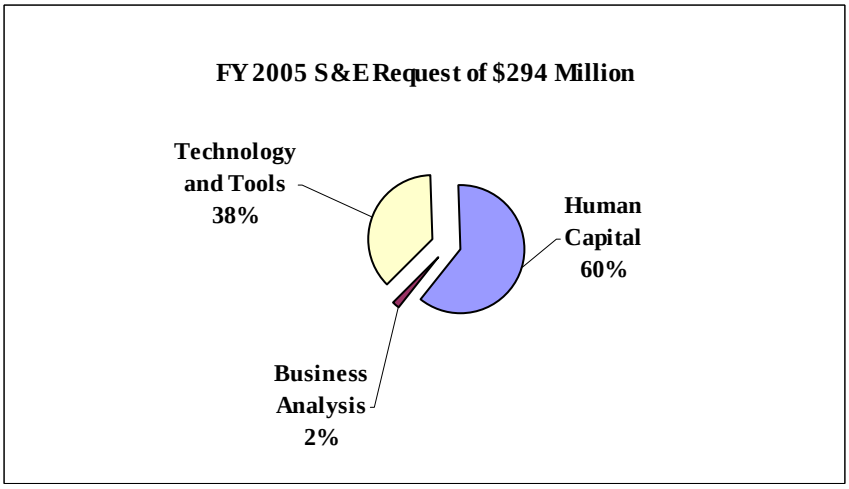
SALARIES AND EXPENSES

SALARIES AND EXPENSES $294,000,000

The FY 2005 Request for Salaries and Expenses (S&E) is $294.0 million, an increase of $75.3 million, or 34.4 percent, over the FY 2004 Estimate of $218.70 million. Adequate funding for Salaries and Expenses, particularly for Information Technology, is critical to the efficient operations of the agency.

The pace of discovery is accelerating, creating exceptional opportunities for investment, but also increasing the NSF workload. The number of proposals NSF processes reached 40,000 in FY 2003, up from 30,000 just two years ago. In addition, the rapidly changing character of research has placed new demands on NSF staff and systems. Proposals today address more complex scientific questions, involve a wider variety of collaborations, and increasingly cross-disciplinary boundaries. NSF also recognizes the need to enhance safety and security for all of its information technology and physical resources. The strategic framework for this investment is discussed in greater detail in the chapter on NSF's Organizational Excellence (OE) portfolio.



This significant increase will support a focused set of overdue investments that foster NSF's continuing commitment to outstanding customer service:

- Human Capital: Funding for Human Capital increases by $20.94 million to a total of $175.91 million, a 13.5% increase over FY 2004. The major components of this increased investment are: $12.15 million for Management of Human Capital; $7.26 million for Personnel Compensation and Benefits, including an increase of 25 full-time equivalent (FTE) employees as well as comparability and locality pay and costs related to employee benefits; and a $1.53 million increase in general operating expenses and travel associated with NSF's programmatic responsibilities.

- Business Analysis: Funding for the Business Analysis increases by $2.56 million to a total funding level of $5.35 million in FY 2005. This represents the third full year of the business analysis, which rests at the center of NSF's strategic framework for ongoing investments in OE.

- Technology and Tools: Funding for Technology and Tools increases by $51.80 million to a total of $112.74 million. The majority of this increased investment – $47.11 million – will continue the development, implementation, operation, and upgrade of NSF's information infrastructure, enable next generation eGovernment capabilities, and improve information and physical security. In addition, $1.1 million of the increased funding for Technology and Tools will provide for increasing

rental costs for NSF's workspace, and $3.59 million will support other infrastructure-related costs, discussed below.

Summary of Salaries and Expenses by Function
(Dollars in Millions)

	FY 2003 Actual	FY 2004 Estimate	FY 2005 Request	Change over FY 2004 Amount	Change over FY 2004 Percent
Human Capital					
Personnel Compensation & Benefits	128.46	138.69	145.95	7.26	5.2%
Management of Human Capital	2.69	3.55	15.70	12.15	342.3%
Operating Expenses	3.80	6.68	7.00	0.32	4.8%
Travel	4.32	6.05	7.26	1.21	20.0%
Subtotal, Human Capital	139.27	154.97	175.91	20.94	13.5%
Business Analysis	3.65	2.79	5.35	2.56	91.8%
Technology and Tools					
Information Technology	24.36	37.18	84.29	47.11	126.7%
Space Rental	17.10	18.20	19.30	1.10	6.0%
Other Infrastructure	5.04	5.56	9.15	3.59	64.6%
Subtotal, Technology and Tools	$46.50	$60.94	$112.74	$51.80	85.0%
Total, Salaries and Expenses	$189.42	$218.70	$294.00	$75.30	34.4%

NSF Workforce
(Full-Time Equivalents (FTE))

	FY 2003 Actual	FY 2004 Estimate	FY 2005 Request	Change over FY 2004 Amount	Change over FY 2004 Percent
NSF S&E -- Regular	1,146	1,200	1,225	25	2.1%
NSF S&E -- Student	32	24	24	-	0.0%
Office of the Inspector General[1]	55	60	60	-	0.0%
National Science Board[2]	9	12	12	-	0.0%
Arctic Research Commission[3]	4	4	4	-	0.0%
Subtotal, FTE	1,246	1,300	1,325	25	1.9%
IPA[4]	142	170	170	-	0.0%
Detailees to NSF	6	5	5	-	0.0%
Contractors Performing Admn. Functions	191	210	210	-	0.0%
Total, Workforce	1,585	1,685	1,710	25	1.5%

[1]The Office of Inspector General is described in a separate section of the justification and is funded through a separate appropriation.
[2]The National Science Board is described in a separate section of the justification and is funded through a separate appropriation.
[3]The Arctic Research Commission is described and funded in the Research and Related Activities section of the justification under Polar Programs.
[4]Intergovernmental Personnel Act (IPAs) are described in the Organizational Excellence section and are funded through the Research and Related Activities and Education Human Resources Appropriations accounts.

HUMAN CAPITAL $175,910,000

The FY 2005 request for Human Capital totals $175.91 million, an increase of $20.94 million or 13.5 percent, over the FY 2004 Estimate of $154.97 million. These investments represent nearly two-thirds of NSF's total OE portfolio, and they consist of four major components: Personnel Compensation and Benefits, Management of Human Capital, Operating Expenses and Travel.

Human Capital Funding
(Dollars in Millions)

	FY 2003 Actual	FY 2004 Estimate	FY 2005 Request	Change over FY 2004 Amount	Change over FY 2004 Percent
Personnel Compensation & Benefits	128.46	138.69	145.95	7.26	5.2%
Management of Human Capital	2.69	3.55	15.70	12.15	342.3%
Operating Expenses	3.80	6.68	7.00	0.32	4.8%
Travel	4.32	6.05	7.26	1.21	20.0%
Total, Human Capital	139.27	154.97	175.91	20.94	13.5%

Personnel Compensation and Benefits ($145.95 Million)

The FY 2005 Request increases by $7.26 million, or 5.2 percent, to a total of $145.95 million for Personnel Compensation and Benefits (PC&B) and will provide for 1,225 full-time equivalent (FTE) regular employees, as well as 24 students. PC&B funds the cost of the payroll including the statutory pay raise.

The agency proposes to add 25 FTEs during FY 2005 to respond to the demands of the growing number of proposals, an increased budget, and additional administrative responsibilities. The new positions will allow the agency to relieve growing workload pressures on current NSF program managers in response to increasingly complex science and engineering opportunities and additional attention to award management and oversight.

Management of Human Capital ($15.70 Million)

For FY 2005, the Management of Human Capital budget request is $15.70 million, an increase of $12.15 million, or 342.3 percent over FY 2004. This request recognizes that the agency must invest in its people, in the same way it has invested in its information technology, if it is to achieve excellence in the recruitment, retention, knowledge management, learning, and performance management systems needed to attract, develop and retain the highest quality staff. To maintain its excellence as an organization, NSF must invest in the key to that excellence – its people.

NSF's commitment to its people was recognized in 2003 by the Partnership for Public Service and the American University's Institute for the Study of Public Policy Implementation when they ranked NSF as the second best place in the Federal Government to work. While this commitment continues, NSF must comprehensively research, review and update its human capital practices and policies to assure it will continue to respond effectively to the ever-changing employment market with innovative, value-added programs that maintain its viability as an employer of choice. Many of NSF's human capital programs and policies no longer reflect best industry practices. NSF cannot afford to ignore the need to tailor its human resource initiatives to an ever-changing employment market or to effectively assess and plan for changes in the competencies it will need to meet future mission requirements.

At the end of calendar year 2003, NSF finalized its Human Capital Management Plan (HCMP), which is aligned with the strategic mission, goals and organizational objectives of NSF and provides NSF with a roadmap to improve its human capital programs and policies so it can meet the needs of its current and future staff. The plan also addresses the Foundation's goal of significantly improving its outreach to scientists, engineers, educators, information technology specialists and business professionals in an increasingly competitive hiring environment. One of NSF's strategic objectives for Organizational Excellence, and a core concept of its mission, is to improve the diversity of its science and engineering workforce in order to better address the needs of the nation's diverse populations. The HCMP, in conjunction with NSF's Diversity Plan (currently under development), will guide NSF's efforts in this area.

Strategic learning and career management are a central focus of NSF's long-range human capital plan. These activities are coordinated via the NSF Academy, whose goal is to enhance the skills of the Foundation's workforce, build critical competencies in support of the Foundation's mission and strategic goals and groom future leaders.

Within Management of Human Capital, two integrated and complementary initiatives comprise the budget request: Strategic Human Capital Implementation and The NSF Academy.

Strategic Human Capital Implementation ($10.45 Million)

Significant investments in Human Capital are essential if NSF is to continue attracting and retaining the highest caliber scientists, engineers and educators to fulfill its mission and if it is to ensure that the Foundation's technological and administrative personnel remain innovative and entrepreneurial. Funding in FY 2005 will provide needed capital to fully implement the goals and action strategies outlined in the NSF Human Capital Management Plan. Funding will support the following FY 2005 initiatives:

- ***Competency-Based Job Families ($1.89 Million)*** --As an initial step toward a more meaningful and integrated workforce system, NSF has clustered its 288 distinct position titles into 41 potential job families. A set of competencies has been created for each unique job family. These competencies will serve as the basis for recruiting, educating, developing, motivating and transitioning NSF employees and for NSF's workforce planning efforts. FY 2005 funds are requested to continue to develop the foundation of the competency system including: competency based behavioral indicators, a competency based position library, and a competency based position management methodology. Funding will also support the integration of competencies into NSF's electronic recruiting system, workforce planning and career path initiatives, recruiting and retention enhancements, performance management initiatives, and employee development initiatives.

- ***Workforce Planning and Career Paths ($1.78 Million)*** **--**In order to more effectively match employees' skills with future job profiles, funds are being requested to continue to refine NSF's job families based on current and future strategic requirements, and to design and implement career paths to help focus recruitment, retention, development, and evaluation efforts. Funds will also allow NSF to comprehensively track and resolve skill gaps stemming from the ever-changing scientific and technological landscape in which it must operate and to successfully deploy its workforce to meet new goals and objectives.

- ***Recruitment and Retention Enhancements ($1.0 Million)*** -- NSF faces the challenge of continually replenishing its staff with individuals who are at the forefront of the most promising fields of science, education and engineering, and who recognize opportunities for cross-

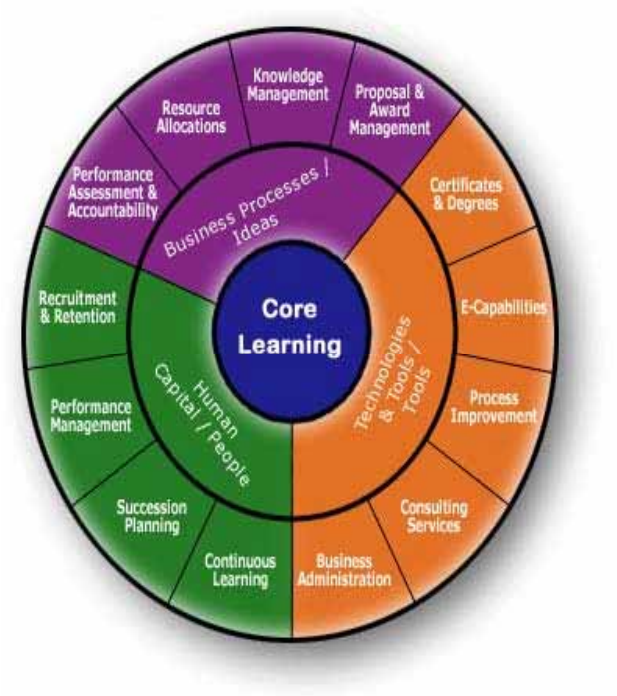
disciplinary advances at the frontier of science. This means that NSF must frequently update its recruiting strategies and its branding and marketing campaigns to attract scarce talent in cutting-edge scientific fields and to provide the necessary incentives to assure they will choose NSF as an employer. Included within the FY 2005 request are funds to develop and implement an effective outreach and marketing campaign to ensure the Foundation has a continuing influx of individuals at the forefront of the science, engineering, information-technology, business, and education fields. Outreach and marketing efforts will include: development of broad-based internships for science, engineering, education and information technology professions, participation in targeted recruitment, and implementation of improvements in presentation of recruitment materials. Requested funds will be used to research and implement effective compensation, recruitment, and retention strategies to secure continued employment of the best talent and to align these policies with best practices in the private, public and non-profit sectors. NSF will also identify and implement effective practices and policies to attract and retain scientists, engineers, educators and administrators from minority and underserved populations.

- ***Performance Management-- ($2.0 Million)*** The FY 2005 request includes funds to research, develop and deploy a competency-based performance management system that will directly tie individual and organizational accomplishments to strategic agency goals and that will effectively distinguish between high and low performers in the agency. NSF will develop and implement an automated 360-degree performance assessment process that will adjust performance expectations based on the ever-changing scientific and technological environment in which it works.

- ***Work Life Initiatives ($1.780 Million) --***Creating an environment in which quality of work life and family-friendly policies support the accomplishment of the Foundation's strategic objectives is essential to improve NSF's position as an employer of choice and to retain the highest quality personnel. Although NSF ranked second overall as a best place to work in Government, it ranked 16th out of 28 agencies on its family-friendly culture and benefits. NSF requests funds to embark on a comprehensive assessment of employee attitudes and human capital policies; conduct promising practice research; and implement initiatives that will improve overall employee productivity and satisfaction. In accordance with the requirements of the National Defense Authorization Act for Fiscal Year 2004, the assessment will include questions that are unique to the Foundation and will assess leadership and management practices and employees' satisfaction with their leadership, work environment, rewards and recognition, opportunities for professional development, and their opportunity to contribute to achieving NSF's mission. Requested funds will also support the redesign of NSF's employee assistance program, the subsidy of child care for lower-paid employees, the development of a broad based quality of work life program, and the upgrade of the alternative dispute resolution process.

- ***Strategic Alignment of Human Capital Functions—($1.0 Million)*** In order to effectively implement and manage its strategic human capital initiatives, NSF must make significant investments to reengineer its human capital processes and improve efficiency. Beginning in FY 2003, NSF embarked on a business process reengineering effort in its human resource management division. It has also begun to tactically contract some of its transactional work to outside vendors and will retrain current human resource professionals to assume strategic, customer service roles in the organization. In FY 2005, NSF will fully implement the findings of the business process reengineering effort, continue its research and implementation of strategic human capital endeavors, and further its goal of moving all appropriate transactional work to contractors so that staff can serve as consultants and strategic partners to their stakeholders.

Information Management and Communication ($1.0 Million) -- The requested funds will support NSF's continued improvement to its information management and communication strategies. In FY 2005, funds will support the ongoing development of a comprehensive program designed to collect information to support workforce planning and recruiting and retention initiatives. NSF will also develop a central electronic repository for all of its human capital related policies and procedures and design materials targeted to supervisors and employees. Funding will allow NSF to effectively evaluate its human resource metrics and assure that its accountability measures provide strategic, valued information that drive future human capital decisions and directly support overall performance accountability and assessment initiatives; and, to communicate findings to target audiences both inside and outside of the organization.



<u>The NSF Academy</u> ($5.25 Million)

This request includes funds for staff resources, creation of new programs and curricula, and development of innovative approaches to electronically manage Academy activities. It will enable the Academy to develop a broad array of opportunities to support life-long learning and enable staff to efficiently and effectively perform critical functions in support of NSF's vision, mission and goals.

Since its establishment in October 2002, the Academy has provided a variety of educational opportunities in support of a limited agenda. Over the past year, NSF's vision of the Academy has evolved and current plans call for significant expansion of activities in response to NSF's Human Capital planning efforts. Components of the initiative are highlighted below:

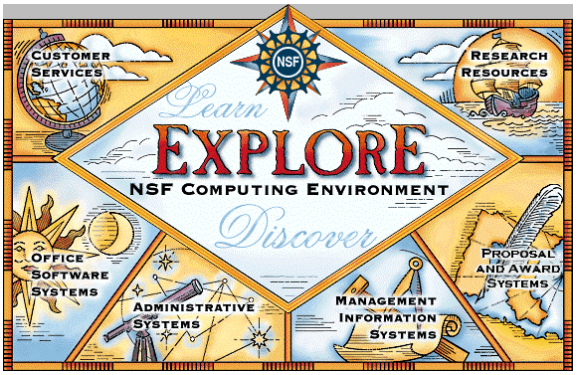
- ***NSF Tutorials and e-Business Multimedia Courses*** – Creation, enhancement, and delivery of NSF specific tutorials and e-business learning activities will support organizational development and achievement of agency mission. Development of continuous learning opportunities focused on NSF's existing and emerging business processes (e.g., those involving e-jackets, panel systems, proposal review and post-award processing, and oversight) will be the primary thrust of this initiative. These learning activities will utilize an innovative life-cycle approach that replicates the actual flow of e-business processes, thus facilitating and shortening the skill acquisition period for NSF staff. Other tutorials will provide learning activities related to research and education frontiers supported through NSF initiatives.

- ***NSF's Blended Learning Portfolio*** – Significant expansion of portfolio content will accompany the formal linkage of core, technical and leadership competencies to NSF job families and Academy course offerings. Portfolio growth will emphasize further development of courses and programs in work life areas; project management and contract oversight; IT technology and security; and leadership development. Curriculum efforts will require a mixture of delivery methods, with attention to audience, course content, technology, culture, and organizational structure. Delivery methods will range from instructor-led classroom activities to self-paced e-

learning, experiential learning, and mentoring. This portfolio includes a diverse set of course offerings that respond to staff and organization skill gaps. It is designed to meet the changing needs of specific NSF job families (e.g. division directors, program managers, administrative managers, or program assistants.)

- ***Introduction to the NSF Enterprise*** – This new activity will include the development of a comprehensive multi-media presentation to orient new employees and provide a resource for existing staff to continually refresh their knowledge regarding NSF administrative practices and mission-critical business processes. Through development of tailored web sites, this activity will focus attention on NSF mission, goals, and culture; information technology; and on the management needs of specific job families. It will provide a workplace technology orientation that will enable employees to use IT systems after their first week of employment. This activity will also offer a venue for organizational knowledge management.

- ***Career Paths and Individual Development Activities*** – A diverse array of initiatives and new strategies will assure that the Foundation retains key personnel, develops future leaders, and supports succession planning. Career development initiatives focused on individual NSF staff will include management, executive and leadership training and extension of NSF's after hours program for employees who are enrolled in career development courses or seeking certifications or college degrees. Career development strategies will focus on in-depth career counseling, development of individual career path maps, and use of electronic career mapping tools to provide online links between career requirements or competencies and job families.



In addition to these Human Capital initiatives, development of a comprehensive, integrated e-Human Capital system and a Learning Management System for the Academy is included within the Technology and Tools section of the Budget Request.

Operating Expenses ($7.0 Million)

Operating Expenses increase by $320,000, or 4.8% percent, to $7.00 million in FY 2005. These include funding for direct costs of the FTE staff for supplies, equipment, and other operating expenses necessary for the management of the NSF's research and education activities.

Travel ($7.26 Million)

Travel increases by $1.21 million or 20 percent, to $7.26 million in FY 2005. These resources fund costs associated with a reliable merit review process and the oversight recommended by the agency's Inspector General. These funds will also be used to intensify management and oversight activities; enable staff to participate in national and international science and engineering conferences and workshops; and provide access to strategic training opportunities.

BUSINESS ANALYSIS $5,350,000

In FY 2002, NSF initiated a comprehensive, multi-year Business Analysis, the outcomes of which will inform Organizational Excellence investments for the foreseeable future.

Business Analysis Funding
(Dollars in Millions)

	FY 2003 Actual	FY 2004 Estimate	FY 2005 Request	Change Over FY 2004 Amount	Change Over FY 2004 Percent
Business Analysis	2.95	2.49	5.35	2.86	114.9%
National Academy of Public Administration	0.70	0.30	0.00	-0.30	-100.0%
Total, Business Analysis	3.65	2.79	5.35	2.56	91.8%

The goals of the Business Analysis are:

- Document each of the agency's core *Business Processes* and define its contribution to the NSF mission.
- Define process effectiveness and efficiency improvements that leverage past experience, capitalize on best practices in the public and private sectors, and respond to emerging mission-related trends.
- Develop future-looking *Business Process* scenarios and criteria for success.
- Define a *Human Capital Management Plan* to provide next-generation human capital capabilities. The Plan will identify future-looking workforce competencies and describes human capital strategies and approaches to support the *Business Process* scenarios and to capitalize on opportunities afforded by *Technology and Tools* innovations.
- Define an *Integrated Technology and Tools Plan* (business infrastructure tools, knowledge bases, and technologies) that describes an overall integrated technical and information architecture for future systems and capabilities in support of the agency's *Business Processes*.

The Business Analysis project will be complete at the end of FY 2005. However, deliverables are being completed throughout the project. Major products delivered at the end of FY 2003 included a complete baseline documentation of the core business processes, a first version of an agency-wide human capital management plan, and a first iteration of enterprise architecture. This work underscores two fundamental challenges facing NSF as it becomes a fully integrated organization capable of working both within and across disciplinary and organizational boundaries: 1) maintaining the highest levels of quality in merit review and the award process, and 2) maintaining flexibility while promoting efficiency and appropriate agency-wide standards.

During FY 2004 and FY 2005, the Business Analysis effort will address these challenges in a variety of ways.

- From the business process perspective, NSF continues to explore alternative, more efficient methods for conducting the proposal review process that maintain the integrity of the process. Based on findings from the analysis, the Foundation is developing more formal procedures for managing the technical risk of awards and assessing the contribution of NSF-funded projects to the advancement of science and engineering. NSF is also capitalizing on Business Analysis work (e.g., an employee workload survey and analysis) to effectively implement alternative human capital management approaches to increase the utilization or effectiveness of the workforce.

- Guided by Human Capital findings to date, NSF is converting from a task-based to a competency-based human resource management system and consolidating several hundred existing job titles into 40 job families. These changes will directly link workforce planning, recruitment, development, retention, and performance management activities to agency business strategy and will simplify and streamline these activities for NSF management and staff.

- From the Technology and Tools perspective, the Business Analysis is providing a framework for planning and implementing NSF's next generation information technology (IT) environment and establishing agency-wide standards for IT security, functionality, and application development. The first iteration Enterprise Architecture has been used to guide planning for FY 2004 and FY 2005 information technology investments in grants management, human capital, and other business functions, as well as establish priorities for acquisition of critical supporting infrastructure.

The business analysis has already begun to produce a clear roadmap for significant improvements in NSF's business processes, human capital management, and technology and tools management. NSF is confident that the results of this effort will inform the agency's investments in Organizational Excellence for the foreseeable future.

National Academy of Public Administration Review. Consistent with the guidance provided in House Report 107-740, NSF has contracted with the National Academy of Public Administration for a 1-year, $1.0 million review of NSF's organizational, programmatic, and personnel systems, and of the role of the National Science Board. NAPA is scheduled to complete this review in April 2004.

TECHNOLOGY AND TOOLS $112,740,000

The FY 2005 request for Technology and Tools totals $112.74 million, an increase of $51.80 million, or 85 percent, over the FY 2004 Estimate of $60.94 million. These investments represent approximately one-third of NSF's total OE portfolio, and they consist of three major components: Information Technology, Space Rental and Other Infrastructure.

Technology and Tools Funding
(Dollars in Millions)

	FY 2003 Actual	FY 2004 Estimate	FY 2005 Request	Change Over FY 2004 Amount	Change Over FY 2004 Percent
Information Technology	24.36	37.18	84.29	47.11	126.7%
Space Rental	17.10	18.20	19.30	1.10	6.0%
Other Infrastructure	5.04	5.56	9.15	3.59	64.6%
Total, Technology and Tools	$46.50	$60.94	$112.74	51.80	85.0%

Information Technology ($84.29 Million)

The FY 2005 Information Technology request is $84.29 million, an increase of $47.11 million, or 126.7 percent over the FY 2004 Estimate. This increase will enable the Foundation to address key President's Management Agenda initiatives, support a world-class infrastructure, address management challenges identified through internal review and oversight, and implement recommendations stemming from the multi-year Business Analysis.

NSF is a Federal leader in the use of information technology and promotes electronic business solutions that are simpler, faster, more accurate, and less expensive. Our requested funding levels reflect the importance and value the Foundation places on the innovations and efficiencies that can be achieved by the thoughtfully planned and well-managed execution of information technology. The agency's paper-based work processes have evolved to capitalize on technology-enabled ways of doing business, allowing the agency to serve as an effective and capable steward of the taxpayer's resources. NSF's return on investment has truly yielded improvements in both effectiveness and efficiency. As a result of the technology innovations implemented by NSF, in FY2003, NSF processed more than:

-- 40,000 Electronic Proposals (over 99% of all proposals)
-- 190,000 Electronic Reviews
-- 7,500 Graduate Research Fellowships
-- 25,000 Electronic Grantee Progress Reports
-- 10,000 Electronic Post-Award Actions
-- 15,000 Electronic Requests
-- $3.5 Billion Disbursement of Funds

The culmination of NSF's exemplary performance was highlighted by receipt of the President's 2003 Award for Management Excellence for the Foundation's innovative electronic capabilities to solicit, receive, review, select, award, manage and report results on public research and education investments. The award recognizes NSF's successful FastLane system, an interactive, real-time, web-based system used by over 200,000 scientists, educators, technology experts and administrators, including the country's top researchers, to conduct business over the Internet. The award further recognizes NSF's leadership

role in the Federal eGovernment initiatives that directly relate to NSF's science and engineering, research and education mission as well as supporting initiatives that affect all Federal agencies.

While much has been accomplished and a strong foundation for success is in place, NSF's information technology plans for FY 2005 and beyond must respond to new challenges and needs in the following three areas:

- Enabling Human Capital Management
- Continued Leadership and Innovation in eGovernment
- Delivering World Class Customer Services and Secure Infrastructure.

Enabling Human Capital Management ($5.0 Million)

During FY 2004, NSF will define requirements for a new end-to-end Human Capital system to support strategic workforce planning, competency and performance-based human resources management, and improved personnel management services. As part of this initiative, NSF will complete migration to the new Government-wide mandated Payroll System. During FY 2005, NSF plans to acquire commercial technology, and begin implementation of high priority capabilities needed to support human capital management and NSF Academy initiatives. Of the total requested increase, $4.3 million is associated with the end-to-end Human Capital system, and $0.7 million for the adoption of Office of Personnel Management-sponsored learning management system capabilities.

A learning management system is the key software application that enables strategic management of human capital activities such as workforce planning and operational management training. It provides an electronic means of tracking catalogues and curricula, developing learner profiles and individual learning plans, mapping competencies and skills to catalogue offerings, delivering courses, creating content and assembling it for uniquely tailored courses, testing and assessment, and reporting capabilities.

Continued Leadership and Innovation in eGovernment ($14.2 Million)

NSF is in the planning stage for implementing the next generation of information technology capabilities that go far beyond automation of paper-based business processes. NSF is committed to re-engineering its internal processes and implementing solutions that leverage innovative technology and workflow to address the full range of administration and management priorities and functions. This next-generation, technology-enabled solution will be planned for, defined, and implemented in phases, building on the multi-year Business Analysis study. The overall solution set, called the Proposal, Review, and Management Information System or PRAMIS, will include four foci: migration and integration with Government-wide eGov initiatives; continued evolution of "back office" grants management functions; strategic information asset management; and customer relationship management. Each are highlighted below:

- ***Government-wide e-Gov Initiatives***. NSF continues to play a leadership role on many Government-wide e-Gov initiatives. Specifically, NSF is a partner on Grants.gov, is migrating to a new Government-wide Personnel and Payroll system in FY 2004, and actively supports the eHuman Resources Initiatives, eTraining, eTravel, Integrated Acquisition Environment, and eAuthentication. In light of its contributions and accomplishments, NSF has maintained a green status in electronic government since FY 2002.

- ***Proposal, Review, and Award Management functionality.*** Using results from the Business Analysis, NSF will implement next generation "back office" grants managements capabilities. These capabilities will be based on re-designed business processes aimed at transforming the current mix of electronic and paper-based sequential award processing to enable dynamic, integrated processing of NSF announcements, proposals, and awards including improvements to pre- and post- award grant monitoring and contract management. Initial phases of "back office" grants management capability will be implemented through the Electronic Jacket pathfinder, which is closely integrated with FastLane. This application is serving as a proof-of-concept for total electronic proposal processing at NSF. Efforts to date have eliminated the need to process, print, and store paper copies of proposal processing files for approximately 70% of the proposals received by NSF, resulting in significant efficiency and productivity savings. FY 2004 and FY 2005 funding supports deployment of next phase critical functions including electronic signature, electronic records for awards, electronic workflow and continued integration with legacy applications.

- ***Strategic Information Asset Management.*** This initiative will include development and implementation of a plan to manage NSF's strategic information and associated data infrastructure to facilitate the access, definition, management, security, and integrity of data across the enterprise. The Strategic Information Asset Management project will focus on delivering the capability to address a strong suite of knowledge bases derived from information from various sources, layered with robust decision support and enterprise information system capabilities; content management and improved quality of information products accessible via NSF's web site; reviewer knowledge base that provides improved capability to identify individuals in the science and research community to evaluate the merits of research proposals; analytical tools for improved executive information, program management and oversight, and decision support; and document management capabilities.

- ***Customer Relationship Management.*** This initiative will extend NSF's current customer care services to include improved support for planning, delivering, and evaluating services provided to over 230,000 scientists, educators, and research administrators throughout the grants management lifecycle process. Functionality will address improved call center management for telephone service, analytics for customer-oriented processes and requirements; customer/account management information for integration with NSF's corporate directory; and customer feedback management for collecting and analyzing comments and feedback from the scientific community.

Delivering World Class Customer Services and Secure Infrastructure ($65.1 Million)

- ***NSF Security Program.*** $10.0 million, an increase of $7.0 million over FY 2004, is requested for investments necessary to make continual improvements to the NSF security program. NSF invested hundreds of thousands of dollars and thousands of work hours to enhance an already strong security program in FY 2003. Based on these investments, NSF's IT Security Program is – at a minimum – comprehensive, consistent with law and guidance, and effective. As a result of this extraordinary effort NSF was recognized for its significant improvement in its security posture in FY 2003 with an "A-" rating by the House Government Reform Committee's review of agency self assessments under

the Federal Information Security Management Act (FISMA). The FY 2005 request includes key investments essential to sustain and improve NSF's information security program in the areas of policy and procedures, risk assessments and security plans, managed intrusion detection services, vulnerability assessments, and the implementation of additional technical and managerial security controls.

– ***Operational Efficiency***

$55.1 million, an increase of $26.0 million over FY 2004, is requested for investments necessary to make continued improvements in operations and basic information technology infrastructure. These include investment in the Data Center and corporate infrastructure; network, e-mail and telephone infrastructure; customer services and care; and implementation of recommended investments resulting from the NSF Business Analysis and Enterprise Architecture analyses.

- NSF has undertaken a well-planned, phased approach to securely manage a complex information infrastructure that supports re-engineered workflow and business processes using innovative, technology enabled solutions. Planned and approved next generation capabilities to support high priority strategic investment areas will not be advanced without this additional funding. Adequate funding in these areas is critical to the efficient operation of the Agency, as NSF has become increasingly dependent on innovative technologies to handle an increasingly complex workload. This request includes funds to continue implementation of critical investments in hardware, software, and tools necessary to manage and operate an infrastructure that can support NSF electronic business processes.

Space Rental ($19.30 Million)

The FY 2005 Request is $19.30 million, an increase of $1.10 million, or 6.0 percent, over the FY 2004 Estimate. These resources are needed to pay rising GSA rental costs, real estate taxes, and to accommodate the growth in staff that commenced in FY 2003. A small amount of additional space will be leased in Fiscal Years 2004 and 2005 to relieve existing congestion and to accommodate the additional FTE associated with the budget request.

Other Infrastructure ($9.15 Million)

The FY 2005 request for physical infrastructure is $9.15 million, an increase of $3.59 million, or 64.6 percent, over the FY 2004 Estimate. To keep pace with advances in information technology and business processes, changes in the operational infrastructure are necessary. The increases will be used to provide enhanced physical security, including modernization of the badging and physical access system. Re-engineering the facility management services is also necessary to accommodate the continued growth in the volume of proposals submitted and the transition to fully electronic proposal processing.

The following table shows the planned distribution of general operating expenses by object class and is followed by brief detailed explanations of each category.

General Operating Expenses by Object Class
(Dollars in Thousands)

	FY 2003 Actual	FY 2004 Estimate	FY 2005 Request	Change Amount
Travel and Transportation of persons	4,333	6,050	7,260	1,210
Transportation of Things	221	211	500	289
Rental Payments to GSA	17,099	18,200	19,299	1,099
Communications, Utilities and Misc. Charges	2,056	2,499	2,702	203
Printing and Reproduction	334	310	310	0
Advisory and Assistance Services	6,100	7,708	22,200	14,492
Other Services	4,694	7,307	13,408	6,101
Purchases of Goods & Services from Gov't. Accounts	2,154	1,564	2,099	535
Medical Care	485	485	700	215
Operations and Maintenance of Equipment	8,530	10,321	43,445	33,124
Supplies and Materials	2,517	2,329	2,639	310
Equipment	12,436	23,017	33,479	10,462
Reception and Representation	9	9	9	0
Total	$60,968	$80,010	$148,050	68,040

Totals may not add due to rounding.

Description of categories:

- **Travel and Transportation of Persons** is discussed at the beginning of the GOE section.

- **Transportation of Things** consists of household moves associated with bringing new scientists and engineers to NSF. The increase of $289,000 will cover the increasing costs of household goods moves, and allow more comprehensive relocation benefits for newly hired employees.

- **Rental Payments to GSA** includes the rent charged by GSA for NSF's facility in Arlington, Virginia, and a few floors in an adjacent building. The FY 2005 increase of $1.1 million is required to fund GSA's estimate for currently occupied space, plus an additional floor and a half in the adjacent building.

- **Communications, Utilities, and Miscellaneous Charges** include all costs for telephone lines and services, both local and long distance, postage, and charges for centrally managed photocopying equipment. The increase of $203,000 will offset increases in phone and postage charges, and upgrades to photocopying/scanning machines

- **Printing and Reproduction** includes contract costs of composition and printing of NSF's publications, announcements and forms; as well as printing of stationary and specialty items. These expenses do not increase over the FY 2004 Estimate.

- **Advisory and Assistance Services** include development, learning and career enhancement opportunities offered through the Academy, contracts for position classifications, work life initiatives, outreach and contractual costs for the Business Analysis and related services. The FY 2005 increase of $14.5 million is needed to expand programs, curricula, and methodologies that support life-long

learning opportunities and develop employee competencies; initiate development of a competency based human resource system covering workforce planning, recruitment and retention, performance management, career mapping and employee development; support implementation of improved work-life programs such as Child Care and an enhanced Employee Assistance Program; broaden diversity recruiting initiatives, marketing and branding programs; implement broader human resource flexibilities to attract and retain employees; fund the Business Analysis that will define major improvements in efficiency and effectiveness of core business processes and develop and implement a Human Capital Management Plan and an Integrated Technology and Tools Plan.

- **Other Services** include warehousing and supply services, mail handling, proposal processing, equipment repair and maintenance, building-related costs, furniture repair, contract support for conference room services, security investigations and miscellaneous administrative contracts. These costs increase by $6.1 million in FY 2005 to fund office space build-outs and renovations, physical security initiatives and improvements, ongoing development of NSF's intranet and external web site, enhanced security investigation contract services, and offset increased costs resulting from upgraded security sensitivity designations.

- **Purchases of Goods and Services from Government Accounts** include reimbursable services purchased from GSA. These costs include security guard services, off-hours heating and air conditioning support, and some construction services. The increase of $535,000 will provide for additional guards in the newly acquired space, offset increased costs for security guards, and fund GSA-handled facility build-out.

- **Medical Care** includes costs associated with the health services contract, providing limited on-site medical services to the agency's staff. This includes performing physical examinations for the NSF staff on assignment at the South Pole. The increase of $215,000 covers increased costs of contracted health services and the purchase of improved medical equipment.

- **Operations and Maintenance of Equipment** includes management and operation of the central computer facility 24 hours/day, 365 days/year; operation of the customer service center and FastLane help desk; maintenance of database server hardware and related peripherals; software licensing fees; data communications infrastructure and network systems support; electronic mail support; and remote access (e.g., Internet and World Wide Web). The increase of $33.1 million is needed for increased costs to operate and maintain basic infrastructure equipment and services, including internal and external network for staff, visitors and panelists; increased costs due to the rising volume of Help Desk calls; increased maintenance costs for FastLane, legacy applications, and newly integrated infrastructure services contracts; and offset rising to maintain and improve NSF's enterprise-wide security program.

- **Supplies and Materials** include office supplies, library supplies, paper and supplies for the NSF central computer facility, and miscellaneous supplies. The increase of $310,000 will offset rising costs associated with electronic journals and databases that facilitate program staff locating reviewers to evaluate proposals.

- **Equipment** costs include new and replacement computing equipment, desktop computers, data communications equipment, video-teleconferencing equipment, office furniture, file cabinets, and support equipment such as audio-visual equipment. Also included are software development costs associated with developing and maintaining central application systems that support proposal, award, financial, and administrative activities. These costs increase in FY 2004 by approximately $10.5 million to support the following activities: investments in next generation grants management

capability and other eGovernment initiatives; investments in a new Human Capital system; web site initiatives; acquisition of hardware and software to improve operational efficiency to meet increasing workloads; implementation of a robust directory-enabled technical architecture to support next generation capability; and investments to define and implement the new Enterprise Architecture.

- **Reception and Representation** expenses are funds that may be used for official consultation, representation, or other extraordinary expenses at the discretion of the NSF Director or his/her designee. These expenses do not increase over the FY 2004 Request.