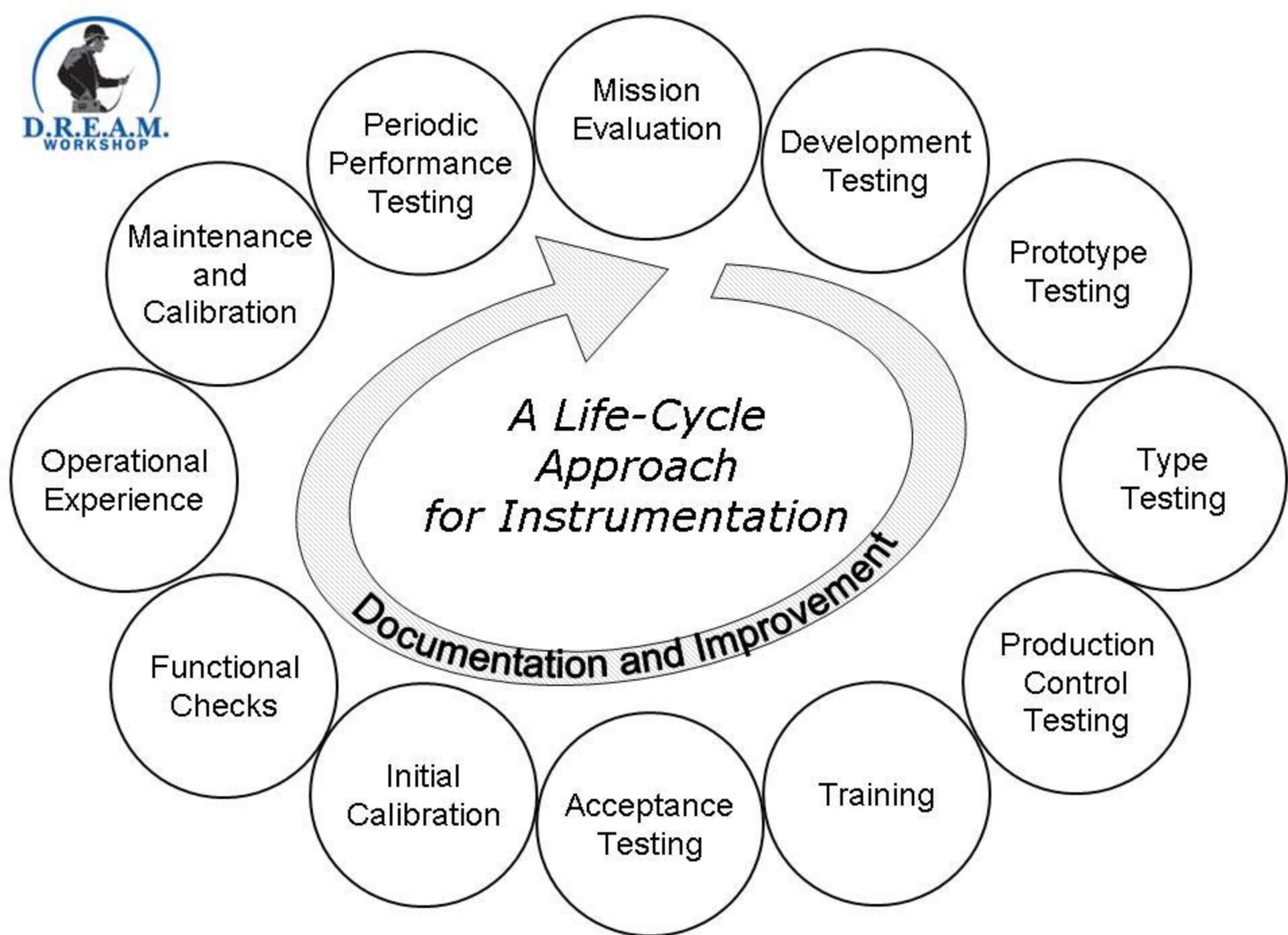
Rapporteur Report

Hazard Session: Radiation

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Status of current DRM for radiation detection/exposure assessment

- Extensive knowledge of radiation physics and measurement (including anomalies)
- Can measure at levels lower than hazardous
- Current success with miniaturization
- Photons = mature (rate, total, spectral)
- Alpha, beta, neutrons = need work



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Status of current DRM for radiation detection/exposure assessment

- Serves as a model for other threat agents
- Graduated Radiation/Nuclear Detector Evaluation and Reporting Program
- Responder Knowledge Base (Web-based reference)



Research Needs

- Develop bio methods that are direct reading, efficient, and available
 - Biodosimetry
 - Bioassay
- Reduce size and increase speed of neutron detectors for all energies
- 3rd party independent testing of instruments
- *Develop methods and standards for immediate first-responder detection of airborne particulates (CBRN)*



Data management challenges

- IEEE 1451 series -- harmonization of data acquisition and transmission
- ANSI 42.42 -- data format (for all sensors)
- ANSI 42.36 -- RADnet standard for data transmission
- Voice, video, data, positioning (GIS, GPS)



Possible NIOSH Roles

1. Evaluate and report on operational experiences with various instruments in various industries
 - Cover routine and emergency operations
 - Include national and international input
 - Transfer emerging technologies to the US
2. Expand role on the Interagency Board (IAB) for Equipment Standardization and Interoperability (CBRN)



Possible NIOSH Roles

3. Expand role in development of national and international standards
4. Identify gaps in safety practices nationwide
 - Develop training materials and guidance to bridge the gaps
 - Identify opportunities for DRM solutions
5. Collaborate with stakeholders to develop and implement new and improved methods
 - National laboratories, federal agencies, users, manufacturers