PROGRAM ACCOUNTS: R&RA and EHR $148,940,000
+$20,930,000 / 16.4%

Funding from program accounts (R&RA and EHR) covers approximately 27 percent of the total Organizational Excellence portfolio. Two activities comprise program-funded Organizational Excellence: Intergovernmental Personnel Act (IPA) costs and Program Related Administration.

Summary of R&RA- and EHR-Funded Organizational Excellence

(Dollars in Millions)

	FY 2015 Actual	FY 2016 Estimate	FY 2017 Request	Change over FY 2016 Estimate Amount	Change over FY 2016 Estimate Percent
IPA Costs	**$45.01**	**$48.93**	**$53.94**	**$5.01**	**10.2%**
IPA Compensation	37.97	41.16	45.50	4.34	10.5%
IPA Lost Consultant & Per Diem	3.90	4.36	4.85	0.49	11.2%
IPA Travel	3.14	3.42	3.59	0.17	5.0%
Program Related Administration	**$78.51**	**$79.08**	**$95.00**	**$15.92**	**20.1%**
Program Related Technology	67.99	63.40	80.80	17.40	27.4%
Other Program Related Administration	10.51	15.68	14.20	-1.48	-9.4%
Total, R&RA and EHR Funded Organizational Excellence	**$123.52**	**$128.01**	**$148.94**	**$20.93**	**16.4%**

Totals may not add due to rounding.

Intergovernmental Personnel Act (IPA) Costs

A portion of NSF's workforce consists of temporary staff hired through the Intergovernmental Personnel Act (IPA) authority. IPAs remain employees of their home institution while serving at NSF during their temporary appointment. They are not paid directly by NSF and are not subject to federal pay, benefits, or other limitations. NSF reimburses their home institution without overhead using the traditional grant mechanism. IPAs are eligible to receive relocation expenses, or a per diem allowance in lieu of relocation, and reimbursement for income foregone because of their assignment at NSF (i.e., lost consulting fees).

The agency uses IPA science and engineering staff to help ensure that the Foundation's funding decisions are based on the best input from the field, and reflect fresh ideas and creativity. The expertise provided by these IPAs is essential to help shape the NSF research portfolio and support transformational advances across the frontiers of all fields of science, engineering, and education.

IPA Costs by Appropriation

(Dollars in Millions)

	FY 2015 Actual	FY 2016 Estimate	FY 2017 Request	Change over FY 2016 Estimate Amount	Change over FY 2016 Estimate Percent
IPA FTE Utilization[1]	171	183	196	13	7.1%
Research and Related Activities (R&RA)					
IPA Compensation	$33.25	$35.46	39.27	$3.81	10.7%
IPA Lost Consultant & Per Diem	3.31	3.67	4.07	0.40	10.9%
Travel	2.81	2.99	3.15	0.16	5.4%
Subtotal, R&RA Costs	**$39.37**	**$42.12**	**$46.49**	**$4.37**	**10.4%**
Education and Human Resources (EHR)					
IPA Compensation	4.72	5.70	6.23	0.53	9.3%
IPA Lost Consultant & Per Diem	0.59	0.69	0.78	0.09	13.0%
Travel	0.33	0.43	0.44	0.01	2.3%
Subtotal, EHR Costs	**$5.64**	**$6.82**	**$7.45**	**$0.63**	**9.2%**
Total, IPA Costs[1]	**$45.01**	**$48.93**	**$53.94**	**$5.01**	**10.2%**

Totals may not add due to rounding.

[1] The FY 2015 Actual FTE utilization and total obligations reflect the costs associated with six IPAs in staff offices (BFA, OIRM, and OLPA). These six IPAs are not included in this table for FY 2016 and FY 2017. Approximately $1.50 million in FY 2016 and FY 2017 for these six IPAs is budgeted within Other Program Administration and included in the General Program and Evaluation (P&E) activities section of the this narrative.

FY 2017 Request funding of $53.94 million for IPA costs represents an increase of $5.01 million, or 10.2 percent, over the FY 2016 Estimate of $48.93 million. The FY 2017 Request IPA usage level of 196 FTE is 13 FTE, or 7.1 percent, greater than the FY 2016 Estimate; R&RA IPA FTE increases by ten and EHR IPA FTE increases by three.

R&RA funding for IPAs increases $4.37 million over the FY 2016 Estimate. Roughly 64 percent of this increase ($2.79 million) is related to the increase of ten FTEs. The remaining $1.58 million (30 percent) reflects an increase in per IPA costs related to compensation and lost consultant and per diem. The increase in per IPA costs were determined based on the FY 2015 Actual obligations for IPAs and market forces impacting the organizations where the bulk of the increases in IPAs and largest numbers of IPAs are found.

EHR funding for IPAs increases $630,000 over the FY 2016 Estimate reflecting the proposed increase of three FTEs. EHR's cost per FTE are held flat with the FY 2016 Estimate.

IPA compensation increases by $4.34 million, or 10.5 percent, above the FY 2016 Estimate to a total of $45.50 million. Lost consultant and per diem is funded at $4.85 million, +$490,000, or 11.2 percent, over the FY 2016 Estimate. FY 2017 Request funding for IPA travel is $3.59 million, +$170,000, or 5.0 percent, above the FY 2016 Estimate. Funding for these three categories is associated with full use of NSF's existing IPA FTE allocation and projected IPA costs for FY 2017.

Program Related Administration

Program Related Administration Investments

(Dollars in Millions)

	FY 2015 Actual	FY 2016 Estimate	FY 2017 Request	Change over FY 2016 Estimate Amount	Change over FY 2016 Estimate Percent
Program Related Technology	$67.99	$63.40	$80.80	$17.40	27.4%
Other Program Related Administration	10.51	15.68	14.20	-1.48	-9.4%
Total, Program Related Administration	**$78.50**	**$79.08**	**$95.00**	**$15.92**	**20.1%**

Totals may not add due to rounding.

Program Related Administration (PRA) increases $15.92 million above the FY 2016 Estimate to $95.0 million for the FY 2017 Request. It includes two categories of activities that support NSF's strategic goal, Excel as a Federal Science Agency, and that are directly funded from NSF's program accounts:

- Program Related Technology (PRT); and
- Other Program Related Administration (Other PRA)

The FY 2017 increase for PRA is driven by the increased needs and requirements in PRT.

Program Related Technology (+$17.40 million, to a total of $80.80 million)

NSF requests a FY 2017 information technology (IT) investment of $106.40 million. The portion of NSF's IT investment funded through the R&RA and EHR accounts supports NSF's mission activities and account for approximately 76 percent of NSF's IT investment portfolio. The FY 2017 PRT funding request is $80.80 million, an increase of $17.40 million above the FY 2016 Estimate. The remaining $25.60 million IT investment is AOAM funded and is discussed in the AOAM chapter.

Program Related Technology Investments

(Dollars in Millions)

	FY 2015 Actual	FY 2016 Estimate	FY 2017 Request	Change over FY 2016 Estimate Amount	Change over FY 2016 Estimate Percent
Mission-Related Applications and Services	$51.15	$45.99	$56.99	$11.00	23.9%
Mission-Related IT Operations and Infrastructure	13.90	14.44	19.84	5.40	37.4%
Mission-Related Security and Privacy Services	2.94	2.98	3.98	1.00	33.6%
Total, Program Related Technology	**$67.99**	**$63.40**	**$80.80**	**$17.40**	**27.4%**

Totals may not add due to rounding.

NSF accomplishes its mission through federal financial assistance to individuals and institutions whose proposals have been judged the most promising by a rigorous and objective review process. Each stage in the NSF proposal and award management process is supported electronically. The IT services and systems that support the proposal and review process are funded through the PRT investment, an essential element in our Nation's support for science, engineering, and education research.

For FY 2017, NSF's information technology priorities for PRT are:

- Implementing electronic invoicing. NSF is exploring options and may use a shared service provider to implement in FY 2017. This activity would support the Shared Services cross-agency priority goal

(CAP): to strategically expand high-quality, high value shared services to improve performance and efficiency throughout government.[1]

- Enhance the security of NSF's infrastructure to respond to the ever evolving threat landscape and strengthen continuous monitoring capabilities and better posture NSF to respond to cybersecurity vulnerabilities. This supports the Cybersecurity CAP goal: improve cybersecurity performance through ongoing awareness of information security, vulnerabilities, and threats impacting the operating information environment, ensuring that only authorized users have access to resources and information; and the implementation of technologies and processes that reduce the risk of malware.[2]
- Expand NSF's Enterprise Data Warehouse to include more data sets and additional reporting tools to strengthen NSF's use of data and evidence to drive better decision-making and achieve greater impact.
- Continue to work toward a federated system to manage results of NSF-funded research that integrates external (repository) and internal administrative systems with minimal additional burden to NSF awardees and staff.
- Modernize NSF.gov, leveraging best practices from the U.S. Digital Service Team where possible, to make it easier to update information and provide the general public and the science and engineering research and education communities with access to high quality digital government information and services.
- Support the continued operation of iTRAK, the Foundation's financial management system and make changes to iTRAK to support the requirements of the Digital Accountability and Transparency (DATA) Act.
- Ensure legacy mission systems change apace as changes are made to iTRAK.
- Continue modernization of systems that support the merit review process in order to reduce administrative burden to researchers and NSF staff. Focus will be on systems that support the management of proposals, reviews, and reviewers and the expansion of infrastructure capabilities to support these modernizations.
- Prepare IT systems for transfer to the new NSF headquarters.
- Operation of parallel infrastructures during the relocation to the new NSF headquarters; this is required to ensure business continuity during the transition.

Mission-Related Applications and Services (+$11.0 million, to a total of $56.99 million)
Investments in this category fund the applications and services that support the merit review process, including pre-proposal planning; receipt of proposals; processing proposals; reviewing proposals; award decisions, documentation, and notification; funding awards; post-award oversight; dissemination of award results; and award close-out. Mission-related applications and services include investments such as iTRAK, Research.gov, eJacket, and FastLane.

- iTRAK is NSF's financial management system. The total FY 2017 investment for iTRAK is $7.75 million. Seventy percent of this request is funded by PRT and 30 percent is funded by AOAM. The PRT portion of the iTRAK request increases by $1.44 million to a total of $5.43 million, to support high priority enhancements, to implement electronic invoicing, a potential new shared service planned for FY 2017, and to support the requirements of the DATA Act.
- Legacy Mission Applications, +$3.65 million to a total of $32.10 million, supports several different mission-related activities:
    - Other Mission Applications, +$3.65 million to a total of $18.47 million in FY 2017 to fund the following projects:
        - +$1.30 million to ensure legacy mission applications change apace with changes to iTRAK.
        - +$350,000 to continue the modernization of the legacy mission applications that support the merit review process and the Proposal Management Efficiencies (PME) initiative. As part of

[1] www.performance.gov/node/3398/view?view=public#overview
[2] www.performance.gov/node/3401/view?view=public#overview

these modernization efforts, NSF will look for opportunities to improve agency digital services and information, leveraging best practices from the U.S. Digital Service Team where possible.
    - +$2.0 million to modernize NSF.gov, which is the primary locus of public information about NSF and NSF funding opportunities. The requested amount will support NSF efforts to provide the general public with high quality digital information and services.
  - Public Access Initiative, plus zero to a total of $3.0 million, increases public access to the results of NSF-funded research. Specifically, the requested funds will be used to maintain the NSF Public Access Repository by: integrating it with internal award management systems; initiating planning activities to expand NSF's federated model for public access to additional repositories; and enhancing the services provided to users of NSF's public access capability.
  - eJacket, plus zero to a total of $5.72 million, provides the necessary funds for operations and maintenance of this mission support system.
  - FastLane, plus zero to a total of $4.91 million, provides the necessary funds for operations and maintenance of this mission support system.
- Research.gov, +$350,000 to a total of $10.65 million, is a community driven solution led by NSF that gives the science and engineering research and education communities and the public easy access to key information and services in one location (www.research.gov). Research.gov also provides services to help NSF staff plan and manage their programs and proposal and award portfolios. The requested increase will fund continued modernization of services, as part of PME, that support the merit review process, including services to increase automated compliance checking of NSF proposals and to upgrade proposal submission services. As part of these modernization efforts, NSF will look for opportunities to improve digital information and services.
- NSF's Enterprise Data Warehouse, +$5.56 million to a total of $8.06 million, centralizes and streamlines access to NSF data for NSF staff. The analysis capabilities provided by the Enterprise Data Warehouse and related tools inform NSF portfolio management, evaluation, and assessment. The requested increase will allow NSF to move more NSF data sets into the warehouse, implement additional reporting tools, and support the requirement of the DATA Act.
- Enterprise architecture and planning, plus zero to a total of $754,000, is consistent with the FY 2016 Estimate.

Mission-Related IT Operations and Infrastructure (+$5.40 million, to a total of $19.84 million)
Investments in this category provide basic operations and maintenance funding for NSF infrastructure, network, and telecommunications requirements. Network services include NSF's primary network for NSF staff, an external network for NSF visitors, and connection to Internet2 for virtual meeting support. Additionally, this category includes NSF's help desk services for internal users (NSF staff) and external users (the research community including institutions, principal investigators, reviewers, and other NSF visitors) 13 hours per day, five days per week.

The $5.40 million increase will allow for the expansion of infrastructure capabilities that support the modernization of merit review systems. Additionally, this investment will prepare IT systems for relocation to the new NSF headquarters and fund parallel infrastructures during the relocation, essential for ongoing operations during the transition. The requested amount will also increase the security of NSF's infrastructure.

Mission-Related Security and Privacy Services (+$1.0 million, to a total of $3.98 million)
Investments in this category include automated configuration management tools that manage security patches and provide proactive protection from viruses, spyware, and other threats. This investment covers the mission-related portion of NSF's network security, application security, security control testing and tools, automated vulnerability assessment tools, and remediation and intrusion detection services.

The $1.0 million increase will be used to enhance continuous monitoring capabilities, reduce NSF's cybersecurity vulnerabilities, and better position NSF to respond to cybersecurity threats.

Other Program Related Administration (-$1.48 million, to a total of $14.20 million)

In FY 2017, NSF's Other PRA includes funding for four Foundation-wide activities:

- Evaluation and Assessment Capability (EAC);
- Proposal Management Efficiencies (PME);
- NSF support for federal E-Government initiatives that are mission-related; and
- General planning and evaluation (P&E) activities that are Foundation-wide.

Other Program Related Administration

(Dollars in Millions)

	FY 2015 Actual	FY 2016 Estimate	FY 2017 Request	Change over FY 2016 Estimate Amount	Percent
Proposal Management Efficiencies	$0.35	$0.34	$0.38	$0.04	11.8%
Evaluation and Assessment Capabilities	6.84	8.86	8.86	-	-
E-Government Initiatives	1.01	1.01	1.44	0.43	42.6%
General Planning and Evaluation Activities	2.31	5.47	3.52	-1.95	-35.6%
Total, Other Program Related	**$10.51**	**$15.68**	**$14.20**	**-$1.48**	**-9.4%**

Totals may not add due to rounding.

Proposal Management Efficiencies (+$40,000, to a total of $380,000)

FY 2017 Other Program Related Administration funding of $380,000 increases support for assessment activities within Proposal Management Efficiencies. These assessment activities provide feedback on the impacts of NSF's investments in improving the merit review process and are used to identify further potential enhancements. More detailed information can be found in the PME narrative in the NSF-Wide Priorities chapter.

Evaluation and Assessment Capability (no change, to a total of $8.86 million)

In FY 2017, Other PRA funding of $8.86 million will enable further development of the Foundation's Evaluation and Assessment Capability. Activities supported include articulating evaluation principles and practices across the foundation through workshops, training programs, and website development for internal and external sharing of NSF evaluation activities; developing and conducting evaluations for cross-cutting, high visibility programs; and implementing a flexible evaluation and assessment framework and building evaluation capacity through data collection, development of evaluation methods, and development of analytical and visualization tools. More detailed information for EAC can be found within the NSF-Wide Priorities chapter.

E-Government Initiatives (+$434,000, to a total of $1.44 million)

The FY 2017 Budget Request for NSF program-supported and mission-related E-Government initiatives is increased $434,000 above the FY 2016 Estimate. This level is consistent with the FY 2017 funding amounts provided by the initiatives' respective managing partners and reflects funding level changes for the following initiatives:

- The Integrated Award Environment (IAE) initiative changed its agency charging algorithm for FY 2017, increasing NSF's service fee for IAE- loans and grants by approximately $600,000;
- NSF's contribution to the Budget Formulation and Execution Line of Business increases $5,000; and
- Grants.gov changed its agency charging algorithm for FY 2017, decreasing NSF's service fee by approximately $172,000.

General Planning and Evaluation Activities (-$1.95 million, to a total of $3.52 million)
FY 2017 Other Program Related Administration funding for general planning and evaluation activities is $3.52 million, which supports activities on broad programmatic and policy matters of NSF-wide scope and benefit. This includes activities such as the verification and validation of performance information; six IPAs in the offices of Budget Finance and Award Management and Resource and Information Management; and certain costs associated with the American Association for the Advancement of Science (AAAS) fellowships program.

Beginning in FY 2016, funding for the Organization for Economic Co-operation and Development funding is provided through the Office of International Science and Engineering. It was previously provide through P&E. In FY 2017, several activities previously funded through P&E – the Vannevar Bush, Public Service, and Waterman awards; the National Medal of Science; the Summer Science Internships Program; and NSF collaborations with the National Academies of Science including the Federal Demonstration Partnership, the Government-University-Industry Research Roundtable, and the Committee on Science, Engineering, and Public Policy – are now included in the Planning and Policy Support line within Integrative Activities.

The FY 2017 funding estimate is based on the level of Other PRA activities and projects that occurred in FY 2015 and anticipated activities for FY 2017.