National Technical Information Service (NTIS)
Advisory Board Meeting Minutes
October 27, 2021
Virtual meeting

Attendance

The following board members participated in the meeting: Dr. Ajit Gaddam, Advisory Board (AB) Chair, Mr. Aaron D. Burciaga, and Ms. Claire L. Walsh. Ms. Diana M. Zavala was not able to attend but briefed the AB members prior to the meeting.

NTIS senior staff participants included Mr. Greg Capella, Acting Director; Ms. Elizabeth Shaw, Associate Director, Office of Program Development (OPD); Mr. Wayne Strickland, Acting Associate Director, Office of Program Management (OPM); Dr. Chakib Chraibi, Acting Associate Director, Office of Data Services (ODS); Ms. Allison McCall, Chief Information Officer, Office of the Chief Information Officer (OCIO); and Ms. Andrea Patterson, Deputy Chief Financial Officer, Office of the Financial Officer (OCFO).

Welcome/Opening Remarks

Ms. Shaw in the capacity of the Designated Federal Officer (DFO) opened the meeting with introductions as well as an overview of the establishment and purpose of the AB. Ms. Shaw called the meeting to order, turning it over to Mr. Capella and Dr. Gaddam.

Mr. Capella, Acting Director welcomed everyone to the meeting. After waiting a few minutes for others to join, Mr. Capella shared there were members of the public in attendance. He turned the meeting over to the chairperson, Dr. Gaddam. Dr. Gaddam introduced the other AB members, Ms. Walsh and Mr. Burciaga. Mr. Capella shared that Ms. Zavala would not be in attendance today. Dr. Gaddam stated the AB met a few days earlier to review the slides and had several good data points to share. Mr. Capella then briefly reviewed the agenda, sharing that it was much like the previous agendas with an anticipated ending at approximately 4 PM to 4:15 PM ET:

NTIS ADVISORY BOARD (Virtual)
National Technical Information Service

Register Through the WebEx Link:
https://ntis.webex.com/ntis/j.php?RGID=r9b852607bb219ac7bff825087e2d00b9

Wednesday, Oct. 27, 2021

AGENDA

I. NTIS Mission and Operational Update	
1:00 PM	**Call to Order, Last The Federal Advisory Committee Act (FACA)meeting notes review/acceptance and Introduction of Board Members** • Elizabeth Shaw, Designated Federal Officer • Greg Capella, Acting Director/Deputy Director • Dr. Ajit Gaddam, Advisory Board Chair
1:25 PM	**NTIS Update** • Greg Capella, Acting Director/Deputy Director
1:40 to 2:50 PM	**Operations of the Service and Lines of Business Overview** • Greg Capella, Acting Director/Deputy Director (5 min) • Elizabeth Shaw, Associate Director, Office of Program Development (15 min) • Wayne Strickland, Acting Associate Director, Office of Program Management (15 min) • Dr. Chakib Chraibi, Acting Associate Director, Office of Data Services (15min) • Allison McCall, Chief Information Officer (10min) • Andrea Patterson, Deputy Chief Financial Officer (10min)
2:50 PM	**10-minute break**
II. Discussion with Board Members	
3:00 PM 4:00 PM	**Advisory Board Discussion with NTIS** • Progress / thoughts on NTRL, future technology and marketplace • Guidance on the operation of the NTIS
III. Summary and Close	
4:00 PM	**Review Feedback and Action Items**
4:15 PM	**Members wrap up discussion and public comment***
IV. Meeting Adjourns 4:30 PM	

* Speakers will be selected on a first-come, first-serve basis. Each speaker will be limited to five minutes. Questions from the public will not be considered during this period.

Director's Overview

Mr. Capella shared that NTIS will lose approximately $1 million. The most significant factors were due to two of the large projects underran the projections. One reason was due to more efficient operations. The other project did not advance as far as we anticipated; however, there are plans to continue with both projects. Additionally, NTIS increased its investment to modernize key applications. All interfaces with the public have been or will be improved. A significantly improved interface with the Limited Access Death Master File (LADMF) is planned to be deployed next week. Mr. Capella reported that NTIS is migrating applications to the cloud. In addition, NTIS is in the final stages of closing out the Denver back-up site.

Mr. Capella shared the NTIS COVID-19 response continued to be focused on the safety of the staff. Although NTIS had outbreaks, we were able to quickly contain and maintain the operation with minimal disruption. On a positive note, there have been no fatalities from COVID within the staff and contractors. NTIS will continue to follow the guidelines set forth by DOC, OMB and OPM.

NTIS has made progress with organizational staffing changes to include advertising for two positions and adding another position that will give us more control of the cloud efforts. There is also a noncompetitive hire from the military that is in progress. Mr. Burciaga asked if this non-comp hire was part of the SkillBridge program. Mr. Capella shared it was from another program. Mr. Capella disclosed the National Institute of Standards and Technology (NIST), will likely advertise for the NTIS Director, once the new NIST leadership is in place.

Mr. Capella shared NTIS continues to capitalize on the strength of repeat business. In spite of the transition to the new administration and COVID, NTIS was able to do quite well although not as well as initially thought. Multiple new opportunities to provide agency solutions are maturing with the pipeline for additional work characterized as quite strong. Mr. Capella disclosed we are looking to add Decision Science Transition Services. To date, it has not gotten traction as of yet but anticipates this could be an effective product for the NTIS portfolio.

In support of the administration's representation of underserved communities, NTIS has focused efforts on equity. Some of the steps taken include re-advertising the Federal Register Notice for Joint Venture Partners, with additional language to encourage participation from the underserved communities, as well as NTIS' participation in the Minority Business Development Agency (MBDA) event. This event created good interaction with the community and hopefully, we will receive more partnership requests.

 NTIS implemented a new financial system, leveraging the Commerce Business System (CBS) for most of the financial activities. CBS meets most of NTIS' needs. However, there have been difficulties with making it work for a reimbursable bureau such as NTIS. The CBS team and NTIS continue to work collaboratively. NTIS has not retired all the legacy financial systems.

Mr. Capella highlighted again the status update of the NTIS technology infrastructure migration, including the back-up site in Denver, Colorado. He shared the Shawnee Data Center site is well into the migration. There have been delays with moving to the cloud that included issues with application versions and upgrades. The National Technical Reports Library (NTRL) has already moved to the cloud. Further Mr. Capella stated, we are moving everything we can to the cloud to

include virtual machine infrastructure and there should be no issues with completing the cloud efforts in FY 22. There were no questions regarding this portion of Mr. Capella's overview.

Operations of the Service and Lines of Business Overview

Mr. Capella continued with an overview of the NTIS organization, stating there have been no changes to the organizational management structure. However, NTIS will soon be advertising for an Associate Director, Program Management and for the Associate Director, Data Services. More details on the staff were provided that included a recent vacancy within the OCFO and gaining one new staff member within the Office of Program Development. The budget analyst position is planned to be advertised and filled shortly. Backfilling for the data science position is planned for the current vacancy. NIST may hire another attorney to support the current legal support for NTIS allowing for a back-up; however, the total FTE will remain at one. This should have no impact on cost.

Mr. Capella shared NTIS is growing the data accessibility services with the new work from the Veteran's Administration (VA). He stated the project is still evolving with a few issues and anticipates full production this fiscal year (FY). Mr. Capella shared the pipeline is flourishing. LADMF is in stasis with no large movements up or down. NTRL has moved to the cloud with an impact on the costs during the migration, because of the dual operations and a longer transition. The costs were about $1.6M with anticipated costs at $1.4M. No questions were asked about this presentation.

Next Ms. Shaw, Associate Director, Office of Program Development (OPD), described the organization structure which has remained unchanged since the last meeting. She shared the recent vacancy in OPD was filled with a former NTIS employee, Mr. Steven Holland. Ms. Shaw shared Steven was recently at the Department of Defense (DoD) and is managing the defense portfolio. Since Mr. Holland was a former NTIS team member, Ms. Shaw noted Mr. Holland was able to quickly ramp up into the position. Ms. Shaw reviewed the rest of the OPD team and provided an overview of their respective portfolios.

In addition to Ms. Patricia Gresham's agency portfolio, she is taking the lead on the awards initiative that was created as part of the discussion at the previous AB meeting. Also, the joint venture partner (JVP) initiative, where she is collaborating with the JVP to understand the OPD role and pipeline. Mr. Bobby Khondker's portfolio includes the VA, Department of Homeland Security (DHS), and Centers for Disease Control (CDC). Due in part to his private-sector background, Mr. Khondker is focused on supply chain initiatives as well as leading climate change, and assistive technology for the OPD team. Ms. Simone Gills is lead on the Health and Human Services (HHS) portfolio. As a former project manager (PM), she leads the engagement with past projects, and current customer relationships. Ms. Gills' also maintains the FACA due-outs and is lead on equality, fraud, and Office of Inspector General (OIG) opportunities.

Ms. Shaw described the process for meeting with customers with early involvement/ collaboration from all the offices to include NTIS' OPM and ODS. The 3-person structure consisting of OPD, OPM and ODS members, allows for early involvement and understanding the of agency's needs. Ms. Shaw reported the OPD team's focus continues to be on maintaining current relationships, researching agencies' current efforts and review of current work, pointing out again Ms. Gills role in this area. Ms. Shaw shared the OPD team continues to focus on the efforts of the administration's four areas of equality, economy, climate and COVID.

Ms. Shaw stated the OPD team's outreach for FY 21 was to almost 500 agencies and agency contacts. From those contacts, NTIS was able to facilitate 78 virtual meetings - approximately 1.5 meetings per week. This represented a higher meeting rate than in a non-virtual environment. In comparing the outreach numbers from the last AB meeting, Ms. Shaw noted the concentrated effort to cover 100 contacts, trying to support the assistive technology work.

Additionally, the team was able to attend 51 events throughout the course of the FY. These events supported training, understanding agencies issues/ "pain points" and potential leads. Ms. Shaw shared the OPD team's involvement with the research process and development of NTIS collateral materials. She provided insights into the OPD agency outreach techniques, sharing those customers from previous lines of business (LOB), which were also part of the strategy. Ms. Shaw spoke to the graphic depiction for OPD outreach, highlighting the administration's initiative, OIG reports, existing customers, fraud, 504/508 and JVP collaboration.

Ms. Shaw shared the sales cycle appears to belong, with the status of many agencies in the "forming" phase and sharing there may be some new opportunities coming at the beginning of the calendar year. As part of understanding the agency customer's needs, Ms. Shaw provided part of the messaging sent to agencies that previously met with NTIS. The results were as follows:
- 40% stated "No current need"
- 10% stated "Unfamiliarity with the NTIS vehicle"
- 30% stated "Cannot meet the $1 M threshold"
- 20% stated "Does not offer anything that we can't get now"
- 20% stated "Other"
    - Contact us in 2022
    - Good for now, will reach back if anything changes
Note – two respondents checked more than one response

Ms. Shaw closed by sharing specific tactics for "growing" current accounts through understanding specific issues and needs. Additionally, a focus on current/future innovation such as Zero Trust, HR, Energy accountability, Cyber, Cloud, Digital Transformation, Supply Chain and Accelerating Procurement. Ms. Shaw asked if there were any questions and Dr. Gaddam felt we should table this slide until later in the meeting. He shared the AB focused on the slide's information a few days earlier and had some insights.

Mr. Strickland, Acting Associate Director, Office of Program Management (OPM), described the OPM organization chart, sharing OPM has been very stable. He outlined the roles and responsibilities of the OPM team. He introduced the positive outcome from the interns and the Operation Warfighter (OWF)Program. Mr. Strickland shared the strategy for working with the interns to include, working on specific tasks such as transitioning the LADMF management tool database to the Microsoft Access database. Mr. Strickland recognized Mr. Randy Caldwell for his role with the internship arrangements.

In sharing the Line of Business slide, Mr. Strickland highlighted the role of the IT project managers as technical liaisons when working with the OCIO team. Specifically, the IT project managers helped with understanding the systems and level of support needed. Further, Mr. Strickland discussed staff contributions to the data services lines of business, with a focus on project lifecycle management and client delivery. He introduced collaboration with the Project

Management Improvement Accountability Act (PMIAA) where the Department of Commerce (DOC) has a community of practice (COP) for the bureaus and Mr. Strickland represents NTIS. It is anticipated that OPM will benefit with exposure to valuable training and the strengthening of program management capabilities/skillsets through this DOC COP.

Mr. Strickland shared the overview of the National Technical Reports Library (NTRL) slide reviewing the statutory authorities for NTRL are featured in this graphic. He further provided there are two goals:
1. Maintain the current content and modernize access
2. Continue to grow the NTRL content from federal science resources

The internship program with the Fairfax County Public Schools (FCPS) is on pause due to the COVID restrictions, and safety of the participants. Historically, the students would digitize the legacy microfiche as part of this program.

The NTRL 3-year plan is progressing. For the FY 20/21 plan, Mr. Strickland reported OPM accomplished most of the deliverables; however, still needing to be completed is upgrading the NTRL website. There continues to be an influx of tangible documents that the OPM team is working to educate federal agencies to transition to online feeds of the content by improving team outreach. For FY 22, Mr. Strickland felt the OPM team was on target. He highlighted the University of Denver, Master of Library and Information Science (MLIS) student internship as a positive change. The library of science background of these interns will give a unique perspective from an academic background on the NTRL. Mr. Strickland shared NTIS will maintain the relationship with the American Library Association (ALA), National Information Standards Organization (NISO) and Federal Laboratories Consortium (FLC).

Mr. Strickland provided insights into the NTRL team and wanted to share a sense of "how we are doing." The net result in 2020, was ~5,700 new content added to the NTRL. This was considerably lower than previous years before staff reductions. During peak times, around the 1990's and early 2000's, the number rose to 15,000 to 30,000 of new content coming into the NTRL. With the shift to the NTIS data mission, content ingesting leveled to around 10,000 as the new standard. The positive is there has been an increase of about 50% to 8,727 items added for FY 21. As there is a focus on digitization and automation, OPM is encouraged with the growth but realizes there is still a backlog to contend with.

The JVP presentations have offered potential opportunities for NTRL modernization. Mr. Strickland shared some examples of how automation and partnership opportunities may benefit the NTRL. One presentation provided background in creating assets from metadata. While the other piqued OPM's interest in automation tools and their approach to data and content management.

Updates to the Limited Access Death Master File (LADMF) were shared. A simplified process customer interface process via the website will now focuses on the following five (5) steps:

1. Review
2. Pay
3. Submit
4. Order
5. Renew

This change to LADMF focuses on the customer experience. Mr. Strickland closed out with an overview of a few select projects. The SSA project is going into the 11th year with plans to continue. Dr. Gaddam had 3 questions:

1. Dr. Gaddam recapped the progression from the spreadsheet to the access database for the LADMF, then asked the impact of the virtual interface/front changing and the impact on how we are thinking from a modernization standpoint. Would the database be powering the responses, and will the application programming interface (API) endpoint allow customers to query?

Mr. Strickland clarified that the reference to the access database and excel spreadsheet were for internal administrative activities only.

2. Dr. Gaddam referenced the 1.7 M notices for SSA that were sent out. He asked that from a cost management standpoint, who bears the last mile delivery cost to send UPS, USPS, or FedEx? Does this expense come to NTIS?

Mr. Strickland shared NTIS manages the cost associated with the output, but it is built into the budget as part of the operating cost. Mr. Jay Hanchey further clarified that ultimately, the customer pays the shipping costs.

3. Dr. Gaddam reviewed the discussion regarding the future of the NTRL and JVP's capability. He then referenced that Google has a massive effort scanning books, documents, and files, with a variety of formats needed by the consumer. He asked if this may be an option to route some of these documents to Google?

Mr. Strickland clarified the JVP references were not the same as a typical partnership. Further sharing, NTIS and Google have already investigated a potential partnership. However, there was concern that a partnership would need to fit Google's business model. Mr. Capella added the majority of the documents and the cost to maintain in the warehouse are less than 5% of the NTRL budget. NTIS does not have the funding to digitize the documents. He shared NTIS has explored other avenues to include cooperative agreements and outreach to the Library of Congress, but absent funding there was no interest. The Fairfax County Public School internship program is an effort to expand the digitization of legacy documents. Primarily, all new NTRL content is born digital and will not require digitization.

Mr. Burciaga followed up on the document backlog stating the numbers do not appear to be large in comparison to other industries. He provided insight into the differences between digitization and digitalization, stating the key opportunity is making the data more useful by scanning to bring in the data and information - not just the record. Mr. Burciaga felt there was about a month's work of digitization and there are start-up companies that would love to use this as a proof of concept. If this offering was launched, then the capability could become a new service. Mr. Strickland clarified the backlog was millions of records and the 30k was not representative of the legacy content. Mr. Capella added that changes to the filtering requirements were made so as not to delay the posting of records and reducing the backlog. He asked the Board for any companies that may be willing to help. Mr. Burciaga shared the Board could assist and asked for Mr. Strickland to follow-up.

- Mr. Burciaga commented on the SSA, EDFSA and VA as the primary source of revenue and aligning this to the NTIS mission to promote economic, innovation and growth, he felt there was an additional opportunity with the public and industry that was not readily seen in the information shared.

Mr. Capella clarified that NTIS was trying to address this with legal and the Title 15 authority limits NTIS to federal support, only with the exception of LADMF. He plans to follow-up with legal.

Dr. Chraibi, Acting Associate Director, Data Service (ODS) described the role of the data services office. He stated the role is to support NTIS' core mission by assisting federal agencies in their quest to harness data as a strategic asset and leverage innovative technologies to achieve their mission outcome. ODS supports several agency projects as a technical advisor and data science expert. The current ODS organization chart was shared noting several vacancies that will be filled soon.

A listing of the projects ODS has been supporting was shared. Dr. Chraibi stated these projects reflect the breadth and depth of ODS' contribution in the field of data science and related fields such as machine learning (MI) and artificial intelligence (AI). The ability to engage with the agency and private sector early in the formulation of the problem statement then quickly begin the innovation process through an interagency agreement (IAA) is essential to the success of the program. Additionally, the importance of the collaborative process with OPM and OPD is critical to promoting, communicating, and executing the value proposition.

Dr. Chraibi provided an in-depth explanation of the merit review process. This merit review is a very rigorous, transparent, fair and equitable process. Once the JVP selection, legal review, financial and IAA are completed, then NTIS moves immediately to the project kick off. Dr. Chraibi highlighted the ODS work with the Health and Human Services (HHS) project.

Dr. Chraibi followed with insights into some of the data projects. For the HHS OIG project, they were seeking to develop the framework for data integration and a tool to enable continuous improvement. Dr. Chraibi shared HHS is at the forefront of addressing waste, fraud, and abuse. For this project, we had the largest number of proposals. We were able to complete it in 14 business days. For the Department of Labor (DOL) CIO project, the objective is to develop and deploy an enterprise platform. This platform will provide the ability for data-driven decision making, and analytics capabilities to support the DOL agency and programs. This work will fully leverage data resources driving organizational performance improvement. Additionally, there are two projects at the US Agency for International Development (USAID). The objectives are to design and build data platforms; and store, organize and integrate data to support reporting and evidence decisions while optimizing resources.

Dr. Chraibi provided an overview of the National Institute of Standards and Technology (NIST) project, the Forensic Science Interactive Process Maps (FSIPM). NTIS is working with NIST to strengthen the practice of forensic science by conducting scientific research, assessing the foundation of forensic science methods and practice culminating in the development of science-based documented standards. Further, he highlighted the work at the Department of Homeland Security (DHS), Program Accountability and Risk Management (PARM), sharing we are working to develop a modern and efficient knowledge-based management ecosystem to support their acquisition community stakeholders. The DHS project will include an analysis of return on

investment (ROI). Finally, at the DOD, NTIS used AI enabled algorithms to strengthen detection, user activity monitoring, and network mapping.

NTIS continues to build solutions based on the effective use of the JVP authorities. Our JVP team is growing with a greater range of data science capabilities. There is a new Federal Register Notice (FRN) seeking JVPs to include underserved communities. The current number of JVP stands at more than 40 partners who offer more than 50,000 data scientists. NTIS has added weekly overview meetings with the current JVPs so that all team members understand the capabilities and offerings available.

Dr. Chraibi concluded with NTIS having contributed to a major initiative within the Department of Commerce (DOC). On Sept 28, 2021, the DOC announced the release of the Commerce data strategy. The strategy will enhance the economic role and increase its competitive advantage. The plan consists of five goals:
- Data Governance and Management
- Data Access and Analysis
- Data Ethics
- Data Skills
- Data Collaboration

Dr. Chraibi shared he was asked to lead the work on data ethics for the DOC. He confirmed Ms. Walsh's question if the data ethics work was part of the 5-year plan. Dr. Chraibi shared the goal is to complete the plan in Q3 this FY. Ms. Walsh asked if AI will be incorporated into the data ethics plan. Dr. Chraibi shared a notice was sent yesterday seeking volunteers to join the working group and felt that AI would be integrated.

Mr. Burciaga shared he has an article coming out on ethics and the VA has a very strong AI Data Ethics Council. He felt there may be some synergies gained by reaching out. He shared the CP8 strategy of culture, people, process, projects, products, professionalization, partnerships, platform and patents and intellectual property (IP). Partnerships could be broadened to areas such as software companies, training, universities, and community colleges. In focusing on the "people" strategy, Mr. Burciaga asked that NTIS think of how to recruit, retain, mentor people, reskill and retire elements. A discussion on the importance of culture with Dr. Chraibi sharing that was one of the end goals. Mr. Burciaga asked if there was consideration for an ethics board.

There were no additional questions so proceeded with the CIO presentation. Mr. Capella introduced Ms. McCall.

Ms. McCall, Chief Information Officer, described her organization sharing there were no changes and thankfully very little turnover within the CIO shop. She shared she has a fantastic team of contractors and feds. In addition to the three federal employees listed on the organization chart; there are only two other federal employees. Ms. McCall commented that we are running with a very lean organization.

Ms. McCall updated the AB on the efforts surrounding cloud migration. She shared that they are still working on decommissioning the Denver site as well as all the systems on-prem. One of the big efforts is to make sure the OCIO team is fully able to perform its functions in the cloud. She was pleased to share the team just completed the migration of the NTRL into the cloud. Ms.

McCall noted all of the cloud migrations have been a difficult undertaking due to a myriad of challenges to include the loss of staff, loss of system knowledge, and ongoing security challenges in the cloud and on premise. Regarding the efforts for the migration of the virtual desktop infrastructure (VDIs), the OCIO was not able to select their first option due to the cost.

Ms. McCall provided an update from the previous meeting regarding innovating the data transfer and access (DTA) work that includes SSA, ED, and VA. She shared this is very much needed and the code that supports these systems is 11-years old. Ms. McCall described the holistic approach for the DTA projects to include talking with the users, addressing opportunities to automate more and reducing human intervention. Ms. McCall shared the steps to the DTA Innovation Initiative:
- Step 1. Organizational and IT Environment Discovery
- Step 2. End User Needs Analysis
- Step 3. Solution Development
- Step 4. Migration Planning
- Step 5. Automation
- Step 6. Build the Target Environment
- Step 7. Initiate Test Migrations
- Step 8. Cutover
- Step 9. Transition to Operations and Maintenance (O&M)

Ms. McCall stated these efforts are not meant to replace individuals rather it will help NTIS become more efficient. These efforts will help streamline and improve our processes. We are looking to find a way to make these systems extensible.
Pending no questions, Mr. Capella introduced Ms. Patterson for the OCFO update.

Ms. Patterson, the Deputy Chief Financial Officer, shared her organization's structure had not changed from the previous meeting with the exception of one team member leaving. The vacancy was held by someone formerly from the OCIO who helped transition to the Commerce Business System (CBS).

Based on the forecast, it was predicted NTIS will end the year with a positive net; however, we ended up with a $1M loss. Ms. Patterson shared we did not earn as much with the SSA project. The reduced revenue was because of changes to the project resulting in efficiencies. Additionally, we anticipated the VA project to be further along in the deployment. It did not to the extent as originally planned.

Based on the recommendations from the AB, we were able to share the progression of the revenue by year and LOB:

Line of Business		FY2020	FY21 March 2021	FY2021
Data Science Innovation Services	Revenue	$38,806,593	$15,057,483	$26,261,750
	Cost	$37,188,881	$14,680,135	$25,859,350
	Net	$1,617,712	$377,348	$402,400
Data Accessibility Services	Revenue	$30,775,769	$14,342,770	$30,214,650
	Cost	$29,168,292	$14,215,040	$29,613,251
	Net	$1,607,477	$127,730	$601,399
Data Subscription Services	Revenue	$5,911,872	$1,481,863	$2,666,519
	Cost	$5,907,300	$1,666,735	$2,740,757
	Net	$4,572	-$184,872	-$74,238
Legacy Business	Revenue	$4,032,343	-$2,452	$0
	Cost	$3,068,362	$30,030	$34,632
	Net	$963,981	-$32,482	-$34,632
Technical Clearinghouse (NTRL)	Revenue	-$2,020	$0	$0
	Cost	$1,920,343	$761,779	$1,541,938
	Net	-$1,922,363	-$761,779	-$1,541,938

*Numbers exclude Imputed Financing

Ms. Patterson explained that in addition to the reduced revenue from the Data Accessibility LOB, the Data Science showed a decline because of multiple projects came to an end. The Data Subscription Services LOB was impacted by the loss of the Drug Enforcement Administration (DEA). There is no revenue associated with the NTRL; however, we have been able to reduce costs. Finally, the cost for the cloud was higher than anticipated.

We have not forecasted for FY 2022 yet. Due, in part, to timing as we just starting the new FY, understanding the impact of the continuing resolution (CR) on new projects and the status of the VA project. Ms. Patterson explained how the transition to CBS made a change to how overhead (OH) was allocated - moving from allocating all OH to a surcharge methodology.
Mr. Capella noted that the "reserves" are more than sufficient and will not impact our ability to move forward. There were no questions, so we adjourned for a short break.

Mr. Capella moved into the AB discussion portion of the agenda. He stated this section will allow the Board to provide feedback on the current status and suggest areas where we could focus to further improve NTIS performance then introduced Dr. Gaddam.

Advisory Board Discussions/Recommendations for NTIS

The AB discussed what had been shared and provided additional feedback specifically focused on how to move forward, what NTIS can do to improve, and capabilities to target. Dr. Gaddam acknowledged the new format sharing the Board met previously acknowledging there were several questions from Ms. Zavala that he will share as well as updates on the marquee customers. He began with the following questions:

1. On talent and hiring there appears to be a lag time noting a 3 to 4 months between a posting to hire. Although, he stated it was not uncommon. Has NTIS attended hiring events for strong diversity candidates in science, technology, engineering, and mathematics (STEM)?
   Mr. Capella shared hiring actions come from NIST human resources (HR). They have been willing to support us; however, constrained by the federal options available to us. Thus far, we have not had any results from attending events. Mr. Capella shared Mr. Caldwell has reached out to the veteran's organizations such as the Wounded Warrior program in an attempt to add to the NTIS talent pool. Mr. Capella shared that 3-4 months is optimistic probably a much longer lag time.

Dr. Gaddam followed up with a budget question sharing concerns that the budget may not be available to fill the position. Mr. Capella shared that we control our budget; however, some key positions such as Data Science is critical to our success. There were multiple positions that are vacant and NTIS had to prioritize based on needs.

Mr. Burciaga suggested the SkillBridge as another option for finding resources. He suggested developing an education partnership. Some of the schools he has worked with include Massachusetts Institute of Technology (MIT), Purdue, Notre Dame, Carnegie Mellon, and South Carolina. Mr. Burciaga felt that reaching out to community colleges as well as connections from the Board may be of help to NTIS. In addition to interns, he recommended adding more senior talent to the mix.

Mr. Caldwell added that we have been working with the DOD Operation War Fighter internship program as well as the VA on the vocational rehabilitation programs. He is looking to use some of the same pipelines to build out the Ph.D. and Sr. level data scientist. Additionally, NTIS has started laying the foundation to have the educational outreach. Mr. Caldwell felt that one of the challenges is competing priorities with a small staff.

Dr. Gaddam concluded that in addition to the potential resources stated earlier, the Board has strong alumni relationships that could be leveraged. He shared a program at Carnegie Mellon that could be considered where students from a cross-function of capabilities worked on specific problems. Mr. Capella supported sharing any new NTIS postings to the Board for further outreach.

2. Training efforts for NTIS were addressed as another area for potential improvement. As NTIS participates in developing proposals or attending meetings, there is an expectation for all participants to speak the same language. This represents another opportunity to build a roadmap to include upscaling the team.

   Dr. Chraibi shared data science is evolving quickly and there is an expectation that we integrate how data science, AI, and ML will contribute to the agency's mission. The DOC is exploring training in these areas as part of the Commerce Data Plan. At NTIS, Dr. Chraibi shared we have weekly meetings with the JVP to understand capabilities and use cases. Mr. Capella shared the process for engaging with potential agency customers is very collaborative and includes ODS, OPD and OPM in the discussions. Dr. Gaddam shared that in addition to the data science work there were tremendous opportunities with cloud services. In addition to the cloud, he shared budgets are allocated for work in automation, cyber and data science.

   Mr. Burciaga shared he was available to help evaluate some of the upscaling platform. He agreed with the importance of training the workforce and thought there was value in training as well as communication. The Federal Bureau of Investigation (FBI) is an example of an agency using these platforms and he will provide contacts to NTIS for further investigation.

3. Future revenue shortfall is a concern. As data analytics becomes more and more ingrained into the agency's culture, the ask for experts becomes reduced. For example,

the rise of the Chief Data Officer (CDO), points to having more of these services performed in-house. Mr. Burciaga sees the trend as directing to more in-house data work. How is NTIS addressing the potential loss in this area?

Mr. Capella agreed stating we are seeing some organizations maturing; however, it is at the tip of the iceberg level. He felt the push within the government was due to the inconsistent and lack of coherence amongst business units around data policies, data management and tools. Mr. Capella believes we have time and reiterated the need to expand the authorities beyond data science.

Dr. Gaddam shared the problems are vast and huge. He highlighted the earlier information stating NTIS should follow where the budgets are going. Some of the key areas include are zero trust, supply chain with cyber and data science are supporting pillars. Mr. Burciaga recommended that we work with Dr. Chraibi to hire practice leads in specific fields such as data engineering and operations, automation, cyber-analytics and supply chain analytics. He suggested that Dr. Chraibi look at chapter and sections to help with the ODS organization. Mr. Capella shared there has been a need to help augment skills in different agencies.

4. The Climate seems to be an area for opportunity. Mr. Burciaga shared the Dept. of State announced the creation of a cyber bureau with a budget increase almost of 50%. The State Department is asking for help with partnerships. Dr. Gaddam reiterated to "follow the money" and provided there appears to be many potential cyber opportunities.

Ms. Shaw shared we had met with the Department of State on the ability for us to assist with solutions. This was an early discussion and potential opportunity for NTIS to assist further. Mr. Capella shared he would like to explore cyber opportunities within the State Department. Dr. Chraibi affirmed that climate represents a strong opportunity. He stated he is organizing a webinar with NOAA and industry in January on how to leverage predictive analytics to address climate change.

With this last question Dr. Gaddam passed the floor to the fellow Board members.

5. Mr. Burciaga asked for clarification on the new focus of the JVP program.

Mr. Capella shared we re-published because the agreements are due to expire. We encourage the current partners to continue but also to engage new partners. In the last 2-3 months, we included new language that states we fully support those underserved communities, encouraging them to engage with us. Additionally, we leveraged our relationship with MBDA to further explore additional opportunities with minority businesses.

Mr. Burciaga suggested the Small Business Administration (SBA) and the registry of the HUBZone certified could be valuable. He followed up on a question regarding the retention rate of the JVP's.

Mr. Capella stated we saw some attrition with the past JVPs. Although recently there was a surge with approximately 10 new proposals. Mr. Caldwell provided additional detail with 7 of the partners responding within a week of the deadline. Another 5 tentatively

committed to providing updated packets within the next 90 days. Five partners were already in projects and were grandfathered in. Those working on current projects plan to provide an update submission. Of the original 32 partners, Mr. Caldwell felt we will lose 7-8 JVPs. Mr. Capella shared we are seeking feedback from those JVPs that did not propose.

Mr. Burciaga asked for insight into where we advertised. He shared when he set up partnerships, he sets up goals in specific areas to include professional organizations. Mr. Capella shared in addition to the FRN posting and speaker opportunities, we sent out over 10k e-mails from NIST and DOC lists. Also, we had MBDA re-broadcast the information. There has been some involvement with organizations such as AFCEA, ACT-IAC and industry groups. Mr. Burciaga was willing to share thoughts on additional organizations.

Mr. Burciaga discussed the conversation on the marquee customers. He advised that we enter the relationship at the top and not through a grass roots campaign. Marquee customers can include DHS, FBI, Internal Revenue Service (IRS), the Joint Artificial Intelligence Center (JAIC) and the National Oceanic and Atmospheric Administration (NOAA). The Board was willing to introduce us to the JAIC leadership to include the Chief Operating Officer MG Marty Burke.

Ms. Walsh shared she did not have anything else to add commenting that it looks like NTIS is making some great progress. She asked that we move to the next section.

Review Feedback and Action Items:

1. Mr. Capella asked for assistance with getting the "marquee customer." Dr. Gaddam shared he and the board will assist with ideas in this area.
   Status: Complete.

2. Mr. Burciaga ask if moving forward we could include a column of Same Period Last Year (SPLY) in the OCFO presentation.
   Status: Complete. Information provided to Board on 10/27/21.

3. Mr. Capella offered to send all vacancy announcement on USA Jobs to the Board.
   Status: Complete. Information will be provided as positions are posted.

4. Mr. Burciaga suggested we investigate further Platform as a Service or "Insights as a Service."
   Status: Complete. NTIS has explored this with other agency customer and shared we did not get traction for this offering.

5. Mr. Burciaga suggested leveraging Production Other Transaction Authority (OTA) as an opportunity.
   Status: Complete. Discussed with legal. No clear advantages and significant startup concerns.

6. Ms. Zavala suggested NTIS explore offerings of AI trust assessment capability and ML operations insight.

Status: Ongoing. We have looked for partners and have not had any traction to date but will continue.

7. Ms. Walsh asked that NTIS anticipate future demand on AI regulations or a future EOs. She emphasized how NTIS could support agencies with transparent and ethical AI frameworks.
Status: Ongoing. Dr. Chraibi's efforts directly support these efforts. To date, we have not had any request from agencies to fund this. The Commerce Data Strategy report has been published in July 2021. Chakib has been tasked to work on Commerce Strategic Objective 4.3: "Advance ethical, responsible, and equitable use of Commerce data"

8. Ms. Zavala and Mr. Burciaga suggested developing a process for applying for awards to include an award SOP.
Status: Complete. Deployed award process internally.

9. Mr. Burciaga asked if NTRL has a future road map for the evolution over the next 3-5 years. Mr. Strickland will share with the Board the 3-year plan once completed. Combining the previous item 11 to this effort "Mr. Burciaga recommended NTRL as a Service and NTRL as a governance service. NTIS will investigate and provide an update."
Status: In Progress. Mr. Capella stated we still need to find ways to tap in the quality of the NTRL data. At this point we did not see a mechanism to find financial value to NTIS. We are in a holding on obtaining funding to digitize the documents in the library. NTRL team continues to fine tune the 3-year plan shared at the May 2021 FACA Board

10. Mr. Burciaga recommended the OPM team meet to whiteboard actions towards the direction of quantified results. He reviewed Slides 22 and 23 from the earlier presentation recommending what happened as an outcome but shared we did not quantify as "man hours", "lives saved" or "dollar and cents."
Status: In Progress. The LADMF and NTRL teams have been assessing the technical challenges for gathering metrics data from out NTIS systems. Project Managers are evaluating options and drafting language for legal review regarding the sharing of metrics between client agency, JVP and NTIS. This presents a problem because this is not our data.

11. Mr. Burciaga asked if there was any thinking toward an NTIS hack-a-thon. He felt that the large trove of data available coupled with the JVP could be the basis for the quarterly or semi-annual hack-a-thon. This may be excellent incubator. This recommendation could allow NTIS to sponsor the "problem du jour" at one of the agencies.
Status: In Progress. We will need to revisit after resources become available from the upgrades and migrations. Mr. Burciaga suggested doing this with another entity and can provide potential hackathons to investigate.

12. Mr. Burciaga' s organization focus included the impact of telework. He asked that NTIS consider how post-COVID changed how NTIS operates. He suggested NTIS looks at provided data for platforms as a JV opportunity – Analytics as a Service, Insights as a Service, and Platform as a Service.

Status: In Progress. NTIS is engaged with the Department at the leadership level on how NTIS and the other Commerce bureaus will operate going forward. That includes how telework might evolve as well as potentially remote work assignments. DOC will follow Office of Personnel Management (OPM) guidance.

13. Dr. Gaddam focused on the post-COVID actions at NTIS. Post-COVID represents a tremendous opportunity for talent acquisition absent the geographical restrictions. He recommended seeking talent to include new college hire to augment the current staff.
Status: In Progress. NTIS continues to use a variety of hiring authorities to augment the staff. The Office of Personnel Management (OPM) is considering the definition remote work and the ability to telework more. The OPM policy will be forthcoming.

14. Mr. Burciaga shared the largest opportunity should be in the NTRL and data subscription comparing the opportunity to Netflix and iTunes. Also, should look at monetize by scraping reports and exploring the role of the JVP. Mr. Burciaga offered another session to assist with this initiative.
Status: In Progress. The NTRL team will develop a review of the legislative mandate that prevents NTIS from charging for public access to the NTRL. Will be seeking Mr. Burciaga's input for opportunities to improve relationship with commercial database industry and JVPs. We will continue to seek ways to monetize the data.

15. Dr. Gaddam and Mr. Burciaga shared NTIS should explore focusing on cyber specialization and cloud. Further consideration to an IT lead for a Center of Excellence (COE) on automation analytics and AI as well as cyber and cloud. He shared IT should consider having a person lead the COE and supporting the ODS team. NTIS will investigate the feasibility of a lead for the COE structure. (Chakib)
Status: In Progress. NTIS is investigating further opportunities. The Office of Management and Budget (OMB) and the Cybersecurity and Infrastructure Security Agency (CISA) have issued guidance to move all Federal agencies to a shared zero-trust maturity model for FY22-24. However, no funding has been provided. Legal is assisting NTIS with language to get our authority modified.

From the May 2021 meeting, there were 15 initiatives, with 9 still in progress/ongoing and 6 completed.

Action Items and Recommendations for the Next Meeting
New Items:

- Dr. Gaddam shared the Board has strong alumni relationships that could be leveraged so NTIS will reach out to obtain the contacts
- Mr. Burciaga shared he was available to help evaluate some of the upscaling platform. He agreed with the importance of training the workforce and thought there was value in training as well as communication. The FBI is an example of an agency using these platforms and he will provide contacts to NTIS for further investigation.
- Mr. Burciaga recommended that we work with Dr. Chraibi to hire practice leads in specific fields such as data engineering and operations, automation, cyber-analytics and supply chain analytics. He suggested that Dr. Chraibi look at chapter and sections to help with the ODS organization.

- The State Department is asking for help with partnerships. Dr Gaddam reiterated to "follow the money" and provided there appears to be many potential cyber opportunities.
- Mr. Burciaga suggested the SBA and the registry of the HUBZone certified could be valuable for the JVP program.
- Mr. Burciaga was willing to share thoughts on additional organizations for promoting the JVP program.
- The Board for any companies that may be willing to help with digitization. Mr. Burciaga shared the Board could assist asking for Mr. Strickland to follow-up.

Items in Progress Updates for the next meeting:

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There were 9 due outs in progress from the past meetings with 7 new items making a total of 16 in progress and new items for discussion at the next meeting.

Member Wrap up Discussion and Public Comments

Mr. Capella opened the floor to the public, asking if anyone from the public had any comments. After hearing none, Mr. Capella turned the meeting over to Ms. Shaw and Dr. Gaddam for the closing.

Dr. Gaddam recognized the constraints at NTIS. He followed that the intent of sharing these broad stokes is to assist with NTIS taking one step forward. He shared his appreciation and thanked everyone to listening and the continued dialogue. He shared he thought this was another fantastic meeting. Ms. Shaw stated she planned to get the notes out in the next 3 weeks. She shared NTIS will look for dates in the second FY 22 meeting.

Board Governance/Administration

The minutes will be shared coordinated internally, and then with Dr. Gaddam. Absent no additional comments the meeting was closed.

Adjournment

I hereby certify that, to the best of my knowledge, the foregoing minutes are accurate and complete.

Ajit Gaddam

Dr. Ajit Gaddam
Chairman
National Technical Information Service Advisory Board

Mr. Gregory Capella
Director (A)
National Technical Information Service

These minutes will be formally considered by the Council at its next meeting, and any corrections or notations will be incorporated in the minutes of that meeting.