Response to Written Questions Submitted by the Hon. Jerry Moran to the Hon. Penny Pritzker

Question 1. How has Regional Innovation Program housed at the Economic Development Administration helped regional economies?

Answer. The Economic Development Administration (EDA) is committed to fostering connected, innovation-centric economic sectors which support commercialization and entrepreneurship as described in the America COMPETES Reauthorization Act of 2010. Working with regions across the country to develop regional innovation strategies, including regional innovation clusters, is also a goal of the DOC's FY 2014-2018 Strategic Plan and a keystone of the Secretary's commitment to building globally competitive regions.

As part of this strategy, the Regional Innovation Strategies Program (RIS Program) supports capacity-building activities that include 1) Proof of Concept Centers and Commercialization Centers as well as scaling of existing commercialization programs and centers; 2) feasibility studies for the creation and expansion of facilities such as science and research parks; and 3) supporting opportunities to close the funding gap for early-stage companies. To that end, EDA's existing and highly successful i6 Challenge is being joined by Cluster Grants for Seed Capital Funds, and Science and Research Park Development Grants to create the RIS Program.

According to preliminary studies of the i6 program conducted by the University of North Carolina and SRI International, evidence from the client/participant survey of i6 grantees indicates that over 90% of respondents attributed direct positive impacts on their capacity to the services or support that they received through the i6 program; most reported results across multiple categories, advancing technology and developing network contacts being the most significant.

Examples of short-term and long-term impacts included increased innovation and entrepreneurship capacity and knowledge, increased competitiveness, growth and expansion, and new opportunities. The preliminary findings also indicate that the impacts can occur at both the firm/organizational level and at the regional level.

For example, the Digital Sandbox KC in Kansas City, Missouri, offers a central connection point for large businesses, emerging enterprises, and entrepreneurs to evaluate and develop new products and services. Established in 2012, this facility is a hub for proof-of-concept work, mentorship, technical assistance, and early-stage investments and new jobs. By mid-2014, the Digital Sandbox had assisted local entrepreneurs with more than 200 business concepts, resulting in funding for 37 proof-of-concept projects. Furthermore, 26 of these grew into businesses that received more than $10.2 million in follow-on funding, creating 154 jobs for the local Kansas City economy.

Question 2. What outcomes have you seen for those economies and grant recipients?

Answer. The Digital Sandbox KC is not alone in such success. Another example is the University of Virginia, which joined forces with Virginia Tech and SRI International in 2012 to create a statewide innovation network, the Virginia Innovation Partnership (VIP). VIP's goal is to accelerate innovation and economic growth by breaking down silos and establishing better connections among the state's research and entrepreneurial assets. By October 2014, this partnership resulted in 36 research projects

receiving initial funding—12 of which grew into new businesses with over $3.5 million in follow-on funding—17 patents, two statewide venture conferences, and one very robust entrepreneurship mentor network.

Question 3. How do you measure success of these programs?

Answer. EDA, partnered with the University of North Carolina at Chapel Hill and SRI International to develop performance and outcome metrics for EDA-funded projects and to incorporate these metrics into a comprehensive and user-friendly evaluation system. The multi-year collaboration produced a logic model to guide future EDA initiatives and both partners offered a set of recommendations to enhance project/program evaluation. An improved EDA evaluation system will enable policymakers to better target their investments and to measure their potential impact on economic activity. The partners reviewed data sources and developed metrics to enhance the quality of information collected from EDA grantees. These metrics can measure economic development activities in new ways and allow policymakers to get a more complete picture of the impact of EDA-funded projects on a local or regional economy. A comprehensive evaluation of EDA-funded projects can lead to increased evidence-based decision making and allow EDA to lead the federal economic development agenda by promoting and measuring innovation and competitiveness.

This framework was used as a baseline from which EDA, along with Department's Economics and Statistics Administration (ESA), created standard metrics for each respective program under the RIS Program. Each award recipient agrees to collect and report on the metrics relevant to that recipient's program. EDA collects and analyzes the reported metrics.

These outputs drive local economies forward via outcomes such as increases in jobs, improvements in human capital, and growth in investment into the community. These outcomes are measured by new jobs created, new skill development, venture capital invested, and other respective metrics.

Additionally, Section 27 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. §3722) as amended by the Revitalize American Manufacturing and Innovation Act of 2014 (Title VII of 113 H.R. 83) [hereinafter RAMI] mandates an independent third-party evaluation of the RIS Program no later than three years after RAMI's enactment. (§3722(e) (1)) "The evaluation shall include—(A) whether the program is achieving its goals; (B) any recommendations for how the program may be improved; and (C) a recommendation as to whether the program should be continued or terminated." (§3722(e) (2)) The aforementioned outputs and outcomes that are measured throughout the program will be used as part of this evaluation. In order to allow programs using these consistent set of metrics to have time to generate measurable outcomes, it is anticipated this evaluation will be initiated toward the end of the mandated three year period stated above.

Question 4. I recently reintroduced the Startup Act. One portion of this legislation seeks to improve how federal research is commercialize for the purpose of new businesses and job growth. What programs at the Department of Commerce assist companies and universities in commercializing federal research?

Answer. Thank you for the opportunity to provide information related to the leading role of the Department in supporting innovation, such as the activities that relate to the Startup Act. The Department provides both a leadership role in coordinating these activities across agencies, as well as

firsthand experience in operating federal laboratories at the National Institute of Standards and Technology (NIST), the National Oceanic and Atmospheric Administration (NOAA), and the National Telecommunications and Information Administration (NTIA). In addition, the Department works with and promotes the commercialization of federal research through partner organizations such as the Federal Laboratory Consortium (FLC) and efforts such as the Lab to Market Cross Agency Priority (CAP) goal, and through the administration of grants through the Economic Development Administration (EDA).

The government-wide coordination of policy issues, including the regulatory authority for rules on how to deal with intellectual property resulting from government funded research are performed by NIST. In addition, NIST has specific responsibilities for coordinating public-private collaboration efforts by federal laboratories and serving as the host agency for the Federal Laboratory Consortium for Technology Transfer.

EDA's Office of Innovation and Entrepreneurship leads the Department's Regional Innovation Strategies Program. The objective of this program is to make funding available for capacity-building activities that include Proof of Concept Centers and Commercialization Centers as well as scaling of existing commercialization programs and centers; feasibility studies for the creation and expansion of facilities such as science and research parks; and supporting opportunities to close the funding gap for early-stage companies. In September 2014, EDA announced three separate funding opportunities under this program, including: the i6 Challenge, Science and Research Park Development Grants, and Cluster Grants to support the development of Seed Capital Funds.

EDA announced $8 million in funding to 17 grantees of the 2014 i6 Challenge on March 30, 2015. The i6 Challenge, in its fourth iteration, is a leading national initiative designed to support the creation of centers for innovation and entrepreneurship that increase the commercialization of innovations, ideas, intellectual property and research into viable companies.

EDA's Office of Innovation and Entrepreneurship also runs the National Advisory Council on Innovation and Entrepreneurship (NACIE), an external advisory council which the Secretary of Commerce chairs. The current council was established in October of 2014 and is made up of 27 accomplished individuals from academia, industry, and non-profits. It is charged with advising the Department on various matters that include the commercialization of research and is currently considering various projects around this topic. The former NACIE, seated from 2010 – 2012, created a report titled "The Innovative and Entrepreneurial University: Higher Education, Innovation, and Entrepreneurship" that includes best practices in technology commercialization from universities. The current NACIE is working with the White House Lab-to-Market inter-agency working group to determine if there is an opportunity to do the same kind of report for commercialization of research from federal labs.

In addition, both NIST and NOAA participate in the Small Business Innovation Research (SBIR) program, which provides funding grants for entrepreneurial research. These grants can be focused on the development of federal technology as well as external technologies. NOAA plans to expand its SBIR program in 2015 to include at least one SBIR technology transfer subtopic, which will enable private sector firms to take a NOAA-developed technology from the lab to commercialization with the help of SBIR funds.

The Technology Partnerships Offices at NIST and NOAA focus on commercialization and the needs of small businesses, start-ups and entrepreneurs, and have implemented licensing options to aid these innovators and to lower the risk for other potential partners in obtaining and using their technologies. In addition to traditional commercialization licenses and licenses through the SBIR program, NIST and NOAA offer a no-cost, exploratory license to advance the development of their technologies for eventual commercialization. NIST also offers a low-cost one-year license for NIST technology not licensed within five years of the patent issue date, and a small business license agreement to help attract investors to develop early stage technologies.

When it comes to collaborations with the private sector, the Department is a leader across federal laboratories and agencies, making extensive use of the authority to enter into Cooperative Research and Development Agreements or CRADAs. NIST alone accounts for approximately one third of the government's active CRADAs annually, while NOAA has been greatly expanding its use of this powerful tool in the last three years. NOAA has been gradually rebuilding its technology transfer program over the past three years and has now begun work to baseline the effectiveness of its CRADAs from the past decade.

The Department also has focused on technology outreach efforts to both industry and academia. For example, NIST is currently working with the Secretary of Technology for the state of Virginia to produce showcase events for the small business sector highlighting licensable NIST technologies. In 2014, NIST and NOAA conducted a joint technology showcase on the campus of their Boulder, Colorado, laboratories, which was marketed to local industry and academic groups. NOAA is also working closely with the technology transfer offices at its Cooperative Institutes to ensure jointly developed technologies are most effectively moved to commercialization.

Through the Lab to Market effort, NIST is also coordinating with a number of university groups, including the Council on Government Relations, the Association of University Technology Managers, and the Association of American Universities, to solicit feedback on current grant and partnership procedures. Under the Lab to Market and Open Data initiatives, NOAA is working to make more of its data publicly available through a strategic engagement with private sector partners. NOAA is also exploring establishing an Entrepreneur-in-Residence program at one or more of its labs in the United States. The United States Patent and Trademark Office (USPTO) is also evaluating patent entity status for inventions that develop from a university-government research partnership.

Question 5. Has there been any research on the effectiveness of these commercialization programs?

Answer. Yes, NIST and other federal agencies have historically conducted economic analysis research on the effectiveness of technology transfer. One of the five strategic areas of the Lab to Market effort is metrics. NIST coordinated the development of improved tech transfer metrics, which were first required to be reported by agencies in their FY13 Federal Tech Transfer Reports. NIST has been collecting data from each research agency and will release an interagency summary report to the President and Congress this summer. NIST is also expanding metrics analysis to include not only reports of (substantial) numbers of federal technology transactions such as licenses executed and patents filed, but also the long term economic impact analysis of these transactions through published literature. Internally, NIST is developing a list of start-ups and NIST-assisted young technology companies, and will gather data to track supported companies over time in order to develop metrics that gauge the effectiveness of NIST's support of these companies.

Question 6. Are there other strategies that can help improve how federal research makes its way to the marketplace?

Answer. There are many potential strategies to improve how federal research leads to economic growth. The Department's leadership in the Lab to Market initiative includes a focus on open data for federal intellectual property and federal research facilities. We are considering the various components of this strategy, including human factors, public-private collaborations, improved access to federal technologies and facilities, and working with state and local economic development organizations. New tools, such as the Federal Laboratory Consortium for Technology Transfer (FLC) Business tool and Available Technologies tool, have simplified the ability of potential partners to search across the federal labs. The Department and other agencies regularly work with state and local economic development groups to hold federal technology showcases, place Entrepreneurs in Residence within tech transfer offices to evaluate federal technologies, and facilitate partnerships with businesses and universities. Additionally, as noted above, the Department has reactivated NACIE to make recommendations in using federal technologies to advance the economy, develop the U.S. workforce, and encourage entrepreneurship. The USPTO also has a host of initiatives to improve the patent experience for inventors and patent quality to protect both inventors and the public. The NIST Manufacturing Extension Partnership Program actively assists the transition of technologies from our federal labs to U.S. manufacturers. The Department continues to explore many alternatives to bring together all of our assets to focus on growth.

Federal I.T. Reform

Question 7. Describe the role of your department's Chief Information Officer (CIO) in the development and oversight of the IT budget for your department. How is the CIO involved in the decision to make an IT investment, determine its scope, oversee its contract, and oversee continued operation and maintenance?

Answer. The Department's Chief Information Officer (CIO) participates directly in the budget development via three related processes. All major Information Technology (IT) initiatives that are proposed for the agency budget request to the President are first reviewed and approved by the Commerce IT Review Board (CITRB) which is chaired by the CIO. The CITRB rates the investments on a 1 to 5 scale across five major assessment areas: Program/Project Management, Shared Services, IT and Cyber Security, Approach and Subject Matter Expertise, and overall Health and Wellness. This assessment allows the board to identify areas of concern relating to specific aspects of the IT investment. If the areas of concern are not addressed and the overall rating stays low, it is highly unlikely that this investment will get approval to be included in the Department's budget request to the Office of Management and Budget (OMB). In addition, the CIO participates in the Deputy Secretary's review of the agency budget request each year and incorporates his/her thoughts concerning such investment proposals. Besides the annual budget process, the CIO is the chair and/or participating member of the CITRB, the Acquisition Review Board (ARB), and the Milestone Review Board all of which review major investments. A major IT acquisition ($25M +) requires the Department's CIO to issue IT investment authority in order for the acquisition to proceed. Once a major IT initiative is under development or in operations, it is monitored monthly by the CIO. During the operation and maintenance phase, the CIO will continue to review and monitor investments via the CITRB and/or convene a Tiger Team if

targeted investigation or analysis is required.

Question 8. Describe the existing authorities, organizational structure, and reporting relationship of the Chief Information Officer. Note and explain any variance from that prescribed in the newly-enacted Federal Information Technology and Acquisition Reform Act of 2014 (FITARA, PL 113-291) for the above.

Answer. In addition to the statutory responsibilities through the Clinger-Cohen Act and related laws, the Department of Commerce has implemented a set of CIO responsibilities that are fully responsive to OMB Memorandum M-11-29, *Chief Information Officer Authorities*. These responsibilities are conferred on the CIO through the Acting Secretary's June 21, 2012, Memorandum *Department IT Portfolio Management Strategy*. These responsibilities focus on the areas of Governance, Commodity IT, Program Management, and Information Security. We believe that these responsibilities are in line with those prescribed by FITARA, and we will await guidance from OMB in regards to any implementation requirements.

Question 9. What formal or informal mechanisms exist in your department to ensure coordination and alignment within the CXO community (i.e., the Chief Information Officer, the Chief Acquisition Officer, the Chief Finance Officer, the Chief Human Capital Officer, and so on)?

Answer. The Department's CXO's meet informally and formally on a regular basis to discuss issues, concerns and immediate and urgent initiatives. Each CXO manages a Council to discuss and address their specific constituent needs and requirements. Each Council includes cross-member CXO participation on a routine basis either as a standing member or by briefing specific subject matter issues and concerns. For example, the CIO routinely briefs the Chief Financial Officer (CFO) Council during the Department's budget formulation process. Additionally, the CIO is a standing member on the CFO Council, the ARB and the Acquisition Council just to name a few. Additionally, the CITRB, chaired by the CIO and co-chaired by the CFO, includes membership of the Chief Acquisition Officer, Budget Director, Department's Risk Management Officer, Commerce Bureau CIOs, etc. Therefore, there are many opportunities across department councils, working groups and review boards for departmental CXOs to discuss issues and concerns and provide timely and critical feedback and updates.

Question 10. According to the Office of Personnel Management, 46 percent of the more than 80,000 Federal IT workers are 50 years of age or older, and more than 10 percent are 60 or older. Just four percent of the Federal IT workforce is under 30 years of age. Does your department have such demographic imbalances? How is it addressing them?

Answer. The Department's IT Workforce numbers are similar to overall Federal IT Workforce demographics - 50% are 50 years of age or older, 11% are 60 or older and only 3% of our IT workforce is 30 years of age or younger.

Age	**DOC IT Workforce**	**Federal IT Workforce**
30 and below	3%	4%
>=50	50%	46%

>=60	11%	10%

For current and future vacancies, the Office of the Chief Information Officer is developing a recruitment strategy to attract IT workers that includes partnering with the Department's Office of Human Resources Management to utilize existing hiring programs to recruit current college students and recent graduates in entry level positions.

Question 11. How much of the department's budget goes to Demonstration, Modernization, and Enhancement of IT systems as opposed to supporting existing and ongoing programs and infrastructure? How has this changed in the last five years?

Answer. Of the Department's current IT funding, 35% is for Development, Modernization and Enhancement (DME) as defined by OMB. In 2010, the Department's percentage IT funding allocated to DME was 48%. However, this was heavily skewed by the almost $1 billion spent for the 2010 Decennial Census. Excluding this anomaly, the percent of DME funding for the department would have been approximately 23%.

Question 12. What are the 10 highest priority IT investment projects that are under development in your department? Of these, which ones are being developed using an "agile" or incremental approach, such as delivering working functionality in smaller increments and completing initial deployment to end-users in short, six-month time frames?

Answer. The Commerce mission is supported by many strategic and critical IT investments ranging from weather prediction and reporting systems, enumeration and economic reporting/tracking systems, to patent and trademark systems, all supporting a critical mission to the citizens of the United States. The ten highest priority IT investments under development across the Department include:

- DOC - Business Application Solutions (BAS)
- DOC - Enterprise Security Operations Center (ESOC)
- DOC - Commerce BusinessUSA
- NOAA - Weather Wire Service (NWWS)
- NOAA - NCEP Advanced Weather Interactive Processing System - Agile
- Census - 2020 Decennial
- Census - Enterprise Data Collection and Processing (CEDCaP) program
- USPTO - Trademark Next Generation (TM NG)
- NIST – Website Redesign and Realignment
- ITA – Salesforce Customer Relationship Management (CRM)

Question 13. To ensure that steady state investments continue to meet agency needs, OMB has a longstanding policy for agencies to annually review, evaluate, and report on their legacy IT infrastructure through Operational Assessments. What Operational Assessments have you conducted and what were the results?

Answer. The Department employs several interconnected processes for monitoring legacy IT infrastructure. Per official Department policy, all operational investments including IT infrastructure are required to conduct annual operational analyses. In addition, the Department's IT infrastructure

investments are required to come before the Department's CITRB every year to discuss their current and proposed strategy and performance. In addition to yearly reviews, all IT infrastructure systems are required to send in progress reports and updated performance metrics to the OCIO monthly, in order to get even more timely information and greater transparency on the performance of IT infrastructure operations.

Question 14. What are the 10 oldest IT systems or infrastructures in your department? How old are they? Would it be cost-effective to replace them with newer IT investments?

Answer. The oldest IT systems currently used across the Department include:

Bureau	IT System/Infrastructure	System Age (Yrs.)	Cost Effective Replacement Possible?
NIST	e-Travel Manager System (ETS)	6.5	Yes
NIST	Grant Management Information System (GMIS)	14	Yes
DOC	Commerce Business System (CBS)	11	Yes
NOAA	Automated Surface Observing System (ASOS)	10+	Yes
NOAA	National Weather Telecommunications Gateway (NWSTG)	10+	Yes
NOAA	Advanced Weather Processing System (AWIPS)	8+	Yes
Census	Decennial 2010	5+	Yes
NTIA	Frequency Management Records System (FMRS)	25+	Yes
NTIA	Spectrum 21 (SXXI)	15	Yes
NTIA	FreqNet Portal	15	Yes
ITA	Lotus Notes	15+	Yes
ITA	Oracle Content Management System (CMS)	15+	Yes

Question 15. How does your department's IT governance process allow for your department to terminate or "off ramp" IT investments that are critically over budget, over schedule, or failing to meet performance goals? Similarly, how does your department's IT governance process allow for your department to replace or "on-ramp" new solutions after terminating a failing IT investment?

Answer. The CITRB reviews IT projects, programs, and portfolios on a routine basis. The CITRB acts as a board of directors that advises the Secretary and Deputy Secretary on critical IT matters. Projects that are consistently rated "red" on the OMB IT Dashboard are reviewed by the Board.

Depending on the severity of issues, problems or escalating risk impacting the project, the CITRB may recommend termination, or halting of the project.

In addition to termination or halting the project, the CITRB ensures that proposed investments contribute to the Secretary's strategic vision and mission requirements, employ sound IT investment program management methodologies, comply with Departmental systems architectures, employ sound security measures, and provide the highest return on the investment or acceptable project risk. The CITRB provides for coordinated risk management, review, and advice to the Secretary and Deputy Secretary regarding IT investments. This advice includes recommendations for approval or disapproval of funding for new or base investments as well as recommendations for continuation or termination of projects under development at key milestones or when they fail to meet performance, cost, or schedule criteria. The Board also recommends approval or disapproval of requests for IT investment authority. Disapproval means they are not approved to enter into a contract to proceed to the next phase – this decision may result in overall termination or halting the investment until certain key actions have been completed.

Question 16. What IT projects has your department decommissioned in the last year? What are your department's plans to decommission IT projects this year?

Answer.

Decommissioned Projects		
Bureau	**IT Projects/Systems**	**Comments**
BEA	1000+ Legacy Programs/Applications	Incorporated into centralized databases
Census	IBM Lotus Domino web-based email and calendar system	Migration to cloud-based solution
ITA	Microsoft Exchange Infrastructure	Migration to cloud-based solution

Projects Planned For 2015 Decommissioning		
Bureau	**IT Projects/Systems**	**Comments**
ITA	On-premise SharePoint	Migration to cloud-based solution

ITA	On-premise data center servers	Migration to cloud-based solution
ITA	ITA Government Network	Transition to network as a service

Question 17. The newly-enacted Federal Information Technology and Acquisition Reform Act of 2014 (FITARA, PL 113-291) directs CIOs to conduct annual reviews of their department's IT portfolio. Please describe your department's efforts to identify and reduce wasteful, low-value or duplicative information technology (IT) investments as part of these portfolio reviews.

Answer. In order to monitor and promote optimal investment strategies and project management practices, the Office of the CIO charters the CITRB. Typically, the CITRB reviews two to three investments every month to review their performance and strategy. Following each review, comments and questions are sent to the managers and sponsors of that investment. This has led to many efforts within Commerce operating units and across the Department to consolidate similar efforts and contracts. For example, the Department is currently in the process of moving to a single cloud email system and towards a single financial and business management system. On a local level the number of networks, help desks and data centers throughout the Department continue to be steadily reduced. In parallel, and to facilitate such streamlining and consolidation, the Department has provided contract vehicles available to all operating units.

Question 18. In 2011, the Office of Management and Budget (OMB) issued a "Cloud First" policy that required agency Chief Information Officers to implement a cloud-based service whenever there was a secure, reliable, and cost-effective option. How many of the department's IT investments are cloud-based services (Infrastructure as a Service, Platform as a Service, Software as a Service, etc.)? What percentage of the department's overall IT investments are cloud-based services? How has this changed since 2011?

Answer. The Department implemented OMB's "Cloud First" policy and includes this as a requirement during annual Budget Formulation reviews. All new IT investments are required to investigate and if possible leverage cloud strategies and technologies during alternative analysis processes. Below is a consolidate list of cloud solutions across the Department:

Bureau	**IT Service Name**	**Cloud Service Provider Name**	**Type of Service (Infrastructure, Software, Platform, Etc.)**
BEA	Office 365	Microsoft	Platform
BEA	SharePoint	Microsoft	Software
BEA	Help Desk Ticketing Application	TBD	Software
NIST	Cloud Computing Services	Amazon	Infrastructure
NIST	IT Service Management	ServiceNow	Software
NIST	Cloud Email and Collaboration	Microsoft	Platform

NIST	Enterprise Mobile Device Management	MaaS 360	Platform
NTIA	Email		Platform
NTIA	Infrastructure Services	Various providers	Infrastructure
NOAA	IT Infrastructure	Various providers	Infrastructure
Census	Akamai Content Delivery	Akamai	Infrastructure
Census	GovDelivery Email and Blogging Services	GovDelivery	Software
Census	Microsoft Office 365	Microsoft	Software
Census	Cloud Testing For Centurion / Community TIGER/ Real-Time Non-ID	Noblis	Infrastructure
Census	Salesforce.com Integrated Partner Contact Database	Salesforce	Software
Census	SunFlower (Property Mgt)	SunFlower	Software
Census	Adobe Site Catalyst	Adobe	Software
Census	MaaS 360 Mobile Device Management (MDM)	Fiberlink	Software
ITA	SalesForce.com	Sales Force	Software
ITA	Email, Collaboration, VTC, and Storage	Microsoft	Platform
ITA	Infrastructure	Amazon	Infrastructure
ITA	IT Service Management	ServiceNow	Software

Question 19. Provide short summaries of three recent IT program successes – projects that were delivered on time, within budget, and delivered the promised functionality and benefits to the end user. How does your department define "success" in IT program management? What "best practices" have emerged and been adopted from these recent IT program successes? What have proven to be the most significant barriers encountered to more common or frequent IT program successes?

Answer. The Department defines an IT program/project as successful when, in addition to delivering within cost, schedule and budget, the program/project delivers the planned and measureable levels of benefit and addresses the specific requirements as originally defined, while staying in alignment with the mission and goals of the Department. Program/project success is being able to effectively integrate the various components of the program, at every level to ensure the people, process, and technology function successfully together. Barriers within Commerce include the ability to aggressively work across the organization on shared initiatives given the diverse mission areas and the federated culture. Program/project management teams must ensure that they conduct integration activities to ensure that the elements of the program are compatible and function together to satisfy business needs, while meeting cost and schedule constraints, and optimizing effectiveness. Several successful projects implemented across the Department include:

• BEA Data Flow Improvement Project

Within the Bureau of Economics and Analysis (BEA), the bureau implemented a project to enable more efficient data flows of the huge amounts of data processed and analyzed. BEA enhanced its centralized IT framework by achieving cross-program consensus on a design, developing, and releasing a BEA data hub which standardizes secure transmission of data across BEA's four major program areas.

• NIST PIV Enablement Project

The National Institute of Standards and Technology (NIST) implemented the PIV Enablement Project which was implemented to meet OMB, Department of Homeland Security, and the Department's policies requiring the use of HSPD-12 credentials (PIV cards) for network access. The project successfully enabled more than 90% of NIST Information System users to use their assigned PIV cards to authenticate to PIV enabled information systems as the normal mode of authentication with Windows computers. The project improved IT security by providing the capability to require two-factor authentication using the PIV card.

• Census Enterprise Systems Development Lifecycle Initiative

In 2014, the Census Bureau implemented the Enterprise Systems Development Lifecycle (eSDLC) initiative. The eSDLC leveraged best practices and processes from internal stakeholders, federal agencies, and private industry to develop a full set of processes and templates. Having all IT projects follow the eSDLC has increased the control of schedule, costs, and risks.