PROGRAM ACCOUNTS: R&RA AND EHR

$132,090,000
+$11,370,000 / 9.4%

Funding from program accounts Research and Related Activities (R&RA) and Education and Human Resources (EHR) covers approximately 28 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 2016 Actual	FY 2017 (TBD)	FY 2018 Request	Change over FY 2016 Actual	
				Amount	Percent
IPA Costs	**$45.33**	**-**	**$54.32**	**$8.99**	**19.8%**
IPA Compensation	38.33	-	46.11	7.78	20.3%
IPA Lost Consultant & Per Diem	3.92	-	4.59	0.67	17.1%
IPA Travel	3.08	-	3.62	0.54	17.4%
Program Related Administration	**$75.38**	**-**	**$77.77**	**$2.39**	**3.2%**
Program Related Technology	66.28	-	72.72	6.44	9.7%
Other Program Related Administration	9.10	-	5.05	-4.05	-44.5%
Total, R&RA and EHR Funded Organizational Excellence	**$120.72**	**-**	**$132.09**	**$11.37**	**9.4%**

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. IPAs are eligible to receive relocation expenses, or a per diem allowance in lieu of relocation. Reimbursement for income foregone because of their assignment at NSF is allowed only for IPA agreements in place before FY 2017, per NSF's new policy released October 2016. In addition, the new policy is piloting a required 10 percent cost sharing by the IPA's home institution of the IPA's academic-year salary and fringe benefits.

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 2016 Actual	FY 2017 (TBD)	FY 2018 Request	Change over FY 2016 Actual Amount	Change over FY 2016 Actual Percent
Research and Related Activities (R&RA)					
IPA FTE Utilization	146	-	163	17	11.6%
IPA Compensation	$34.71	-	$39.88	$5.17	14.9%
IPA Lost Consultant & Per Diem	3.44	-	3.81	0.37	10.8%
Travel	2.77	-	3.18	0.41	14.6%
Subtotal, R&RA Costs	**$40.93**	-	**$46.87**	**$5.94**	**14.5%**
Education and Human Resources (EHR)					
IPA FTE Utilization	29	-	35	6	20.7%
IPA Compensation	$3.62	-	$6.23	$2.61	72.1%
IPA Lost Consultant & Per Diem	0.48	-	0.78	0.30	62.7%
Travel	0.31	-	0.44	0.13	42.3%
Subtotal, EHR Costs	**$4.41**	**-**	**$7.45**	**$3.04**	**69.0%**
Total, IPA FTE Utilization[1]	**183**	**-**	**198**	**15**	**8.2%**
Total, IPA Costs[1]	**$45.33**	**-**	**$54.32**	**$8.99**	**19.8%**

[1] The FY 2016 Actual FTE utilization and total obligations include the costs associated with eight IPA FTE in staff offices (BFA, OIRM, OD, OLPA, and EAC). These eight IPA FTE are not included in this table for FY 2018. Approximately $300,000 in FY 2018 for IPA FTE is budgeted within Other Program Administration and included in the General Program and Evaluation (P&E) activities section of this narrative.

The FY 2018 Request funding for IPA costs is $54.32 million representing an IPA usage level of 199 FTE. FY 2018 R&RA funding for IPAs is $46.87 million supporting 163 IPA FTE. FY 2018 EHR funding for IPAs is 7.45 million supporting 35 IPA FTE. For both R&RA and EHR, per IPA FTE costs are estimated at a level commensurate with the FY 2016 Actual.

FY 2018 total IPA compensation is $46.11 million, lost consultant and per diem is $4.59 million, and travel is $3.62 million. Funding for these three categories is associated with full use of NSF's existing IPA FTE allocation and projected IPA costs for FY 2018.

Program Related Administration

Program Related Administration Investments

(Dollars in Millions)

	FY 2016 Actual	FY 2017 (TBD)	FY 2018 Request	Change over FY 2016 Actual Amount	Change over FY 2016 Actual Percent
Program Related Technology	$66.28	-	$72.72	$6.44	9.7%
Other Program Related Administration	9.10	-	5.05	-4.05	-44.5%
Total, Program Related Administration	**$75.38**	**-**	**$77.77**	**$2.39**	**3.2%**

The FY 2018 Request for Program Related Administration (PRA) is $77.77 million. 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 2018 increase for PRA is driven by the increased needs and requirements in PRT.

Program Related Technology ($72.72 million)
NSF requests a FY 2018 information technology (IT) investment of $98.0 million. The portion of NSF's IT investment funded through the R&RA and EHR accounts supports NSF's mission activities and accounts for approximately 74 percent of NSF's IT investment portfolio. The remaining $25.28 million IT investment is AOAM funded and is discussed in the AOAM chapter.

Program Related Technology Investments

(Dollars in Millions)

	FY 2016 Actual	FY 2017 (TBD)	FY 2018 Request	Change over FY 2016 Actual	
				Amount	Percent
Mission-Related Applications and Services	$46.87	-	$47.20	$0.33	0.7%
Mission-Related IT Operations and Infrastructure	14.19	-	19.31	5.11	36.0%
Mission-Related Security and Privacy Services	2.98	-	3.98	1.00	33.4%
Mission-Related IT Management	2.24	-	2.24	-	-
Total, Program Related Technology	**$66.28**	**-**	**$72.72**	**$6.44**	**9.7%**

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 2018, NSF's information technology priorities for PRT are:
- Enhancing the security of NSF's infrastructure to respond to the ever-evolving threat landscape.
- Begin moving towards platform-as-a-service models in alignment with the Federal Government's Cloud First priorities.
- 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 investments that support continuous modernization, including Proposal Management Efficiencies, modernization of the NSF.gov website, and Public Access.
- Expand NSF's Data Management and Delivery (formerly called Enterprise Data Warehouse) to include more data sets and additional reporting tools to strengthen NSF's use of data to drive better decision-making and achieve greater impact.
- Supporting the continued operation of iTRAK, the Foundation's financial management system, and perform database upgrades needed to move to current versions and ensure continued interoperability with NSF's core financial functions.

Mission-Related Applications and Services ($47.20 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. These investments can be classified as:
- Mission Support Systems (formerly Legacy Mission Applications), $35.33 million, supports the following activities:
  - $10.29 million for continuous modernization of systems and services that support the merit review process, such as Proposal Management Efficiencies, Public Access to NSF-funded research, and

   modernization of the content management system for the NSF.gov website. These modernization efforts reduce administrative burden on NSF staff and the research community.

-    $25.04 million provides for the operations and maintenance for NSF's mission support systems, which provide a suite of functionality supporting each stage in the NSF proposal and award management process.
- NSF's Data Management and Delivery investment (formerly Enterprise Data Warehouse), $6.07 million, centralizes and streamlines access to NSF data for NSF staff. The analysis capabilities provided by a modern enterprise data warehouse and related tools inform NSF portfolio management, evaluation, and assessment. The FY 2018 investment will allow NSF to move more NSF data sets into the warehouse and implement additional reporting tools.
- iTRAK is NSF's financial management system. The total FY 2018 investment for iTRAK is $8.29 million. Seventy percent of this request is funded by PRT and 30 percent is funded by AOAM. The PRT portion of the iTRAK request is $5.80 million, to fund operations and maintenance as well as high priority database upgrades, which will ensure the system continues to function efficiently and effectively and the databases remain interoperable with core financial functions.

Mission-Related IT Operations and Infrastructure ($19.31 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 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), which are available 13 hours per day, five days per week.

The FY 2018 Request level will allow for continued modernization of the infrastructure that supports NSF's merit review process as these mission support systems are also modernized. This will enable NSF to take advantage of future opportunities for cloud or shared services as appropriate. Additionally, NSF will begin planning and analysis activities to support movement of its virtualization environment to a platform-as-a-service or offsite hosting model in alignment with the Federal Government's Cloud First priority.

Mission-Related Security and Privacy Services ($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 FY 2018 Request level will be used to support NSF's Continuous Diagnostics and Mitigation (CDM) Program, including CDM training, governance support, and additional human resources needed for implementation and preparing for implementation of CDM Phase 2. Implementation for Phase 2 will begin in the first quarter of FY 2018.

Mission Related IT Management ($2.24 million)
IT Management includes support for the Chief Information Officer and senior IT leadership in the areas of IT strategy and planning, enterprise architecture, capital planning, vendor management, IT budget/finance, and IT strategic communications. This category includes the mission support portion of NSF's IT management services.

Other Program Related Administration
In FY 2018, $5.05 million for NSF's Other PRA includes funding for three Foundation-wide activities:
- 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 2016 Actual	FY 2017 (TBD)	FY 2018 Request	Change over FY 2016 Actual	
				Amount	Percent
Proposal Management Efficiencies	$0.31	-	$1.11	$0.80	258.3%
Evaluation and Assessment Capabilities	5.35	-	-	-5.35	-100.0%
E-Government Initiatives	1.01	-	1.46	0.45	45.2%
General Planning and Evaluation Activities	2.43	-	2.48	0.04	1.8%
Total, Other Program Related Administration	**$9.10**	**-**	**$5.05**	**-$4.05**	**-44.5%**

Proposal Management Efficiencies ($1.11 million)
The FY 2018 Budget Request funding for PME will support assessment activities that provide feedback on the impacts of NSF's investments in improving the merit review process and are used to identify further potential enhancements. In addition, support will be provided for a study of the feasibility and impact of double-blind review.

Evaluation and Assessment Capability (zero)
NSF's EAC was established to support, coordinate, and conduct NSF-wide program evaluations and evidence generation and utilization to catalyze learning and improvement through collaboration with NSF's directorates and offices. EAC has become an integral part of NSF's operations and in FY 2018 will transition from an activity in Other PRA to a budget line in Integrative Activities. More detailed information on EAC can be found within the Integrative Activities narrative in the Research and Related Activities chapter.

E-Government Initiatives ($1.46 million)
The FY 2018 Budget Request for NSF program-supported and mission-related E-Government initiatives is consistent with the FY 2018 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 increasing NSF's service fee for IAE-loans and grants approximately $618,000;
- NSF's contribution to the Budget Formulation and Execution Line of Business increases $5,000;
- NSF's contribution to the Human Resource Management Line of Business increases approximately $3,000; and
- Grants.gov changed its agency charging algorithm decreasing NSF's service fee by approximately $172,000.

General Planning and Evaluation Activities ($2.48 million)
FY 2018 funding for general planning and evaluation activities supports investments on broad programmatic and policy matters of NSF-wide scope and benefit. This includes activities such as the verification and validation of performance information; IPA FTE in the office of Budget Finance and Award Management; and certain costs associated with the American Association for the Advancement of Science (AAAS) fellowships program. The FY 2018 funding estimate is based on the level of general planning and evaluation activities and projects that occurred in FY 2016 and anticipated activities for FY 2018.