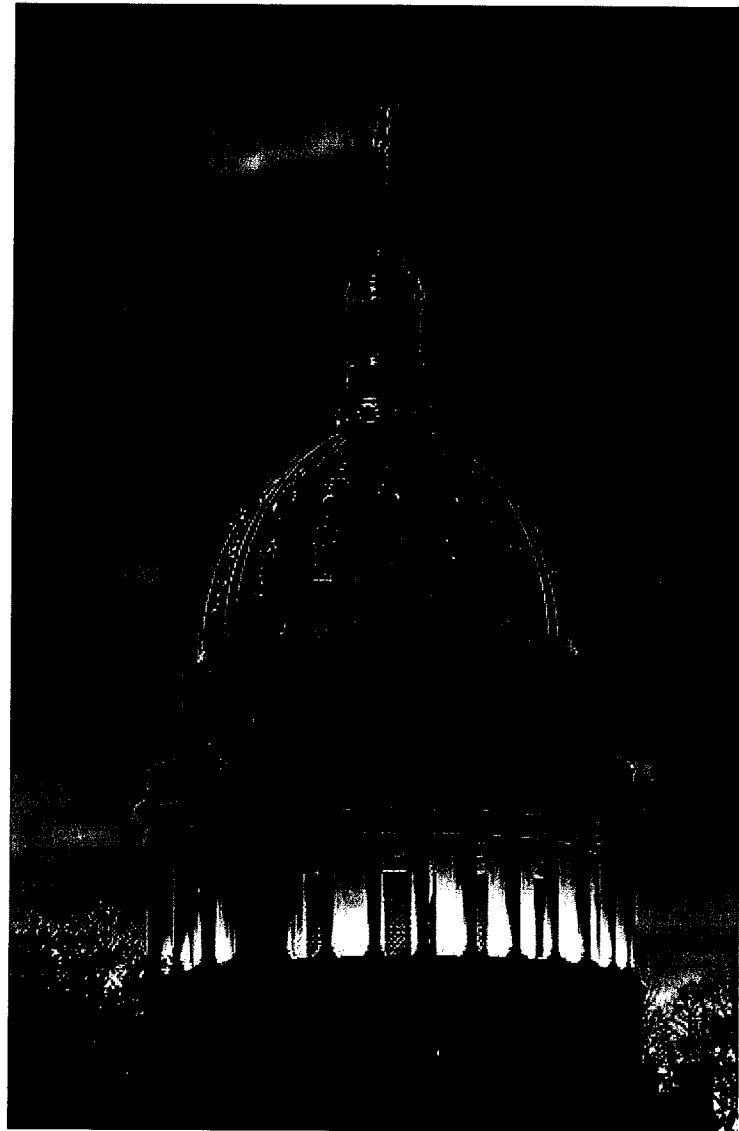


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Improving Quality through Technology

EOI Response to provide
Engineering and Grant
Oversight, Reporting and
Compliance services to the
State of West Virginia



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Expression of Interest #COM04
Department of Commerce Broadband (BTOP Grant)
Engineering and Accounting of Grant Compliance
Submission: July 15, 2010 – 1:30 p.m.

WV PURCHASING
DIVISION

Original Copy



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July 15, 2010

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Chuck Bowman
Purchasing Division
2019 Washington Street, East
P.O. Box 50130
Charleston, WV 25305-0130

RE: Solicitation No.: COM04, Department of Commerce Broadband (BTOP Grant) Engineering and Accounting for Grant Compliance

Dear Mr. Bowman:

Deloitte¹ is pleased to submit our Expression of Interest (EOI) response to provide Department of Commerce Broadband (BTOP Grant) Engineering and Accounting for Grant Compliance to the State of West Virginia.

We believe that our submission meets all of the requirements of the request, and demonstrates that Deloitte possesses the required level of skill and experience to perform the Statement of Work (SOW).

We are excited by the prospect of working with you, and we hope our proposal conveys our enthusiastic commitment to provide distinctive client service and highly specialized talent to this project.

As highlighted in our response, Deloitte has a long standing record of commitment to the State of West Virginia. We also have deep experience in broadband and grants management that can be directly applied to the specific requirements of West Virginia.

I have been deeply impressed with the State's understanding of telecommunications and how broadband can enhance the overall economy. On behalf of Deloitte, I believe we can effectively complement your deep understanding so that West Virginia is seen as role model for other states receiving broadband grants.

Sincerely,

Brett S. Haan, Principal
Deloitte Consulting LLP

¹ As used in this document, "Deloitte" means Deloitte Consulting LLP, Deloitte Financial Advisory Services LLP, and Deloitte & Touch LLP, subsidiaries of Deloitte LLP. Please see www.deloitte.com/us/about for a detailed description of the legal structure of Deloitte LLP and its subsidiaries.

Addendum to preceding Deloitte Consulting LLP cover letter to the State of West Virginia

Deloitte Consulting LLP understands that the State intends to conduct negotiations with the most highly qualified vendor and if the parties are “unable to negotiate a satisfactory contract”, the State will initiate negotiations with next highest qualified vendor until agreement is reached. Deloitte Consulting further understands that the order of precedence for the “formal contract document” will be: (1) the contract; (2) the EOI; and (3) the vendor's response to the EOI.

Deloitte Consulting has reviewed the proposed terms in the EOI and does not believe the terms are complete. For example, the contract terms would need to include a limitation of liability, an acceptance process, a changes process, and a further identification of the parties' responsibilities. In addition, there are certain terms in Section 3 that would require clarification or adjustment. For example: we would want to clarify the conflict of interest provisions to ensure a common understanding and promote compliance; we would want to clarify the indemnification provisions and would request that the indemnification for breach of confidentiality be addressed in the limitation of liability instead of via an indemnification; we would want to clarify the application of liquidated damages (which we interpret as not applicable per the EOI); and, we would request that a notice and cure period be included in the termination for cause provision. It is Deloitte Consulting's intent to address these issues in the contract document which has a higher order of precedence than the EOI. As such, Deloitte Consulting's EOI response is conditioned upon reaching mutual agreement on the complete contract, including the addition of other necessary terms and conditions as well as the clarification or adjustment of certain terms in the EOI as part of the final contract document.

Deloitte Consulting has successfully negotiated contracts for many public sector clients, including with the State of West Virginia. We are confident that we can promptly come to agreement on the final contract terms purposes of this project.

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Executive Summary

The Deloitte is pleased to provide this Expression of Interest (EOI) response to the State of West Virginia Department of Commerce's (West Virginia or the State) Statewide Broadband Infrastructure Project. We are excited about the opportunity to share our qualifications and ideas with you in this response. Our team includes resources from CSA Central, Inc. (CSA), the largest Hispanic-owned architectural/engineering/planning and environmental firm in the U.S. With our recommended solution and approach the State will get **one team, two companies, many skills and tools, and full capability** to deliver this project successfully. For more information on both Deloitte and CSA, please refer to Appendix A.

We believe our response and solution will meet your objectives for the project as outlined below:

- Engineering and Specification Compliance with Grant Guidance
- Compliance with Engineering Specification
- Vendor Invoice Compliance
- Data Compilation and Reporting
- Compliance with Broadband Technology Opportunity Program (BTOP) Grant Requirement & Continuous Process Improvement

Our project approach reduces your delivery risk, optimizes your application performance and accelerates the completion of specific compliance activities.

Within this executive summary, we will review our understanding, explain our approach (*Summary Approach*), describe "what's in it" for the State (*The Deloitte/CSA Difference*) and restate our commitment. We understand the strategic value of the project and the critical path of this project to statewide broadband implementation. We have applied our grants management, engineering and large scale project management experience to our solution.

The remaining portion of this section of our EOI response seeks to summarize the following:

- Our Understanding of the State's Need
- Approach Summary
- The Deloitte/CSA Difference
- Value Summary
- Our Commitment to West Virginia

Our Understanding of the State's Need

After careful review of the EOI and in conjunction with our knowledge of the West Virginia Statewide Broadband Infrastructure Project we understand that West Virginia has created the Broadband Development Council (BDC) and that largely through efforts of the BDC a grant submission was awarded a National Telecommunications and Information Administration (NTIA) grant that will fund a robust "middle mile" solution. The middle mile solution will provide anchor broadband service to critical community facilities including healthcare facilities, schools, libraries, county buildings and public safety entities. By design it will also provide a critical broadband backbone into the communities in which the last mile can be facilitated.

The grant will fund three categories of implementation; Fiber between WVU and NRAO, 12 tower sites with microwave and local connectivity, and an MPLS network deployment to anchor facilities. Each category has its own approach for the design and engineering.

The State of West Virginia requires a vendor that is able to participate during the specification and engineering process in order to validate the engineering and specifications for compliance with grant guidance for each of the implementation categories. Furthermore, the State of West Virginia requires a vendor that will validate vendor/contractors/construction crews comply with the noted engineering specifications during implementation, and the vendor will also validate the physical construct of the grant concept after installation. In order to achieve these objectives, West Virginia must have confidence that their vendor has the:

- technical skill and attention to details necessary to validate for compliance
- ability to provide a comprehensive methodology for validation
- capability or collecting and reporting of engineering invoice and technical documentation

The American Recovery and Reinvestment Act (ARRA) increases the accountability and reporting mandates for federal, state and local agencies well beyond previously existing regulations and guidance. These increased transparency and accountability mandates including, specific reporting requirements of ARRA, create compliance challenges for the recipients of ARRA funding. In addition, the OMB and the US Department of Commerce National Telecommunications and Information Administration (NTIA) continue to issue guidance related to ARRA funding which detail recipient mandates. The guidance issued by OMB on December 18, 2009, and previous OMB guidance (including ARRA and OMB A-133) and NTIA on July 10, 2009 is intended to provide guidance on improving the quality of data reported, and directs agencies to bring recipients in compliance with Section 1512 of the Act and have been considered as the primary compliance criteria for this engagement.

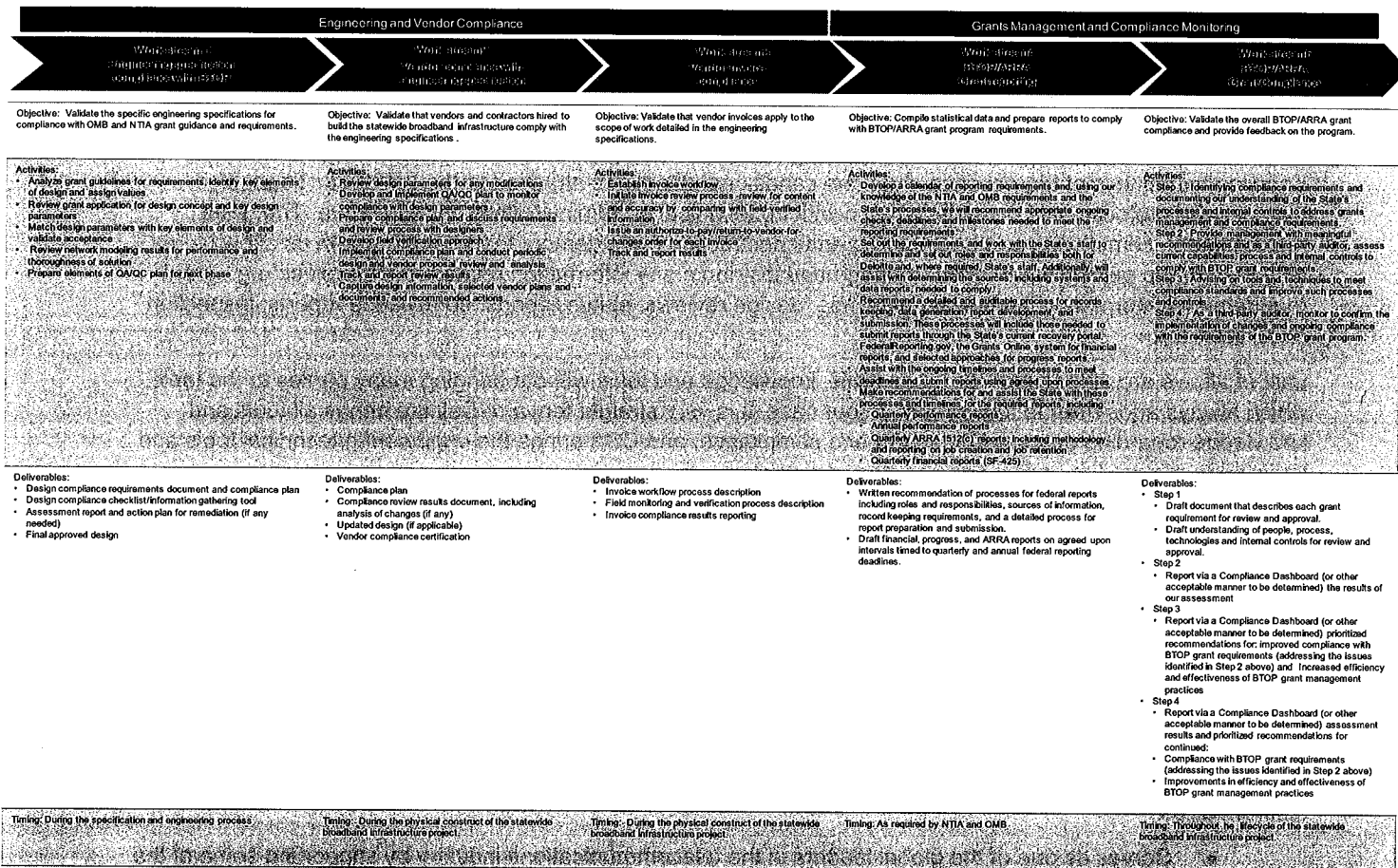
We believe our solution combines qualified and dedicated engineering, grants management and compliance resources with proven methodologies and approaches, and tools and accelerators to achieve your objectives. It is our belief that this, coupled with our willingness to invest in our relationship, our commitment to frequent and clear communications and our record of success on other similar projects at the federal, state and local levels, should provide the State confidence that the Deloitte/CSA Team is right solution to address its needs.

Approach Summary

Our approach has been designed to address the requirements of the five Areas defined on page 10 of the EOI and meet the State's expectations as defined on page 12 of the EOI. Specifically:

- Area 1 – Engineering and Specification Compliance with Grant Guidance
- Area 2 – Compliance with Engineering Specification
- Area 3 – Vendor Invoice Compliance
- Area 4 – Data Compilation and Reporting
- Area 5 – Compliance with BTOP Grant Requirement & Continuous Process Improvement

The following chart depicts the field-tested approach that we will use to help the State achieve its objectives. The approach separates requirements into rational work streams that are performed by engineers, grant management and compliance specialists and supported by proven methodologies and tools designed to deliver outstanding results.



We understand that the State places a high value on sound and proven project management practices. Deloitte welcomes the opportunity to discuss our firm's proven capabilities in this area and describe to the State the approaches, methodologies and tools Deloitte will use in organizing, planning, scheduling, implementing, controlling, analyzing and reporting on the project progress throughout the project period. The West Virginia Statewide Broadband Infrastructure Project-"Middle Mile" effort demands strict adherence to compliance requirements of the American Recovery and Reinvestment Act and NTIA. Deloitte answers this demand through the application of a thorough, firm- wide Project Management approach that is tightly aligned with the Project Management Body of Knowledge (PMBOK®). Please refer to Appendix E for more information about our project management methodology.

The Deloitte/CSA Difference

The Deloitte/CSA Team brings a combination of deep knowledge and experience in all key areas of the engagement: ARRA grant requirements, ARRA compliance, grant management process, broadband deployment, fiber and telecommunications infrastructure design and construction, tower design and construction, and MPLS connectivity to key/anchor tenants.

Knowing that time is of the essence given the conditional deadlines attached to the grant, our Team of experienced professionals is ready to begin with no technical or administrative learning curve. The grant management, compliance and engineering and construction management tools we bring with us allow us not only to ramp up quickly but to store, manage and distribute any information related to the project; e.g., grant requirements information technical guidelines, design reviews, status reports, compliance reports, inspection checklists, etc.

Last of all, we are able to provide these skills, knowledge and tools without bringing many parties to the table, which always adds risks to any project. In our case, it is very straight forward: Deloitte brings all tools and knowledge regarding grant management and compliance, and CSA brings the engineering/technical tools and knowledge required to analyze design and construction.

Again, this is **one team, two companies, many tools, and full capability** to deliver this project successfully to the State of West Virginia and its residents. This is the Deloitte/CSA Team.

Value Summary

We believe the Deloitte is singularly qualified to work with West Virginia on its Broadband Infrastructure Project, and throughout the rest of this response to the EOI we detail our capabilities, experiences and qualifications to demonstrate why a team approach between the State and Deloitte would be high-quality. For the State, Deloitte provides the following themes we demonstrate across our engagements that are specific differentiators:

- Serves as one of the global leaders in the telecommunications industry by supporting some of the world's top wireline telecommunications service providers, wireless operators, cable companies, and satellite companies—as well as leaders in hardware, software, and telecommunications equipment manufacturing. This blend of resources and experience provides West Virginia with a single source for the variety of services and insights required in this effort along with an ability to address validation requirements.
- Commitment and experience of key staff, as well as a large committed professional workforce who is onboard and ready: Deloitte is proposing highly experienced and proven key staff to quickly meet task requirements and avoid the lead time and subsequent risks associated with recruiting and hiring new staff. Our Team will leverage this vast experience to be productive beginning on the first day and lasting throughout the entire period of performance.
- Significant team past performance delivering comparable work for public and private sector: Our Team has significant experience, from both Deloitte and our partner, CSA, of successfully completing projects that have been similar in complexity and magnitude to the West Virginia project. Our combined Team provides the depth and breadth of knowledge and experience that

spans the entire spectrum of interoperability including strategy development, planning and assessments, functional and technological analysis and specifications, network design and engineering.

- Substantial experience throughout Federal Government (FCC and Dept. of Commerce), State and Local Agencies;: Our first-hand institutional knowledge of these organizations allow us to reduce project risk and effectively complete tasks on-time, on-budget, and in compliance with departmental and other relevant requirements.
- Demonstrated experience in public sector real estate, facilities, and construction matters, for both government civilian and defense agencies; Deloitte has one of the largest and most respected real estate and capital asset advisory practices in the industry
- Deloitte demonstrates its full capability through its current leadership and engagement in programs of similar size, scale, complexity, and public impact. We are currently working with the Federal Communications Commission (FCC), Federal Railroad Administration (FRA), and Western Area Power Administration (WAPA) - all these engagements require a deep knowledge of telecommunications policy formation and have large grants management components. For example, Deloitte as a Program Director on the 800 MHz Transition Administrator engagement with FCC leads the multi-year, multi-billion program to reconfigure the 800 MHz band supporting the FCC's efforts to safeguard public safety communications. This critical program has many similarities to NTIA's BTOP and our team has brought the independent skills and experiences to help make it a success.
- With respect to telecommunications, the Deloitte has deep telecommunications (wireless and wireline) industry experience and extensive familiarity with the telecommunications competitive landscape, key business drivers, the regulatory environment, existing governmental programs to promote broadband deployment, and the underlying technology.
- Deloitte has a dedicated grants management practice group with practitioners who focus on the needs of grantees and grantors and has been doing so for our clients for over 13 years. Our work in grants management spans the grant management life cycle and includes all surrounding activities. From conducting audits, to designing grants programs and process, to building the best organizational design, Deloitte provides the full span of services. Our thought leaders and experts on grants management have no less than 15 and up to 30 years of direct, practical experience in the field as grants managers and senior leaders within local, state, and federal grantmaking and grantee agencies. As a result, our abilities are more nimble and we can develop solutions that are practical and thoughtful and accomplish it more quickly.

Our Commitment to West Virginia

Deloitte has more than just a successful relationship with the State – we have an established and proven commitment. We are committed to being a responsible corporate citizen. Corporate citizenship, from our perspective, is founded on three areas of community commitment: education commitment, economic commitment, and social accountability.

Businesses face the challenge of understanding their civic duties as they relate to the environment in which they operate. Some corporations lose sight of their role in the local market. Being a private entity, Deloitte has the flexibility to construct a more holistic approach to our involvement in the community. As such, we take our role as a responsible corporate citizen seriously. If any business strives to enhance its relationship to a community, it must support all three areas of corporate citizenship.

Education Commitment is an overarching responsibility of businesses. This involves building relationships with academic institutions through funding, providing industry insights for student's career growth, and providing career opportunities to students.

- West Virginia University (WVU) is a designated recruiting school for our accounting and IT consulting undergraduate recruiting programs.
- We actively participate in career fairs; provide internships to top students, and actively recruit students through West Virginia University system for full time employment.
- In 2008, Deloitte recruited six students from WVU and our records indicate that we have a total of 51 alumni from WVU and one from Marshal in full time employment with our firm.
- Among the 52 employees, 13 alumni serve in leadership roles in the firm (10 partners and 3 directors).
- Additionally, one of our senior partners, Glen Fienberg, serves on the board of advisors for the WVU College of Business and Economics.

Economic commitment includes providing careers, generating revenue for the State and supporting the local business community. By providing careers, the firm develops individuals into productive members of the community.

- We currently have 10 permanent West Virginia residents working for projects in various locations. In addition to permanent residents, we have 21 non residents who work in West Virginia and pay taxes. For 2008, our records indicate we withheld more than \$82,500 through payroll taxes on behalf of these employees.
- In addition to Deloitte employees, we currently have 29 resident contractors working for our projects in West Virginia, who pay taxes in the state.
- Being a limited partnership organization, the proportional share of organization profits earned in West Virginia stays in West Virginia. In 2008, our partners paid \$68,214 as single business tax in West Virginia.
- In addition to payroll and corporate returns, some of the employees and contractors own residential properties in West Virginia, which brings in additional revenues to the State. Deloitte's employees/contractors also contribute to the local economy through sales taxes and property taxes.
- Our employees/contractors in West Virginia own more than 40 automobiles, which contributes to the local economy.
- Deloitte also contributes to the local economy through travel and accommodation expenditures, such as automobile leases and rentals, hotels, and apartments for non resident employees assigned to long-term projects in West Virginia.
- Our employees receive class room/online training through firms learning program. In addition to class room/online training, Deloitte develops their staff by including them in the decision-making process, providing flexibility when possible, and focusing on leadership, mentoring, coaching, and team building.

Social Accountability can drive the largest impact. Social responsibility begins with a volunteer-based effort targeted toward serving the community.

- Our community involvement demonstrates our commitment to not only the success of our clients, but also to the citizens of the State of West Virginia.
- Through our Global IMPACT Day program, Deloitte employees volunteer at any number of worthy community organizations, schools, and health care institutions in lieu of their normal work responsibilities for one day a year. Through the years we have dedicated our time to local organizations, such as Holz elementary school, Ronald McDonald House, American Diabetes Association, Kanawha County Humane Society, and Gabriel Project.

- In addition to IMPACT Day programs, our firm has made significant contributions to some of the local organizations, such as Presley Ridge Schools, MDA, Make a Wish foundation, Gabriel Project, and United Way.

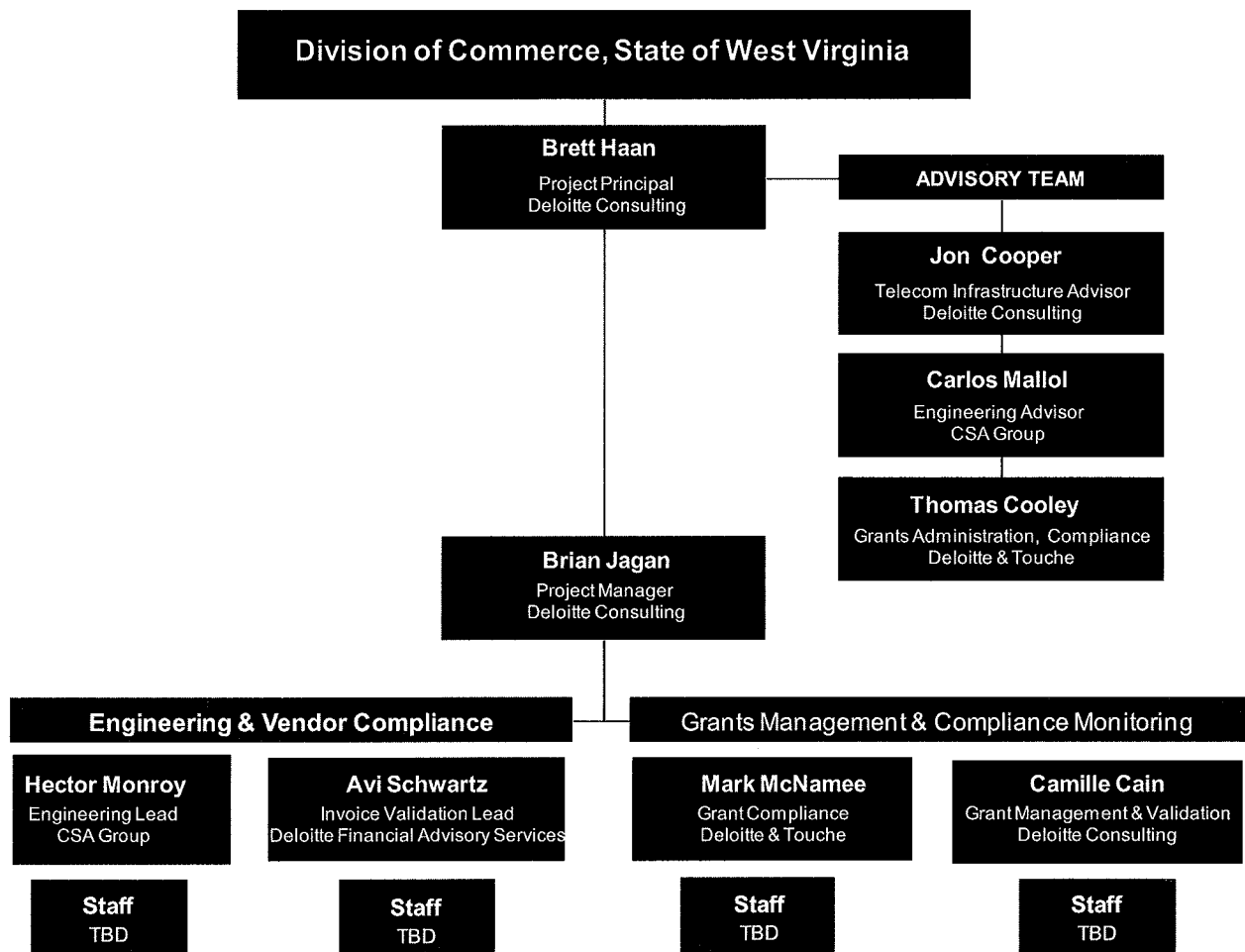
Deloitte has served the State of West Virginia for more than 20 years. As a long time partner of West Virginia, Deloitte is committed to providing quality service to citizens of the state. As a partner who has the depth of resources in critical areas of changing technology, business process, and end-user implementation needs, we are excited and are looking forward to opportunities in the future.

Our Qualifications

Our Team

Organizations don't provide professional services – People do. What really makes the difference are the skills and experience of the people who serve you and their commitment to you. No other single factor has a greater bearing on the quality of service we deliver. Therefore, our Team selected for the State has demonstrated skills and experiences needed to meet your objectives and who have worked together in a collaborative way to deliver large complex projects with the highest quality, on time and at or above client expectations. Our prospective Team is lead by Brett Haan who has over 20 years of telecommunications experience in commercial, government and regulatory affairs in both the United States and Europe. Brian Jagan is the Project Manager with over 15 years for delivering large diverse projects on time and within budget. Brett and Brian will be augmented by a talented group of team leads responsible for Engineering/Validation Compliance and Grants Management and Compliance Monitoring. Brett, Brian and the team leads are supported by a talented group of advisors who are available to assist with complex technical matters, quality control and/or ongoing advice to the team. In essence a team this Team with whom we have a high degree of confidence will deliver on the specific requirements of this EOI, specifically:

- Engineers with an understanding of your program approach and the specific requirements of the BTOP grant
- Grants management and compliance specialists who have deep experience and understanding of grant execution and oversight at both the state and federal level
- Staff with the experience needed to provide effective coordination of our services and accurate and objective feedback to stakeholders



We believe that the experience of our team members coupled with the structure under which we will execute and the flexibility to scale, as needed, provides the State with an effective model to achieve your objective of providing engineering, oversight and accounting services to validate overall compliance with the BTOP grant program. Please see Appendix B for detailed resumes of prospective team members.

Engineering and BTOP Specialists

Given the different categories of implementation (Fiber Implementation, Tower Design and Connectivity, and MLPS Connectivity), the Team brings to this engagement a unique combination of resources and experience that will provide significant value to the state as they cover all technical areas required in Requirement Areas 1, 2 and 3 as well as all three implementation categories.

The Team has specialized resources experienced with delivering successful construction projects for state agencies with large capital programs.. Our team is composed of professionals with practical industry experience in nearly every aspect of the capital construction process, and with advanced degrees in engineering, architecture, business, accounting, and law. We have assisted with project oversight and the resolution of complex capital construction project disputes around the world.

By conducting project cost and control analyses during contract performance and following project completion, one of our goals is to help our clients improve the return on their capital project investment. Our professionals apply many years of construction industry experience in performing cost and financial control analyses for grant projects. We assist clients in their efforts to:

- Perform financial oversight and identify areas of potential financial risk

- Evaluate budgets, cost forecasts, and projected cash flow
- Assess costs incurred as compared to performance achieved
- Evaluate pay applications and change order requests
- Analyze disbursements against contract requirements
- Assess financial and management controls
- Evaluate potential for fraud and develop preventive measures
- Develop enhanced financial oversight systems and controls

The Team has in-house staff that have developed, reviewed and implemented broadband deployment strategies in mountainous topographies, thus addressing similar challenges to those found in West Virginia.

We have also designed and managed communication tower construction programs and are familiar with the intricacies of tower construction. We are able to field-verify all aspects of tower construction, from structural integrity to connectivity, and denote whether towers are being built to specifications and construction is proceeding as planned. At the same time we are able to offer field support to personnel performing compliance-related tasks in a manner that increases the efficiency and effectiveness of the team.

We use an approach similar to our Quality Assurance and Quality Control plans use on construction management engagements, where we methodically examine the construction site to ensure adherence to drawings and specifications. We begin by sitting down with contractors to review project schedule and work sequence, which in turn allows us to have the right disciplines represented at the right time during walk-throughs and reviews. We then systematically break the project down into sections and examine compare drawings to what is being built, with an eye on quality of construction and workmanship as well as adherence to drawings and specifications.

Documentation is very critical. We document our findings thoroughly so there is no doubt as to why a decisions were made, and clearly identify deviations (if any) from grant requirements, drawings or specs as well as what solution was devised to address the deviation

Having all disciplines in-house allows a significantly higher level of coordination that delivers higher quality and faster results for our clients. With this familiarity and expertise, we will be able to review specifications and plans with a keen eye not only for details, but for expected results.

The leader of our Engineering and BTOP compliance work streams is **Hector Monroy**, a director with CSA Group. He reports to **Brian Jagan** and will act as the primary point of contact for the engineering and specifications compliance. He will work closely with **Avi Schwartz** for invoice validation services, a senior manager with Deloitte Consulting LLP.

Advisors are established as additional resources that have specific skills that are likely to be necessary for specific knowledge and expertise to support the core team. **Jon Cooper**, a manager with Deloitte Consulting LLP specializing in Broadband and Telecommunications is local to WV and has extensive experience with building communication networks in West Virginia. **Carlos Mallo**, senior vice president with CSA Group has extensive background with construction management consulting for large civil projects.

Grants Management and Compliance Specialists

ARRA increases the accountability and reporting mandates for federal, state and local agencies well beyond previously existing regulations and guidance. Our grants management and compliance specialists are familiar with the guidance issued by OMB related to the Recovery Act as well as the pre-existing OMB circulars and related grants regulation. We have extensive experience with the Single Audit Act and related directives found in OMB A-133. We are also familiar with NTIA guidance and the requirements of the BTOP program and overall have significant experience assisting recipients with grant writing, management, administration and oversight aimed at complying with the often complex and challenging requirements of federal grant programs. Our team consists of individuals who have managed or participated in audits and reporting of major programs falling under the Single Audit Act (OMB A-133) and who have the qualification and experience to provide

guidance and understanding of Generally Accepted Accounting Principles (GAAP) promulgated by the Governmental Accounting Standards Board (GASB) for state and local governments.

For over 13 years, the Deloitte Grant Management practice has provided support to federal, state and local government agencies aimed at improving their efficiency and effectiveness throughout the grants management, administration and oversight lifecycle. We understand the intricacies and unique challenges our public service grantors face in integrating their administrative systems and grants management and oversight functions to expeditiously allocate and manage funding provided from federal programs. Likewise, we understand the administrative hurdles grantees face in accounting for, managing and reporting on the status of such programs.

Our Deloitte Grants Management Practice is an active member of the grant-making community and industry. For the past six years, members of Deloitte's Grants Management Practice Group has sponsored the National Grants Management Association (NGMA), which provides to its more than 900 members valuable forums for sharing grants management information on highly complex issues ranging from the regulatory environment, OMB Circulars, and accounting and auditing issues to grant budgeting, financial management, intellectual property, and ethics and conflicts of interest topics. Our practitioners are active members in the association—they participate in NGMA committees and attend networking and educational events. We are also deeply involved in the National Grants Partnership (NGP), an organization with an interest in improving the grants process in the United States.

In addition to providing architecture and engineering experience, our teaming partner, CSA also has significant experience with grant program management and administration and currently serves in a lead capacity for ARRA funds allocated through a number of federally funded programs in the Commonwealth of Puerto Rico.

The leader of our grants management and compliance work stream is **Mark McNamee**, a Director with Deloitte & Touche LLP. He reports to **Brian Jagan** and will act as the primary point of contact for all of grants management and compliance service needs and concerns. Mark will work closely with Camille Cain, a Senior Manager with Deloitte Consulting LLP who will serve as the work stream manager to provide overall guidance and leadership across all of the key task areas and to communicate and coordinate the various tasks and activities associated with this work stream. Camille will have the responsibility of managing the day-to-day

In addition to our core team associated with this work stream, Deloitte has assembled an advisory team of seasoned professionals who possess the experience and skill sets to support the core team as needs arise and provide perspective on public sector leading practices. Each advisor brings a depth of expertise in a broad array of areas to provide detailed insight and lessons learned in areas critical to the successful execution of this engagement. **Thomas Cooley**, a Director with Deloitte & Touche LLP specializing in Grants Management, with experience as co-chair of the OMB-Association of Government Accountants (AGA) "Intergovernmental Partnership for Management and Accountability" will advise on grants management and administration compliance and will provide guidance on emerging matters at the OMB. Brian Jagan, who leads our efforts at the NTIA will serve as our NTIA liaison and will provide up-to-date information on emerging issues and requirement changes coming from the NTIA. **Kathryn Schwerdtfeger**, will serve as the ARRA subject matter specialist and will assist the project team by providing recommendations related to improving processes and controls that will enhance compliance with the WAP and ARRA requirements. The continuity and depth of knowledge that these advisors bring allow us to provide value-added business advice.

Our Approach

Our approach has been designed to address the requirements of the five Areas defined on page 10 of the EOI and meet the State's expectations as defined on page 12 of the EOI. Specifically:

- Area 1 – Engineering and Specification Compliance with Grant Guidance
- Area 2 – Compliance with Engineering Specification
- Area 3 – Vendor Invoice Compliance
- Area 4 – Data Compilation and Reporting
- Area 5 – Compliance with BTOP Grant Requirement & Continuous Process Improvement

The chart on the following page depicts the field-tested approach that we will use to help the State achieve its objectives.

Engineering and Vendor Compliance

Grants Management and Compliance Monitoring

Objective: Validate the specific engineering specifications for compliance with OMB and NTIA grant guidance and requirements.

Objective: Validate that vendors and contractors hired to build the statewide broadband infrastructure comply with the engineering specifications.

Objective: Validate that vendor invoices apply to the scope of work detailed in the engineering specifications.

Objective: Compile statistical data and prepare reports to comply with BTOP/ARRA grant program requirements.

Objective: Validate the overall BTOP/ARRA grant compliance and provide feedback on the program.

Activities:

- Analyze grant guidelines for requirements, identify key elements of design and assign values
- Review grant application for design concept and key design parameters
- Match design parameters with key elements of design and validate acceptance
- Review network modeling results for performance and thoroughness of solution
- Prepare elements of OMB/CC-plan for next phase

Activities:

- Review design parameters for any modifications
- Develop and implement OMB/CC-plan to monitor compliance with design parameters
- Plan for compliance plan and discuss requirements and review process with designers
- Develop checklist for approach
- Implement compliance plan and conduct periodic design and vendor proposal review and analysis
- Track and report review results
- Capture design format for selected vendors and documents and recommendations

Activities:

- Establish invoice workflow
- Initiate invoice review process-review for content and accuracy by comparing with field verified information
- Issue authorize-to-pay/return-to-vendor for changes order for each invoice
- Track and report results

Activities:

- Develop a calendar of reporting requirements and, using our knowledge of the NTIA and OMB requirements and the State's processes, we will recommend appropriate ongoing checks, deadlines, and milestones needed to meet the reporting requirements
- Set out the requirements and work with the State's staff to determine and set out roles and responsibilities for both DOT and State staff
- State staff, additionally will assist with determining the sources, including systems and data reports, needed to comply
- Recommend detailed and auditable process for records keeping, data generation, report development, and submission. These processes will include those needed to submit reports through the State's current recovery portal
- Federal Reporting by the Grants Online System for financial reports, and selected approaches for progress reports
- Assist with the ongoing timelines and processes to meet deadlines and submit reporting progress reports
- Make recommendations for analysis of the State with these processes and timelines for the required reports, including:
 - Quarterly performance reports
 - Annual performance reports
 - Quarterly ARRA 152(C) reports including methodology and reporting on creation and/or retention
 - Quarterly financial reports (SF-425)

Activities:

- Step 1 - Identify compliance requirements and document our understanding of the State's processes and internal controls to address grants management and compliance requirements.
- Step 2 - Provide management with meaningful recommendations and as a third-party auditor, assess current capabilities, process, and internal controls to comply with BTOP grant requirements.
- Step 3 - Advise on tools and techniques to meet compliance standards and improve such processes and controls
- Step 4 - As a third-party auditor, monitor to confirm the implementation of changes and ongoing compliance with the requirements of the BTOP grant program

Deliverables:

- Design compliance requirements document and compliance plan
- Design compliance checklist/information gathering tool
- Assessment report and action plan for remediation (if any needed)
- Final approved design

Deliverables:

- Compliance plan
- Compliance review results document, including analysis of changes (if any)
- Updated design (if applicable)
- Vendor compliance certification

Deliverables:

- Invoice workflow process description
- Field monitoring and verification process description
- Invoice compliance results reporting

Deliverables:

- Written recommendation of processes for federal reports including roles and responsibilities, sources of information, record keeping requirements, and a detailed process for report preparation and submission
- Draft financial, progress, and ARRA reports on agreed upon intervals timed to quarterly and annual federal reporting deadlines.

Deliverables:

- Step 1
 - Draft document that describes each grant requirement for review and approval
 - Draft understanding of process, technologies and internal controls for review and approval
- Step 2
 - Report via a Compliance Dashboard (or other acceptable manner to be determined) the results of our assessment
- Step 3
 - Report via a Compliance Dashboard (or other acceptable manner to be determined) prioritized recommendations for: improved compliance with BTOP grant requirements (addressing the issues identified in Step 2 above) and Increased efficiency and effectiveness of BTOP grant management practices
- Step 4
 - Report via a Compliance Dashboard (or other acceptable manner to be determined) assessment results and prioritized recommendations for continued
 - Compliance with BTOP grant requirements (addressing the issues identified in Step 2 above)
 - Improvements in efficiency and effectiveness of BTOP grant management practices

Timing: During the specification and engineering process

Timing: During the physical construct of the statewide broadband infrastructure project

Timing: As required by NTIA and OMB

Timing: Throughout the lifecycle of the statewide broadband infrastructure project

The following sections cover the high-level activities and deliverables to be completed as outlined in the graphic on the previous page.

Engineering and vendor compliance

Background

The Team understands that engineering and technical specifications of the West Virginia Statewide Broadband Infrastructure project must be compliant with NTIA grant. The Team is prepared to assist the State by providing the knowledge, qualifications and expertise to confirm that the project is consistent with the objectives of the program.

Workstream 1: Engineering specification compliance with BTOP

The purpose of this work stream is to ensure that, during the design and specification stage, all activities and work products are in compliance with BTOP grant requirements. During this stage our plan is to perform a thorough review of grant/NOFA requirements and develop a process to ensure from a Quality Assurance perspective that the design is appropriate. We will collaborate with design team members to incorporate adherence to grant requirements as they proceed through the design process. This step is key as it is easier to catch design changes early on and fix them than it is when the process is already well into design.

One key aspect of this work stream is the network modeling, which will illustrate the expected performance of the network. We are assuming that network modeling activities are being conducted by the design team, and that result from the model will be available for us to review. This not only validates that the system is adequate, but also will lay the foundation for what should be the expected network performance.

Critical participants and stakeholders include designers, state technical personnel, user representatives (institutional and community), and our Team.

- **Activities**
 1. Analyze grant guidelines for requirements, identify key elements of design and assign values
 2. Review grant application for design concept and key design parameters
 3. Match design parameters with key elements of design and validate acceptance
 4. Review network modeling results for performance and thoroughness of solution
 5. Prepare elements of QA/QC plan for next phase
- **Deliverables**
 - Design compliance requirements document and compliance plan
 - Design compliance checklist/information gathering tool
 - Assessment report and action plan for remediation (if any needed)
 - Final approved design

Workstream 2: Vendor Compliance with Engineering Specifications

Work Stream 2 focuses on ensuring that once the design concept and specifications have been set, vendors participating in the construction phase adhere to the engineering design as specifications as delineated in the previous work stream. The outcome of tasks and activities conducted in this work stream is that the systems were designed and specified were indeed built, and if there were any deviations, that they are documented with an explanation. If the system is built to specs, then we know exactly what to expect in terms of performance from the network system moving forward. A significant portion of the information gathered and deliverables completed in this work stream will feed into work streams 3, 4 and 5, providing the necessary information to verify invoices, prepare status reports, and comply with ARRA/BTOP guidelines. The process of verifying compliance with specifications is information-intensive, and will use drawings, digital photos, discrete testing, and other techniques to gather information.

There will be specific network testing procedures of the fiber connectivity, tower sites and MPLS connectivity to determine if minimum performance specifications, as required by the grant award, are being achieved.

The Team is knowledgeable of the typical network tests performed after installation of new systems. We will work with the design and construction teams as well as the State to determine which tests are appropriate to perform, review or validate. Listed in Appendix D are the **Detailed Typical Tests for Acceptance and Compliance** that could be expected on this project.

One of the key steps in this work stream is to discuss requirements with all vendors and contractors so they know information is required and why, but also so they work proactively in the process of information gathering and storage.

- **Activities**
 1. Review design parameters for any modifications
 2. Develop and implement QA/QC plan to monitor compliance with design parameters
 3. Prepare compliance plan and discuss requirements and review process with designers
 4. Develop field verification approach
 5. Implement compliance plan and conduct periodic design and vendor proposal review and analysis
 6. Track and report review results
 7. Capture design information, selected vendor plans and documents, and recommended actions
- **Deliverables**
 - Compliance plan
 - Compliance review results document, including analysis of changes (if any)
 - Updated design (if applicable)
 - Vendor compliance certification

Workstream 3: Vendor Invoice Compliance

Our invoice audit and validation procedures are designed to determine that invoices for payment made against grant awards comport to the terms and conditions of the grant.² Our inspection of invoices consists of tests of documentary and other evidence, consisting of at least the following elements:

- Validation that the structure of the invoice complies with the terms and conditions as specified in the grant award
- Validation that the dollar amount of the invoice is in accord with the terms and conditions of the grant award
- Validation that the payment terms as specified on the invoice are in accordance with the terms and conditions of the grant award
- Validation that the services and/or goods enumerated in the invoice were provided in accordance with terms and conditions of the grant, which may include the following procedures:
- Inspection of goods and services listed on the invoice by qualified engineering personnel to determine if goods and services invoiced are required to achieve the objectives of the grant award
- Inspection of the underlying supporting documentation (such as time sheets) that accompanies the invoice to determine if the support complies with grant award requirements
- Written representations from the grant award recipients regarding appropriateness of goods and services rendered as part of the grant award

² In this context, the term "audit" does not constitute an audit conducted in accordance with generally accepted auditing standards, an examination of internal controls, or other attestation or review services in accordance with standards established by the AICPA, the Public Company Accounting Oversight Board or any other regulatory body. Throughout the remainder of this document the term "audit" is replaced with "inspection" or intended to mean an inspection.

- Direct confirmation of goods received or services rendered by direct correspondence with third-party stakeholders, as appropriate
- Inspection of sites to observe the physical existence of goods invoiced
- **Activities**
 1. Establish invoice workflow
 2. Initiate invoice review process -review for content and accuracy by comparing with field-verified information
 3. Issue an authorize-to-pay/return-to-vendor-for-changes order for each invoice
 4. Track and report results
- **Deliverables**
 - Invoice workflow process description
 - Field monitoring and verification process description
 - Invoice compliance results reporting

Based on the terms and conditions of the grant awards, additional inspection procedures may be employed. These additional procedures are highly fact-specific to the grant award and can be tailored to further determine that the invoice comports to the scope of work as required by the grant award. Upon completion of our inspection of the invoice, we will provide the State of West Virginia with written notice of our inspection, including the results of that inspection, and any observations and recommendations we may have.

Grants management and compliance monitoring

Background

ARRA funding brings with it an unprecedented level of transparency and accountability, including:

- Scrutiny of processes and outcomes by NTIA and possibly other stakeholder groups such as state and local officials, Members of Congress, and the media
- Increased and enhanced review of processes and grantees by the Government Accounting Office (GAO) and the DOC Inspector General (IG)
- The increased need to show performance and actual results that advance the public policy goals of the BTOP program
- Aggressive timelines imposed for completion of the broadband expansion projects and reporting of use of funds, impacts and results, among other items required by the OMB and NTIA

The Team understands the specific compliance and reporting requirements of the BTOP program and is prepared to assist the State by providing objective audit and monitoring services to confirm that the State has appropriate processes and controls in place to ensure accuracy, timeliness, and the ability of the State to verify that program outcomes are measurable and successful.

Our grant management and compliance monitoring team have tailored an approach and methodology that have been proven effective for evaluating overall compliance with grant requirements and providing value-added information and recommendations regarding opportunities to improve the efficiency and effectiveness of the overall program. Our methodology emphasizes the following:

Our approach, as defined below, affirms our ability and capacity to meet the objectives of work streams 4 and 5 which are represented as Areas 4 and 5 on page 10 of the EOI, including:

- Clear alignment with an overall project management approach.
- A strong foundation for grants management that meets statutory and administrative requirements
- Streamlined and well-documented processes that are transparent and understood by the State employees, sub-recipients, and vendors

- Strong financial controls for expenditures and their tracking, reporting, and recovery through funds draw downs
- Clear timelines, standard operating procedures, and tools for collecting data, developing grant reports, and assessing reports to identify potential issues for resolution
- Continuous documentation of actions, recommendations, and decisions at each step to verify that West Virginia is able to point to a fair and consistent process
- Ongoing audit activities to ensure that West Virginia is adhering to internal controls and process, meeting grants requirements, and stands ready for federal monitoring or audit activities.

Approach and Deliverables

The objectives of the grants management and compliance monitoring workstreams include:

- Compiling statistical data and preparing reports to comply with BTOP/ARRA grant program requirements and
- Validating the overall BTOP/ARRA grant compliance and providing feedback on the program.

Our approach integrates, to a large degree, the steps needed to perform both reporting and monitoring services; however, the two are represented separately below.

Workstream 4: BTOP/ARRA grant reporting

Compliance with the Department of Commerce and ARRA reporting requirements is critical to the State's success and ability to avoid drawdowns interruptions and improve confidence that the program can meet its milestones. The Team has significant experience with the variety of reporting requirements for federal grant programs, including assisting both grantees design processes to comply and grantor agencies in designing reports and guidance for grantees. As part of our general assessment process in Workstream 5, we will assess the State's processes and ability to comply with reporting requirements and will make recommendations where needed, that can improve processes with an eye toward creating an efficient and effective grant compliance processes and controls.

- Activities
 1. Deloitte will develop a calendar of reporting requirements and, using our knowledge of the NTIA and OMB requirements and the State's processes, we will recommend appropriate ongoing checks, deadlines, and milestones needed to meet the reporting requirements.
 2. Our Team will set out the requirements and work with the State's staff to determine and set out roles and responsibilities both for the Team and, where required, the State's staff. Additionally, we will assist with determining the sources, including systems and data reports, needed to comply.
 3. Our Team will recommend a detailed and auditable process for records keeping, data generation, report development, and submission. These processes will include those needed to submit reports through the State's current recovery portal, FederalReporting.gov, the Grants Online system for financial reports, and selected approaches for progress reports.
 4. Further, our Team will assist with the ongoing timelines and processes to meet deadlines and submit reports using agreed upon processes.
 5. The Team will make recommendations for and assist the State with these processes and timelines for the required reports, including:
 - Quarterly performance reports
 - Annual performance reports
 - Quarterly ARRA 1512(c) reports, including methodology and reporting on job creation and job retention
 - Quarterly financial reports (SF-425)

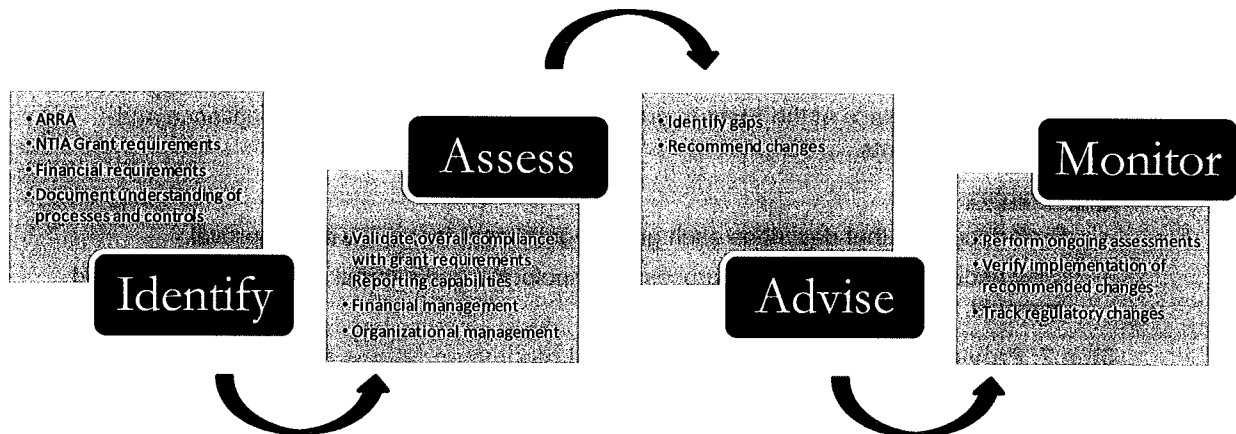
- Deliverables
 - Written recommendation of processes for federal reports including roles and responsibilities, sources of information, record keeping requirements, and a detailed process for report preparation and submission.
 - Draft financial, progress, and ARRA reports on agreed upon intervals timed to quarterly and annual federal reporting deadlines.

Workstream 5: BTOP/ARRA Grant Compliance

To execute Workstream 5 we will use resources from our grants management practice and others with deep skills and experience with auditing large grant programs subject to the Single Audit Act (OMB Circular A-133) and specific requirements associated with ARRA Act funds. Our grants management consultants and auditors have years of experience in auditing, grants and agency management, process improvement, and organizational design. We capitalize on the consolidation of ideas, strategies, methodologies and experience to bring our clients value-creating ideas and solutions. No other organization offers such a broad-based, integrated practice.

The team will follow Deloitte's Grantee Assessment Process (GAP), as demonstrated in the figure below. GAP is a four-step methodology which includes:

- **Step 1 - Identifying** compliance requirements and documenting our understanding of the State's processes and internal controls to address grants management and compliance requirements.
- **Step 2 - Provide** management with meaningful recommendations and as a third-party auditor, **assess** current capabilities, process and internal controls to comply with BTOP grant requirements.
- **Step 3 - Advising** on tools and techniques to meet compliance standards and improve such processes and controls.
- **Step 4: - As a third-party auditor, monitor** to confirm the implementation of changes and ongoing compliance with the requirements of the BTOP grant program.



We anticipate Workstream 5 will be accomplished through a series of on-site interviews with key personnel and ongoing evaluations of available documentation and support for processes and internal controls supporting the BTOP grant management and compliance activities of the State.

To aid us in the execution of Step 2, we have developed our Integrated Compliance Assessment Plan (ICAP) framework and tool. The framework and tool, as demonstrated in the figure below, is a proprietary database compiling relevant components of financial compliance and fiscal accountability related to ARRA funding for the BTOP program. The framework and tool allow us to make certain that we are evaluating the State consistently, considering relevant requirements.

Control Environment	•The applicant has a defined organizational structure and assignment of authority and responsibility to promote a sound control environment.
Expenditures	•Expenditures are for activities within the scope of the project and are allowable under A-87, Cost Principles for State, Local, and Indian Tribal Governments, and other applicable cost principles.
Accounting	•Accounting records are complete, are posted timely, and are tracked against approved budgets.
Reporting	•Provider reports are accurate and are submitted timely.
Program Management	•Program funds are properly administered.
Equipment & Inventory	•Controls are in place to protect assets acquired with federal funds.
Administrative Expenses	•Administrative expenditures are approved by appropriate personnel and are evaluated for allowability and compliance to the program.
Contracts	•Contracts are utilized for the procurement of services and are approved in the local plan.
Subrecipient Management	•If the provider passes funds on to another organization, the provider must monitor the activities of their sub-recipient.
Performance Measurement	•Progress on each project is measurable and clearly reflected in the provider's reports.
Record Retention	•Financial records, supporting documents, statistical records, and all other records pertinent to an award are retained as required.

- **Activities**

Step 1: Identify Requirements and document our understanding. The purpose of this step is to ensure that the project team and the State's staff agree upon the full scope of the BTOP compliance and reporting requirements, including those issued by the OMB and NTIA. In addition, we will identify and document our understanding of the key people, process, technologies and internal controls in place at the State to provide for compliance with such compliance and reporting requirements.

- **Deliverables**

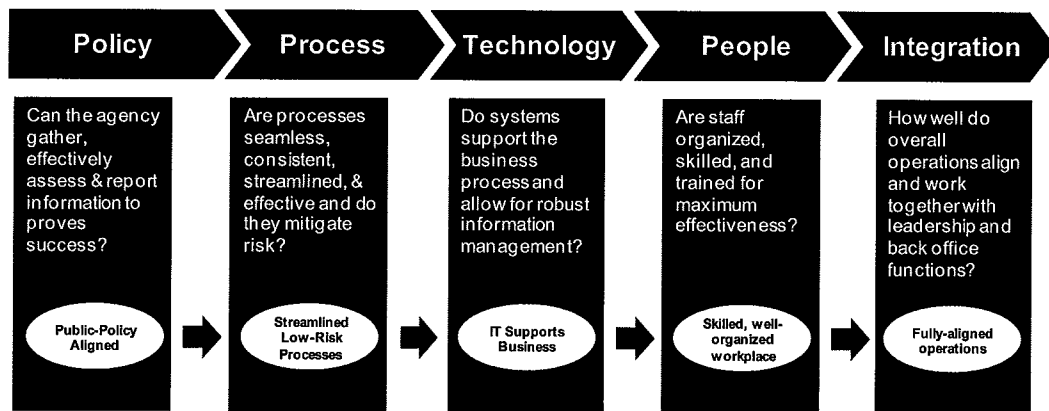
- Draft document that describes each grant requirement for review and approval.
- Draft understanding of people, process, technologies and internal controls for review and approval.

Step 2: Provide management with meaningful recommendations and as a third-party auditor, assess current capabilities, process and internal controls to comply with BTOP grant requirements. Whereas the previous step defines the baseline set of reporting requirements and documents our understanding of the key people, process, technologies and internal controls, this step will address the State's need for third party audit and validation services aimed as assessing the State's ability to meet compliance requirements and improve the efficiency and effectiveness of the overall BTOP grant management processes. The evaluations performed by our audit and monitoring team are designed to address:

- Organizational issues – Is the current organizational structure conducive to collecting and reporting required information? Is there a natural path on which work products can be approved?
- Technical issues – Do existing management systems capture and report information required by ARRA and the Commerce Department?

- Reporting and compliance issues – Are accounting, procurement and contracting practices in line with BTOP requirements? Have the relevant sub-recipient and vendor expectations been established?
 - Policy and Process issues – Are there have any existing procedures and/or policies that will inhibit required reporting?
 - Internal Controls – Do processes include adequate internal controls to effectively avoid non compliant activities or fraud, waste, and abuse?
- **Deliverable**
 - Report via a Compliance Dashboard (or other acceptable manner to be determined) the results of our assessment

Step 3: Advise on tools and techniques to meet compliance standards and improve BTOP grant management processes and controls. In addition to providing feedback on compliance with BTOP grant requirements, we will provide findings as well as recommendations to improve BTOP grant management processes, where applicable. This analysis is intended to meet the State’s needs and will contain recommendations appropriate to the size and scale desired. The general purpose is to assist the State by helping to establish right-sized solutions and simple, streamlined processes to aid in ongoing management and compliance. Recommendations include varied options for solutions wherever possible and will prioritize significant issues or showstoppers that need to be addressed immediately to avoid a lack of compliance or future audit findings. At the discretion of the State, The Team can provide recommendations across a variety of areas as depicted in the following chart:



- **Deliverables**
 - Report via a Compliance Dashboard (or other acceptable manner to be determined) prioritized recommendations for:
 - Improved compliance with BTOP grant requirements (addressing the issues identified in Step 2 above) and
 - Increased efficiency and effectiveness of BTOP grant management practices

Step 4: As a third-party auditor, monitor to confirm the implementation of changes and ongoing compliance with the requirements of the BTOP grant program. The purpose of this step is to provide ongoing feedback regarding the condition of processes and internal controls and related opportunities for improvement, if needed. Similarly to Steps 1 – 3, ongoing monitoring will include on-site interviews, inspection of documentation and other techniques to identify compliance exceptions and opportunities for process and control improvement. In addition, we will monitor new or emerging grant and/or other regulatory requirements and report such information to the State.

- **Deliverables**

- Report using a Compliance Dashboard (or other acceptable manner to be determined) assessment results and prioritized recommendations for continued:
- Compliance with BTOP grant requirements (addressing the issues identified in Step 2 above)
- Improvements in efficiency and effectiveness of BTOP grant management practices

Our Experience

Our Team's past performance and experience speaks to our ability to execute and deliver results in demanding environments. We bring together past performance and experience in ARRA compliance, large capital projects, grants management, telecommunications, and broadband deployment to deliver the highest quality results to our clients. Our unique and collaborative approach to these work elements has proven successful in developing grants application protocols, performance metrics, and action plans. Our commitment to bringing together the right Team with deep experience on similar projects, and who can leverage Deloitte's multi-functional and global expertise and capabilities allows us to support the Statewide Broadband Infrastructure Project for West Virginia.

Projects Experience Summary

Client	Project Title	Description
West Virginia Department of Health & Human Resources	RAPIDS Integrated Eligibility Suite	Deloitte has been a long term partner with DHHR to maintain, enhance and provide operations support to the RAPIDS suite of applications. The suite includes the legacy RAPIDS integrated eligibility system, the web-based incremental renewal initiative eRAPIDS, the client self service portal inROADS and a data warehouse and reporting solution RAFT.
State of Louisiana	Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP)	Deloitte assisted the State of Louisiana with Federal and state regulations to comply with the management and administration of Public Assistance funds.
State of Arizona – Governor's Office of Economic Recovery		Deloitte Provided services to the Arizona Governor's Office of Economic Recovery in its efforts to comply with the American Recovery and Reinvestment Act of 2009 (ARRA) and the Office of Management and Budget (OMB) Circular A-133.
State of Pennsylvania	Wide Radio Tower Project	CSA's work on the Pennsylvania Public Safety Radio Project encompassed development of sites for approximately 250 wireless radio towers throughout the state
Puerto Rico Office of the Chief Information Officer (OCIO)	Information Management and Broadband Implementation	CSA, as Program Managers and Technical Advisors for the OCIO, established program management and business methodology procedures in the newly appointed OCIO to provide recommendations for ARRA funding applications, consultant procurement evaluation process and Broadband Infrastructure evaluation
Federal Communications Commission (FCC)	Program Director for 800 MHz Transition Administrator (800 MHz TA)	Deloitte leads the program that includes 2 additional organizations – a law firm that provides telecom regulatory guidance and expertise and a spectrum engineering firm that provides subject matter expertise with regard to the spectrum "band" plan design and spectrum assignment
US Department of Health and Human Services	Project Management and Technical Support for the	ONC turned to Deloitte to provide assistance in standing up its office and identifying and implementing strategies to achieve

Client	Project Title	Description
	Office of the National Coordinator	its objective. Areas of support: <ul style="list-style-type: none"> • program and performance management • communications and collaboration • research and subject matter expertise • program and operational support services
US Department of Justice	Office of Justice Programs, National Security and Justice, Grant Management: Tracking, Assessment and Tools Development	Deloitte is supporting the Program Assessment Division (PAD) within the Office of Audit, Assessment, and Management (OAAM) at the DOJ Office of Justice Programs (OJP). This new OJP division is charged with: <ol style="list-style-type: none"> 1. Internally assessing the performance of OJP grant programs 2. Overseeing grant monitoring activities and developing solutions to be sure OJP meets annual monitoring targets and to standardize grant monitoring deliverables and processes
US Department of Transportation	National Transportation Infrastructure, Policy, and Oversight, Grants Management Process Review Project	The purpose of Grants Management process reviews is to identify key management practices and conclude on any weaknesses that may lead to financial weaknesses, whether material to the Department or for entity-level consideration only.
US Department of Homeland Security (DHS) Federal Emergency Management Agency (FEMA) Grant Programs Directorate (GPD)	Grants Management and Administration Support	The FEMA Grant Programs Directorate (GPD) engaged Deloitte to provide financial grants management and administration support to FEMA's grant portfolio, valued at more than \$10 billion
National Oceanic and Atmospheric Administration (NOAA)	Grants Management System Development and Implementation	NOAA leadership proposed the implementation of a system that would automate the grants management lifecycle processes, reduce processing times and standardize procedures
Office of Program Analysis & Evaluation (PA&E) in the OCFO	Recovery Act Performance Management Dashboards	The Office of Program Analysis & Evaluation (PA&E) in the OCFO engaged Deloitte Consulting to design, manage, and test the development of performance management dashboards for roughly \$37 billion in American Recovery and Reinvestment Act (Recovery Act, or "ARRA") funding at the Department of Energy
A Communications Corporation	Construction Cost Assessment for OSP Fiber Build	Deloitte was retained by a Communications corporation to perform a construction review and audit of an OSP Fiber Build contract.

For detailed information regarding the above client experiences, please see Appendix C.

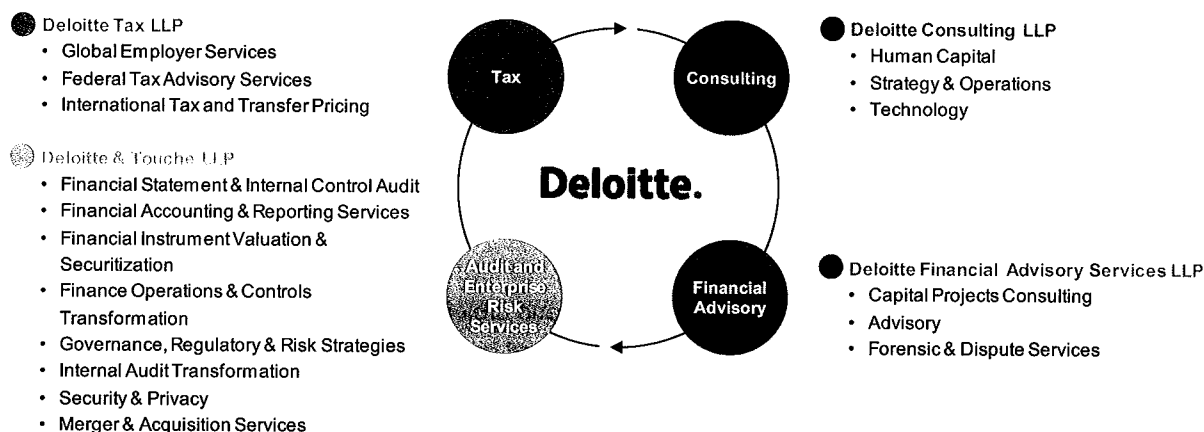
Appendix A: Deloitte/CSA Organization Profiles

The Deloitte and CSA Organizations

The Deloitte Organization

Deloitte Touche Tohmatsu (DTT) is one of the world's largest professional services organizations with nearly 165,000 employees worldwide. DTT reported global aggregate revenue of \$26.1 billion for fiscal year 2009. DTT is profitable, well capitalized and suitably staffed to support largest and most complex organizations and projects.

The global DTT member firms advise more than 80 percent of the world's largest companies and deliver services in four professional areas: Consulting, Audit and Enterprise Risk, Tax, and Financial Advisory Services, with some of the key service lines identified as follow:



In addition, Deloitte stands out from other professional services firms because of the depth and breadth of our multidisciplinary capabilities. Our organization is built upon the intellectual capital of approximately 41,000 professionals in the United States. Our professionals are trained to function as one cohesive unit for each client we serve, adding value to their business.

Deloitte History

The current Deloitte U.S. organization (Deloitte LLP) formed in 1989 when its predecessor organizations of Deloitte Haskins & Sells and Touche Ross & Co., both with operations dating back more than a century, combined.

Deloitte Touche Tohmatsu (DTT) is one of the world's largest professional services organizations, and Deloitte LLP is the U.S. member firm of DTT. Subsidiaries of Deloitte LLP (including Deloitte & Touche LLP, Deloitte Consulting LLP, Deloitte Tax LLP, and Deloitte Financial Advisory Services LLP) primarily serve clients based in the United States.

In addition, Deloitte stands out from other professional services firms because of the depth and breadth of our multidisciplinary capabilities. Our organization is built upon the intellectual capital of approximately 41,000 professionals in the United States. Our professionals are trained to function as one cohesive unit for each client we serve, adding value to their business.

Since 2003, consulting services have been provided by Deloitte Consulting LLP. Since 2004, tax services have been provided by Deloitte Tax LLP. Since 2005, financial advisory services have been provided by Deloitte Financial Advisory Services LLP. Each of these entities is a Delaware limited liability partnership.

The CSA Organization

CSA founded in 1956 and currently celebrating its 52nd anniversary, has since grown to become the largest Hispanic-owned architectural/engineering/planning and environmental firm in the U.S., with offices in Florida, Puerto Rico, Illinois, Ohio, New York, Pennsylvania, Argentina, and Panama.

CSA is consistently ranked by Engineering News Record among the Top 200 Design Firms, Top 100 Environmental Firms, and Top 50 Program Management Firms in the U.S. CSA is known for its' capability in providing our clients with full service project delivery, based on state-of-the-art technology and the personal attention that they've come to expect. Our goal is to deliver solutions based, turn-key A/E/P&E services; giving clients' access to a family of professionals, already ranked among the top design consulting firms in the Country.

With capabilities that include architecture, engineering, procurement, construction management, operations & maintenance and environmental services; we strive to continually deliver innovative turn-key solutions for our clients within the facilities (educational, housing, hospitality, commercial & institutional); and infrastructure (transportation, power, water, telecommunications & rail) markets.

With a staff of over 400 professionals we are able to meet our client's needs efficiently and effectively. A current example of this ability is the Program Management Service we are providing for the American Recovery and Reinvestment Act (ARRA) in Puerto Rico. The programs total value exceeds six billion dollars.

The ARRA program's objective was to provide support to the government in the implementation of the ARRA, in a way that would:

- Maximize federal funding approval
- Optimize return on investment
- Provide the needed support to expedite initiatives and projects
- Assure compliance with all Federal and State laws and regulations

During the early inception of ARRA, CSA made a strategic decision to invest in research and human capital to enhance its Program Management expertise and established best practices essential to the successful execution and delivery of such a large endeavor. Data capture began at program initiation with continuous improvement in structure and detail as the program progressed. Anticipating the compliance requirements throughout the program mobilization and ramp up, the team used outreach and training events to develop clear understanding of the key ARRA requirements such as:

- Registration and certification
- Required data elements for quarterly reports
- Effective grant and competitive proposal writing and review support
- Coaching on the required accountability, transparency, compliance management, aggressive deadlines
- Established communications and facilitated interfaces with multiple stakeholders

CSA's enhanced Program Management services were developed to address the ARRA high level regulatory requirements through the use of:

- Integrated Monthly Reporting Metrics

- Implemented local reporting structure that used information codes and metadata 100% compatible with Federalreporting.gov
- Trained local entities on electronic filing
- Established local structure to monitor ARRA expenditures
- Enhanced data quality for federal quarterly reporting

As the grant and competitive proposals were completed, CSA Compliance coordinators conducted training on grant-specific and federal reporting requirements. Then CSA's Agency and Municipal Coordinators worked closely with these entities across multiple fronts to ensure proper execution. QA/QC reviews of all data elements for the required monthly and quarterly reports were conducted as ongoing changes to guidelines, laws and regulations were identified and incorporated. Reports were customized for the agencies and municipalities. In close collaboration with the Office of the Governor, CSA applied database technology to serve as both a communication and reporting tool.

Appendix B: Representative Team Staffing

Resumes of Prospective Team Members

The following pages contain the resumes of our prospective Team members for our EOI response submission to the State of West Virginia.

Executive Oversight

Brett S. Haan

Principal

Deloitte Consulting LLP

Career Summary

Brett Haan is a Principal with Deloitte Consulting responsible for Public Safety communications projects and other domestic and international telecommunications engagements. He has over 20 years of telecommunications experience in commercial, government and regulatory affairs in both the United States and Europe. Mr. Haan also actively leads or has led projects for Deloitte in a number of Emerging Markets such as Pakistan, Afghanistan, Iraq, Armenia and previously headed projects in Moldova. This work has been conducted for national regulators and technology ministries as well as for international groups such as USAID, the European Union and the World Bank. His professional career started at the General Accounting Office (GAO), where he evaluated multi-billion dollar defense communications programs for risk, technology development and overall policy coordination. He has continued this telecommunications technology, policy and public policy work throughout his career. He has had the unusual experience of holding senior positions with the Federal Communications Commission (FCC) in the United States, as well as being a senior advisor in Germany to the Foreign Affairs and Defense Subcommittee of German Free Democratic Party (FDP). In Brussels Mr. Haan worked as a senior advisor to the European Commission's Minister Martin Bangemann, then the Commissioner for the EU's internal market and industrial affairs – DG13.

Relevant Project Experience

Deloitte Experience

- **Program Director:** 800 MHz Transition Administrator LLC, on-going project for the Federal Communications Commission (FCC).
- **Project Lead:** Actively leads or has led projects for Deloitte in a number of Emerging Markets such as Pakistan, Afghanistan, Iraq, Armenia and previously headed projects in Moldova.
- **Program Manager:** Led a team that successfully planned and developed a wireless voice and data strategy for American University

Previous Experience

- **Senior Vice President:** Served as Senior Vice President for Regulatory Affairs and Business Development for the German company Telegate, AG
- **Senior Policy Advisor:** Responsible for European issues at FCC's International Bureau.
- **Senior Advisor in Europe:** Held positions in Europe as a Senior Advisor: European Commission (industrial affairs and information and telecommunications technology); American advisor: Foreign Relations and Defense Committee, Free Democratic Party

Education/Professional Designations

- Bachelors of Art: University of Utah
- Masters of Art: University of Chicago

Advisory

Telecom Infrastructure Advisor

Jon Cooper

Manager

Deloitte Consulting LLP

Career Summary

Jon Cooper is a Manager in Deloitte's Consulting LLP. With over twenty years experience in the conceptualization, design and development of complex telecommunications systems, Jon has a diversified professional background which includes technical engineering and business skills. He has a strong foundation in business development, as well as a practical knowledge in the fields of radio-frequency engineering and optimization, engineering management, government coordination, site development, and maintenance operations organizations. Mr. Cooper has strong written, verbal, and interpersonal skills, with an emphasis on teamwork, group problem solving, and total quality management.

Relevant Project Experience

Deloitte Experience

- Provided support to the FCC 800MHz Transition Administrator covering rebanding of Sprint/Nextel and Public Safety licensee spectrum for the **U.S. Federal Communication Commission**

Previous Experience

- Provided expert operational guidance and oversight for the technical development of the State of Florida public-safety wireless communication network for the **MACOM/State of Florida Statewide Law Enforcement Radio System**
- Held executive-level positions with leading regional and national commercial wireless carriers in the radio system development arena for **McCaw Cellular, AT&T Wireless, and nTelos**

Education/Professional Designations

- Bachelor of Science Electrical Engineering, West Virginia University: Institute of Technology

Engineer Advisor

Carlos Mallo, P.E., D.B.A.

Sr. Vice President, Civil Engineer
CSA Central, Inc.

Career Summary

Dr. Mallo is a Civil Engineer with 33 years of experience dedicated to areas of construction. His career focus has been on infrastructure development and program management solutions for complex projects. Within CSA he worked on the development of Program Management solutions for the American Recovery and Reinvestment Act (ARRA) in Puerto Rico. Dr. Mallo has a unique combination of experience in both the management of over \$100 million of infrastructure work and as a professional offering construction management consulting services for large civil engineering projects. Additionally, he has been active in the investigation and resolution of constructability issues and construction claims by providing claim analysis, scheduling analysis and expert witness testimony in construction-related claims.

Relevant Project Experience

CSA Experience

- CSA Lead Team member tasked with the development of program management solutions for the 6.2 billion dollar ARRA program in Puerto Rico.
- Hurricane Damage Recovery Programs – Principal in Charge for the contract with Florida Department of Transportation (FDOT) District One for the management of the recovery effort after the 2004 and 2005 hurricanes, resulting in the administration of over \$100 million in various contracts
- FEMA-funded Reconstruction Program, Miami-Dade County – Dr. Mallo was the project director and program manager for engineering and construction of over 3,000 sites damaged by floods in Miami-Dade County. The \$350 million dollar program included the participation of over 150 consultants and contractors working under Dr. Mallo's supervision.

Education/Professional Designations

Education

- Doctor of Business Administration, Nova Southeastern University, Ft. Lauderdale, FL, 2003
- Master of Science in Engineering Management, University of Missouri, Rolla, 1982
- Bachelor of Science in Architecture, National University of La Plata, Argentina, 1979
- Bachelor of Science in Civil Engineering, National Technological University, Argentina, 1978

Professional Licenses and Registrations

- Professional Engineer, Florida No. 36122
 - Certified Bridge Inspector, National Highway Institute
 - Project Management Professional, Project Management Institute, No. 10427
-

Grants Administration, Compliance

Tom Cooley

Director

Deloitte & Touche LLP

Career Summary

Tom. Cooley leads Deloitte's grants management services and offerings, designed to assist Federal grant making agencies, as well as recipients and sub-recipients of Federal grants, in their grant processing and award administration, management and oversight functions from pre-award through award, post-award management, audit and close-out activities. Support for these activities includes internal controls, compliance reviews, improper payments reviews, and risk assessment, risk management and risk mitigation, and A-133 audit activities, among others.

Relevant Project Experience

Experience

- **Chief Financial Officer/Director:** Office of Budget, Finance and Award Management, National Science Foundation (NSF); plus, served as a member of the Executive Committee of the U.S. Chief Financial Officers Council.
- Developed and implemented NSF's highly regarded Post-Award Management and Oversight program.
- Chaired key groups, On behalf of OMB, charged with grants implementation, from cradle to grave, with particular attention to policy development to drive system implementation and review of the OMB
- Chaired the Grants Policy Council (GPC) of the US Chief Financial Officers Council and worked in tandem with the Chair of the Grants Executive Board
- Hosted a national GPC webcast Dec. 10, 2009 where GAO, RATB and OMB/OFFM reported on the results and issues stemming from the first quarterly reporting deadline, October 1-10, 2009
- Chaired the Grants Committee of the Federal Funding Accountability and Transparency Act (FFATA) OMB-led Task Force,
- Developed data policy guidance to implement first-tier grants recipient reporting to www.FederalSpending.gov and developed the model for OMB-led pilot project for sub-recipient reporting.

Education/Professional Designations

- Plant Physiological Ecology; University of South Florida, Tampa
- Masters of Science – Botany; Chemistry minor; University of Maryland, College Park
- Bachelor of Science – Microbiology; Chemistry minor; University of Maryland, College Park

Kathryn Ann Schwerdtfeger

Partner

Deloitte & Touche LLP

Career Summary

•Kathie is the leader of our Central Texas ERS practice where she provides leadership to our internal audit, Sarbanes-Oxley, and control assurance clients throughout Central Texas. Kathie has more than 23 years of professional audit experience performing financial, compliance, and performance audits; internal audits, risk assessments; quality assurance reviews; and forensic investigations of Texas state agencies and other public sector entities. She is the Lead Relationship Partner for the States of Texas, Louisiana, and New Mexico and also serves as the firm's National Public Sector Internal Audit Leader. Prior to joining Deloitte in 2001, Kathie spent 13 ½ years working for the Texas State Auditor's Office ("SAO") where she served as Special Assistant to the State Auditor and the Federal Single Audit Coordinator.

Relevant Project Experience

Experience

- Led the internal audit assessment of the FEMA Public Assistance Grant Program for the Louisiana Governor's Office of Homeland Security and Disaster Preparedness and currently leading our process and control enhancements for this \$37B federal assistance program. This included developing their subrecipient monitoring program from the ground up and helping to execute the first round of site visits
- Led the recent internal audit of grants management for the Texas Department of Public Safety where we evaluated grant management, cash management, and grant acquisition processes for the agency's grant programs to include the Public Assistance Grant Program for disaster recovery.
- Led the recent performance audit of the Texas Department of Agriculture's rural loan programs providing recommendations for enhancing controls and optimizing the financial stability and overall effectiveness of the programs.
- Led the Texas Association of School Board's Risk Management Fund's internal control assessment over financial management processes.

Education/Professional Designations

- B.B.A., Accounting, Southwest Texas State University
- Certified Public Accountant (CPA), Texas

Project Management

Brian Jagan

Senior Manager

Deloitte Consulting LLP

Career Summary

Brian is a senior manager on the Federal Communications Commission Management team in Deloitte Consulting Practice. Mr. Jagan is a highly motivated individual with demonstrated ability to lead mission critical initiatives, build and maintain executive-level relationships and deliver projects on time and within budget. He has over 15 years experience in the commercial and public service sectors. He has significant experience in wireless and strategy development, as well as managing a wide range of projects in several industries. His roles on these projects include the development of a billing strategy for Wellcare, Manager of Project Consulting for MetLife's Small Market Institutional Project Team, Assistant Vice President for Special Projects within Citibank's International Personal Banking, Wireless and Project Systems Lead for the Department of Interior and US Customs Project, Project Manager of the American University Wireless Project, Project Team Lead for Bezeq and e.spire Telecommunications Implementation, Developed Telecommunications Strategy and Roadmap for Canadian Market, Developed MediaOne's entry strategy into Telecommunications, Managed the development and deployment of a CRM solution at AT&T Wireless, and Team Leader for CellNet and Telia Telecom Implementations. Mr. Jagan is currently focused on Broadband BTOP Stimulus initiatives.

Relevant Project Experience

Deloitte Experience

- **Team Lead:** Transition Administrator, Federal Communications Commission: communications team and the stakeholder implementation management
- **Project Lead:** Wellcare: development of a premium billing strategy, future state process flows, functional business requirements, and business rules
- **Project Consulting Manager:** MetLife: executed and delivered multiple projects within the Small Market Institutional market

Previous Experience

- Assistant Vice President: Citibank
- **Wireless and Project Systems Lead:** U.S. Customs & Department of Interior
- **Project Manager:** The American University
- Project Team: Lead Bezeq
- **Project Team Lead:** e.spire Telecommunications
- Senior Consultant: AT&T Wireless
- Senior Consultant: MediaOne
- **Project Team Lead:** CellNet & Telia Telecom

Education/Professional Designations

- B.S., Finance, University of South Alabama
- MBA, Finance, Rollins College

Engineering

Hector Monroy, P.E.

Director of Knowledge Management

CSA Central, Inc.

Career Summary

Hector Monroy has 19 years of experience in civil and system engineering, project management and consulting services. He is currently the project manager for the broadband Connected Nation (CN). CN applied for the ARRA and the Broadband Data Improvement Act for various State Broadband Data and Development Grants. He has also been a developer of corporate wide strategic plans for CAD/CAE processes, CAD/CAE/GIS process integrator and Knowledge Management (KM) initiatives. He is an experienced CAD manager with over two hundreds CAD/CAE users, an Internet/Intranet CAD/CAE tools designer and developer, a vertical CAD/CAE software designer and developer for specific projects, a CAD/CAE quality control and quality assurance auditor, and a technical evaluator for draftsman recruitment. He has worked on the development of various GIS systems for public entities and has participated in the assessment of the MIS and operations systems for government agencies. He has worked in projects in the Caribbean, United States, Central America and South America.

Relevant Project Experience

Experience

Project Manager: Broadband GIS Data Processing – Connected Nation

CSA is performing processing services on broadband mapping data. CSA is working with Connected Nation staff to provide GIS mapping services to assist in the development of the state-level broadband maps.

Management Team Member: ARRA Information Management and Broadband Implementation (Puerto Rico)

CSA, as Program Managers and Technical Advisors for the Office of the Chief Information Officer (OCIO), established program management and business methodology procedures in the newly appointed OCIO to provide recommendations for ARRA funding applications, consultant procurement evaluation process and Broadband Infrastructure evaluation.

Education/Professional Designations

Education

- Master of Science in Civil Engineering, University of Puerto Rico, Mayagüez, 2000
- Master of Science in Computational and System Engineering, University of Los Andes, Bogota, Columbia, 1998
- Bachelor of Science in Civil Engineering, University of Cauca, Popayán, Columbia, 1989

Professional Licenses and Registrations

- Engineer in Training , Puerto Rico, License No. 20234
- Registered Civil Engineer, Columbia

Invoice Validation

Avi Schwartz

Senior Manager

Deloitte Financial Advisory Services LLP

Career Summary

Avi Schwartz is a Senior Manager in the Capital Projects Consulting Group of Deloitte Financial Advisory Services LLP. Avi has 15 years of experience working in the construction industry and advising owners of major capital construction projects. He routinely conducts management and financial controls assessments of significant capital projects with a goal of improving performance and mitigating strategic and operational risks. Avi has also developed and implemented financial and project controls as well as policies and procedures for the design-procurement-construction process. In addition to government and higher education institution clients, his clients have also included financial service, pharmaceutical and media corporations, and not-for profit organizations.

Relevant Project Experience

Deloitte Experience

- Co-led a construction cost and economic activity study on behalf of a major State government.
- Assisted a major State government to mobilize for the 2009 Recovery Act.
- Co-led an economic and cost study of the construction industry in a major metropolitan market.
- Managed a look back cost investigation aimed at identifying cost exposures on a multi-billion dollar emergency procurement effort.
- Worked with a housing authority client's steering committee to reorganize the way in which a housing authority managed capital construction projects.
- Developed a capital project policies and procedures manual for a major public library system.
- Conducted a construction cost assessment of a new planetarium.
- Served as subject matter specialist assisting the internal and external auditors in conducting construction site visits and change order and invoice testing for a major school construction authority.

Education/Professional Designations

- B.S. in Mechanical Engineering, Binghamton University, Binghamton, NY
 - M.B.A. in Operations & Technology Management, Baruch College, New York, NY
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Grant Compliance

Mark McNamee

Director

Deloitte & Touche LLP

Career Summary

Mark is a Director in Deloitte's Enterprise Risk Services practice, specializing in risk management, compliance and finance transformation services. He has 25 years of experience serving state and Federal government agencies, as well as private sector organizations. Mark is a Certified Public Accountant, Certified Government Financial Manager, and Project Management Professional. He has also served in a leadership capacity for Deloitte's American Recovery and Reinvestment Act ("ARRA") program management office, providing guidance and subject matter advisory services to clients and account teams – both public and private sector. Mark has led many large programs and project during his eight years with Deloitte. Prior to joining Deloitte, he served as Director of Risk Management for a large, global general contracting firm; chief financial officer for two different mid-sized corporations; and chief executive officer for a business process outsourcing firm.

Relevant Project Experience

Deloitte Experience

- Southeast Region leader of Business Process Outsourcing practice, focusing primarily on **public sector and not-for-profit clients**
- Finance transformation leader for housing agencies deemed as "troubled" by the **U.S. Department of Housing and Urban Development**
- Enterprise Risk Services Leader of Deloitte's American Recovery and Reinvestment Act program management office
- Leader, Deloitte's pro-bono service program, providing grant management and due diligence advisory service for **several high profile non-governmental organizations**
- Experience leading large, program-type engagements encompassing multiple priorities, work streams and projects
-

Previous Experience

- Chief Executive Officer for Business Process Outsourcing firm, specializing in not-for-profit and public sector
- Chief Financial Officer for mid-sized convention and business services organization
- Chief Financial Officer for mid-sized utility construction contractor
- Director of Risk Management for large, global general contractor
- Consultant for PriceWaterhouseCoopers

Education/Professional Designations

- Masters of Business Administration (Finance & Investments Concentration – George Washington University, Washington DC
- Bachelor of Science, Commerce (Accounting Concentration) -- University of Virginia, McIntire School of Commerce, Charlottesville VA
- Certified Public Accountant
- Certified Government Financial Manager
- Project Management Professional
- Certified Information Technology Professional

Grant Management & Validation

Camille Cain

Senior Manager

Deloitte Consulting LLP

Career Summary

Camille is a senior manager for Deloitte's Strategy and Operations practice, specializing in grants management services. She has 20 years of experience serving state and Federal government agencies. She has extensive background at all organizational levels. She has served as a line-level grant manager as well as in senior management roles managing and directing administration of state grants and federal pass-through funds for a large state. She has directed local and regional communications for a federal department with much of the stakeholder and media outreach related to grants and federal policies. She has also directed a multi-billion dollar federal grant making office and has served in a leadership and oversight capacity for a large federal department's grant making agencies and functions. Camille's experience includes all areas of grants management and leading government agencies. Over the course of her career, she has directly led development and all surrounding requirements of over 40 grant programs, including overseeing and designing the accompanying training and technical assistance programs.

Relevant Project Experience

Deloitte Experience

- Grants program management development for the U.S. Department of Health and Human Services: Office of the National Coordinator for Health IT
- Advisory services for grantmaking deliberative processes for the **U.S. Department of Transportation**
- Development of grantmaking capability for the U.S. Department of Transportation: Federal Railroad Administration
- Assessing grantee capabilities for **PECO, a subsidiary of Exelon** (a public utility)
- Assessing grantee capabilities for **Florida Power and Light**
- Support for grantmaking and improvement of processes and strategy for the **U.S. Department of Homeland Security**

Previous Experience

- Deputy Associate Attorney General for the **U.S. Department of Justice**
- Director of Regional Services for the **U.S. Department of Education**
- Principal for Riga Solutions Group, Inc.
- Principal Deputy Director and Acting Director for the U.S. Department of Justice: Bureau of Justice Assistance
- Director, Planning and Grant Administration for the State of Texas, Office of the Governor: Criminal Justice Division
- Program Manager for the State of Texas, Office of the Governor: Criminal Justice Division

Education/Professional Designations

- Bachelor of Arts, Government, University of Texas at Austin

Appendix C: Detailed Client Experiences

Client: West Virginia Department of Health & Human Resources

Project: West Virginia RAPIDS Suite

General Background

In 1994, the State of West Virginia contracted Deloitte to develop the State's first integrated eligibility system, which became known as RAPIDS. RAPIDS' primary goal was to reduce the amount of manual intervention required to determine eligibility for the purpose of reducing error rates across the three main eligibility programs, Food Stamps, Medicaid, and TANF. This implementation was completed over a twenty-four month period, and since then Deloitte has been contracted by the State to maintain the entire RAPIDS suite.

Since its inception in 1994, the West Virginia RAPIDS Suite has grown to include four primary components, all developed and maintained by Deloitte Consulting:

- Legacy Recipient Automated Payment and Information Data System (RAPIDS)
- Information Network for Resident On-Line Access and Delivery of Services (inROADS)
- RAPIDS Analysis and Formatting Tool (RAFT)
- Incremental renewal of legacy RAPIDS to web-based system (eRAPIDS)

In 2002, Deloitte leveraged available technology to develop a web-based application that provides West Virginia residents with 24x7 online access to program screening, application submission, periodic review completion, and detailed benefit viewing. Based on Deloitte Consulting's COMPASS application, inROADS extends to all West Virginia residents and Community Partners and has been incrementally enhanced through 13 subsequent releases.

In August, 2006, the WV DHHR launched the building of a data warehouse, RAFT. The team has delivered three releases of the warehouse, which DHHR has demonstrated at several industry conferences, consistently receiving accolades and interest from other agencies.

The eRAPIDS initiative was born in 2006 out of the State's desire to work with Deloitte to transform the legacy mainframe based integrated eligibility system to a web-based system using J2EE technologies. The project vision is to incrementally upgrade the RAPIDS subsystems over eight releases and five years.

Scope and Approach

- **Program Management:** Strategic planning and prioritization of requirements and resources to increase the value of the RAPIDS suite and overall benefits to the department.
- **Project Management:** Comprehensive planning, issue and risk management, and quality assurance of each release of the four distinct systems that make up the RAPIDS suite.
- **Application Development:** Provided general and detailed system design and application development for the maintenance and enhancement releases of RAPIDS, eRAPIDS, inROADS and RAFT.
- **Testing:** Deloitte leads the unit, integration, performance, accessibility, conversion, and regression testing effort and support user acceptance testing for all four systems.
- **Maintenance and Operations:** Deloitte has provided over a decade of maintenance and operational support for the RAPIDS system resulting in smooth and stable operations with over 99.9 percent system availability.

- Modifications and Enhancements: Each year Deloitte successfully implements significant software enhancements to RAPIDS, such as Welfare Reform, Children's Health Insurance Program, TANF Reauthorization, and the Deficit Reduction Act. These enhancements are implemented while managing significant parallel releases to inROADS, eRAPIDS and RAFT.

Value Delivered

Together, the RAPIDS, inROADS, RAFT, and eRAPIDS systems, all developed and maintained by Deloitte, have allowed the State of West Virginia to continually improve public services provided to its citizens and reduce administration costs. Furthermore, each component of the RAPIDS suite has added its own significant value:

- RAPIDS: created a uniform application environment across the State's 55 counties, reduced the Quality Control error rate, improved worker productivity, and enhanced client services through the outreach concept and improved timeliness and accuracy of benefit issuance
- inROADS: allows for more complete and accurate application information, 24x7 application entry availability, reduction in data entry for State workers, automated reporting and application tracking, interfacing with RAPIDS application, and enhanced client services through the outreach concept and improved availability to access State services
- RAFT: allows RAPIDS business staffers to have direct access to the Benefits Eligibility information without having to deal with the underlying database complexity, speeding up the reporting process, improving quality and freeing up technical resources for other work
- eRAPIDS: improved user interface, easy to learn and adapt, improved worker efficiency, and reduced data errors

The development and maintenance of the RAPIDS suite is an example of Deloitte's collaborative project management approach. This successful approach has consistently achieved solid results that have positively impacted the State's bottom line and the ease of West Virginia residents to apply for and receive benefits.

Client: State of Louisiana

Project: Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP)

General Background

Deloitte assisted the State of Louisiana with Federal and state regulations to comply with the management and administration of Public Assistance funds.

Hurricane Katrina was one of the largest national disasters in the history of the United States. In response to the overwhelming administrative effort required to implement the Public Assistance program, a new agency, GOHSEP, was established by the State of Louisiana. Deloitte was brought in to help GOHSEP identify gaps in the grant administration process. Deloitte performed a risk assessment and worked side-by-side with the State of Louisiana to identify key risks and prioritize gaps. Under additional engagements with the State of Louisiana, Deloitte assisted with the design and implementation of functional departments, processes, controls, tools and procedures.

Scope and Approach

Deloitte provided the following services:

- Assessed the State's administration of the \$9B FEMA Public Assistance Grant Program identifying numerous opportunities to enhance the efficiency and effectiveness of the program, enhance compliance with Federal regulations, and improve accountability and reporting of program funds
- Assisted the State with designing and implementing process and technology enhancements resulting in streamlined processes, expedited payments, establishment of controls, establishment of performance metrics, creation of a compliance monitoring function, development of management reports, and establishment of standard operating procedures
- Assisted the State in enhancing its organizational design of the Recovery Division and stabilizing and training the workforce
- Provided technical assistance to numerous State subgrant recipients to help them understand program expectations

Value Delivered

The State of Louisiana has evolved significantly in its administration of Public Assistance funds. GOHSEP has fully documented key processes in a standardized fashion. With assistance from Deloitte, such processes have been implemented with new tools that support and leverage efforts in accounting and reporting of grant funds. Organizational recommendations have also been implemented and training has been facilitated to develop State personnel.

Client: State of Arizona – Governor’s Office of Economic Recovery

Project: ARRA Subrecipient Monitoring Project

General Background

Deloitte provided services to the Arizona Governor’s Office of Economic Recovery in its efforts to comply with the American Recovery and Reinvestment Act of 2009 (ARRA) and the Office of Management and Budget (OMB) Circular A-133.

Scope and Approach

Deloitte conducted the below key activities in order to meet the objectives of the effort in front of Office of Economic Recovery:

- Developed Policies and Procedures and related tools for the management and execution of A-133 Subrecipient desk reviews.
- In addition, the team created templates to support each phase of this process, including letters to document management’s decisions with regards to Subrecipient compliance.
- Consulted the Governor’s Office of Economic Recovery on the phases of Subrecipient Monitoring, including subrecipient risk assessments, on-site monitoring visits, and quarterly reporting.

Value Delivered

Assisted AZ GOER in building a Subrecipient Monitoring compliance program for executing desk reviews as well as performing site visits for specific ARRA grants. Trained and transition the department on compliance monitoring activities.

Client: State of Pennsylvania

Project: Wide Radio Tower Project

General Background

CSA’s work on the Pennsylvania Public Safety Radio Project encompassed development of sites for approximately 250 wireless radio towers throughout the state. The network is to be used by 22 state user agencies including the Pennsylvania Turnpike Commission, State Police, and local emergency response groups. Tower sites, many of which are located on state lands, state forests and parks, consist of undeveloped, developed, and existing radio tower sites.

Scope and Approach

As is typical of wireless communications projects, this one was conducted on fast-track schedule. For both “Greenfield” and existing site construction, our management team, as well as our architects, surveyors; structural, mechanical, electrical, and geotechnical engineers; and environmental scientists conduct boundary and topographic surveys, subsurface testing, erosion and sediment control studies, structural tower loading analyses, ground resistance testing, and building utility evaluations. Based on these studies and other data collected in the field, CSA developed plans and specifications for tower and ancillary facility installation. Our construction managers and inspectors then oversaw the construction of foundations, cell sites, fencing, landscaping, and roads. We then managed Acceptance Testing of equipment and maintenance of sites to ensure operations are maintained as required. Ang Associates, Inc. of CSA Group, along with CSA Central, Inc., were subcontractors to Rohn Industries, Peoria, IL, the tower(s) manufacturer for the original state contract. Currently, we are working as subcontractor to RCC Consultants, Inc. for Construction Management/Quality Control aspects of final project implementation; and M/A-COM for tower maintenance, emergency repairs, and utility installation. CSA maintains the complete database for active system operations.

Value Delivered

Turnkey solution on a fast-track project, where we provided architects, surveyors, structural, mechanical, electrical, and geotechnical engineers; and environmental scientists to make sure sites were identified, design completed, towers built and tested the system on a very short time period

Client: Puerto Rico Office of the Chief Information Officer (OCIO)
Project: Information Management and Broadband Implementation

General Background

The Puerto Rico Office of the Chief Information Officer (OCIO), in collaboration with the Puerto Rico Infrastructure Financing Authority (PRIFA), is in charge of developing the Puerto Rico Broadband Inventory Map (PRBIM) and the Puerto Rico State Broadband Plan (PRSBP). In addition, the OCIO coordinated the proposals for infrastructure funding for the American Recovery and Reinvestment Act of 2009 (ARRA). The main purpose of the development of the PRSBP is to establish the framework to expand the use of Broadband in Puerto Rico.

Scope and Approach

- CSA, as Program Managers and Technical Advisors for the OCIO, established program management and business methodology procedures in the newly appointed OCIO to provide recommendations for ARRA funding applications, consultant procurement evaluation process and Broadband Infrastructure evaluation
- CSA, CPR, OCIO and PRIFA are hard at work to ensure all communities - rural and urban - have access to the unlimited benefits associated with broadband. An interactive coverage map is currently under development.
- CSA also worked in expediting the preparation of proposals for infrastructure funds and a total of over \$38 million were secured for Puerto Rico in the first round of proposals. Additional competitive proposals were submitted in round two for a total of over \$80 million.

Value Delivered

CSA clarified and improved the OCIO's knowledge and technical expertise of both the ARRA Program and Broadband Planning. Without this information they could not have applied for grant money and initiated their broadband plan.

Client: Government of Puerto Rico, Infrastructure Financing Agency (PRIFA)

General Background

As the federal government announced the economic stimulus package known as ARRA, many state and local governments scrambled to organize an effort to maximize their portion of the stimulus package. It was widely believed that those entities that gained an understanding of the package and the rules and regulations surrounding it the fastest would stand a better chance of increasing the investment the federal government would make in their jurisdiction.

Facing a challenging economic environment and recognizing the issues associated with a decentralized government structure, Puerto Rico decided to leverage private sector experience in program management by partnering with CSA.

Scope and Approach

The ARRA program's objective was to provide support to the government in the implementation of the ARRA, in a way that would:

- Maximize federal funding approval
- Optimize return on investment
- Provide the needed support to expedite initiatives and projects
- Assure compliance with all Federal and State laws and regulations

During the early inception of ARRA, CSA made a strategic decision to invest in research and human capital to enhance its Program Management expertise and established best practices essential to the successful execution and delivery of such a large endeavor. Data capture began at program initiation with continuous improvement in structure and detail as the program progressed.

Anticipating the compliance requirements throughout the program mobilization and ramp up, the team utilized outreach and training events to develop clear understanding of the key ARRA requirements such as:

- Registration and certification
- Required data elements for quarterly reports
- Effective grant and competitive proposal writing and review support
- Coaching on the required accountability, transparency, compliance management, aggressive deadlines
- Established communications and facilitated interfaces with multiple stakeholders

CSA's enhanced Program Management services were developed to address the ARRA high level regulatory requirements through the use of:

- Integrated Monthly Reporting Metrics
- Local reporting structure that used information codes and metadata 100% compatible with Federalreporting.gov
- Training of local entities on electronic filing
- Local structure to monitor ARRA expenditures
- Enhanced data quality for federal quarterly reporting

As the grant and competitive proposals were completed, CSA Compliance coordinators conducted training on grant-specific and federal reporting requirements. Then CSA's Agency and Municipal Coordinators worked closely with these entities across multiple fronts to ensure proper execution. QA/QC reviews of all data elements for the required monthly and quarterly reports were conducted as ongoing changes to guidelines, laws and regulations were identified and incorporated. Reports were customized for the agencies and municipalities. In close collaboration with the Office of the Governor, CSA applied database technology to serve as both a communication and reporting tool. Additional communication activities included press releases, interviews and community outreach events to maintain a constant flow of information and accomplishments.

Value Delivered

Provided the Government of Puerto Rico with a center-led structure that led the effort in maximizing the funding allocated to Puerto Rico (up from \$5 billion to \$6.5 billion) and managed the funds as they were made available to the government, ensuring that 1) that any agency that needed support in their quest for funding had the appropriate support to maximize their potential; 2) funds were spent on their intended projects; 3) reporting to the federal government was done properly and on-time; 4) there was no money allocated for infrastructure projects that would go unspent due to inaction by the agency of record; 5) there was a culture of accountability and transparency surrounding the ARRA efforts; and 5) that the residents of Puerto Rico, as well as the media, had access to all information available for public review .

Client: Federal Communications Commission (FCC)

Project: Program Director for 800 MHz Transition Administrator (800 MHz TA)

General Background

The 800 MHz Transition Administrator project is a unique, public-private partnership serving the public interest through improved first responder communications. The effort, which involves public policy formulation and ongoing policy refinement as the program is refined through additional rounds of activity, amounts to a neutral, independent quasi-governmental organization that administers the (minimum) \$2.8 billion nationwide program.

Deloitte leads the program that includes 2 additional organizations – a law firm that provides telecom regulatory guidance and expertise and a spectrum engineering firm that provides subject matter expertise with regard to the spectrum "band" plan design and spectrum assignment. The mechanism that drives this effort, as established by the FCC, is the grant of funds to individual entities required to implement the approved tasks and use the granted funds within a set duration. All agreements between the parties that designate the intended grant terms (tasks, funds, schedule,) are reviewed and approved by the project team. To date, the team has reviewed and approved nearly 3100 grants/contracts.

Scope and Approach

The effort requires a significant stakeholder communications, outreach and education effort to equip and engage the 4300+ stakeholders impacted by the program. As part of the FCC's requirements, the project also entails a financial accounting for the anticipated \$2.2 billion of stakeholder costs (grant expenditures) and the approximately \$600 million for Sprint Nextel network modification costs. In addition, Deloitte performs the critical Stakeholder and Implementation Management function providing the Communications, Contact Center and Schedule Management services.

Value Delivered

Program Leadership:

- Face of program providing credibility of effort to FCC, Sprint Nextel (grant funding organization), public safety community
- Integration point for Deloitte team tasks along with Legal/Regulatory and Spectrum Engineering functions (contract partner entities)
- Policy formulation and refinement
- Issue/risk mitigation

Stakeholder and Implementation Management

- Develop and implement branding strategy/approach for the program effort
 - Engage, educate, and equip 4300+ stakeholders with process knowledge and information necessary to navigate the reconfiguration program
 - Utilize industry conferences and trade shows, program sponsored forums, webinars, community-specific channels, media and the www.800TA.org website to interact with the impacted stakeholders and deliver required content (policies, procedures, forms, ...) to all involved parties
 - Operate contact center/help desk that provides 1st level support to stakeholders requiring additional information, clarification or assistance with specific matters
 - Develop and disseminate "fact sheets" on key program topics or procedures
 - Conduct regional Implementation Planning Sessions to establish coordinated implementation schedules across interdependent grants.
-

Client: Office of the National Coordinator for Health IT, Department of Health and Human Services
Project: Development and Implementation of National Health IT Grant Programs

General Background

In 2005, the President issued an Executive Order forming the Office of the National Coordinator (ONC) with the objective of creating widespread, secure use of electronic health information exchange by 2014. To achieve this objective the ONC pursued a number of initiatives to remove barriers and promote incentives for widespread adoption of health IT including efforts to harmonize privacy and security policies, develop technical interoperability standards, and defining and developing the infrastructure for a Nationwide Health Information Network (NHIN).

The American Reinvestment and Recovery Act of 2009 (ARRA) dramatically expanded ONC's scope on the nation's health care infrastructure, tasking ONC with several new programmatic objectives including the administration of \$2 billion in HIT related grants, and defining 'Meaningful Use' of electronic health records (EHRs)

ONC turned to Deloitte to provide assistance in standing up its office and identifying and implementing strategies to achieve its objective. Areas of support program and performance management, communications and collaboration, research and subject matter expertise and program and operational support services.

Scope and Approach

ONC engaged Deloitte to provide grant management expertise on several fronts. These included funding strategy development and modeling, funding opportunity announcement (FOA) development, grant process management, and grant evaluation tools and processes. Deloitte executed grants management activities based on expertise of the full Federal grants lifecycle, planning and implementation of ARR-funded awards and integration of key content and program activities as they pertain to execution of grants activities. Lead by a grant management SME core, human capital, strategy, and technology practitioners created public documentation, and deployed several solutions for the ONC.

Value Delivered

Deloitte enabled ONC to execute on rapidly enacted legislation and provide strategy, content and processes in order for ONC to manage their programs. Deloitte continues to provide project management, content SME, grants SME and analytics support to develop resources, recommendations and tools for ONC. Key accomplishments include the following:

- Lead development of HIE and REC FOAs, and provided recommendations for development of grants and HIE SME content from planning to completion; also provided support for Workforce and Beacon FOAs
- Develop project plan of grants lifecycle activities with program content, analytics and other key tasks included
- Develop agendas, action item trackers and provide PMO support for the management of day-today program level activities
- Provide coordination support during Objective Review process, both at a functional and technical level – including the development of Objective Review Tools for reviewers to score applications during the objective review
- Developed scoring sheets for evaluating objective review criteria
- Developed HIE Strategic and Operational Plan Evaluation Criteria
- Complete HIE Strategic and Operational Plan Reviews (including technical architecture reviews) and informing the content of letters to states
- Assist in drafting program-specific special conditions for the Notice of Awards
- Developing and executing the utilization of an Interim CRM Tool to manage internal and external communications
- Develop content for the State HIE Toolkit, used as the guidance document for all recipients
- Provide content and logistics support for recipient webinars and internal training for program staff for State HIE program and 1512 Recipient Reporting
- Support ONC Operations in developing processes, tools and materials in preparation for April recipient reporting for ARRA-funded programs
- Develop ONC-wide Standard Operating Procedures and workflows for key grants and program management activities
- Developing tools to support execution of programs, including Milestone Dashboard and reporting templates
- Developing FAQs for the ONC website and responding to inquiries received through the HHS Inbox
- Provide ad hoc analytics support for data calls and requests for information in support of the programs

Client: Department of Justice

Project: Grants Management: Tracking, Assessments, and Tools Development

General Background

Deloitte is supporting the Program Assessment Division (PAD) within the Office of Audit, Assessment, and Management (OAAM) at the DOJ Office of Justice Programs (OJP). This new OJP division is charged with:

- Internally assessing the performance of OJP grant programs
- Overseeing grant monitoring activities and developing solutions to be sure OJP meets annual monitoring targets and to standardize grant monitoring deliverables and processes

Scope and Approach

- Monitoring oversight support to track and report on monitoring accomplishments, risks
- Risk-based grant assessments guidance and tools to assist with development of annual monitoring plans
- Development and deployment of MS Access-based tool to capture financial, administrative, and programmatic grant data
- Policies and procedures development support

Value Delivered

- Deloitte supported the development of the GMT, an Excel-based tool that captures financial, administrative, and programmatic monitoring data. The GMT contains the templates, tools, and guidance necessary for conducting grant monitoring activities, including desk reviews, site visits, and post-site visit activities.

These templates and tools contain elements that are common to monitoring all types of grants OJP disburses, including discretionary, formula, congressional earmark, demonstration, and training and technical assistance, thus helping to make certain that core grant monitoring data is captured in a uniform fashion across OJP.

- Deloitte helped develop grant assessment guidelines and an Access-based GAT for assessing grants based on potential vulnerabilities. The GAT contains 15 standard "risk" criteria against which all open, active grants are assessed.

The Grant Manager's responses to criteria, which include a combination of "Yes/No" and "High/Medium/Low" responses, produce an assessment score, which then determines the grant's monitoring priority level. Program offices use the priority levels to help them prioritize grants for site-visit monitoring activities for the upcoming fiscal year. The GAT has helped to standardize grant risk assessments across OJP.

- Using completed GAT data, Deloitte assists PAD in developing the agency's annual programmatic monitoring plan that outlines planned site visits for the fiscal year. To help make certain that OJP is on track to achieve its plan, Deloitte conducts a quarterly review of each program office's monitoring progress. This review includes verifying site visits completed for the quarter and updating the monitoring plan to reflect these accomplishments and any schedule changes.

This review also includes a quality assessment of completed site visit deliverables. Each quarter, Deloitte produces a scorecard for each program office that contains key information regarding monitoring progress and deliverable quality.

- Deloitte supported PAD in designing, developing, and standing up its grant program assessment functions. Deloitte helped author a program assessment white paper and concept of operations document which outline PAD's vision, mission, goals, and program assessment function.

Deloitte also helped develop SOPs that define, in detail, the activities completed and deliverables produced throughout each phase of the program assessment lifecycle. Currently, Deloitte is helping PAD execute its first two program assessments. Support includes conducting research, gathering data, coordinating and completing site visits, and developing assessment reports.

Client: Department of Transportation
Project: Grants Management Process Review Project

General Background

Deloitte has been supporting DOT in implementing the OMB Circular A-123, Appendix A requirements by documenting process narratives, flowcharts, and risk assessments for key business processes; assessing entity level controls; and testing transaction level controls for most Operating Administrations (OA) within the Department across different lines of business, including Grants Management.

The purpose of Grants Management process reviews is to identify key management practices and conclude on any weaknesses that may lead to financial weaknesses, whether material to the Department or for entity-level consideration only.

Scope and Approach

- Knowledge of DOT's Grant processes
- Familiarity with DOT stakeholders, IT systems, and Grants Management templates
- Development of Grant process documentation

Value Delivered

- Grants Management Review: Deloitte's review and analyses focuses on the following sub-processes:
 - Application review and sign-off
 - Approval of award package and notification
 - Grant administration including funds pre-certifications, staff training, verification that grantees are administering programs in an efficient and cost effective manner, and implementation of methodologies to monitor grantee performance
 - Processing of advances/reimbursement requests including mandating forms, grantee attachments, and controls to prevent improper or overpayments
 - Closeout procedures
 - Reporting requirements
 - Grant accruals
- Deloitte's review also includes identification of supervisory roles throughout the grants management lifecycle, IT systems and their usage, and reconciliation between grant data residing in IT systems and paper-based sources.
- Grant Process Documentation: Deloitte's services include developing grant process documentation, conducting process level walkthroughs, reporting key findings and exceptions, performing transactional level testing by reviewing award packages and grant files, and submitting final reports to the Program Management Office (PMO) providing internal control advisors to help the Department become compliant OMB A-123, Appendix A compliant.
- Stakeholder Interviews and Management Reporting: Deloitte is performing grants management reviews for eight OAs within the Department in FY09. In performing these reviews, Deloitte works with the PMO and the OAs to collect management documentation and interviews grant and finance managers to map entity-level grant processes.

As a result of Deloitte's review of these processes, Deloitte has been tasked to provide official grants management process documentation for some OAs, such as the National Highway Traffic Safety Administration (NHTSA). Deloitte then created a test plan and conducted walkthrough interviews with the OA to identify controls in place to systematically verify internal controls in grants management. Deloitte analyzes findings to create OA specific transactional-level test plans and reports findings to the OA and the PMO.

Client: Federal Emergency Management Agency, Department of Homeland Security
Project: Grants Management and Administration Support

General Background

The FEMA Grant Programs Directorate (GPD) engaged Deloitte to provide financial grants management and administration support to FEMA's grant portfolio, valued at more than \$10 billion.

Within GPD's Grants Management Division (GMD) and Accountability, Management, and Oversight (AMO) branches, the team focuses on helping GPD meet immediate needs within GPD, while also assisting with the development of long-term strategies and solutions for meeting challenges and accomplishing goals throughout the grants lifecycle.

Scope and Approach

Deloitte supported GPD in its pre-award reviews on grant application budgets. These reviews assist GPD in identifying and addressing incomplete or inadequate information needed to meet the requirements of the grant program. To assist GPD with standardizing and providing consistency across the budget review process, Deloitte developed a checklist for conducting budget reviews, which is designed to assist GPD with standardizing and providing consistency across the budget review process.

Deloitte also helped GPD stay on track to meet fiscal year targets by helping to make certain that budgets reviews, a major component of the 2009 master timeline, are completed in a timely manner.

Deloitte provided policy support by drafting, reviewing, and revising program guidance, policies, and agreements to ensure compliance with US laws and regulations. Deloitte also completed a thorough quality assessment of existing policies and provided recommendations for standardizing future policies. This support ensured that GPD policies and program guidance includes and is in accordance with the necessary and most updated Federal guidance and contributes to more robust accountability and oversight efforts on behalf of FEMA.

Post-Award

Deloitte supported the development, tracking, oversight, and improvement of the financial monitoring operations of the 10 FEMA Regions and Headquarters (HQ). Deloitte assisted GPD with developing an annual comprehensive financial monitoring plan that outlines the planned monitoring activities for each Regions/HQ.

Deloitte then collected data from the Regions/HQ on a periodic basis to track and report on progress against the plan throughout the year, which assists GPD with demonstrating accountability for funds expended on grant programs. Deloitte also prepared comprehensive semiannual and annual analyses on grantee financial management issues, challenges, and promising practices, which assists with the identification of training and technical assistance needs as well as sound practices that should be shared across all grantees.

Deloitte supported GPD with developing standardized monitoring templates and tools. Where templates and tools already exist, Deloitte worked with GPD to improve them in an effort to better meet the Regions' and GPD's data reporting needs. Namely, the Team is assisting FEMA with improving the Regional Monitoring Plan template and the Quarterly Status Report template.

To assist GPD with establishing positive communication and working relationships with the Regions, Deloitte served as a liaison between the Regions and GPD. In the capacity as "desk officers," staff log and route telephonic and electronic regional inquiries and be sure that issues are resolved in a timely fashion.

Closeout

Deloitte supported AMO with the Closeout of a subset of expired grants. The team worked with AMO and the GMD Program Management Office to determine the correct population of grants that need to be closed and assisted AMO with the closeout execution. Support included working with GMD personnel to determine the grants that were ready to be closed financially, working with the program offices to determine the grants that are ready to be closed programmatically, working directly with grantees obtain any outstanding items or information (where necessary), and preparing final closeout documentation.

Enabling Support

Deloitte is assisting GPD with the development of Standard Operating Procedures (SOPs) for key grant business functions, including the budget reviews, award, amendment, payment, monitoring, and closeout functions. These documents, which are intended to serve as employee references and support continuity of operations, outline the processes and procedures for executing on each of these grants management functions and provide the tools, templates, and guidance necessary for successfully completing tasks.

Deloitte is working with GPD to develop a schedule for periodically reviewing and updating the SOPs to be sure they remain

functional and applicable. Deloitte provided analyses on complex financial grant data, obtained from multiple sources, to provide GPD management with recurring and ad hoc information and reports. Analyses include information on obligations, expenditures, expired funds, cost matches/shares, closeouts, and other information helpful in formal and informal stakeholder reporting, including for American Recovery and Reinvestment Act (ARRA) of 2009.

Deloitte is assisting GPD with developing a query library that indexes ad hoc data inquiries. This system allows GPD, when an ad hoc data request is received, to verify whether a similar request was received previously, which can reduce the amount of time required to produce a new report and help eliminate the need to “reinvent the wheel” to fulfill data inquiries. Deloitte also is assisting GPD with developing strategies and tools to help improve the data collection process and enhance the reliability of data outputs.

Deloitte developed a tool that mapped FEMA programs with authorizing and appropriation legislative documents; program-specific policies and state directives. This tool was later further developed into a crosswalk that identified discrepancies in legacy FEMA Quick Guide and Grants Universe documents and was shared with the Intra-Agency Grants Task Force, allowing further standardization agency-wide.

Value Delivered

- Improved financial monitoring documentation prepared by the regions and an enhanced ability to report on the data captured within the documentation
 - Improved ability to track and report on regional financial monitoring, closeout, and cash analysis activities on a quarter by quarter basis
 - Increased insight into the financial activities of FEMA grantees and, ultimately, an improvement in grantee financial performance
 - More favorable audit opinions as a result of a reduction in the backlog of expired grants
-

Client: National Oceanic and Atmospheric Administration (NOAA)

Project: Grants Management System Development and Implementation

General Background

NOAA leadership proposed the implementation of a system that would automate the grants management lifecycle processes, reduce processing times and standardize procedures. Because no commercially available software met the agency's needs, NOAA solicited assistance in the development and implementation of a grants management system, to be known as Grants Online. Because of our visible leadership in the grants management field, and our strong track record of grant processing support for the National Science Foundation, NOAA turned to Deloitte for support. NOAA tasked Deloitte with implementing a grants management tool that would meet the following objectives:

- To have a single unified electronic grant processing and administration solution at NOAA that reduced processing time.
- To have a scalable solution for high volume usage and robust, available operation.
- To provide NOAA with an interface to Grants.gov in an effort to provide "one-stop" shopping for Federal grants-related activities.
- To standardize business processes and contribute to a more efficient and effective use of resources.
- To provide a direct interface to other NOAA systems, such as its financial and legal systems.

Scope and Approach

We used Rational Unified Process (RUP) compliant methodology to develop and implement Grants Online for the client. Using this methodology, we delivered functionality incrementally over 12 iterations rather than a single deployment of a completed application. Each iteration went through a software development lifecycle of requirements definition, design, development, and testing before deployment. This methodology allowed the client to benefit from Grants Online throughout the implementation process, instead of waiting for a final deployment.

Value Delivered

- Grants Online significantly reduced the manual data entry associated with each grant application, and has reduced the timeframe for processing an application from over 30 days to approximately two hours.
 - Grants Online provided the client with a seamless interface to the Grants.gov website, and the application enabled the client to become the first agency to receive an application directly from Grants.gov.
-

Client: Office of Program Analysis & Evaluation (PA&E) in the OCFO

Project: Recovery Act Performance Management Dashboards

General Background

The Office of Program Analysis & Evaluation (PA&E) in the OCFO engaged Deloitte Consulting to design, manage, and test the development of performance management dashboards for roughly \$37 billion in American Recovery and Reinvestment Act (Recovery Act, or "ARRA") funding at the Department of Energy. Deloitte collaborated with Agency executives to determine requirements for key data elements to display in the dashboards. This effort included detailed analysis of applicable Key Performance Indicators (KPI) and a gap analysis of available data.

Scope and Approach

After determining requirements, the team designed graphical mock-ups and established business rules for the dashboards. The detailed mock-ups and business rules helped to focus the dashboard development team's effort and manage client expectations. The team also developed numerous business processes that automated reporting and data collection efforts, and a test team was established to promote rigorous analysis of source data and technology attributes.

Deloitte also communicated with stakeholders throughout the Agency and across the Federal Government to market the new performance management tool.

Value Delivered

The OCFO and the Secretary's Recovery Team use the performance management dashboards to facilitate comprehensive Recovery Program Reviews (RPRs) for more than 140 Recovery Act Projects. The Dashboards also provide a user-friendly interface for stakeholders in Energy, the Office of Management and Budget (OMB), the Government Accountability Office (GAO), and the Office of the Vice President (OVP). The user-friendly Recovery Dashboard interface provides primary stakeholders with ad hoc/customized reports at a moment's notice. The dashboards are widely regarded as a Federal government best practice and were recently briefed to the President of the United States' Performance Management Council (PMC).

Client: A Communications Corporation

Project: Construction Cost Assessment for OSP Fiber Build

General Background

Deloitte was retained by a Communications corporation to perform a construction review and audit of an OSP Fiber Build contract. The Communications corporation contracted with a vendor to design and install a Fiber Optic Ring in a large city in the south east United States.

Scope and Approach

The objective of this engagement was to assess and verify the correct billing amounts from contractor and the subcontractors for work completed to date, to determine the correct allocation to the contributing companies of the payments, to identify the issues concerning project delays and the discrepancies between the construction budget and construction billings, and determine the incentive fee owed to the contractor

Value Delivered

As part of the cost assessment, a lessons learned analysis was performed. Based upon interviews with the communications corporation's management and a review of the construction project, needed improvement was identified in each of the following areas: Feasibility Study, Permitting Process, Management of Project, Cost Estimates and Controls, Schedule Controls, Inspection, Communications, Work Paper Files, Approvals, and Software Management

Client: PECO, an Exelon Corporation (Pennsylvania Electric)

Project: Grantee Assessment Process (GAP) for \$200 million Recovery Act award

General Background

Based in Philadelphia, PECO Energy is an electric and natural gas utility subsidiary of the Exelon Corporation. The Company serves 1.6 million electric and 491,000 natural gas customers in southeastern Pennsylvania and has about 2,500 employees. Founded in 1881, PECO is Pennsylvania's largest utility, operating and maintaining a network with 550 electric substations, 21,000 miles of distribution and transmission lines, 27 natural gas gate stations and 6,600 miles of underground gas mains.

PECO has won a \$200 million American Recovery and Reinvestment Act (ARRA) stimulus award from the Department of Energy. One of only six utilities in the country to receive major funding, the grant will help customers save more than \$1.5 billion in energy costs and bring the equivalent of about 4,300 jobs to the Greater Philadelphia region.

The stimulus grant will allow for faster and wider smart-grid deployment at a lower cost for PECO customers. PECO plans to deploy smart meters for all 1.6 million customers in 10 years, accelerating universal meter deployment by 5 years as a result of the grant. One of the largest single investments in company history, the overall project is estimated to cost up to \$650 million.

Scope and Approach

PECO Energy engaged Deloitte Consulting in a series of projects for assistance in understanding the impact of ARRA and DOE compliance and reporting requirements upon its existing infrastructure.

The six primary objectives of these projects were to:

- Demonstrate that PECO can meet DOE and ARRA reporting requirements
- Position PECO to earn full cost recovery from its DOE smart grid award
- Identify reporting gaps within the existing PECO infrastructure
- Develop remedies for closing identified gaps
- Assist PECO in preparing to meet with DOE pre and/or post smart grid award
- Manage the preparation, review and submission of programmatic compliance reports to the U.S. Office of Management and Budget (OMB) and Department of Energy (DOE).

Value Delivered

Deloitte added value in several ways. First, Deloitte developed a database of all the original rules, regulations and other materials relevant to the administration of the grant. This database would be used by the client to reference requirements. Second, Deloitte performed a review of the current procedures and processes for the current project management of the grant. Deloitte developed a gap analysis as well as prioritized where gaps should be remediated. Deloitte then offered various recommendations based on investments and impacts to the organization. Lastly, Deloitte worked with PECO to establish and manage the preparation, review and submission of programmatic compliance reports to the U.S. Office of Management and Budget (OMB) and U.S. Department of Energy (DOE). The end result was to strengthen PECO's capabilities to fully meet the numerous grant requirements and ensure PECO would be eligible to be reimbursed the entire \$200 million in grant award.

Appendix D: Detailed Typical Tests for Acceptance and Compliance

Event and Splice measurement

An optical time domain reflectometer (OTDR) is used to find and locate performance-inhibiting factors. These factors include bad or dirty connectors, fiber bends, bad splices, mismatched mode-field diameters, etc.

The OTDR plots the backscattered signal power as a function of distance within the fiber. It easily locates all events (bends, bad splices, etc.) that contribute to the overall loss and calculates the overall reflectance level. In addition, the OTDR accurately measures the fiber's length, so cuts or misrouted connections can be found. Because unplanned events can and will affect overall performance, performing this test is essential, and problems must be corrected before any other test (loss, PMD or chromatic dispersion) can be conducted. The test should be conducted in both directions

Backreflection Measurement

Fiber and optical components exhibit a certain amount of back reflection; too much of it can affect the transmission quality. The testing methodology is similar to OTDR testing.

Power and Loss Measurement

The transmitting laser sends a certain amount of power. While the light is traveling through the fiber, absorption and scattering effects will slowly attenuate the original signal. If the power becomes too low, the receiver will not be able to analyze the signal, thus generating errors. Optical loss testing uses a source (such as a handheld FLS source) at one end, and a power meter (such as a handheld FOT meter) at the other end. Taking into account the source power, previously referenced, link loss is obtained from the power reaching the power meter. Again, testing in both directions is a must.

Polarization Mode Dispersion (PMD) Measurement

In the field, PMD measurement is performed using the interferometric method, as described in the Fiber-Optic Test Procedure FOTP-124. This method is the only one that is stable and fast enough for tough field conditions, and the only one recommended by standards for installed links. Due to the statistical nature of PMD, several measurement points have to be determined and averaged out. A quick test over a broad spectral range, which is what the interferometric method enables, ensures high sampling and accurate statistics.

Spectral Attenuation Measurement

When attenuation becomes too high between regenerators, often an optical amplifier is used to increase the reach. Because it is important that all channels have similar power, amplifiers have to be as flat in gain as possible. And even if the amplifiers are flat, there often is wavelength-dependent loss throughout the transmission bands. Power level across these bands must be measured to avoid sending a channel at a high

attenuation wavelength. Measuring loss as a function of wavelength provides crucial information for a good link-budget evaluation..

DWDM Measurement

Once the above tests have been successfully completed, the next step is to light up channels to simulate real transmission. Initial network commissioning should include the measurement of several key parameters and the recording of the results, in order to verify start-up performance and provide a baseline for future troubleshooting and upgrade management. OSA/MWM testing parameters vary according to the network characteristics, system specifications and approved standards. The objective of the commissioning tests is to validate the general performance and integrity of the system. Although testing the whole system at once is often the quickest way, testing it per stage can avoid potential problems by isolating the source of nuisance, which contributes to optimizing network performance.

Bit-Error-Rate Measurement

Any parameter—loss, backreflection, dispersion, etc.—that doesn't meet specifications will affect the bit error rate (BER). BER is defined as the ratio of the defective bits received to the total amount of transmitted bits.

Basic test parameters include error seconds, block errors and unavailable seconds. However, the BER test is the way to check if a system's performance falls within tolerance. This critical test is a final proof that the system is ready to transmit. There are ITU standards defined for various transmission rates. According to the system vendor's specifications, BER can be judged acceptable or not. Achieving a BER level that is well below the maximum accepted level ensures a buffer zone in case of future BER increase.

SONET/SDH Measurement

Once the BER test has proven successful, it is time to send real structured information down the link. For most long-haul applications, this information is transmitted using a network transmission topology called SONET or SDH. SONET is the American National Standards Institute standard for synchronous data transmission on optical media. The international equivalent of SONET is synchronous digital hierarchy (SDH). Together, the SONET and SDH topologies enforce standards ensuring that international or intercontinental digital networks can interconnect and that existing conventional transmission systems can take advantage of optical media through tributary attachments. Irregularities in the structure can, for instance, prevent different parts of the network from communicating. BER testers provide crucial information as they detect bit errors in a network. However, they cannot pinpoint a fault in a network—which a SONET/SDH analyzer can. A SONET/SDH network is split into various sections, starting from the Path section to the Multiplex section and ending with the Regenerator section. Each of these sections will have its own overhead, which will be decoded by the analyzer, thus enabling it to detect if there are any errors or alarms. By monitoring these errors and alarms, an operator will be able to accurately determine the location of a fault.

APS Measurement

One of the main advantages of SONET/SDH networks is their ability to recover from catastrophic faults. Whether it be a fiber cut, a circuit pack failure or a human error, SONET/SDH networks can recover through a process known as automatic protection switching (APS). When a network is commissioned, the APS capabilities must be thoroughly tested to ensure proper functionality and maximum resilience.

MPLS Testing

Testing MPLS networks usually involves ensuring connectivity and resiliency and measuring performance. The following scenarios represent tests.

Customer Edge to Customer Edge Testing

This basic test scenario involves sending untagged packets from the customer edge to ensure that they are properly tagged and services through the MPLS network. This test can be used to measure end-to-end performance or to ensure that the network is properly configured via a network-loading test.

MPLS Edge to MPLS Edge Testing

In this test scenario, traffic is sent from the originating MPLS edge router to the destination MPLS edge router to measure performance and ensure that traffic can flow within the MPLS network. It ensures that the label information base is properly provisioned and LSP can be established.

Customer Edge to MPLS Core

In this test scenario, traffic is sent from the customer standpoint to the MPLS core to test the FEC found at the entrance edge router and to ensure that all packets are properly labeled and forwarded to the MPLS core. This test scenario can also be performed from MPLS core to customer edge, confirming that the destination MPLS router properly strips labels and forwards packets to the proper customer edge.

VPN Emulation/Label Stacking scenario

In this scenario, traffic that is already tagged is sent through an MPLS edge or core to verify that edge and switch routers properly service these tagged frames by stacking a supplementary label and properly forwarding them.

Inaccurate test results

During this process of particulate transference between adapters, debris can build up, creating several concerns. The first is that the test result of any given port adapter may not be accurate based on the amount of debris that was present in the adapter when the test was taken. Test results gathered could vary greatly when debris is introduced on the fiber since it can shift around on the connector face between tests.

Clean and inspect

Unfortunately, the typical practice of testing fiber at the job site rarely seems to include routine cleaning and inspection of the reference cords; that is, unless an obvious insertion loss problem develops during the test process. Often, after such an insertion loss problem has developed while testing, the reference cord may have already encountered physical damage. In many cases, the damage may not even be detectable when inspecting the connector end faces with a hand-held fiber microscope.

Appendix E: Deloitte's Project Management Methodology

Project Management is the application of knowledge, skills, tools, and techniques to complete project activities required to meet project objectives. It is closely related to and sometimes conflated with program management.

The primary challenge of project management is to achieve all of the project goals and objectives while honoring the primary preconceived project constraints such as scope, time, and budget. The secondary and more ambitious challenge is to optimize the allocation and integration of inputs necessary to meet pre defined objectives.

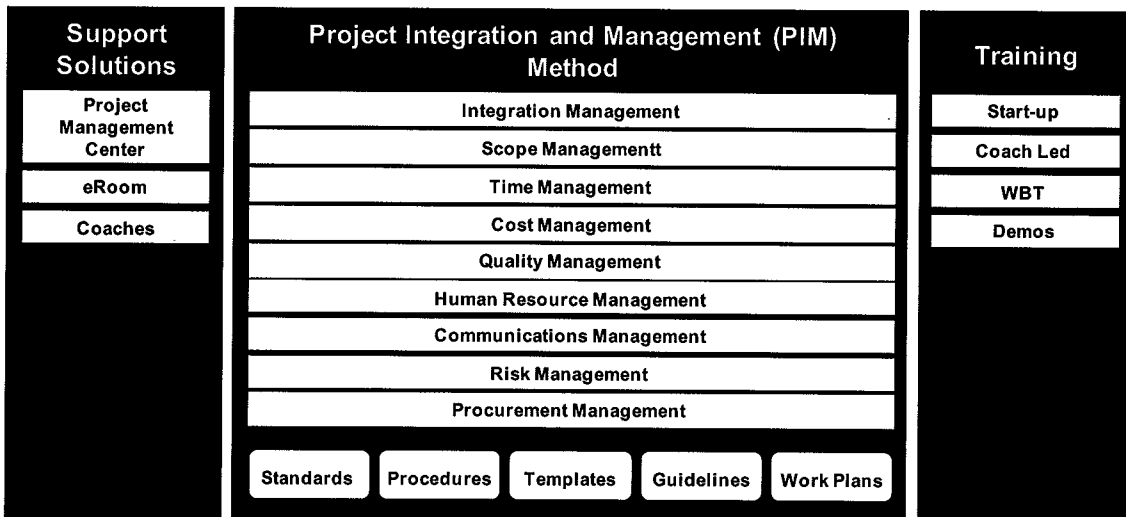
We realize the West Virginia Statewide Broadband Infrastructure Project effort includes a large number of stakeholders including the Governor's Executive Office, WV Department of Commerce, Broadband Deployment Council, the infrastructure design and deployment vendors, NTIA, etc. – and those community organizations and public facilities throughout the State which have a stake in using the broadband infrastructure such as WV DHHR, education, libraries among many others. We believe that Deloitte's program and project management experience in managing very large public initiatives provides us an edge over the competition in this bid.

Project Management as a Discipline at Deloitte

To meet the needs of this engagement, Deloitte Team will deploy its well-developed, proven, thorough and firm-wide approach to Project Management. The Project Management approach establishes solid processes, a common and consistent set of tools, and if needed, an established training program. The approach is broken down into three pieces as follows:

- The Method
- The Support Solutions
- Training

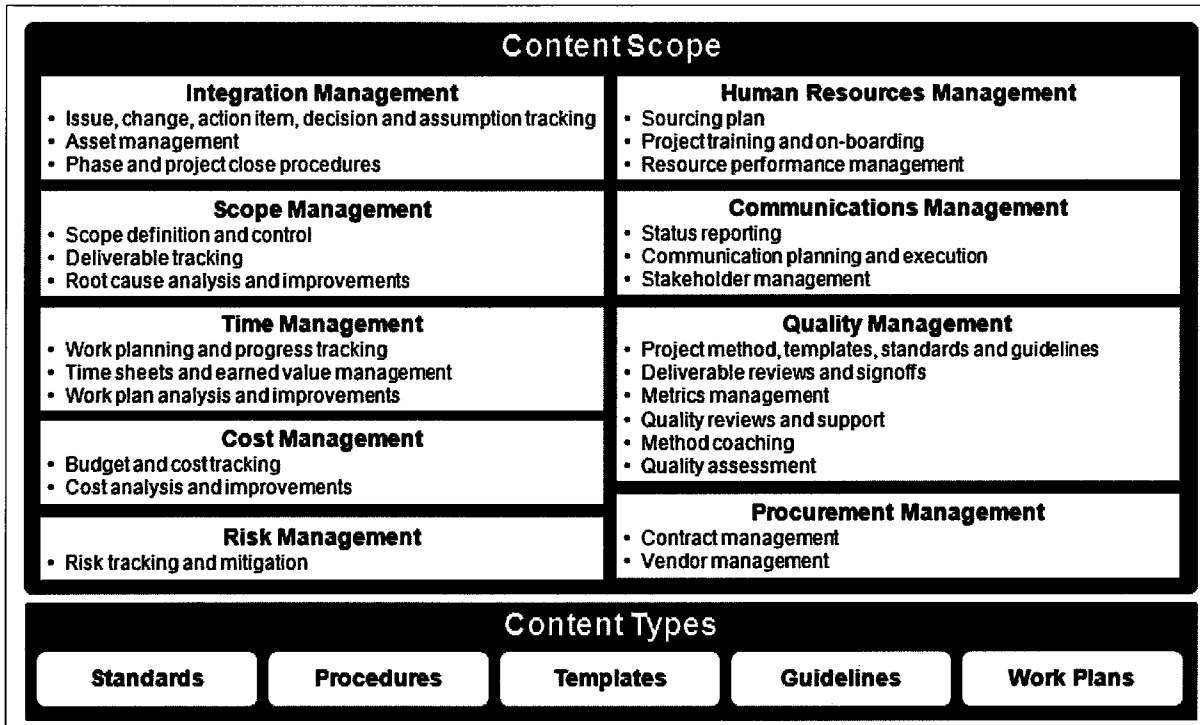
A summary of the three pieces to Deloitte's Project Management approach is detailed in the following figure.



The Method – Project and Integration Management (PIM)

The Project Management Plan developed for the West Virginia Statewide Broadband Infrastructure Project will be one output of the application of Deloitte’s Project and Integration Management Method. The method is the core practice of Deloitte’s Project Management approach. The method consists of a set of best practices, procedures and templates that provide a consistent and repeatable approach to Project Management across our client engagements. This method is called Project Integration and Management (PIM). PIM standardizes Deloitte’s approach to Project Management on all of our projects. PIM is a highly usable and flexible approach to managing projects of all types and sizes.

Project and Integration Management (PIM) is a method that simplifies Project Management tasks, and was developed to align with the Project Management Body of Knowledge (PMBOK®). It can be integrated into existing methods that West Virginia Department of Commerce may have developed and deployed in its other engagements, to address Project Management issues or used as a stand-alone solution. The outlined scope is very comprehensive and is meant to encompass a variety of different program level initiatives; Deloitte will leverage this methodology to its fullest to meet the mission critical needs of this West Virginia Statewide Broadband Infrastructure engagement. The PIM Method Scope is demonstrated in the following chart.



PIM Pathways

Deloitte Team will use the PIM Method which is also organized by PIM pathways. The PIM pathways cover the nine basic areas of Project Management: integration, scope, time, cost, quality, human resources, communication, risk and procurement. The PIM pathways align with PMBOK® Knowledge Areas and contain the processes and deliverables that need to be accomplished within the area in the following order:



- **Integration Management** - Developing the project charter, Project Management plan, issues, action items, decisions, changes, assets management, and closing phases and projects.
- **Scope Management** - Defining and baselining scope and deliverable tracking. Given the large number of stakeholders, it will be critical to manage the scope on this project and be focused on core objectives.
- **Time Management** - Developing, maintaining, and analyzing project work plans. It will also be critical to develop and then strictly adhere to meet reporting milestones and be compliant with the grant rules. For example under the guidance, grant recipients will be required to report on the use of Recovery Act funds no later than the 10th day after the end of each calendar quarter.
- **Cost Management** - Budgeting, tracking, and managing project costs
- **Quality Management** - Defining and managing project methods, templates, standards, and guidelines; defining and managing deliverable reviews, signoffs, and project metrics; planning and managing quality reviews, method coaching, specialist support, and quality assessments. These deliverables will help perform the engineering validation task effectively and consistently.
- **Human Resource Management** - Onboarding, developing, and training project team members.
- **Communication Management** - Planning and executing project communications, and managing project stakeholders. It is a key principle in Deloitte's project management approach to maintain the appropriate level communication with the right content at the right time with the key stakeholders as identified by State of West Virginia on this program.
- **Risk Management** - Planning, tracking, analyzing, and mitigating project risks.
- **Procurement Management** - Managing client and vendor contracts. We hold our sub-contractors to the same level of expectations as we hold our employees and we will deploy the best practices in sub-contractor management to ensure the Deloitte delivers to our promise.

Key Planning Phase Deliverables

Deloitte Team will heavily leverage its PIM methodology based upon the proven principles dictated by PMBOK in creating its key project management plans. In light of the requirements presented in the EOI for West Virginia Statewide Broadband Infrastructure Project effort, and our understanding of its success not only to State of West Virginia but to the public in general as well, here are some of the key plans this team will develop and present to client leadership in the early stages of the engagement.

- **Communications Plan:** The communications plan will be developed to ensure that all the client identified stakeholders are well informed of the initiative progress, issues and risks at appropriate times during the project life cycle. Our Communication Plan will include this as well as processes to be followed for approaching different levels of issues, risks and other performance related matters. Deloitte Team will deploy the necessary procedures and controls within the engagement team to ensure the information flow occurs timely in a transparent manner.
- **Risk Management Plan:** The Deloitte Team understands the complexity of the engagement and the compliance requirements of the Recovery Act as well as the BTOP's Administrative and Financial reporting requirements. Variations give rise to unknowns and hence the risk. Deloitte Team will leverage its program management as well as its core Audit & Enterprise Risk Services

experience from engagements that included working with large number of public entities to build a risk management plan. It will attempt to acknowledge the foreseeable risks as well as how the team will deal with any new risks during the project life cycle.

- **Quality Management:** The key component of West Virginia Statewide Broadband Infrastructure Project effort is engineering validation. To meet this requirement, Deloitte Team will build a robust Quality Management plan based on the grant requirements as well as the connectivity standards developed by NRAO that will dictate how the validations will be performed prior to, during and after installation.

PIM Benefits

There are many benefits that can be realized when using Deloitte’s PIM Method on the West Virginia Statewide Broadband Infrastructure Project engagement. One of the key benefits is scalability. The following figure shows how PIM can be customized for large complex projects such as this effort that includes designing and deploying mission critical broadband infrastructure across the state.

	Level 1	Level 2	Level 3
Integration Management	• Issue and change tracking	• Action item and decision tracking • Asset management • Phase and project close process	• Assumption tracking
Scope Management	• Scope definition and control • Deliverables tracking		• Root cause analysis and improvement
Time Management	• Work planning and progress tracking	• Time sheet tracking • Effort based EV management	• Work plan analysis and improvements
Cost Management	• Cost budgeting and tracking		• Cost analysis and improvements
Human Resource Management		• Sourcing plan • Project training and on-boarding	• Resource performance management
Communications Management	• Status reporting	• Communication planning and execution • Stakeholder management	
Risk Management		• Risk tracking	• Risk mitigation
Procurement Management	• Contract management		
Quality Management	• Project templates • Deliverables review and sign off	• Project method and standards • Metrics management • Quality reviews	• Method coaching • Quality assessments and support

Other highlights and benefits of the PIM Method include:

- **Industry Standard** - Framework based on PMBOK®
- **Scalable** - Fits any project or program regardless of size or scope and accommodates each project’s unique requirements
- **Rich in Information** – The PIM Method houses extensive process details, broken down by modules and tasks associated with each PIM Thread and PIM Pathway
- **Rapid Set-up Available** – Deloitte’s Project Management Center (PMC) facilitates the rapid set-up and deployment of projects according to the PIM Method
- **Based on experience** - Incorporates the best practices, experience and knowledge of the Deloitte team, allowing for repeatability and standardization across projects
- **Effective Collaboration** - Enables the Deloitte team to collaborate and manage projects more effectively and efficiently, identify and mitigate risks quickly and improve reporting

The Support Solutions

The Support Solution provides the tools and support that make Deloitte's approach usable. It provides Deloitte practitioners with easy access to proven solutions that support the method. It includes the Project Management Center (PMC), Knowledge Management and Project Accelerators, eRooms and coaches.

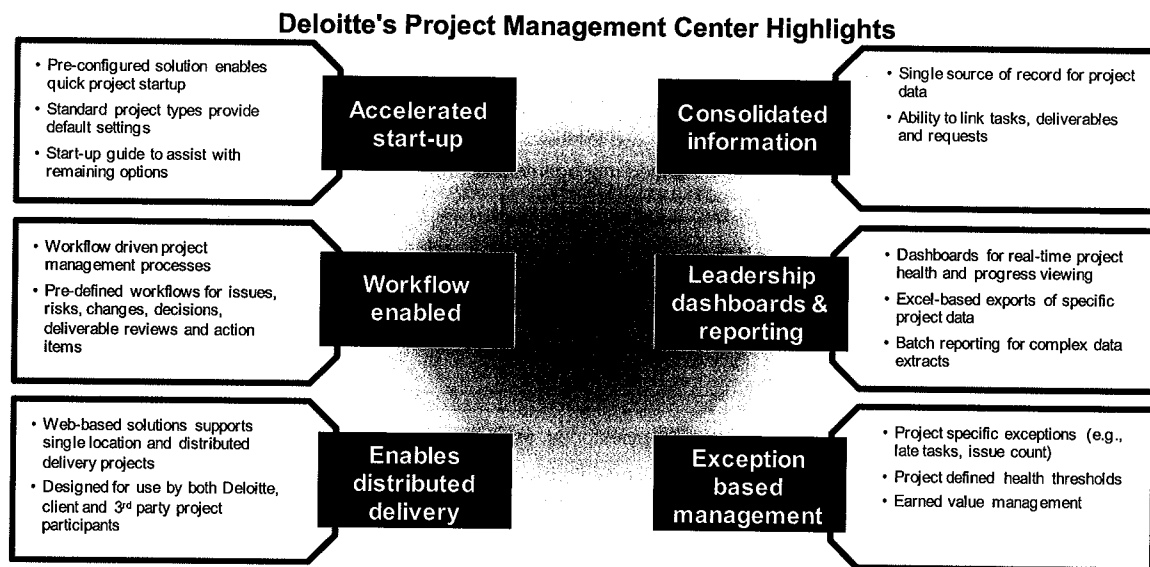
Deloitte's Project Management Center facilitates the rapid setup and deployment of Deloitte-defined Project Management standards and procedures to meet the stringent needs set up by State of West Virginia for this initiative.

Knowledge Management and Accelerators provide how-to guidebooks to best in class sample deliverables across the spectrum of Project Management topics. This provides Deloitte teams with the tools needed to establish and manage projects in a repeatable way. These will prove to be extremely beneficial to this program with a wide number of stakeholders, audience and mission critical nature.

Coaches provide Deloitte teams with a community of recognized Project Management experts from the practice who are there to work through Project Management questions, and are available to share experiences and best practices learned from past public and private initiatives.

The Project Management Center (PMC)

Built on HP's PPM software and hosted by Deloitte, Deloitte's Project Management Center (PMC) provides a centralized platform to manage all phases of a project: delivering preconfigured dashboards for project startup, predefining workflows, ensuring easy accessibility and information-sharing among all parties, and producing real-time reports. The timeline presented in the EOI and the schedule for deliverables clearly indicates the criticalness as well urgency for the bidder to be up and running as soon as the contract is awarded. Our Project Management Center provides ability for an accelerated start up, pre-configured workflows to manage the work efficiently and leadership dashboards to report progress in real time.



Key Features of PMC

The following table provides a snapshot of some of the key features of Deloitte's Project Management Center:

PMC Key Feature	Description
Issue Management	<ul style="list-style-type: none"> • Workflow enabled issues management • Issues can be classified by various classifications (e.g. type, priority, team, escalation level) • Issue Manager Dashboard for status reporting
Risk Management	<ul style="list-style-type: none"> • Workflow enabled risk management • Risks can be classified by various classifications (e.g. type, priority, probability, impact, team) • Risk Manager Dashboard for status reporting
Action Item	<ul style="list-style-type: none"> • Workflow enabled tracking and history of action items
Deliverable Review Management	<ul style="list-style-type: none"> • Workflow enabled review and tracking of deliverable review defects • Meets CMMI requirements
Key Decision Management	<ul style="list-style-type: none"> • Workflow enabled management of project decisions • Supports CMMI Decision Analysis and Resolution (DAR) process
Change Control	<ul style="list-style-type: none"> • Workflow enabled change control • Change requests history can be viewed to gain a sense of how project scope has changed over time
Work Plan Management	<ul style="list-style-type: none"> • Integration and visibility of MS Project work plans with ability to synchronize schedule and actual with MS Project • Actual effort capturing and tracking of project activities (via task or detailed time sheet) • Exception-based management (e.g. tasks not started or late)
Progress Tracking	<ul style="list-style-type: none"> • Resource based views of assigned tasks • Flexibility to support various tracking requirements (% Complete, Actual Effort or Time Sheets) • Ability to track Estimated Remaining Effort (ETC) and Estimated Finish Date
Performance Reporting	<ul style="list-style-type: none"> • Project health metrics and dashboards • Earned value analysis tools • Project control dashboards • Exception- based management of project performance and health
Resource Management	<ul style="list-style-type: none"> • Resource based work calendars • Resource dashboard showing capacity, load, and assignments • Manage resource capacity, by groups and provides a breakdown to individual resources • View the scheduled and actual effort by resource by period down to the assigned Task level
Overall Project Dashboard	<ul style="list-style-type: none"> • Project status, milestones, are available from one centralized dashboard • Keeps stakeholders informed and projects on track • Overall project health "at-a-glance" with "drill-down" to specific problem areas
Content Management	<ul style="list-style-type: none"> • Deloitte Online (based on EMCV eRooms) provides shared, secure workspaces on the web for distributed project teams to do their work • Preconfigured structure and layout to support PMC projects • Project deliverables, plans, and key content in Deloitte Online is seamlessly integrated to PMC
Workflow Enabled Requests	<ul style="list-style-type: none"> • Issues, risk, and change requests • Action items, key decisions, deliverable review tracking

PMC Key Feature	Description
Other	<ul style="list-style-type: none"> • Internet-accessible (by Deloitte practitioners and clients) • Support of varying project types, sizes, and control needs • Support of custom (client) specific methods

PMC Benefits to West Virginia

There are many benefits that the West Virginia Statewide Broadband Infrastructure Project engagement will derive by using Deloitte's PMC. Some of the highlights and benefits of the PMC are outlined as follows:

- Reduces the time to initiate this engagement – from date of award to kick-off to providing deliverables
- Centralizes project information and enables distributed delivery with Web-based user portals, making it extremely useful for managing a wide number of stakeholders and audience.
- Provides management and team level dashboards and reporting with minimal development effort
- Enables concurrent project data access and maintenance
- Facilitates the standardization of Project Management processes across the engagement team via workflows
- Deloitte's Approach to Subcontractor Management