FY18 Budget

Budgeting to Preserve Core NIST

The FY 2018 budget request reflects the Administration's priority to rebuild the military, make critical investments in the nation's security, and keep the nation on a responsible fiscal path.

Funds will maintain core capabilities in measurement science so that the Institute can continue to meet its mission to provide the measurements and standards that accelerate innovation.

The NIST mission is 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

Summary of FY 2018 Budget Request

Proposed $88.7 million reduction (13%) in Scientific and Technical Research Services (STRS)

- Cuts across all laboratory programs

Proposed $133.7 million reduction (86%) in Industrial Technology Services (ITS)

- Eliminates Manufacturing Extension Partnership Program funding
- No new NIST Manufacturing USA institutes

Proposed $14.8 million reduction (12%) in Construction of Research Facilities (CRF)
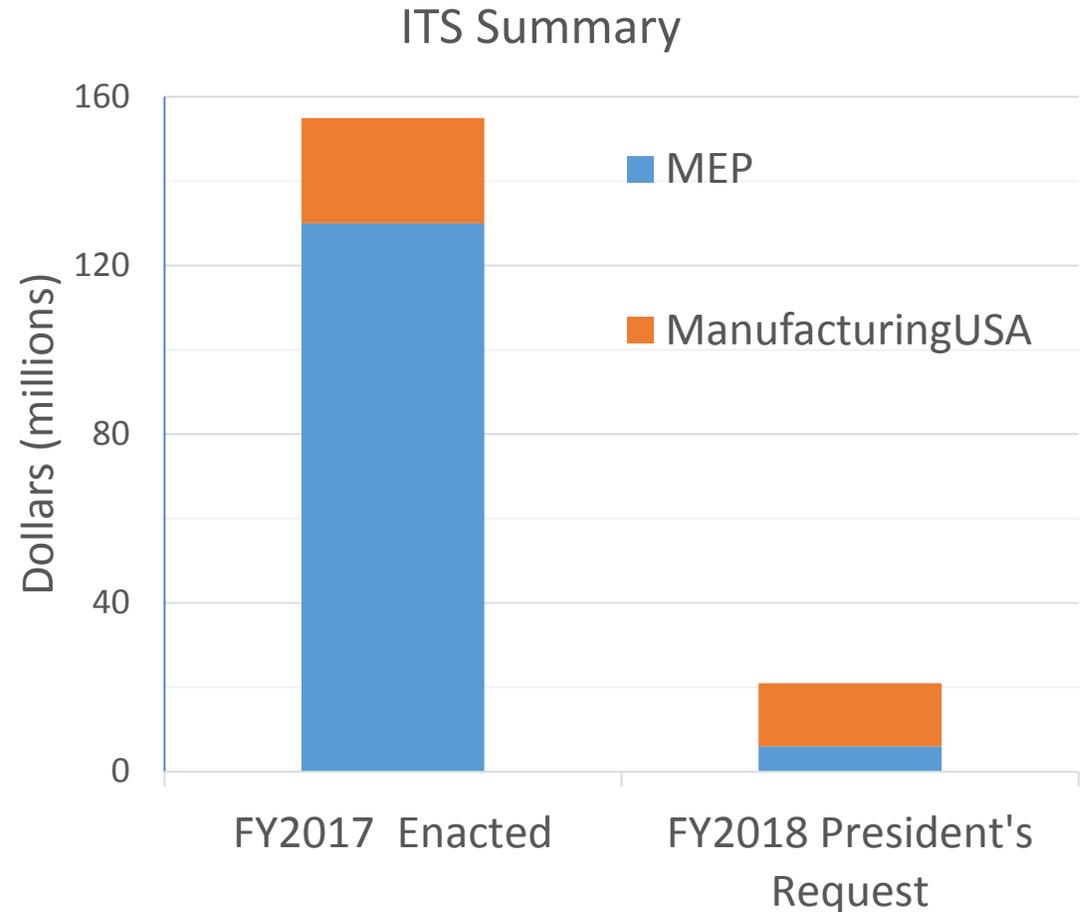
- Funding focused on Building 245 renovation

NIST Budget

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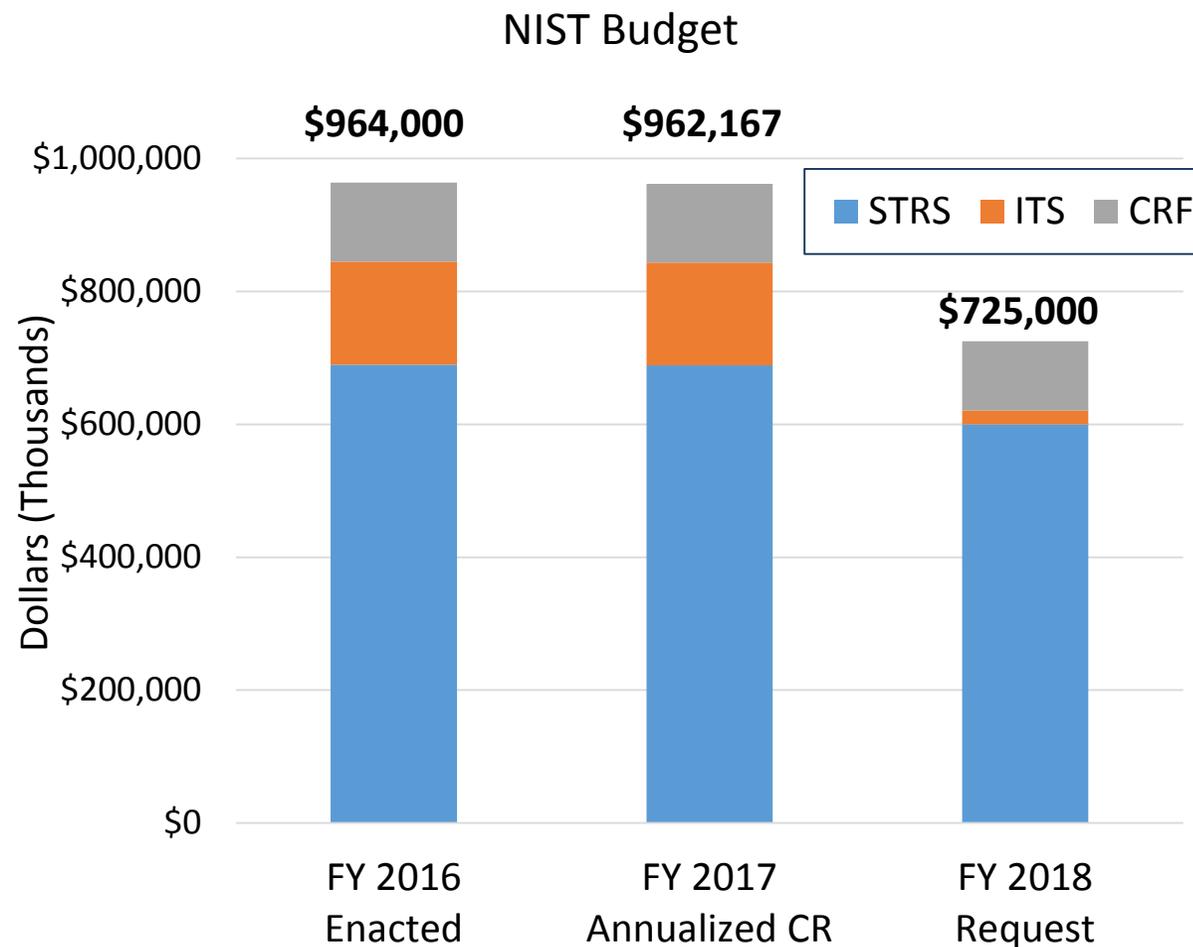
NIST FY 2018 Budget Request (Dollars in millions)

	FY 2016 Enacted	FY 2017 Annualized CR	FY 2017 Enacted	FY 2018 Request	+/(-) Over FY 2017 Annualized CR	+/(-) Over FY 2017 Enacted
STRS	**$690.0**	**$688.7**	**$690.0**	**$600.0**	**($88.7)**	**($90.0)**
Laboratory Programs	605.2	603.6	604.7	544.3	(59.3)	(60.4)
Corporate Services	17.3	17.3	17.3	11.3	(6.0)	(6.0)
Stds Coord & Special Pgms	67.5	67.8	68.0	44.4	(23.4)	(23.6)
ITS	**$155.0**	**$154.7**	**$153.0**	**$21.0**	**($133.7)**	**($132.0)**
Hollings Mfg Ext Partnership	130.0	129.8	128.0	6.0	(123.8)	(122.0)
Manufacturing USA	25.0	24.9	25.0	15.0	(9.9)	(10.0)
CRF	**$119.0**	**$118.8**	**$109.0**	**$104.0**	**($14.8)**	**($5.0)**
Construc & Major Renovations	60.0	60.0	60.0	60.0	0.0	0.0
Saf, Cap, Maint & Maj Repairs	59.0	58.8	49.0	44.0	(14.8)	(5.0)
Total, NIST Discretionary	**964.0**	**962.2**	**952.0**	**725.0**	**(237.2)**	**(227.0)**

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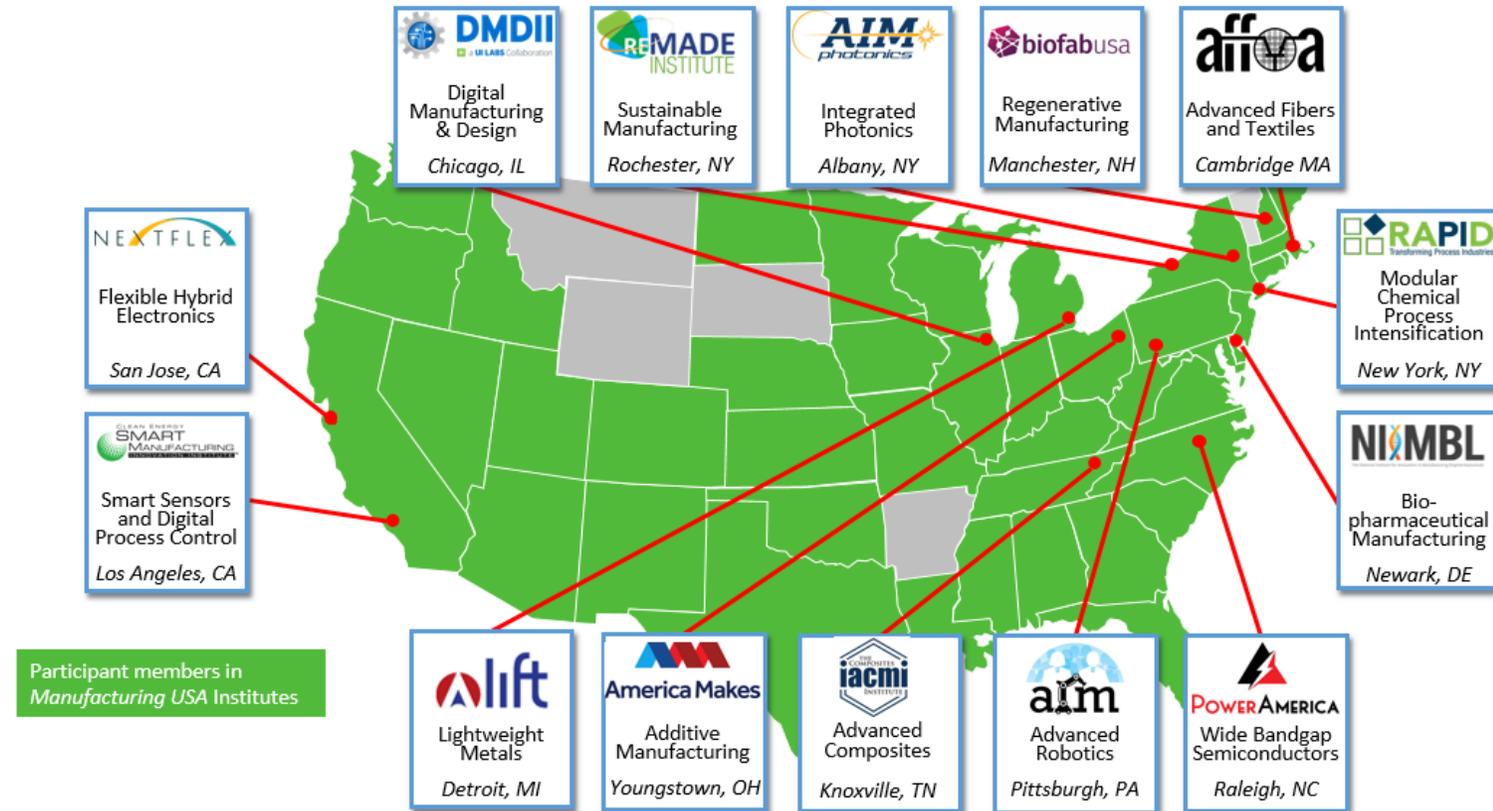
ITS Summary ($21 M, -$134 M and -61 FTE)

Proposes 86% reduction to ITS account:

– Eliminates the MEP program

– Provides funding for continued coordination of existing Manufacturing USA network activities

– Maintains funding for NIST's institute in Manufacturing USA (NIIMBL)

– Requires reorganization in Innovation and Industry Services directorate

ITS Summary

Manufacturing Extension Partnership ($6 M, -$124 M and -61 FTE)

The Hollings Manufacturing Extension Partnership program is a Federal-state partnership of centers in every state and Puerto Rico.

- Transitions to non-federal funding of the program
- Provides $6 million to cover the costs associated with the shut down of the program to begin Oct. 1, 2017
- Impacts 1,300 non-federal technical experts, 2,500 partners and nearly 600 field offices
- Ends NIST Labs / MEP Centers collaborations

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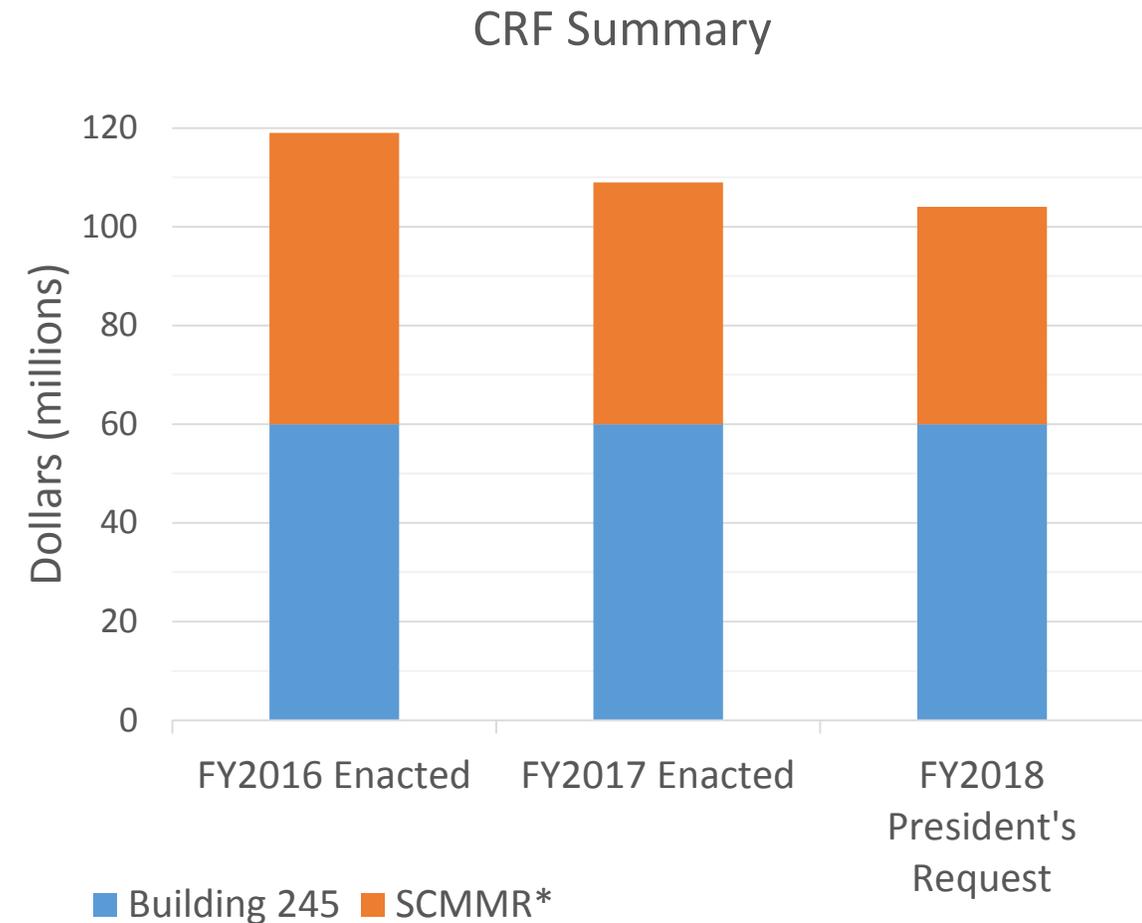Standards and Technology
U.S. Department of Commerce

Manufacturing USA ($15 M, -$10 M, and 0 FTE)

- Funds NIST's coordination of the Manufacturing USA network

- Continues funding the only NIST/Department of Commerce Institute in the network

  - The National Institute for Innovation in Manufacturing Biopharmaceuticals (NIIMBL)

  - NIST will not have funds available to stand up new open-topic institutes (earliest in 2021)

DMDII — Digital Manufacturing & Design — Chicago, IL

REMADE INSTITUTE — Sustainable Manufacturing — Rochester, NY

AIM photonics — Integrated Photonics — Albany, NY

biofabusa — Regenerative Manufacturing — Manchester, NH

affoa — Advanced Fibers and Textiles — Cambridge MA

NEXTFLEX — Flexible Hybrid Electronics — San Jose, CA

RAPID — Modular Chemical Process Intensification — New York, NY

CLEAN ENERGY SMART MANUFACTURING INNOVATION INSTITUTE — Smart Sensors and Digital Process Control — Los Angeles, CA

NIIMBL — Bio-pharmaceutical Manufacturing — Newark, DE

Participant members in *Manufacturing USA* Institutes

lift — Lightweight Metals — Detroit, MI

America Makes — Additive Manufacturing — Youngstown, OH

iacmi — Advanced Composites — Knoxville, TN

aim — Advanced Robotics — Pittsburgh, PA

PowerAmerica — Wide Bandgap Semiconductors — Raleigh, NC

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Construction of Research Facilities ($104.0 M, -$14.8* M)

- ## Gaithersburg - Building 245 ($60.0 M)
  - Estimated cost $322 M over FY 2016-FY 2024
  - Eliminate delays in FDA-required mammography calibrations and enables modern instrumentation needed for nuclear forensics standards

- ## Safety, Capacity, Maintenance, and Major Repairs ($44.0M)
  - $10M to continue renovations in Boulder
  - Anticipate increased backlog of deferred maintenance (now $364M)
  - Anticipate infrastructural systems failures
  - Anticipate more program funded renovations

CRF Summary

*Includes continued renovation on Boulder Building 1 Wings 4 , 5, and Center Spine

*Comparison to Full Year CR levels

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# STRS Summary ($600 M, -$88.7 M and -337 FTE)

FY2018 request reduces laboratory programs by 13%

- Laboratories, 11% reduction
- Corporate Services, 16% reduction
- Standards Coordination and Special Programs Office, 36% reduction
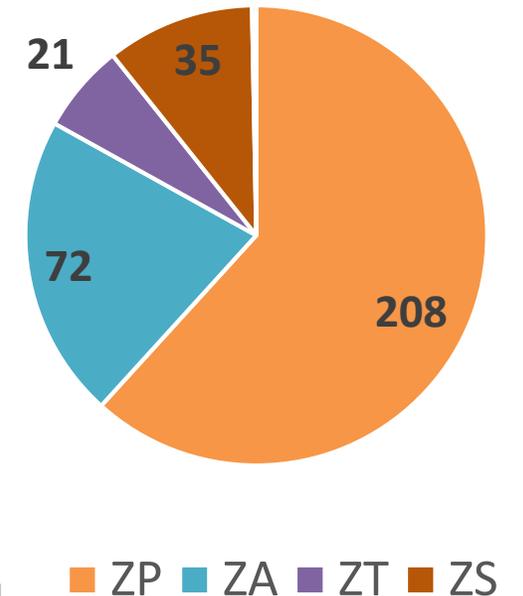
Prioritization criteria include:

- External grant focused
- Reached technological maturity
- Subcritical resources
- Less need for leading-edge NIST measurement science capability

STRS Funding Breakout
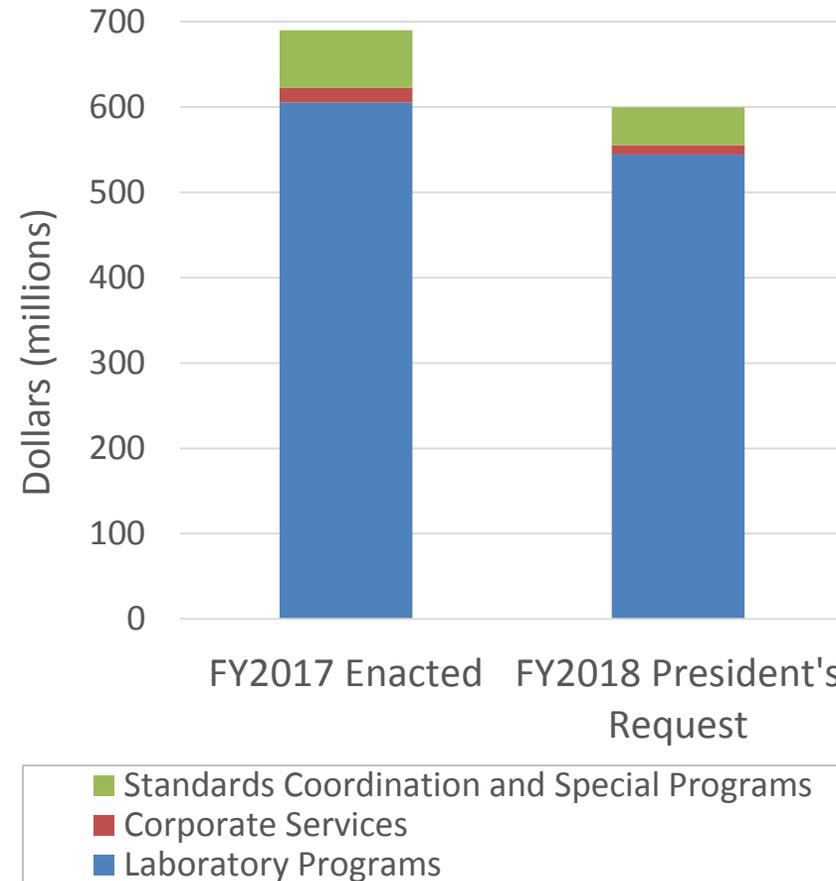
FY18 Staff Reduction by Pay Band

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Summary of STRS Program Reductions

Topic	Reduction (M)	
Advanced Materials Manufacturing	$8.3 ($0.8)	($ external grants)
Advanced Networks, Connected Systems, and Data Science	$15.5	
Biological Science and Health Measurements	$5.4	
Cybersecurity	$5.9 ($0.75)	
Environmental Measurements	$6.6	
Forensic Science Program Management and Committee Support	$2.7 ($1.0)	
Greenhouse Gas and Climate Measurements	$5.8 ($4.5)	*Special programs office*
NIST Center of Excellence Program	$4.0 ($4.0)	
NIST Consortium for Semiconductor and Future Computing Research	$3.3 ($3.3)	
Office of Special Programs Management and Program Coordination	$4.2	
Quantum Science	$4.1	
Resilience and Structural Engineering	$5.9 ($0.6)	
Semiconductor and Microelectronic Measurements	$6.9	
Standards Coordination Office	$4.4 ($3.75)	*SCO*
Time and Fundamental Measurement Dissemination	$6.3	
User Facilities	$3.7 ($1.3)	

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Institutional Support

Institutional support ("IS") funds Management Resources and Directors office functions

- HR, facilities, procurement, security, safety, etc.

- Not a budget line, applied as an overhead

- Reductions scale with collections of STRS, ITS, Other Agency funding, etc.

Continue a full review of IS services

- Full review of services against program needs and requirements

- Seek efficiencies in organization and services

- Implement as appropriate

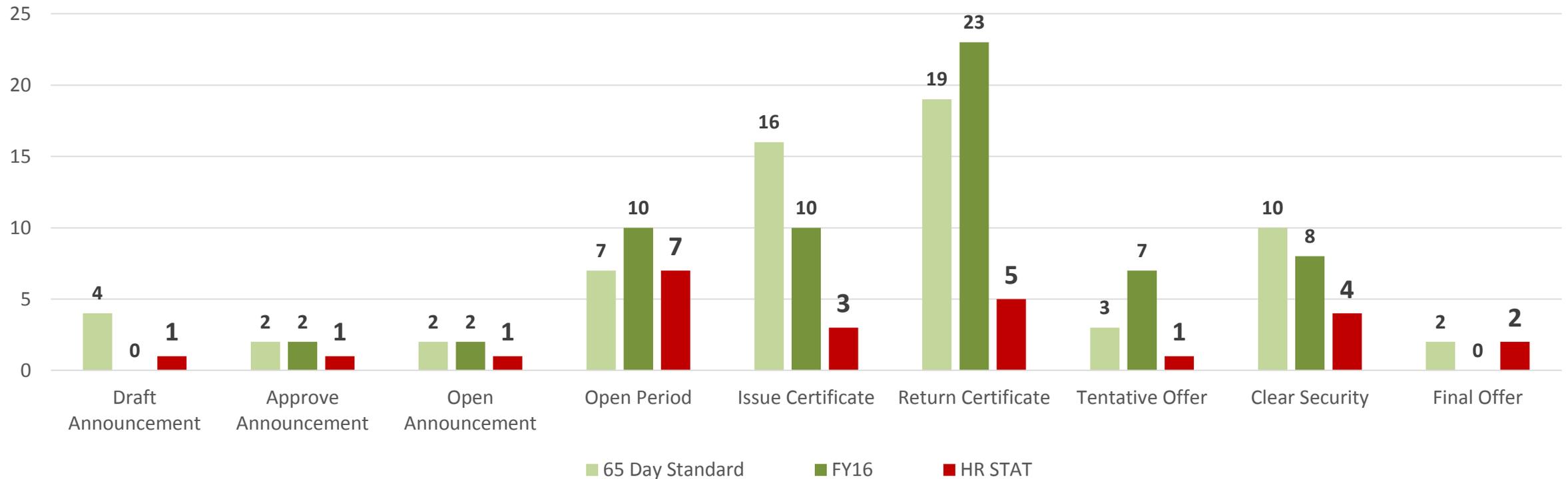- Fully support efforts in process management IT (build on successes!)
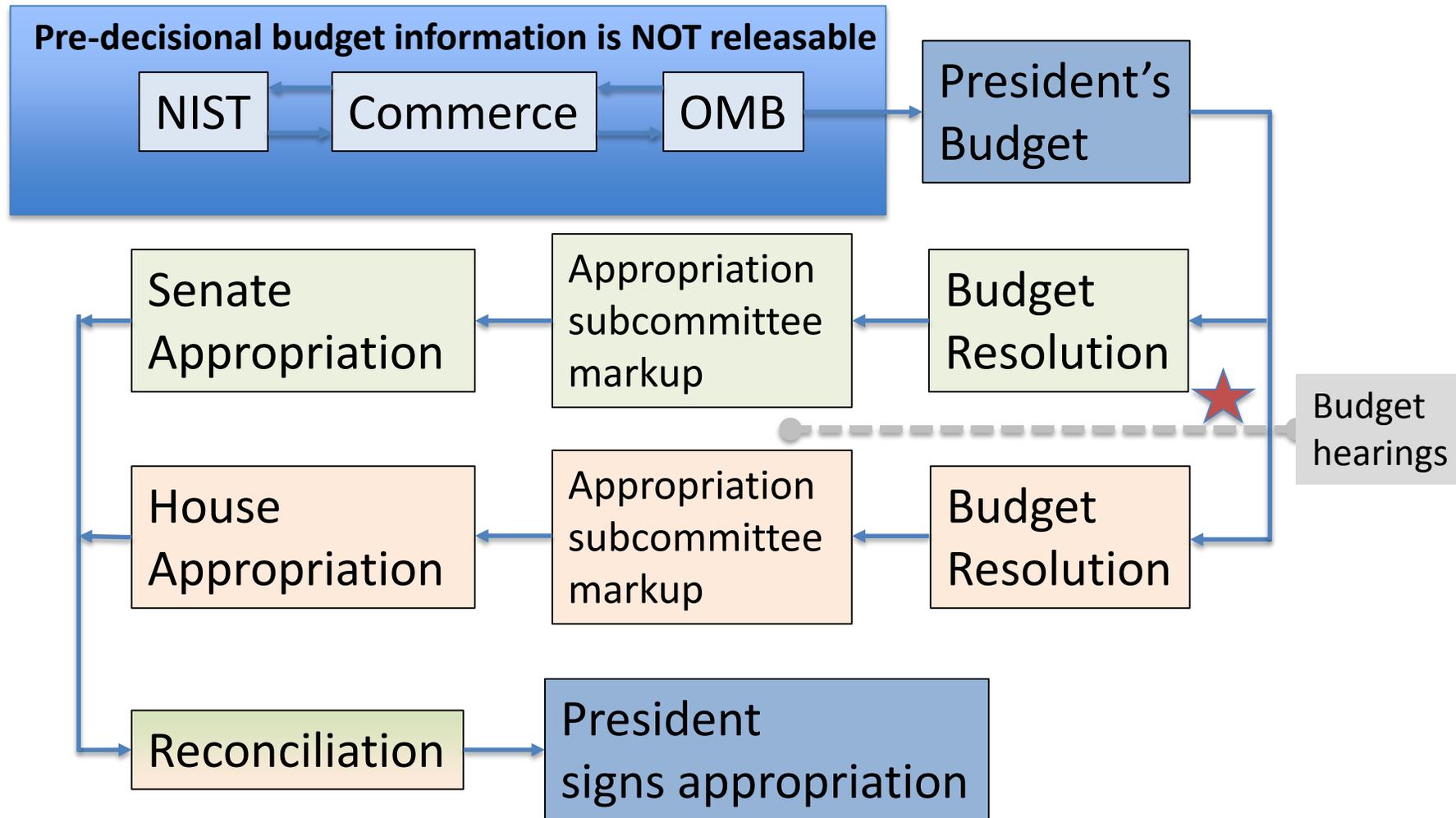
HR STAT Initial Results:

NUMBER OF DAYS TO HIRE

67 *Before*

25 *HRStat*

HR STAT Initial Results

Allows standardization and measurement of process flow

– Can see opportunities and focused efforts on biggest performance potentials.

Budget Process

Pre-decisional budget information is NOT releasable

NIST ⇄ Commerce ⇄ OMB → President's Budget

Budget Resolution → Appropriation subcommittee markup → Senate Appropriation

Budget Resolution → Appropriation subcommittee markup → House Appropriation

Budget hearings

Reconciliation → President signs appropriation

Related Issues: Reform Plan

- Presidential Executive Order on a Comprehensive Plan for Reorganizing the Executive Branch
  - (Within 180 days) submit to the OMB Director a proposed plan to reorganize the agency…to improve the efficiency, effectiveness, and accountability of that agency.

- OMB Memorandum "Comprehensive Plan for Reforming the Federal Government and Reducing the Federal Civilian Workforce"
  - Begin taking immediate actions to achieve near-term workforce reductions and cost savings…
  - Develop a plan to maximize employee performance by June 30, 2017
  - Submit an Agency Reform Plan to OMB in September 2017 as part of the FY19 Budget that includes long-term workforce reductions

Agenda

Tuesday, June 13, 2017

Session I: NIST Update

> Discussion

Session II: NIST Laboratory Programs Strategic Planning

> 12:45 Laboratory Programs Strategic Planning Overview

> 1:30 Update on NIST Bioscience Program

> 2:30 Update on NIST Information Technology Research

Wednesday, June 14, 2017

Session III: Safety Update

Session IV: Developing Organizational Flexibility

Session V: Next Steps and Adjourn

Key questions for VCAT

How should we think about allocating decreasing resources while trying to strengthen NIST for future industry needs?

Are the strategic priorities NIST has identified the right ones?

How can NIST more effectively address:

    Interdisciplinary technologies?

    Cross-laboratory work?

    Change and program flexibility?

    ????

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