

NIST...Enabling the Future: Innovation, Trade, Security, Jobs

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Standards and Technology**

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National Institute of Standards and Technology

NIST's mission is to develop and promote measurement, standards, and technology to enhance productivity, facilitate trade, and improve the quality of life.

Core of the NIST Portfolio includes

- NIST Laboratories -- National measurement standards
- Advanced Technology Program
- Manufacturing Extension Partnership
- Baldrige National Quality Award



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Strong Relationships with Industry

Industry is a vital partner in accomplishing NIST's mission:

Planning

- workshops
- roadmaps

Dissemination

- products
- measurements labs
- standards committees

Execution

- consortia
- centers
- CRADAs
- guest researchers

Assessment

- NRC Board on Assessment
- Visiting Committee for Advanced Technology

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Enabling Innovation

- **“Excellence in measurement science, driven by NIST, positions U.S. industry and universities to more quickly solve problems.”—IRI**
- “Consequently, additional research in metrology at NIST is critical to future chip development.”—SIA
- “NIST stimulates and supports the development of the cutting-edge technology infrastructure needed to strengthen and safeguard America’s economic foundations and security capabilities.”—BIO

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Enabling Innovation

NIST Laboratories

Providing the foundation for discovery and innovation

- Nanomanufacturing and Nanometrology
- Quantum Computing and Communications
- Lab-on-a-Chip
- DNA Technologies



Baldrige National Quality Program

Premier U.S. Criteria and Award for performance excellence and quality achievement.

- Manufacturing
- Service
- Small Business
- Education
- Health Care



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Enabling Innovation

Advanced Technology Program

Fosters innovation through cost shared funding of high risk technologies

- Auto Body Consortium - improved fitting of parts to save money for manufacturers and consumers
- Tissue Engineering - new materials to repair damaged ligaments and tendons: several billion dollar impact
- "DNA Chips" - new technology for cheap, rapid genetic analysis
- HDTV Joint Venture – project developed critical technologies, such as software-based tools permitting end users to browse, retrieve, and view HDTV programs



Manufacturing Extension Partnership Program

- Serves as a nationwide network providing hands-on help to smaller manufacturers to become globally competitive
- Provides access to and encourages the use of innovative manufacturing technologies and processes



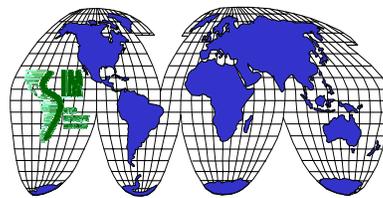
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Facilitating International Trade

NIST Participation

- International Standards Organizations
- Technical Trade Barrier Issues
- International Measurement System



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Contributing to Public Safety and Security

Critical Technical Contributions

- **Standards for Ballistic-Resistant Armor**—2,700 Casualties Prevented
- **Advanced Encryption Standard**—Secure electronic transactions for millions of Americans
- **Standards for Metal Detectors**—Improved safety in airports, courthouses
- **Standards for DNA Analyses**—Accuracy goes up, costs go down
- **Interoperability Standards for Fingerprint Databases**—FBI system can link to the rest of the world

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Summary

- NIST programs have a tremendous impact on U.S. job creation, innovation, trade, and security.
- NIST has been successful in achieving its mission through strong partnerships.