NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
U.S. DEPARTMENT OF COMMERCE

Standards and Technology Driven Public-Private Partnership Models

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July 2024

U.S. Standardization "System"

Voluntary, decentralized, and market-driven

Let by private sector

Public-private partnership

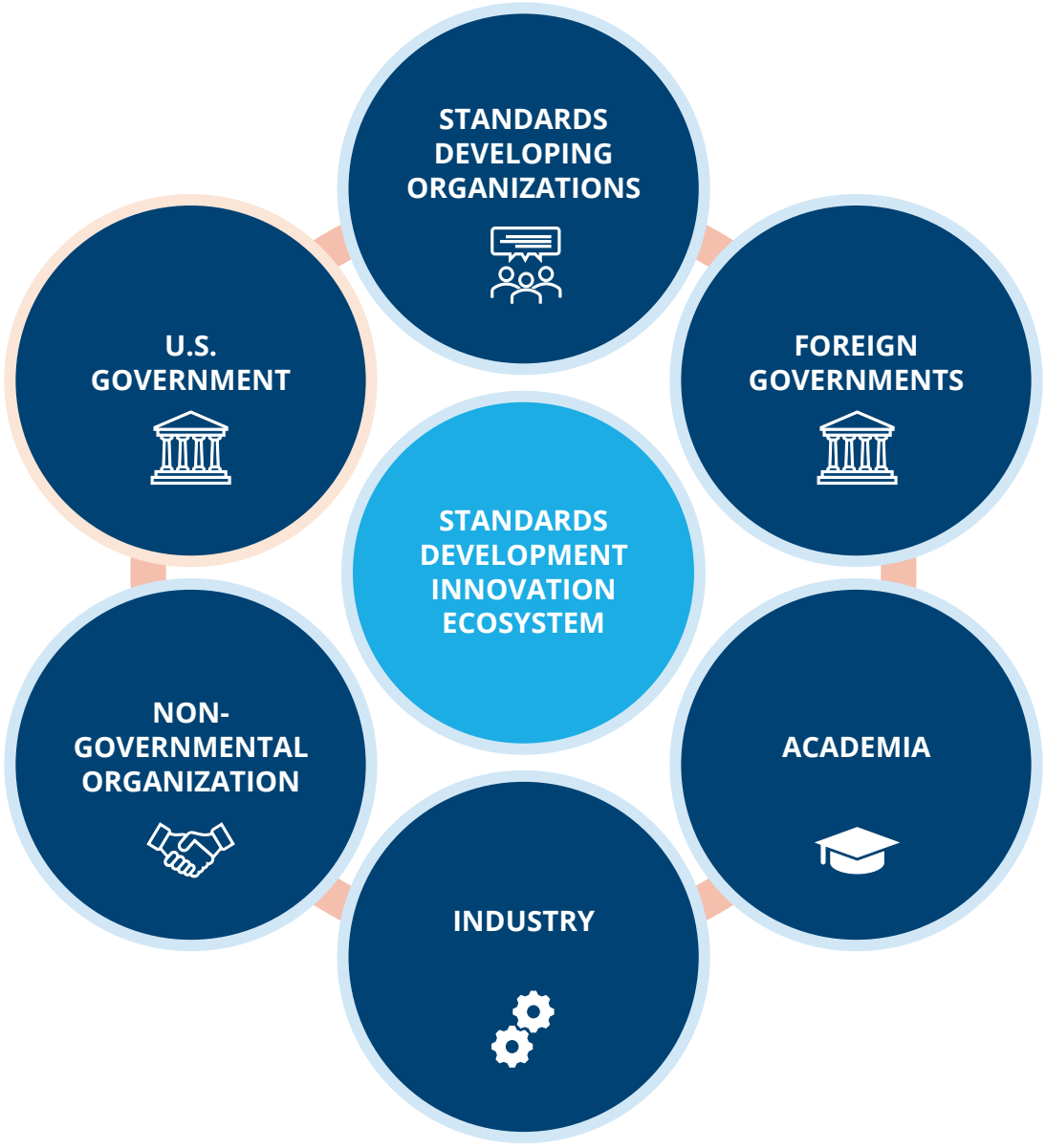
Differs from centralized standards systems in other countries

Reflects U.S. culture and public-private sector dynamics

Relies on cooperation, communication, and parity among diverse stakeholders

Innovation Stakeholders

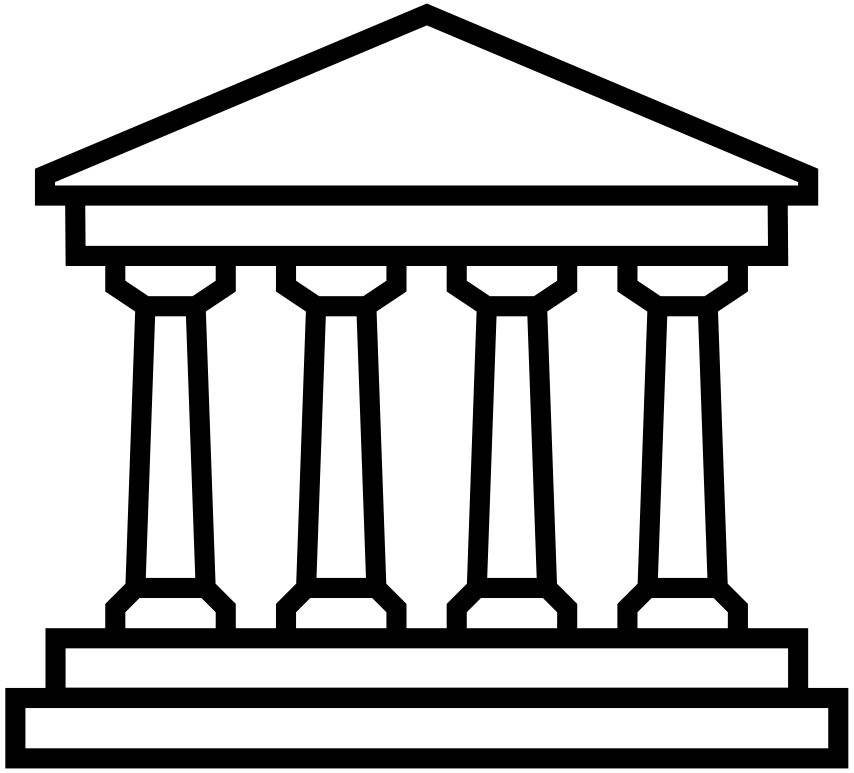
U.S. leadership in the U.S. innovation ecosystem requires collaboration among a diverse set of participants.



USG Standards Mandate

USG law and policy requires Federal agencies to use **international**, **voluntary**, **consensus** standards in their procurement and regulatory activities, except where inconsistent with law or otherwise impractical

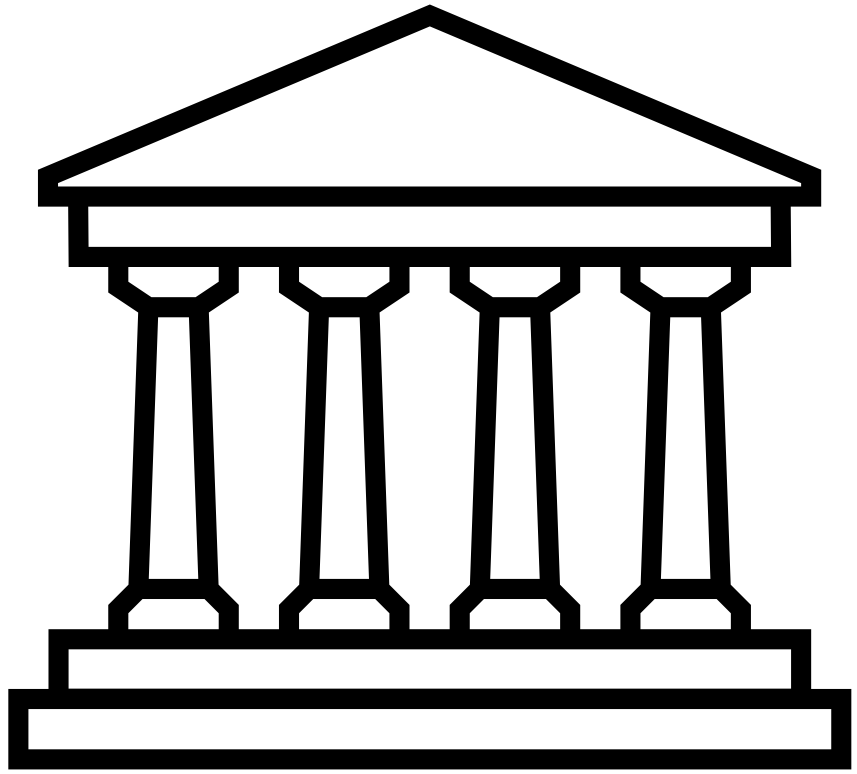
- National Technology Transfer and Advancement Act (NTTAA)
- OMB Circular A-119
- Trade Agreements Act (TTA) of 1979
- M-12-08, Principles for Federal Engagement in Standards Activities to Address National Priorities (memo from three EOP offices: OSTP, OMB/OIRA and USTR)



USG Technology Transfer Mandate

Federal Technology Transfer is transfer of knowledge developed by Federal agencies concerning tools, materials, application techniques and problem-solving methods, to the private sector for commercialization

- Stevenson-Wydler Technology Transfer Act of 1980
- Bayh–Dole Act or Patent and Trademark Law Amendments Act, December 12, 1980
- CRADA Statute 15 USC 3710a (tech transfer)

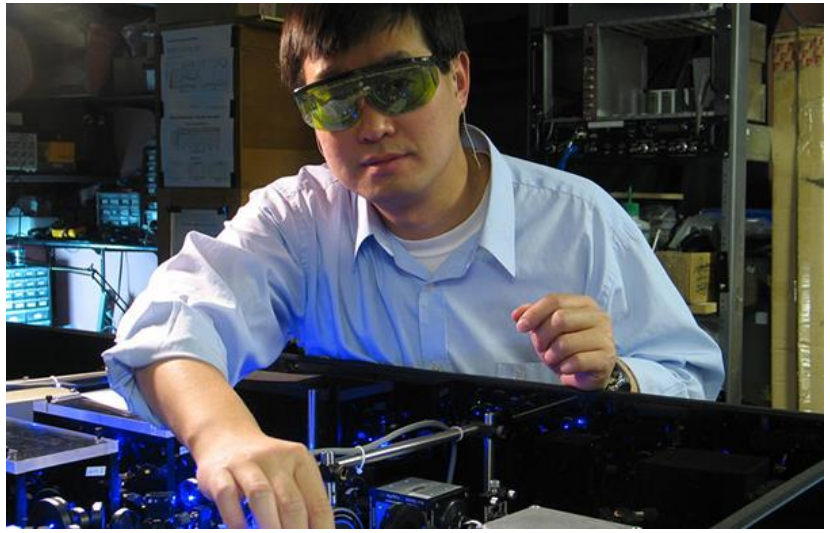


How does USG get Technology to Transfer?

- By-products of mission-oriented R&D at Federal labs
- Developed at universities and private sector firms through Federally funded collaborations and contract projects
- Developed through non-R&D mission-related engineering and technical activities, e.g., equipment maintenance, performance testing, regulatory compliance, enforcement investigations
- Clever people working on routine technical problems often come up with innovative solutions and discoveries having commercial value

NIST Mission

To promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life



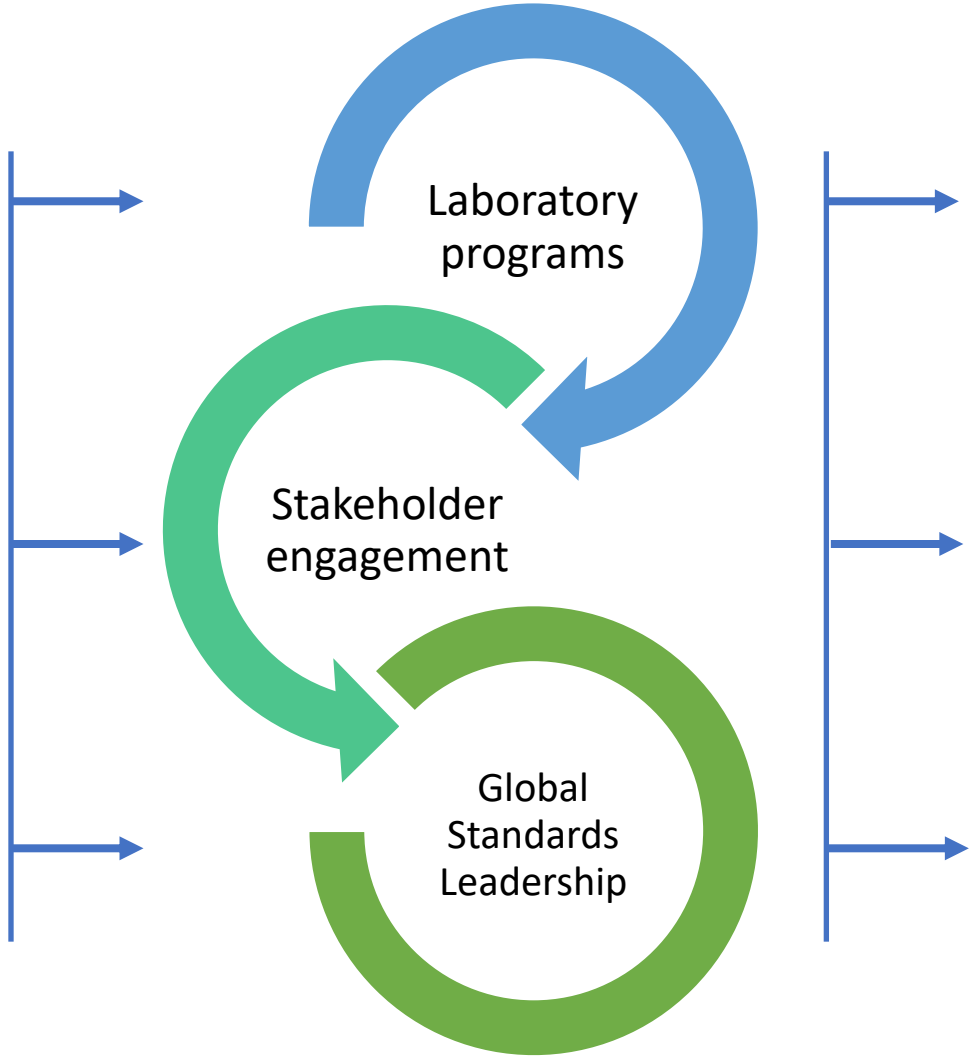
NIST is the US Government's premier agency for measurement, research, and standards development

From Laboratory Programs to Standards

NIST Core Laboratory Capabilities

Consortia & CRADA partners, USG, NMIs, NGOs & other strategic partnerships

SDOs: ISO, IEC, OECD, WHO, ASTM, PDA, etc.
Professional societies



In house capabilities & expertise to support the rapidly evolving technologies

- **Pre-competitive technology, measurement solutions, reference materials and ref. data, etc.**
- **Ongoing bilateral collaborations with industry partners**

- **Supports innovation and commerce**
- **Supports WHO & global regulatory convergence**

Benefits of Using Consortia CRADA

A consortia CRADA allows to work with multiple industry partners at once on a single project with benefit to all parties. Consortia are particularly useful for developing standards/references and addressing issues that affect an entire industry sector.

- Ease of entering into a formal arrangements
- Access to Federal laboratories' expertise, capabilities, and technologies to foster innovation and improve the Unites States' economic, environmental, and social well-being
- Access to IP resulting from the CRADA effort
- Reduced costs, time, and risk of R&D to achieve mission and/or commercial goals by leveraging external expertise, ideas, investment, and resources

Examples Various Models of PPP that enable standards development at NIST

	Mechanism	Stakeholders	Drivers for partnering
Quantum Economic Development Consortium (QED-C)	Consortium under Other Transaction Authority	SRI International, DOE, 180 companies	Support the emerging quantum-based industry
National Institute for Innovation in Manufacturing Biopharmaceuticals (NIIMBL)	Cooperative Agreement	USA Bio Consortium (150 members), University of Delaware	Accelerating innovation in biopharmaceutical manufacturing industry sector
National Cybersecurity Center of Excellence (NCCoE)	FFRDC + CRADA + MOU	MITRE, industry and academia participants in projects, corporation of technology partners	Address industry's most pressing cybersecurity issues
The Center for Statistics and Applications in Forensic Evidence (CSAFE)	Cooperative Agreement	Led by Iowa State University with partners Carnegie Mellon University, University of Virginia, and University of California-Irvine.	Establish scientific foundation for analytical techniques used in forensics
IBBR	Cooperative Agreement, MOU	University of Maryland, College Park; and University of Maryland, Baltimore	Advance measurement science in biotechnology