STRATEGIC GOAL 2

*Foster science and technological leadership
by protecting intellectual property,
enhancing technical standards,
and advancing measurement science*

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Working with U.S. industry to develop and apply technology measurements and standards has been a "growth area" for Commerce. Commerce supports technology development that can lead directly to breakthroughs in innovative manufacturing and production methods. Technological advances create jobs and enable the nation's economy to thrive.

Our laboratories ensure that the United States has the measurement capability needed by industry to continually improve products and services by conducting research and providing needed infrastructural technologies, such as measurements, standards, reference materials, and test methods.

Intellectual property is a potent force in and a fundamental component of the global economy. Commerce strives to preserve the nation's competitive edge by protecting intellectual property and encouraging technological innovation. In market-driven economic systems, innovation provides a catalyst for economic prosperity through the accumulation of scientific knowledge, introduction of new products and services, and improvements in the productivity levels of land, labor, and capital resources.

Bureaus Contributing to this Goal

The TA leads civilian technology for Commerce and works with U.S. industries to promote economic competitiveness. TA is the parent organization for NIST, NTIS, and OTP.

> *NIST* promotes U.S. economic growth by working with industry to develop and apply technology, measurements, and standards.

> *NTIS* operates a central clearinghouse of scientific, technical, and business-related information that industry can use to advance its understanding of science, create new products, identify new market opportunities, and allocate research and development resources, all of which serve to enhance America's competitiveness in world markets.

> *OTP* works with industry to promote competitiveness and advocates integrated policies for maximizing the impact of technology on economic growth.

The USPTO provides patent and trademark protection to inventors and entrepreneurs, and small and large businesses for their inventions and corporate and product identification. Through the timely issuance of high-quality patent and trademark registrations, the USPTO responds to market forces by promoting advances in technology, expanding business opportunities, and creating jobs. In addition, the USPTO is working with its partners to create a stronger, better-coordinated and more streamlined framework for protecting intellectual property around the world.

The NTIA ITS participates in technology transfer and commercialization efforts by fostering cooperative telecommunications research with industry where benefits can directly facilitate U.S. competitiveness and market opportunities. ITS has participated for a number of years in Cooperative Research and Development Agreements (CRADA) with private sector organizations to design, develop, test, and evaluate advanced telecommunication concepts. Because of the great commercial importance of many new emerging telecommunication technologies, including PCS, wireless local area networks, digital broadcasting, audio and visual quality standards, and intelligent transportation systems, ITS pursues technology transfer to the private sector through CRADAS and thereby contributes to the rapid commercialization of these new technologies.

General Goal/Objective 2.1

Develop tools and capabilities that improve the productivity, quality, dissemination, and efficiency of research

Performance Outcomes

- Provide leadership in promoting national technology policies that facilitate U.S. preeminence in key areas of science and technology (OTP)

- Provide technical leadership for the nation's measurement and standards infrastructure (NIST)

- Assure the availability and efficient transfer of measurement and standards capabilities essential to established industries (NIST)

- Catalyze, reward, and recognize quality and performance improvement practices in U.S. business and other organizations (NIST)

- Enhance public access to worldwide scientific and technical information through improved acquisition and dissemination activities (NTIS)

Provide leadership in promoting national technology policies that facilitate U.S. preeminence in key areas of science and technology

The TA's Office of the Under Secretary (OTP, or US/OTP) serves as the focal point within the federal government for leadership on civilian technology policy. It supports technology-based growth through a range of programs and policy development activities, addressing both domestic and international matters by identifying key policy needs and options, strengthening the capacities for technological innovation by U.S. industry and science and technology (S&T) community, and hastening the transfer of new scientific and technological advances to the private sector for commercial development.

US/OTP plays an important role in developing and coordinating national technology policy, working in partnership with industry and the S&T community and serving as an advocate for policies that leverage the benefits of new technology and enhance the strength of the U.S. economy.

In working to achieve the performance goal, TA's efforts are focused on the following four general goals:

- Support and improve the American innovation system.

- Advance the role technology plays in U.S. economic growth and homeland security.

- Strengthen the competitive position of the nation's technology industries.

- Strengthen TA's organization, capabilities, and resources to maximize the effectiveness of its activities and services.

For each of TA's goals and objectives, performance metrics rely chiefly on milestone accomplishments in achieving specific activities.

Provide technical leadership for the nation's measurement and standards infrastructure

Through its broad and vigorous measurement research, NIST works to anticipate the infrastructure needs of next-generation technologies and industries in the United States. This forward-looking research not only yields improvements in NIST's measurement services, but also generates new knowledge, capabilities, and techniques that are transferred to industry, universities, and government.

Next-generation measurement needs require NIST to focus its long-term research efforts on specific interdisciplinary technology areas where inadequate technical infrastructure is a barrier to development, commercialization, and public benefit: health care quality assurance, information/knowledge management, and nanoscale measurements and data. NIST currently has a broad range of competencies to draw on in each area, but emerging measurement and standards needs require a higher level of strategic focus, internal and external collaboration, and organizational commitment. Through its strategic planning processes, NIST has determined that these areas offer the greatest potential for increasing NIST's long-term impact on productivity, trade, and quality of life.

In general, new research does not begin to generate tangible new outputs and outcomes until at least two years after funding and thereafter. Since this goal centers on conducting research for potential future applications, NIST relies most heavily on external peer review to evaluate technical quality, merit, and performance in the current year. These reviews are conducted by specialized expert review panels under the management of the National Research Council (NRC), and cover the NIST laboratories comprehensively. In addition, NIST provides two indicators of the diffusion of its research results: the volume of technical publications, and the citation frequency for NIST-authored publications. NIST also conducts occasional benchmarking analyses of its measurement capabilities relative to other National Metrology Institutes (NMIs).

A major component of the Department's mission is to promote U.S. competitiveness by strengthening and safeguarding U.S. economic infrastructure. The economy and measurement infrastructure depends on accurate measurements and direct traceability to international standards. Measurement equivalency among international; national, and local laboratories is critical for the acceptance of test results for commerce, international trade, and health and safety.

Assure the availability and efficient transfer of measurement and standards capabilities essential to established industries

NIST maintains the national measurement and standards system and provides high-accuracy primary measurement services to anchor the nation's industrial enterprise to international primary standards. U.S. industry requires a high quality measurement infrastructure for product development, testing, instrumentation, process monitoring, and product performance enhancement.

NIST's measurement services provide a common infrastructure for measurement functions in existing industries, allowing customers to verify and gain domestic and international acceptance of their measurement results by tracing them back to the primary national and international standards.

Measurement services for the United States originate at NIST and are disseminated through calibrations, artifacts, and reference data, which ensure product attributes, normalize the U.S productive output, and facilitate domestic and international trade. NIST measurement services derive directly from NIST research efforts and are transferred through measurement standards, data, and technical services generated in the NIST Laboratories. Through these services, NIST provides its customers in industry, government, and the scientific community in general with measurement uniformity, traceability, and equity in domestic and international commerce.

In addition to peer review to assess technical quality and merit, NIST also tracks three output measures: Standard Reference Materials (SRMs) sold, Web access to NIST-maintained databases, and the number of items calibrated to NIST measurement standards. While NIST has diverse measurement and standards outputs, these three product and service categories represent major channels through which NIST transfers its measurement and standards capabilities to established industries; the metrics themselves indicate the level of use of each of these products or services. To measure and evaluate ultimate impacts, NIST uses retrospective microeconomic impact studies to quantify the net present value, real benefit to cost ratio, and social rate of return that accrue from the use of specific NIST measurement and standards products or services.

Catalyze, reward, and recognize quality and performance improvement practices in U.S. business and other organizations

The Baldridge National Quality Program (BNQP) catalyzes quality and performance practices by providing a systems perspective for understanding performance measurement. The BNQP provides criteria for performance excellence in three areas: business, health care, and education. These criteria reflect validated, leading-edge management practices against which an organization can measure itself. With their acceptance nationally and internationally as the model for performance excellence, the criteria represent a common language for communication among organizations for sharing best practices. The large number of applications to the BNQP and Baldrige-based state and local awards reflects high-level corporate commitment to quality and high-performance business practices throughout the country. The BNQP rewards quality and performance improvement practices through the BNQP. This award given annually to winners in the three aforementioned categories has become a signature standard of excellence in these three areas and is highly regarded within those communities.

Enhance public access to worldwide scientific and technical information through improved acquisition and dissemination activities

NTIS continues to meet the challenge of permanent preservation of and ready access to the taxpayers' investment in research and development through the acquisition, organization, and preservation of the titles added annually to the permanent collection. NTIS promotes the development and application of science and technology by providing technologically advanced global e-commerce channels for dissemination of specialized information to business, industry, government, and the public. NTIS is implementing a new initiative to provide the public with increased access to government information. The NTIS bibliographic database (from 1997 to the present) will be available via the Internet free of charge. NTIS will allow users to download any item in its collection that NTIS has in electronic format for a single low fee, or at no charge if it is short. In addition, NTIS will create links that will hyperlink customers to other agency Web sites that offer documents for free download. These recent developments and initiatives are a result of NTIS's new business model that maximizes utilization of the World Wide Web and e-commerce in its information collection and dissemination activities.

Program Evaluation

Program evaluation for the NIST laboratories involves a combination of specific output tracking, crosscutting peer review, and economic impact analyses.

The NIST Laboratories are reviewed annually by the NRC Board on Assessment. The NRC provides an independent, technically sophisticated, and extensive review of:

- The technical merit/quality of the laboratory programs relative to the state-of-the-art worldwide.

- The effectiveness with which the laboratory programs are carried out and the results disseminated to their customers.

- The relevance of the laboratory programs to the needs of their customers.

- The ability of the laboratories' facilities, equipment, and human resources to enable the laboratories to fulfill their mission and meet their customers' needs.

The most recent NRC report is available online at: *http://www7.nationalacademies.org/NIST/NIST_reports.html*

NIST also receives external review from Visiting Committee on Advanced Technology (VCAT), a legislatively mandated panel of advisors that meets quarterly to review NIST's general policy organization, budget, and programs. In addition, the performance of BNQP is evaluated by the Board of Overseers, a federal panel of national quality experts from business and academia that advises the Secretary of Commerce. An important part of the board's responsibility is to assess how well BNQP is serving the national interest. The board reviews all aspects of BNQP, including the adequacy of the Baldrige Criteria and processes for making Baldrige Awards, and reports its recommendations to the Secretary. Other annual external reviews are provided to NIST by the Panel of Judges and the Foundation for the BNQP. See *http://www.quality.nist.gov* for additional information.

NIST supplements the external review process with retrospective studies that seek to estimate the long-term benefits that derive from specific NIST products or services. Collectively, these studies indicate the types and levels of public benefits that will likely derive from investments in NIST laboratory research.

The OIG prepared an evaluation of NTIS's new business model. The model reflects NTIS's commitment to maximize dissemination of unclassified scientific, technical, engineering, and business-related information to U.S. business, industry, and the public. The OIG recommendations were to: (1) make it clear that there are major uncertainties associated with the business model's estimates during future discussions and presentations of the model, (2) periodically review the projections to determine whether they are realistic and achievable, and (3) evaluate the impact of the new business model on NTIS's operations on a monthly basis, and determine whether the new model is achieving the desired results or whether modifications are needed.

US/OTP is currently considering a number of options for establishing an appropriate program evaluation process.

External Factors

Technology is a fundamental component of economic growth and rising living standards. Technological progress drives national productivity growth, provides U.S. industries with a competitive edge in world markets, and serves as a linchpin for effective national security. As such, it is critical that federal policies remain abreast of national and international trends and promote a positive environment for technological and business innovation. The associated policy issues are diverse and numerous, including technology transfer and productive partnerships among the many public and private organizations that conduct

research and drive commercialization of innovative products and processes; the health of the U.S. investment in R&D (public, private industry, venture capital); the strength of the human and physical infrastructure supporting the U.S. innovation system; and sustaining business conditions (such as taxes, trade, intellectual property protection, and government regulations) that facilitate technological innovation and market risk-taking.

Outputs associated with coordination and leadership functions depend in part upon the interest and commitment of numerous public and private sector participants operating at the state and federal levels. USTA can influence but not control other participants.

Because of the nature of research and development, the immediate impact of many of NIST's programs cannot be determined. Therefore, NIST depends on outside peer reviews to provide them with recommendations on how to improve their programs.

Industry-specific business conditions and technological developments affect the level and range of demand for NIST products and services over time. For instance, annual demand for calibrations—only one of numerous outputs of the NIST laboratories—can fluctuate due to several factors outside NIST's control, including changes in the calibration intervals of large customers, changes in the average calibration interval rate in any given year, consolidation of calibration activities within large R&D organizations, and industry consolidation (as for example, in defense-related industries). In general, NIST seeks to mitigate the effects of external technological and market uncertainties by maintaining varied and close relationships with its customer base. Through conferences, workshops, technology roadmaps, and many other forms of interaction with its customers, NIST regularly evaluates and adjusts to the direction and level of demand for measurements, standards, reference data, test methods, and related infrastructural technologies and services.

The Baldrige Award's ability to further promote quality awareness and performance excellence will depend in part upon acquiring the formal authority to conduct research, develop data on best practices, and generate self-assessment primers and other educational materials.

NTIS's work in operating a central clearinghouse of scientific and technical information depends on revenue that comes from (1) the sale of technical reports to business and industry, schools and universities, state and local government offices, and the public at large; and (2) from services to federal agencies that help them communicate more effectively with their employees and constituents.

Collection of scientific and technical information from various contributors and dissemination of that information to an even larger audience is highly dependent on external factors, and therefore not entirely controllable. For example, the amount of new material available is highly dependent on budgetary and program decisions made by other agencies. NTIS's efforts to ensure the public easy access to available scientific and technical information enhanced acquisition and dissemination activities are implemented and monitored through performance measures.

General Goal/Objective 2.1: Develop tools and capabilities that improve the productivity, quality, dissemination, and efficiency of research

Bureau	Outcome	Performance Measure
TA/OTP		
	Provide leadership in promoting national technology policies that facilitate U.S. preeminence in key areas of science and technology	Support/Improve American Innovation System Advance role of technology in U.S. economic growth and homeland security Strengthen competitive position of American technology industries Strengthen US/OTP's organization, capabilities, and resources to maximize the effectiveness of its activities and services
TA/NIST		
	Provide technical leadership for the nation's measurement and standards infrastructure	Qualitative assessment and review of technical quality and merit using peer review Citation impact of NIST-authored publications Peer-reviewed technical publications
	Assure the availability and efficient transfer of measurement and standards capabilities essential to established industries	Number of Standard Reference Materials (SRMs) sold Number of NIST-maintained datasets downloaded Number of items calibrated Economic impact studies
	Catalyze, reward, and recognize quality and performance improvement practices in U.S. business and other organizations	Percentage of applicants indicating satisfaction with the relevance and importance of the feedback report Number of Baldrige Criteria disseminated
TA/NTIS		
	Enhance public access to worldwide scientific and technical information through improved acquisition and dissemination activities	Number of new items available (annual) Number of information products disseminated (annual) Customer satisfaction

General Goal/Objective 2.2

Protect intellectual property and improve the patent and trademark system

Performance Outcomes

- Create a more flexible organization through transitioning patent and trademark applications to e-government operations, and participating in intellectual property development worldwide (USPTO)

- Improve the quality of patent products and services and optimize patent processing time (USPTO)

- Improve the quality of trademark products and services and optimize trademark processing time (USPTO)

The USPTO's *21st Century Strategic Plan* is a far-reaching and aggressive plan designed to transform the USPTO into an organization that is responsible to the global economy in which it operates. After implementation of the plan, market forces will drive the USPTO's business model, geography and time will be irrelevant when doing business with the agency, products and services will be tailored to customer needs, and examination will be our core expertise. The plan is centered around three strategic themes:

- *Agility: Address the Twenty-first Century Economy by Becoming a More Agile Organization* – USPTO will create a flexible organization and work processes that can handle the increasing expectations of its markets, the growing complexity and volume of its work, and the globalization that characterize the twenty-first century economy. USPTO will work, both bilaterally and multilaterally, with its partners to create a stronger, better-coordinated, and more streamlined framework for protecting intellectual property around the world. USPTO will transform its workplace by radically reducing labor-intensive paper processing.

- *Capability: Enhance the Quality Through Workforce and Process Improvements* – USPTO will make patent and trademark quality its highest priority by emphasizing quality in every component of this strategic plan. Through the timely issuance of high-quality patents and trademarks, USPTO will respond to market forces by promoting advances in technology, expanding business opportunities, and creating jobs.

- *Productivity: Accelerate Processing Times Through Focused Examination* – USPTO will control patent and trademark pendency, reduce time to first office action, and recover our investments in people, processes, and technology.

In support of the *21st Century Strategic Plan*, the USPTO will pursue its aggressive timeliness goals to reduce patent and trademark pendency and substantially cut the size of the work backlog. The plan will ensure 27 month average interim pendency time in patents by 2008, while the USPTO continues to pursue the ultimate goal of 18 month total pendency time. In trademarks, the USPTO will achieve a 12 month pendency time by 2008. These will be accomplished through a radical redesign of the entire search and examination systems based upon multi-examination tracks; procedures that give greater choice and flexibility to applicants; increased reliance on commercial service providers; and variable, incentive-driven fees.

Some additional outcomes that USPTO anticipates as a result of its programs include:

- Market forces will drive our business model.

- Our products and services will be tailored to meet the needs of customers.

- Independent inventors, U.S. industry, and the public will benefit from stronger, more enforceable intellectual property rights and reduced duplication of effort worldwide.

Program Evaluation

Proofs of Concept: In the *21st Century Strategic Plan*, the USPTO has committed to subjecting the initiatives proposed in the plan to thorough evaluations. Pilot projects will be initiated and tested wherever necessary. Evaluation plans will incorporate, where appropriate, measurable objectives; critical measures of success; baseline data; and conditions for full implementation. This will ensure that the USPTO proposes appropriate changes to patent and trademark laws, makes changes to internal processes that provide benefits and increased efficiency, and makes sound investment decisions.

Quality Assurance: The USPTO also is committed to enhancing quality through the consolidation of quality assurance activities. Quality will be assured throughout the process by hiring the people who make the best patent and trademark examiners, certifying their knowledge and competencies throughout their careers at the USPTO, and focusing on quality throughout the examination process. In lieu of the standard end-process reviews, the USPTO will expand the review program to check the quality of the work product during all stages of examination, from first action to issue or abandonment or registration. The results of these reviews will be used as part of a continuous quality improvement program to identify problem areas and determine appropriate training needs or other corrective actions.

Accountability: Responsibility for providing performance data lies in the Patent and Trademark organizations. The USPTO holds program managers accountable for ensuring procedures are in place regarding the accuracy of their data and that the performance measurement source is complete and reliable.

External Factors

Several external factors affect the degree to which USPTO meets its performance targets including the following:

- Business factors that foster dramatic increases or decreases in patent and trademark application filings.

- The degree to which USPTO customers—inventors, entrepreneurs, and patent and trademark attorneys—take advantage of the USPTO's e-government environment systems to conduct business with the office electronically.

- Support for other patent offices in structuring new bilateral and multilateral initiatives.

General Goal/Objective 2.2: Protect intellectual property and improve the patent and trademark system

Bureau	Outcome	Performance Measure
USPTO		
	Create a more flexible organization through transitioning patent and trademark applications to e-government operations and participating in intellectual property development worldwide	Patent applications filed electronically Patent applications managed electronically Trademark applications filed electronically Trademark applications managed electronically
	Improve the quality of patent products and services, and optimize patent processing time	Improve patent quality by reducing the error rate Patent-in-process reviews Patent examiner certification Patent examiner re-certification Reduce average patent first action pendency (months) Reduce average patent total pendency (monthly) Patent efficiency Patent productivity
	Improve the quality of trademark products and services, and optimize trademark processing time	Improve trademark quality by reducing the error rate Trademark-in-process reviews Reduce average trademark first action pendency (months) Reduce average trademark total pendency (monthly) Trademark efficiency Trademark productivity

General Goal/Objective 2.3

Advance the development of global e-commerce and enhanced telecommunications and information services

Performance Outcomes

- Increase competition within the telecommunications sector and universal access to telecommunication services for all Americans (NTIA)

- Efficient and effective allocation of radio spectrum (NTIA)

- Ensure broader availability, and support new sources, of advanced telecommunications and information services (NTIA)

The telecommunications and information sectors account for approximately 10 percent of U.S. GDP. Driven in large part by growth of wireless services and the Internet, this figure is predicted by some experts to approach 20 percent of GDP in 2004. One of the NTIA's primary missions is to serve as the President's principal policy advisor on telecommunications and information issues and to be the Administration's primary voice on them. NTIA fulfills this policy-setting role in a number of ways: preparing and issuing special reports on topics that emerge over time; testifying before Congress and other organizations that are concerned with telecommunications policy; providing the Administration's views on actions proposed by the Federal Communications Commission (FCC); issuing requests for public comment on specific issues; and encouraging dialogue with the private sector through sponsorship and participation in conferences, workshops, and other forums.

Increase competition within the telecommunications sector and universal access to telecommunication services for all Americans

As a result of NTIA's FY 2002 spectrum summit, NTIA will examine an array of spectrum management policy issues dealing with innovative approaches to spectrum management and the effectiveness of current processes. This examination will be conducted in tandem with the FCC's proceeding on spectrum management policy in which NTIA will participate on behalf of the Administration. NTIA also will participate on behalf of the Administration in FCC and congressional proceedings on telecommunications policies, including the development of appropriate regulatory treatment for broadband services deployment. A number of Internet-related policy issues will require NTIA action, including Internet Corporation of Assigned Names and Numbers (ICANN) reform and continuing Internet privatization, domain name management both domestically and internationally, proposals to regulate Internet services and content, and the combination of Internet and telecommunications addressing known as Telephone Number Mapping (ENUM). NTIA will pursue policies promoting international trade in telecommunications products and services, promoting consistent international approaches to telecommunications policies, and improving relations with Western Hemisphere neighbors. All of these activities will require substantial coordination among NTIA's program offices, as well as interagency coordination to develop the Administration's positions.

Efficient and effective allocation of radio spectrum

The availability of the radio frequency spectrum is key to the development and implementation of innovative telecommunications technologies such as ultra wideband (UWB) and third generation (3G) wireless services. The NTIA's spectrum management activities are therefore intertwined with its policy activities in that existing uses of spectrum by both the private and federal sectors must be examined to determine where spectrum will be made available for new and innovative spectrum-using services that provide benefits to all consumers. Recent examples include actions to provide spectrum for 3G and UWB wireless services. NTIA's activities include (1) identifying and supporting new wireless technologies that promise

innovative applications for customers of the federal and private sectors; (2) providing the 56 federal agencies with the spectrum needed to support their missions for national defense, law enforcement and security, air traffic control, national resource management, and other public safety services; (3) developing plans and policies to use the spectrum effectively; (4) satisfying future U.S. spectrum needs globally through participation with the 190 other countries of the International Telecommunication Union (ITU) in establishing binding treaty agreements through world radio-communication conferences; and (5) improving through telecommunications research and engineering the understanding of radio-wave transmission, and thereby improving spectrum utilization and the performance of radio-communications systems. Implementation of the Administration's Spectrum Policy Task Force recommendations will be a high priority for NTIA in FY 2005 and following years.

Ensure broader availability, and support new sources, of advanced telecommunications and information services

In addition to its policy-related activities, the NTIA supports innovative telecommunications and information technologies through basic research performed at its laboratory, the ITS. ITS performs extensive basic research on quality of digital speech, audio and video compression, and transmission characteristics. This research has the potential to improve both the performance of telecommunications networks and the availability of digital content on the Internet. Basic research at ITS also supports U.S. positions in international standard-setting bodies and NTIA's development of Administration policies related to the introduction of new technologies, such as UWB and 3G wireless services.

Program Evaluation

NTIA management reviewed and assessed policy and program priorities in the development of FY 2004 and 2005 budgets. The broadband summit and ENUM roundtable served to inform NTIA of state and local government views as well as those of consumers and industry. In addition, NTIA convened a spectrum summit in FY 2002 to begin an inquiry on how to better manage and allocate this finite resource among competing uses. The results of the FY 2002 spectrum summit led to the development of a series of spectrum management reform priorities and objectives. This ongoing inquiry has yielded information about new and innovative ideas for spectrum policy and management. NTIA also is leading efforts on an Administration initiative to develop a radio spectrum policy for the twenty-first century that will better manage the nation's airwaves, enhance homeland and economic security, increase benefits to consumers, and ensure U.S. leadership in high-tech innovations. A high-level interagency task force will recommend ways to stimulate more efficient use of the radio frequency spectrum by government users. Implementation of these recommendations in FY 2005 and beyond should encourage spectrum efficiency, provide spectrum for new technologies, and improve the effectiveness of the domestic and international spectrum management process. To meet its current obligations and to address improvements, NTIA's spectrum management functions will continue to consume the largest share of agency resources.

External Factors

Consideration of telecommunications and information policy issues is affected by the activities of independent regulatory agencies such as the FCC and the Federal Trade Commission (FTC), and by priorities established for NTIA by the Department, the White House, and Congress. Rapid developments in the Internet and telecommunications industries, along with supporting technologies, sometimes make it difficult for government institutions to coordinate timely policy responses to issues as they arise. Regular interagency meetings on policy issues will assist in the development of timely Administration positions.

Congress from time to time has required some changes in federal use of radio frequency spectrum, which can affect availability of frequencies to suit federal needs. The speed of development and implementation of wireless technologies will affect the level and type of demand by federal agencies for certain frequencies. The FCC initiates numerous spectrum-related proceedings in which NTIA participates on behalf of the Administration.

General Goal/Objective 2.3: Advance the development of global e-commerce and enhanced telecommunications and information services

Bureau	Outcome	Performance Measure
NTIA		
	Increase competition within the telecommunications sector and universal access to telecommunication services for all Americans	Provide the policy framework for introduction of new technologies Policy customer survey
	Efficient and effective allocation of radio spectrum	Timeliness of processing Percentage of requests accomplished online Completeness and accuracy of agency assignment requests Customer satisfaction survey on training course
	Ensure broader availability, and support new sources, of advanced telecommunications and information services	Digital broadcasting conversion Quality of basic research as reflected in peer-reviewed publications Level of technology transfer activities conducted with the private sector through CRADAs