VISITING COMMITTEE ON ADVANCED TECHNOLOGY (VCAT or Committee)
MINUTES, June 10-11, 2025
In-Person Meeting

ATTENDANCE:

Visiting Committee Members Attending
Broz, Joseph*(virtually)*
Chakrabarti, Gaurab* *(virtually)*
Fox, Glenn
Holland, Michael
Matusow, Jason (Chair)
Meszaros, Jacqueline (Jack)
Murray, Cherry
Pierpoint, Mark (Vice Chair)

Designated Federal Officer
Shaw, Stephanie

NIST Leadership Board
Banovic, Stephen
Beers, Kathryn (Kate)
Boehm, Jason
Brockett, Del
Brown, Hannah
Burkhardt, Craig
Chin, Joannie
David, Lindra
Fangmeyer, Robert (Bob)
Feldman, Ari
Folk, Alex
Kushmerick, James
Lin, Eric
Rao, G. Nagesh
Stine, Kevin
Sunder, S. Shyam
Szakal, Christopher
Wright, Andrew

NIST Staff
Averill, Jason
Bell, Glenn
Boeckl, Kaitlin (Katie)
Boyens, Jon
Buchanan, Kerrianne
Chambers, Alicia
Chua, Julia
Coder, Jason
Coolbroth, Dana
Evans, Heather
Fraser, Jerry
Gettings, Katherine
Huergo, Jennifer
Incognito, Christian
Ivy, Nahla
Jones, Alec
Lane, Anne
Lawson, Jeremy
Leaman, Dana
Lin-Gibson, Sheng
Mitrani-Reiser, Judith
Newton, Thomas (Tom)
Pena-Alcantara, Amnahir
Popkin, Gabriel
Press, Rich
Przybocki, Mark
Putorti Jr., Anthony (Tony)
Reidy, Kari
Rogers, Kelley
Sager, Roby
Santos, Danielle
Sberegaeva, Anna
Schlenoff, Craig
Sofka, Holly
St. Pierre, James (Jim)
Stambaugh, Corey
Tarlov, Michael (Mike)
Tran, Kimmai
Van Den Berg, James
Vanek, Anita
Ventura, Jasmine
Wong, Jacob

Tuesday, June 10, 2025
Day 1 video found here.

SESSION I: DIRECTOR'S OFFICE UPDATES AND OUTLOOK

Call to Order – *Mr. Jason Matusow – Chair, VCAT*

Mr. Jason Matusow, the VCAT Chair, called the meeting to order at 9:00 a.m. ET. He began by highlighting meeting logistics, taking roll call, and then introduced Mr. Craig Burkhardt, the Acting Undersecretary of Commerce for Standards and Technology and Acting NIST Director, for his opening remarks and announcements.

NIST Announcements – *Mr. Craig Burkhardt – Acting Undersecretary of Commerce for Standards and Technology and Acting NIST Director*

Mr. Craig Burkhardt began by discussing his personal and professional background, along with highlighting his work as a science and technology attorney and the work he completed with NIST as the head lawyer on the World Trade Center Investigation. He finished by highlighting the great alignment NIST has with the President's Science Agenda, and a broad overview of NIST's future in these priority areas.

For more information, see the presentation slides here.

Discussion. The group discussed the following topic:

- Examples of previous goals and new goals that accelerate progress in NIST's priority areas.

NIST's Alignment with Administration Priorities and Future of NIST Overview & Discussion – *Dr. S. Shyam Sunder – Associate Director for Laboratory Programs, Dr. Christopher Szakal – Acting Director, Program Coordination Office*

Dr. Sunder summarized NIST's history, mission, and unique role, along with highlighting priority areas and how these areas align with the Administration's science and technology priorities. He then highlighted NIST's current approach to both artificial intelligence (AI) and quantum information science/technology, followed by detailing the plans to create two Emerging Technology Accelerators, one focused on AI and the other in quantum information science/technology. He described these Accelerators as following a hub-and-spoke model that will leverage cross-cutting NIST and private sector mission-aligned capabilities, demonstrate technology adoption impacts in 3-4 years, and follow a portfolio-based program approach.

For more information, see the presentation slides here.

Discussion. The group discussed the following topics:

- Both industry's and NIST's role in the hub-and-spoke model,
- Measures of success for industry's adoptions of NIST technologies,
- Partnerships with other agencies to drive success for the hub-and-spoke model,
- Where standards work fits within the hub-and-spoke model,
- Staffing plan alignment with the overall technology-based focus,
- Investments into the Acceleration Centers compared to other NIST activities, and
- Leveraging external partnerships.

Focus on AI and Quantum Technologies & Discussion – *Mr. Kevin Stine – Director, Information Technology Laboratory, Dr. James Kushmerick – Director, Physical Measurement Laboratory*

Dr. James Kushmerick began by describing NIST's unique role in quantum, highlighted NIST's three joint institutes, and detailed the vision for the Quantum Acceleration Center. Mr. Kevin Stine continued by describing NIST's vision for AI over the next three to four years, along with detailing how the AI Acceleration Center would operate between NIST, the Center for AI Standards and Innovation (CAISI), and external industrial partners.

Discussion. The group discussed the following topics:

- Specific focus areas for the AI Acceleration Center,
- The role and dynamic of standards in the Acceleration Center models,
- The balance of the pressures for quick outcomes with long-term research,
- Metrics for determining success and developing goals for the Acceleration Centers to both drive the research and for communicating impacts,
- Addressing the existing facilities, maintenance, and upgrades needed to be competitive in priority areas and retain top talent,
- The balance of what NIST will be responsible for in the Acceleration Centers versus what external partners will be supporting, and
- Setting up stretch goals, even those that can fail, to drive research.

NIST's Response to VCAT Annual Report Recommendations – *Dr. Jason Boehm – Chief of Staff*

Dr. Jason Boehm addressed NIST's response to fifteen of the VCAT's 2024 Annual Report Recommendations. These responses highlighted actions NIST has already taken, along with future actions NIST will take, to fully implement the committee's recommendations.

For more information, see the presentation slides here.

Discussion. The group discussed the following topics:

- Areas for the VCAT to focus on to add the most value,
- Which recommendation topic areas were the most helpful,
- Balancing of new priority areas with NIST's core mission, and
- Using the pre-existing relationships to help drive success quickly within the Acceleration Centers.

SESSION II: OPERATIONAL UPDATES

Safety Update – *Dr. Stephen Banovic – Acting Director, Office of Safety, Health, and Environment (OSHE)*

Dr. Stephen Banovic highlighted key changes in OSHE since the beginning of 2025, including the changing of management and reduced staffing levels. Despite these changes, Dr. Banovic emphasized that the OSHE mission has not changed, the progression of establishment and continuous improvement of NIST Safety Management Systems remains on track, and no degradation in customer services has been observed. Dr. Banovic also responded to the four VCAT Annual Report recommendations pertaining to safety, highlighting progress made towards implementation.

For more information, see the presentation slides here.

Discussion. The group discussed the following topics:

- Analysis of the increased injury rate,
- NIST Safety Day,
- Dissemination of the NIST Safety Culture Survey,
- Reporting of ergonomics-related injuries, and
- Use of technology, like AI, to simplify safety-related paperwork and increase efficiency.

SESSION III: LABORATORY PROGRAMS UPDATES

Biotechnology and Biomanufacturing Update and Alignment with Administration Priorities – *Dr. Christopher Szakal – Acting Director, Program Coordination Office, Dr. Sheng Lin-Gibson – Chief, Biosystems and Biomaterials Division, Dr. Michael Tarlov – Chief, Biomolecular Measurement Division*

Dr. Christopher Szakal began by highlighting the recommendations for the Department of Commerce (DOC) in the National Security Commission on Emerging Biotechnology's (NSCEB) Action Plan, including funding recommendations for NIST, along with the alignment of NIST's work in biotechnology with Administration priorities. Dr. Sheng Lin-Gibson then gave an overview of NIST's emerging biotechnology and biomanufacturing programs, including NIST's work with Genome in a Bottle, the genome editing program, nucleic acid sequence screening, the testing of AI biodesign tools, and the convergence of biotechnology, AI, and automation. Finally, Dr. Michael Tarlov gave an overview of the NIST Biomanufacturing Program, including the progression of NIST's reference materials, how these reference materials drive the adoption of emerging analytical technologies, and an introduction to the Center for Biomeasurement and Biomanufacturing Innovation (CBBI) at the Institute for Bioscience and Biotechnology Research (IBBR) along with the biomanufacturing work completed there with these reference materials.

For more information, see the presentation slides here.

Discussion. The group discussed the following topics:

- How NIST is prioritizing specific biomanufacturing needs based on National priorities,
- Supporting national security through biotechnology,
- Internal collaborations and investments to support the biotechnology efforts, including with AI,
- Structured internal practices for the use of AI, including operational use,
- Funding for the biomanufacturing test bed,
- Applying both AI and Machine Learning to NIST's work in biotechnology, and
- NIST's role in international standards relating to biotechnology.

SESSION IV: EXTERNAL ENGAGEMENTS UPDATE

Standardization Center of Excellence Update – *Ms. Dana Leaman – Acting Director, Standards Coordination Office*

Ms. Dana Leaman gave an overview of the Standardization Center of Excellence, ASCET (Advancing Standardization for Critical and Emerging Technologies) – awarded to ASTM International, that will support U.S. engagement in international standardization for critical and emerging technologies (CETs) that are essential to U.S. economic competitiveness and national security. She discussed the scope and the four main lines of effort of the Center, along with the benefit of the partnership to the NIST mission and the current phased approach to achieving the goals of the Center.

For more information, see the presentation slides here.

Discussion. The group discussed the following topics:

- Metrics to measure success for the Standardization Center of Excellence,
- Keeping an updated and relevant information hub,
- Financial support of the Center,
- Using long-term studies to measure impact that the Center is having on the standards community,
- Relationship between the center and the formal standardization bodies,
- External partners with the Center,
- Using the Center to organize U.S. CET standards efforts, and
- The different approaches needed for CET standards and NIST's role in standardization efforts.

Manufacturing USA Update and Alignment with Administration Priorities – *Dr. Eric Lin – Acting Associate Director for Innovation and Industry Services*

Dr. Eric Lin began by describing how NIST's programs in advanced manufacturing align with the Administration's priorities and is rooted in the vision that led to the establishment of NIST. Dr. Eric Lin also gave an overview about the Manufacturing USA program, including the Department of Commerce-led Institutes, and recent reports that have been released. He then concluded by highlighting NIST's vision and strategy for accelerating technology adoption through both the Laboratories at NIST and the Manufacturing USA National Network.

For more information, see the presentation slides here.

Discussion. The group discussed the following topics:

- Granularity on SMART USA's current status, governance model, and members,
- Integration of bioindustrial manufacturing into the Manufacturing USA Institutes,
- Integration of workforce development in Manufacturing USA, and
- International collaborations.

SESSION V: DAY 1 CLOSING SESSION

VCAT Topic Suggestions Discussion for Upcoming October 2025 Meeting – *Mr. Jason Matusow – Chair, VCAT*

Mr. Jason Matusow asked the VCAT members for input into any topic suggestions they would want to hear about during the next VCAT Meeting in October 2025. Topics surfaced are included in the discussion section below.

Discussion. The group discussed wanting to discuss and hear an update on the following topics at the October 2025 meeting:

- The Acceleration Centers,
- Cybersecurity
- Safety
- Budget
- CHIPS Research & Development, and
- Leadership and organizational changes.

Wrap-up

There were no public comments. In closing for the day, Mr. Jason Matusow thanked the VCAT members for their participation and all of the people who supported the meeting.

Adjournment

The meeting was adjourned at 4:49 PM.

Wednesday, June 11, 2025
Day 2 video found here.

SESSION I: BUDGET SESSION

Call to Order – *Mr. Jason Matusow – Chair, VCAT*

Mr. Jason Matusow, the VCAT Chair, called the meeting to order at 9:00 a.m. ET. He began by taking roll call before handing the meeting over to Dr. Christopher Szakal.

Budget Updates and Discussion – *Dr. Christopher Szakal – Acting Director, Program Coordination Office*

Dr. Christopher Szakal began talking about the NIST appropriations process and timeline. He then detailed the Fiscal Year (FY) 2025 enacted budget for each of the three main budget accounts, Scientific and Technical Research and Services (STRS), Construction of Research Facilities (CRF), and Industrial Technology Services (ITS), including changes from FY 2024 enacted levels and planned new investments in artificial intelligence (AI) and quantum information science/technology. He also highlighted broad staffing changes in FY 2025, followed by an overview of the FY 2026 President's Budget Request (PBR) and a look forward to the FY 2027 budget planning process.

For more information, see the presentation slides here.

Discussion. The group discussed the following topics:

- Output metrics and alignment with the strategy,
- Options to consolidate and retreat from buildings/wings as a way to lower costs,
- Cataloging authorized, but not appropriated, Congressional mandates,
- Strong, impactful communications surrounding budgetary limitations and safety impacts,
- Budgetary implications from staff departures, and
- Strategic planning for budgetary changes.

SESSION II: SPECIAL TOPIC HIGHLIGHT

Champlain Towers South Investigation and California Wildfires Update – Mr. Jason Averill – Deputy Director, Engineering Laboratory

Mr. Jason Averill gave a detailed overview of the Champlain Towers South Investigation, including the background of the disaster, initial evidence collection, photographic and video evidence of the collapse timeline, as-built conditions and testing, and potential recommendation topics. He then gave an overview of the 2025 Los Angeles County Fires, including a summary of the event and the objectives and goals of the NIST's Reconnaissance Team deployment. He finished by giving an overview of the Wildland-Urban Interface (WUI) Fire Evacuation and Sheltering Considerations – Assessment, Planning, and Execution (ESCAPE) methodology, which is designed to leverage the lessons learned from the Camp Fire to enhance life safety of residents during WUI Fire evacuations.

For more information, see the presentation slides here.

Discussion. The group discussed the following topics:

- Resources for future disaster events,
- Guidance documents for fires and buildings and the recommendations that stem from them,
- Coordination with other groups and agencies, and where NIST plays a role,
- Timeline for recommendations being implemented after disaster,
- Alignment with resilience efforts,
- Number of people involved in the Champlain Towers South Investigation,
- Involvement in data simulating potential fire risk areas, and
- Supplemental funding and planning.

SESSION III: CORE MISSION SESSION

Measurement Services Update – *Dr. Dr. James Kushmerick – Director, Physical Measurement Laboratory and Dr. Kathryn (Kate) Beers – Director, Material Measurement Laboratory*

Dr. James Kushmerick began by giving an overview of the calibration services that NIST offers in nine areas, along with calibration market statistics, and modernization efforts. Dr. Kate Beers continued by giving an overview on NIST's Standard Reference Materials (SRMs), including sales, impact, innovations, and Research Grade Test materials (RGTMs). She concluded by describing NIST's Standard Reference Data (SRD), how to obtain the SRD, impacts, and data delivery innovations.

For more information, see the presentation slides here.

Discussion. The group discussed the following topics:

- Reinvestment strategies for instrumentation,
- Survey of what instruments NIST has to help guide re-investments,
- How standards are used in advanced manufacturing,
- Costs used as "chargeback" framing and NIST's cost model,
- NIST's licensing efforts,
- Asking Trade Associations for aggregate number of follow-on analyses to support the multiplier effect on the secondary market, and
- Ensuring correct pricing that is fully loaded with facilities and administrative costs.

SESSION IV: CLOSING SESSION

Open Topic Discussion/Wrap-up – *Mr. Jason Matusow, Chair, VCAT*

To close the second day of the VCAT meeting, follow-up responses from the VCAT were discussed, along with many expressions of gratitude before the meeting was adjourned.

Adjournment

The meeting was adjourned at 12:15 PM.

I hereby certify that to the best of my knowledge; the forgoing minutes are accurate and complete.

Ms. Stephanie Shaw, Designated Federal Officer, NIST Visiting Committee on Advanced Technology
Mr. Jason Matusow, Chair, NIST Visiting Committee on Advanced Technology