

# **Director's Update**

**Visiting Committee on Advanced Technology  
February 8-9, 2012**

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**Dr. Patrick Gallagher**

**Under Secretary of Commerce for Standards and Technology and  
NIST Director**

# Overview

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- Agenda Review
- Departing VCAT members
- Budget update
- FY12 program changes
- TIP and Baldrige updates
- Review of major issues:
  - Standards
  - Advanced manufacturing
  - Cybersecurity
  - Technology transfer
- NIST priorities and 3-year plan
- Planning at NIST

# VCAT Meeting Agenda Review

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## Day 1

- **Overview and Discussion of the Department of Commerce Priorities**

U.S. Commerce Secretary John Bryson



- **NIST Update**

Pat Gallagher, Under Secretary of Commerce for Science and Technology and NIST Director



- **Overview of the Administration's Priorities in Advanced Manufacturing**

Jason Miller, Special Assistant to the President for Manufacturing Policy,  
National Economic Council, Executive Office of the President

- **NIST and the Advanced Manufacturing Partnership National Program Office**

Mike Molnar, Chief Manufacturing Officer, NIST



- **Update on the NSTC Subcommittee on Standards**

Mary Saunders, Director, Standards Coordination Office, NIST



- **FedRAMP Overview**

Chuck Romine, Director, Information Technology Laboratory (ITL), NIST



# VCAT Meeting Agenda Review

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## Day 1 (Continued)

- **Overview of the National Cybersecurity Center of Excellence**

Donna Dodson, Chief, Computer Security Division and Deputy Chief  
Cybersecurity Advisor, ITL, NIST



- **Overview of the National Strategy for Trusted Identities in Cyberspace (NSTIC)  
National Program Office**

Jeremy Grant, Senior Advisor, NSTIC, ITL, NIST



- **VCAT Administrative Session – Draft Initial Observations, Findings and  
Recommendations for the 2011 VCAT Annual Report**

## Day 2

- **Administration's S&T Priorities and Directions**

Tom Kalil, Deputy Director for Policy, Office of Science and Technology Policy,  
Executive Office of the President



- **Presentation of Initial Observations, Findings and Recommendations for  
the 2011 VCAT Annual Report to the NIST Director**

Vinton Cerf, VCAT Chair



# THANK YOU to Departing VCAT Members

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**Thomas Baer**

Term: Mar 1, 2006 – Feb 29, 2012

Chair of VCAT Biosciences Subcommittee, 2007

**Paul Fleury**

Term: Mar 1, 2006 – Feb 29, 2012

Chair of Nanotechnology Subcommittee, 2007

Member of the VCAT Subcommittee on Ad. Manufacturing, 2011



**Michael McRobbie**

Term: April 1, 2010 – Jan. 26, 2012

Member of the VCAT Subcommittee on Public Safety Networks, 2011

# Budget Update

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## FY2012 Budget

- FY 2012 NIST budget enacted Nov. 18, 2011
- Provides additional \$70M for NIST laboratory programs, decreases in ITS and CRF.

## FY2013 Request

- President's request scheduled to be released on February 13<sup>th</sup>.

## FY2014 Request

- Planning for FY 2014 has begun with development of new program plans by OUs
- NIST Request to DOC will be submitted in May

# NIST FY 2012 Budget Summary

## NIST FY 2011 - FY 2012 Enacted (Dollars in millions)

|                                  | FY 2011<br>Enacted           | FY 2012<br>Enacted           |
|----------------------------------|------------------------------|------------------------------|
| <b>STRS</b>                      | <b>\$497.4</b> <sup>1/</sup> | <b>\$567.0</b> <sup>2/</sup> |
| Laboratory Programs              | 463.2                        | 518.0                        |
| Baldrige Perf. Excellence Prg.   |                              |                              |
| Corporate Services               | 18.8                         | 18.5                         |
| Stds Coord. and Spec. Prgs.      | 15.4                         | 30.5                         |
| Congressional Projects           |                              |                              |
| <b>ITS</b>                       | <b>\$182.8</b> <sup>1/</sup> | <b>\$128.4</b>               |
| Advanced Manu. Tech. Consort.    |                              | 0.0                          |
| Technology Innovation Prg.       | 44.8                         | 0.0                          |
| Baldrige Perf. Excellence Prg.   | 9.6                          | 0.0                          |
| Hollings Manuf. Ext. Prg.        | 128.4                        | 128.4                        |
| <b>CRF</b>                       | <b>\$69.9</b>                | <b>\$55.4</b>                |
| Const. & Major Renovations       | 12.0                         | 13.9                         |
| Saf. Cap., Maint., Maj. Repairs  | 57.9                         | 41.5                         |
| Competitive Const. Grant Prg.    |                              |                              |
| Congressional Projects           |                              |                              |
| <b>Total, NIST Discretionary</b> | <b>750.1</b>                 | <b>750.8</b>                 |

<sup>1/</sup> Adjusted transfer of Baldrige Perf. Excellence Prg. From STRS to ITS after the approval of NIST reorganization in FY

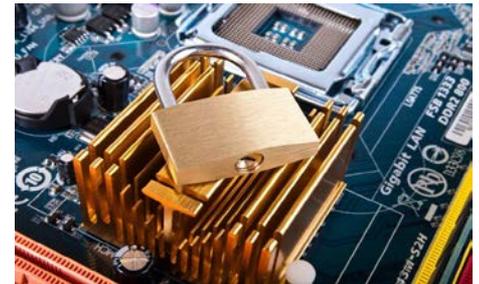
<sup>2/</sup> Includes \$10M for Cybersecurity Center of Excellence and \$16.5M for National Strategy for Trusted Identities in Cybe

# NIST FY2012 Scientific and Technical Research Services Program Changes (+\$69.6M)

- **Tools for Manufacturing Competitiveness (+\$26.8M)**
  - Additive Manufacturing and Next Generation Robotics and Automation (+\$4M)
  - Advanced Materials for Industry (+\$4M)
  - Measurement Services and Standards to Support Biomanufacturing (+\$4M)
  - Measurements to Support the Manufacture and Production of Nanotechnology-based Products (includes nano-EHS) (+\$7M)
  - Advanced Manufacturing Planning Grants Program (+\$6.0M)
  - AMP National Program Office (+\$1.8M)
- **Measurement Services in Time and Electrical Measurements (+\$3.8M)**
- **Cloud Computing and Wireless Interoperability (+\$5.0M)**
- **Measurements and Standards to Support Increased Energy Efficiency and Reduced Environmental Impact (+\$2.5M)**
- **Measurements to Support Advanced Infrastructure Delivery and Resilience (+\$2.0M)**
- **Natl. Strategy for Trusted Identities in Cyberspace , NSTIC (+\$16.5M)**
- **Cybersecurity Center of Excellence (+\$10.0M)**
- **Postdoctoral Research Associateships Program (+\$3.0M)**



Credit: Kathie Koenig Simon



Courtesy: inhabitat.com

# NIST FY 2012 Industrial Technology Services Changes (-\$54.4M)

- **Manufacturing Extension Partnership (\$128.4M, +\$0M)**
  - Technology innovation and commercialization; environmentally sustainable business practices; renewable energy initiatives; market diversification; supplier development; and export opportunities for domestic manufacturers.
  - National Innovation Marketplace (\$2.5M)
- **Technology Innovation Program**  
(No FY 2012 appropriations, -\$44.8M)
- **Baldrige Performance Excellence Program**  
(No FY 2012 appropriations, - \$9.6M)
- **Advanced Manufacturing Technology Consortia (AMTECH)** – not funded in FY 2012



## NIST FY 2012 Industrial Technology Services Changes: MEP and cost-share STATUS UPDATE

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- Re-authorization of America COMPETES directed Comptroller General to examine cost-sharing structure between NIST MEP and state/local entities in funding of regional MEP centers
- In April of 2011 GAO produced a report entitled: *Factors for Evaluating the Cost Share of Manufacturing Extension Partnership Program to Assist Small and Medium-Sized Manufacturers*. The report made no recommendation
- NIST has conducted an internal study of the issue
- A decision memo for the Secretary is currently in process

# NIST FY 2012 Construction of Research Facilities Changes (-\$14.5M)

**Continues renovation of Building 1 in Boulder and preserves minimum resources needed for critical maintenance and repair**

## **Boulder Building 1 Renovation (\$13.9M, +\$1.9M)**

- Interior and exterior renovations of Wing 3

## **Safety, Capacity, Maintenance and Major Repairs, SCMMR (\$41.5M, - \$16.4M)**

- Major repair work required to maintain NIST facilities in acceptable working condition.
- Abatement of hazardous materials from site buildings and structures,
- Enable or maintain building environmental conditions required for meeting scientific requirements.



Credit: HDR Inc.



Credit: NIST

# Update on Technology Innovation Program

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|         | Agreements | FTEs | Close-out Costs (\$M) |
|---------|------------|------|-----------------------|
| FY 2012 | 48         | 45   | 6.5                   |
| FY 2013 | 41         | 5    | 1.2                   |
| FY 2014 | 20         | 2    | 0.5                   |

- Shutdown costs through FY 2014 will use STRS carryover and prior year de-obligations.
- Efforts underway to finalize a system and processes to preserve TIP's legacy and valuable information for future use.

# Update on Baldrige Performance Excellence Program

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## Transition to a New Business Model

- FY 2012 costs covered by carryover, de-obligated balances, and Foundation gift; 24% decrease in staffing to date.
- Foundation decision on future funding expected March 31, 2012
- Discussions in progress to build a national enterprise structure
  - Combining efforts of Baldrige Program and state programs
  - Partnering with the Baldrige Foundation and ASQ
- Focus on generating income
  - Sponsorships, Criteria sales, training fees, assessment fees
  - Baldrige Foundation is initiating a fundraising campaign
- Award ceremony will be held April 15<sup>th</sup>, 2012 with Quest for Excellence conference for 2010 and 2011 winners

# Overview of Major Issues: Standards Policy

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## NSTC Subcommittee on Standards

- Proposed subcommittee deliverables presented at June 30 meeting
- Framework report articulating and outlining USG role in U.S. standards, released by OSTP in Oct 2011.
- Impacts
  - Guidance for private sector about USG standards engagement
  - Framework for policy makers for use in defining standards needs
  - Best practices for agencies engaging in standards activities.
- Discussion on the role of standards in public safety, advanced manufacturing and health IT held on Jan 31 with U.S. CTO Aneesh Chopra.
- OSTP Fact Sheet “Fostering Open Innovation Through Technology, Measurements, and Standards” released Jan 31.

# Overview of Major Issues: Advanced Manufacturing

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- Administration priorities
- DOC focus on advanced manufacturing, Secretary Bryson's priorities
- AMTech Program
- Advanced Manufacturing Partnership National Program Office (AMP NPO)
- New lab funding in manufacturing



Credit: Carnegie Mellon Univ.



Credit: Heritage Global Partners

# VCAT Reports: Public Safety Network

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- Draft VCAT Report and Recommendations “*Desirable Properties of National Public Safety Network*” posted on NIST website.
- SPECTRUM Act introduced May 2011 recommends legislation to provide wireless spectrum resources to build a nationwide interoperable wireless public safety broadband network.
- Legislation introduced on Public Safety Wireless Communications Research and Development:
  - Directs NIST to work with the FCC, DHS, and NIJ to conduct research and develop standards, technologies and applications for wireless public safety communications.
  - Following approval by OMB, Wireless Innovation (WIN) Fund of up to \$300M to be made available to the NIST Director to implement this research program



Credit: J. Emilio Flores/Getty Images

# Cybersecurity

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- NIST continues to be a world leader in development of cybersecurity standards and guidelines and advancement of stronger, hacker-resistant cryptography standards.
- NIST programs in Cybersecurity include:
  - National Program Office for the National Strategy for Trusted Identities in Cyberspace (NSTIC)
  - Cybersecurity Center of Excellence
  - National Initiative for Cybersecurity Education (NICE)
  - Measurement science for cryptographic capabilities, security management automation, security metrics for large-scale systems, usability, and scalable cybersecurity



# Technology Transfer

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In response to the President's Memo on *Accelerating Technology Transfer and Commercialization of Federal Research in Support of High-Growth Businesses (Oct. 2011)*, NIST will:

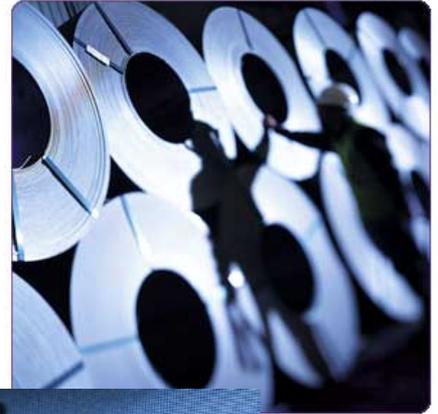
- Develop five-year plan to increase technology transfer activities with external partners.
- Define full range of NIST's technology transfer mechanisms and execute a coordinated effort to track the outcomes and impacts of such activities.
- Convene and lead *Interagency Work Group on Tech Transfer* to identify opportunities for improving technology transfer from Federal laboratories.
- Improve and expand the collection of metrics and develop rigorous economic impact models and tools.



# NIST Priorities, FY 2013-2015

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- **Strengthening U.S. advanced manufacturing capabilities**
- **Advancing the state-of-the-art in cybersecurity solutions**
- **Accelerating technology transfer and commercialization**



# Formal Program Planning

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- Current environment is dynamic and rapidly-changing – requires NIST to be *alert, agile, and adaptive* in responding to issues of critical national importance.
- **Drivers:**
  - NIST Mission
  - Statutory requirements/Congressional direction
  - Budget
  - Administration priorities
  - Department priorities
- **Assessments:**
  - GPRA Modernization Act of 2010
  - Executive Order 13576
  - Priority goals: program and efficiency
  - Department quarterly performance reviews

# Planning Processes Within NIST

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- Base funding programs
- Discretionary funding programs (SERI, IMS)
- Initiative development
- Studies/workshops
- Roadmapping
- OU level strategic planning/program reviews
- Performance and impact assessments
  - R&D Programs
  - Measurement and calibration services