

Importance of an Open Research Environment

**VCAT Meeting: October 18, 2016
Boulder, CO**

Willie E. May

Under Secretary of Commerce for Standards and Technology and NIST Director

NIST: Who We Are and What We Do in 2016

NIST is a world-class scientific and technical agency uniquely focused on driving innovation and economic competitiveness through:

- **a world-leading scientific research program** – measurement, technology, and standards solutions to our stakeholders
- **a Manufacturing Extension Partnership** – focused on strengthening our nation's small and medium manufacturers --- thousands of small manufacturers in 50 states and Puerto Rico rely on the NIST MEP program for hands-on technical and business assistance to assist them in competing in the global marketplace
- **an Advanced Manufacturing National Program Office** – facilitating expansion of a nationwide network of 15 Manufacturing Innovation Institutes
- **a Baldrige Performance Excellence Program** – used to assess performance excellence in the nation's companies and organizations. Criteria from the BPEP are recognized, utilized, and emulated around the world

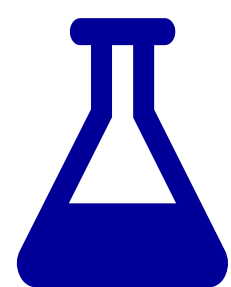
We have a great and unique Mission and are:

- a key player on the Administration's Innovation Team
- the nation's go-to agency for measurements, standards, and technology
- receiving bipartisan and bicameral support



NIST At-a-Glance

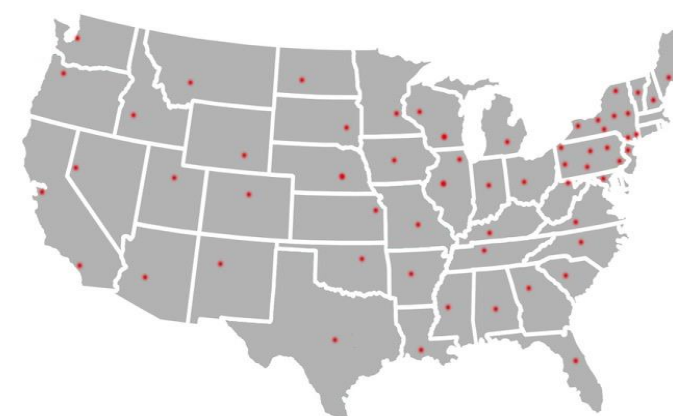
Major Assets, Partnerships, People, Budget



**2 Large
Research
Campuses**



Gaithersburg, MD— **62** bldgs. **578** acres
Boulder, CO—**26** bldgs., **208** acres



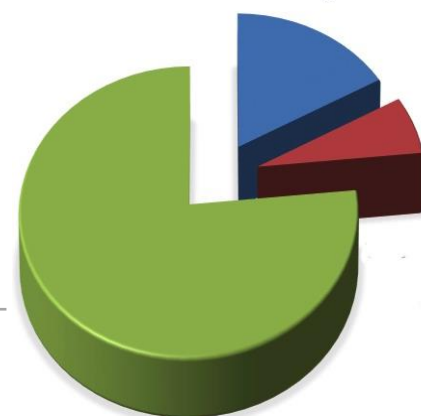
**Partnerships
In Every State**



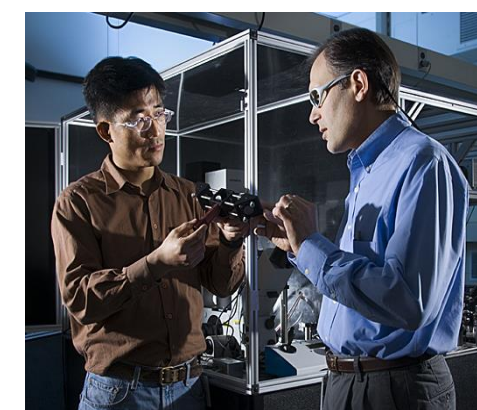
60 Manufacturing Extension Centers
10 joint institutes/Centers of Excellence



**FY 2016
Appropriations.
\$964 Million**



NIST labs, **\$690 M**
Industrial Technology Services, **\$155 M**
Construction of Research Facilities, **\$119 M**



**People:
Employees
& Associates**

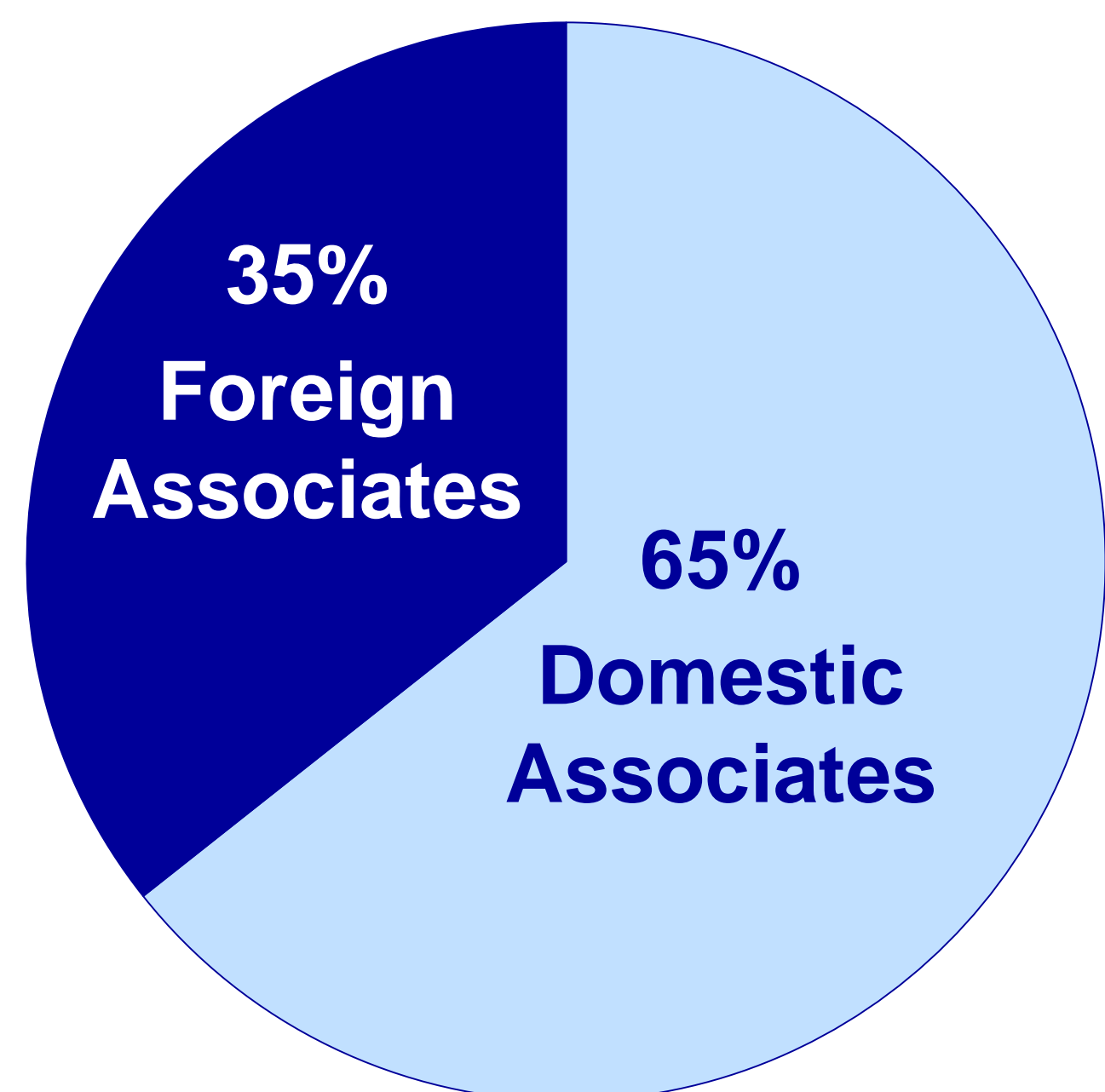
~3,400 Federal Employees
~3,970 Guest Researchers & other NIST Associates
~ 1400 foreign Guest Scientists

Additional Resources

~ **\$120 M** from other government agencies
~ **\$50 M** from reimbursable services

NIST Research Augmented by Guest Scientists

We more than double our research talent via on-campus research collaborations



DOMESTIC		2574
Academia	1851	
Industry Total	859	
<i>Small Business</i>	623	
<i>Large Business</i>	236	
Other Agency	404	
FOREIGN		1395
Academia	386	
Industry	34	
Government (inc. NMIs)	118	
TOTAL for FY 2016		3969

NIST: A Premier Scientific Institution

- Work has resulted in 4+1 Nobel Prizes since 1997
 - 2 MacArthur Fellowship winners since 2003
 - National Medal of Science winners in 1998 and 2007
 - Isaac Newton Medal in 2014
 - Service to America Award winners in 2013 and 2015
- ~ 10 National Academy Members
~ 120 National Society Fellows
~ 60 National/International Awards/yr



Dan Madrzykowski
2013 Service to America
Award



Ron Ross
2015 Service to America
Award



Debbie Jin
2003 MacArthur Fellow
2013 L'Oreal/UNESCO
"For Women in Science"
award
2014 Isaac Newton Medal



Ana Maria Rey
2013 MacArthur
Fellow



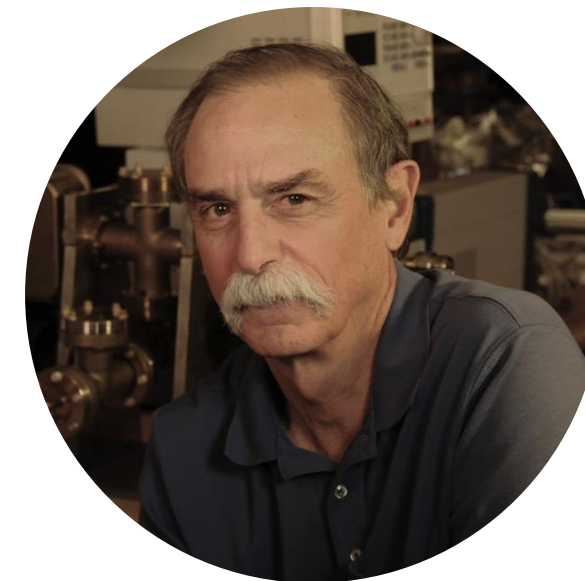
Bill Phillips
1997 Nobel Prize in Physics



Eric Cornell
2001 Nobel Prize in Physics



John Hall
2005 Nobel Prize in Physics



David Wineland
2012 Nobel Prize in Physics
2007 National Medal of Science



Dan Shechtman
2011 Nobel Prize in
Chemistry
based on work while
Visiting Scientist at NIST



John Cahn
1997 National Medal of Science
and 2011 Kyoto Prize
in Materials Science