

# AMUG Strategic Planning

## Ideas for AMUG Group Discussions

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# Purpose of the AMUG

- Provide a forum to:
  - Exchange Information,
  - Discuss Mutual Problems,
  - Develop a Sound Technical Basis for Air Monitoring Practices,
  - Develop Unified Strategies for Air Monitoring, and
  - Help Ensure Regulatory Compliance

# Initiatives and Tools

- Website
- Annual Meetings
  - Spring technical meeting
  - HPS meeting session
- Standards development
- *Methods for Sampling Airborne Radioactivity* Book
- Individual collaborations and assistance
- Relationships with other groups
  - Meeting existing needs
  - Developing new opportunities
- Advancing an “informatics” agenda

# Suggested Informatics Guidelines\*

1. Emphasize literacy and develop critical thinking;
2. Develop and use real-life data examples;
3. Stress conceptual understanding rather than mere knowledge of procedures;
4. Foster life-long learning and active discussions;
5. Use technology for developing conceptual understanding and for analyzing and sharing data; (e.g., databases, simulation and modeling, etc.)
6. Use assessments to improve and evaluate the efficacy and impact of these activities.

\*as adapted by Mark Hoover from the American Statistical Association (ASA) “*Guidelines for Assessment and Instruction in Statistics Education (GAISE)*” which are available at <http://www.amstat.org/education/gaise/> .

# Paradigm for Air Sampling Objectives

## BASIC AEROSOL CHARACTERIZATION

Understanding relevant physicochemical and biological properties of the aerosols of interest

### WORKER HEALTH PROTECTION

Ensuring that worker exposures are within allowed limits and As Low As Reasonably Achievable (ALARA)

### ENVIRONMENTAL MONITORING

Ensuring that environmental releases of aerosols are within allowed limits and ALARA for environmental and public health concerns

### PROCESS QUALITY ASSURANCE AND CONTROL

Ensuring that processes and process controls are operating properly

### EMERGENCY PREPAREDNESS AND RESPONSE

Providing a basis for appropriate actions when things go wrong

## DEMONSTRATION OF COMPLIANCE

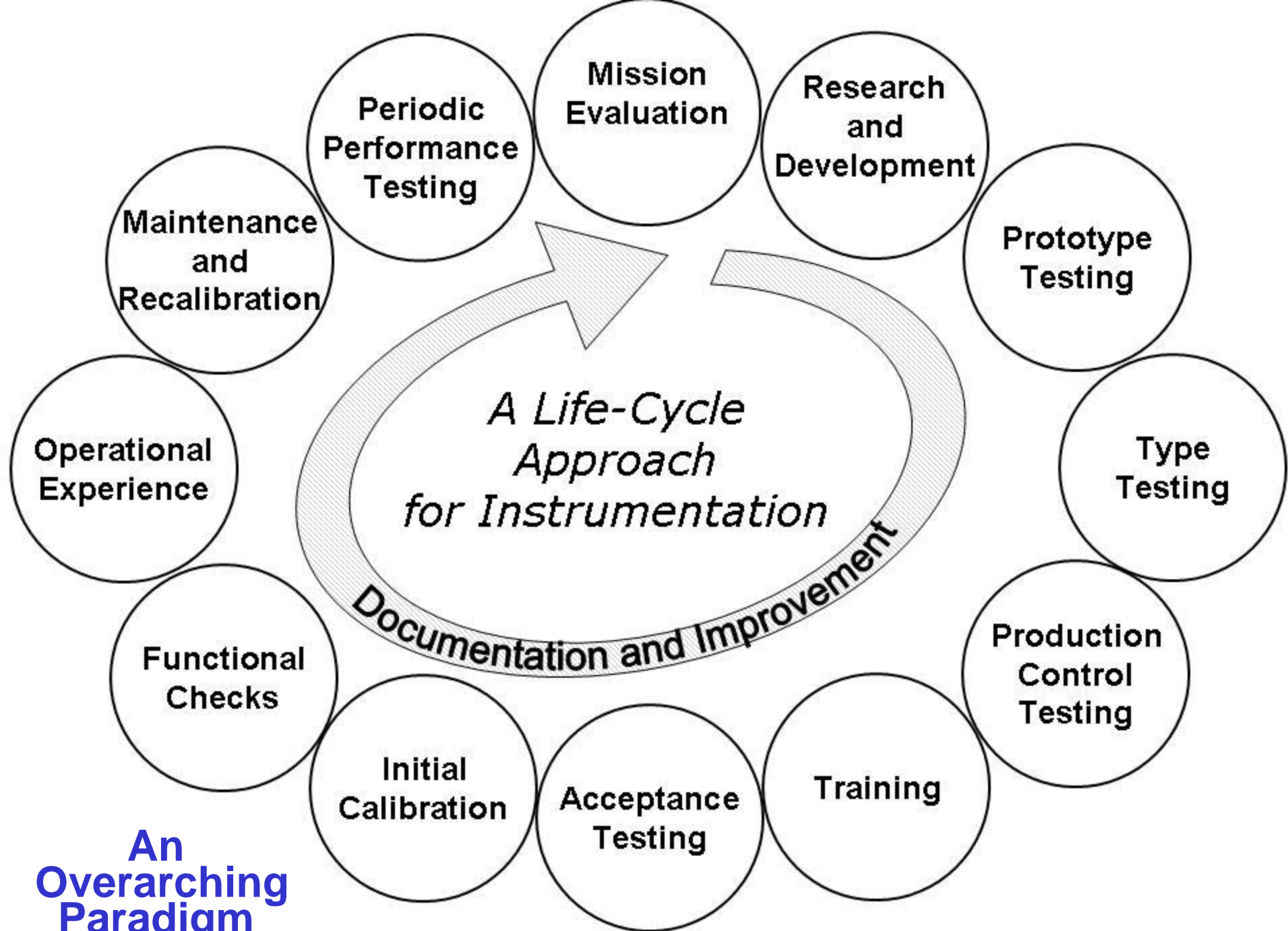
Documenting that administrative and regulatory requirements are met

## RESEARCH

Advancing a comprehensive understanding of the behavior, measurement, and control of aerosols

# Graded Approach to Aerosol Characterization

Level 1	Level 2	Level 3
<b><i>Initial Screening and Detection</i></b>	<b><i>Comprehensive Characterization and Assessment</i></b>	<b><i>Routine Monitoring and Control</i></b>
<ul style="list-style-type: none"> <li>• Process knowledge</li> <li>• Gross mass or activity counting</li> <li>• Optical particle counting</li> <li>• Condensation particle counting</li> <li>• Microscopy</li> </ul>	<ul style="list-style-type: none"> <li>• Elemental composition</li> <li>• Chemical composition</li> <li>• Particle size               <ul style="list-style-type: none"> <li>- Physical</li> <li>- Aerodynamic</li> <li>- Thermodynamic</li> <li>- Electrical mobility</li> </ul> </li> <li>• Morphology</li> <li>• Surface area</li> <li>• Biological solubility</li> <li>• Etc.</li> </ul>	<ul style="list-style-type: none"> <li>• A necessary and sufficient subset of Level 1 and 2 methods for the material and situation of interest</li> </ul>



**An  
Overarching  
Paradigm**



# Questions ?

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