

# Strengthening NIST's Mission: *Optimizing NIST's Measurement Services*

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**NIST**

**National Institute of  
Standards and Technology**

Technology Administration  
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# Motivation for this session

VCAT report will accompany first budget request under new management structure.

Future budget environment will likely be constrained – support needed.

- Increased support for NIST measurement service activities will be a top priority in upcoming budgets.
- It will be necessary to demonstrate the relevance of these services

NIST realignment places an emphasis on the delivery of measurement services to stakeholders.

- NIST must ensure strong management accountability to ensure that the appropriate services are identified, developed and delivered to maximize impact
- NIST must integrate and balance these efforts with the maintenance of a strong research program.

## What I'm looking for...

*Strong support for emphasis on traditional measurement mission as a basis for NIST programs and budget request.*

*Improve accountability for measurement mission in new structure:*

- What are the right measures/drivers?*
- How do we balance short term (services) with long term research?*

*Performance assessment: What is the right vehicle for assessing program quality and impact?*

# Path forward

## Between now and October

NIST will propose a new approach to needs identification, performance review, and impact assessment framework for our measurement laboratories.

Changes to be explored:

- Changes to NIST's external assessment program (currently NRC panel of assessment program).
- New needs and impact assessment processes
- Integration into programmatic planning and implementation process
- Management metrics and controls program

***NIST will want VCAT input on this assessment framework to ensure that NIST has an adequate set of management and evaluation tools that capture and address the role of measurement services.***

*→ Focus of next two VCAT meetings is to prepare the Committee to provide this input.*

# Outline of Today's Activities

- Overview of current NIST measurement services**– *What measurement services are, how they are used, and the current scope of NIST programs*
- Feedback from external users of NIST measurement services** – *Selection of input from users of NIST measurement services in Defense, Clinical Diagnostics, and the Aerospace industry.*
- *Is NIST meeting their need?*
  - *What is the impact of NIST measurement services on their operations?*
- Managing measurement services in new organizational structure** – *An overview of the placement and management of measurement services activities within the new NIST organizational structure.*
- Small group deep dive explorations of NIST measurement service activities** – *Allow the VCAT to explore in-depth how measurement services activities are currently managed and prioritized across NIST.*

# Proposed approach

Small breakout groups (2-3 VCAT members each) will have the opportunity to visit 3 divisions at NIST to conduct a minor assessment of selected measurement services across NIST.

1. Ionizing Radiation – Calibration services impacting healthcare, and medical imaging
2. Analytical Chemistry – Standard reference materials impacting multiple sectors including food, healthcare, and the environmental monitoring
3. Manufacturing Metrology – Calibration services related to mass, force, and acoustical measurements

VCAT will then use these separate assessments to draw general conclusions about the measurement services and as a basis for responding to NIST's proposed assessment framework.

# Assessment questions

- How are needs for measurement services identified?
- What level are the industry-NIST contacts?
- How is the portfolio of services prioritized and managed?
- How are the ongoing research programs linked to the development of new services and improvement of existing services?
- How is performance measured?
- How is the measurement service mission incentivized?
- How are measurement services resourced?
- What is the breakout of resources between measurement service provision and fundamental measurement science R&D?
- How are activities coordinated across NIST?
- How are measurement services factored into intramural and institutional initiatives?
- Are measurement services relevant to national needs? How is such relevance measured?