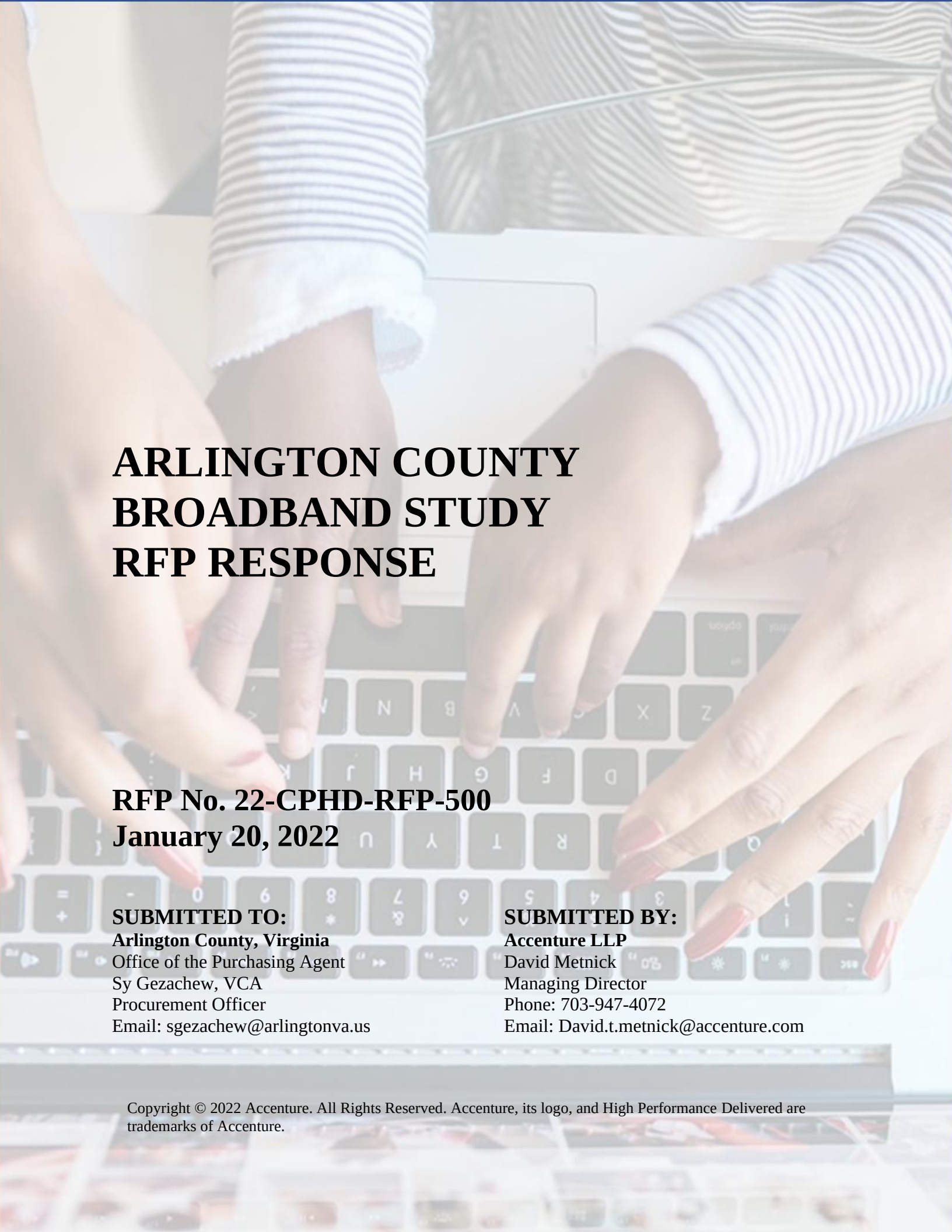

ARLINGTON COUNTY BROADBAND STUDY RFP RESPONSE

RFP No. 22-CPHD-RFP-500
January 20, 2022

SUBMITTED TO:
Arlington County, Virginia
Office of the Purchasing Agent
Sy Gezachew, VCA
Procurement Officer
Email: sgezachew@arlingtonva.us

SUBMITTED BY:
Accenture LLP
David Metnick
Managing Director
Phone: 703-947-4072
Email: David.t.metnick@accenture.com

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1. EXECUTED PROPOSAL FORMS

ARLINGTON COUNTY, VIRGINIA
REQUEST FOR PROPOSALS NO. 22-CPHD-RFP-500

PROPOSAL FORM

ELECTRONIC PROPOSALS WILL BE RECEIVED BY THE COUNTY VIA VENDOR REGISTRY NOT LATER THAN 3:00 P.M., JANUARY 20, 2022.

FOR PROVIDING BROADBAND STUDY PER THE SOLICITATION.

THE FULL LEGAL NAME OF THE ENTITY SUBMITTING THIS PROPOSAL MUST BE WRITTEN IN THE SPACE BELOW. THIS PROPOSAL FORM AND ALL OTHER DOCUMENTS THAT REQUIRE A SIGNATURE MUST BE FULLY AND ACCURATELY COMPLETED AND SIGNED BY A PERSON WHO IS AUTHORIZED TO BIND THE OFFEROR, OR THE PROPOSAL MAY BE REJECTED.

SUBMITTED BY: *(legal name of entity)* **Accenture LLP**

AUTHORIZED SIGNATURE: David T Metnick

PRINT NAME AND TITLE: **David T.Metnick, Managing Director**

ADDRESS: **800 North Glebe Rd**

CITY/STATE/ZIP: **Arlington, VA 22203**

TELEPHONE NO.: **703-947-4072** **E-MAIL ADDRESS:** **david.t.metnick@accenture.com**

THIS ENTITY IS INCORPORATED IN: **January 1, 1989**

THIS ENTITY IS A: *(check the applicable option)*

CORPORATION ☐ LIMITED PARTNERSHIP ✠
GENERAL PARTNERSHIP ☐ UNINCORPORATED ASSOCIATION ☐
LIMITED LIABILITY COMPANY ☐ SOLE PROPRIETORSHIP ☐

IS OFFEROR AUTHORIZED TO TRANSACT BUSINESS IN THE COMMONWEALTH OF VIRGINIA? YES ✠ NO ☐

IDENTIFICATION NO. ISSUED TO THE ENTITY BY THE SCC: **K000334-5**

Any Offeror exempt from Virginia State Corporation Commission (SCC) authorization requirement must include a statement with its proposal explaining why it is not required to be so authorized.

PROPOSAL FORM, PAGE 2 OF 5

ENTITY'S DUN & BRADSTREET D-U-N-S NUMBER: *(if available)*

HAS YOUR FIRM OR ANY OF ITS PRINCIPALS BEEN DEBARRED FROM SUBMITTING PROPOSALS TO ARLINGTON COUNTY, VIRGINIA, OR ANY OTHER STATE OR POLITICAL SUBDIVISION WITHIN THE PAST THREE YEARS? YES ❑ NO ✠

OFFEROR STATUS: MINORITY OWNED: ❑ WOMAN OWNED: ❑ NEITHER: ✠

THE UNDERSIGNED UNDERSTANDS AND ACKNOWLEDGES THE FOLLOWING:

THE OFFICIAL COPY OF THE SOLICITATION DOCUMENTS, WHICH INCLUDES ANY ADDENDA, IS THE ELECTRONIC COPY THAT IS AVAILABLE FROM THE VENDOR REGISTRY WEBSITE AT: HTTPS://VRAPP.VENDORREGISTRY.COM/BIDS/VIEW/BIDSLIST?BUYERID=A596C7C4-0123-4202-BF15-3583300EE088.

POTENTIAL OFFERORS ARE RESPONSIBLE FOR DETERMINING THE ACCURACY AND COMPLETENESS OF ALL SOLICITATION DOCUMENTS THEY RECEIVE FROM ANY SOURCE, INCLUDING THE COUNTY.

1. OFFEROR MUST SUBMIT: ONE ELECTRONIC COMPLETE SIGNED PROPOSAL THAT INCLUDES AS ITS FIRST PAGE THIS PROPOSAL FORM.

2. INDICATE THE NAME AND CONTACT INFORMATION OF THE PERSON WHO CAN RESPOND AUTHORITATIVELY TO QUESTIONS REGARDING THIS PROPOSAL.

NAME (PRINTED): David T. Metnick TITLE: Managing Director

E-MAIL ADDRESS: david.t.metnick@accenture.com TEL. NO.: 703-947-4072

TRADE SECRETS OR PROPRIETARY INFORMATION:
Trade secrets or proprietary information submitted by an Offeror in connection with a procurement transaction will not be subject to public disclosure under the Virginia Freedom of Information Act. Pursuant to Section 4-111 of the Arlington County Purchasing Resolution, however, an Offeror seeking to protect submitted data or materials from disclosure must, before or upon submission of the data or materials, identify the data or materials to be protected and state the reasons why protection is necessary.

Please mark one:

- No, the proposal that I have submitted does not contain any trade secrets and/or proprietary information.

❑ Yes, the proposal that I have submitted does contain trade secrets and/or proprietary information.

PROPOSAL FORM, PAGE 3 OF 5

If Yes, you must clearly identify below the exact data or materials to be protected and list all applicable page numbers, sections, and paragraphs, of the proposal that contain such data or materials:

_____

_____

_____

_____

State the specific reason(s) why protection is necessary and why the identified information constitutes a trade secret or is proprietary:

_____

_____

_____

_____

If you fail above to identify the data or materials to be protected or to state the reason(s) why protection is necessary, you will not have invoked the protection of Section 4-111 of the Purchasing Resolution. Accordingly, upon the award of a contract, the proposal will be open for public inspection consistent with applicable law.

CERTIFICATION OF NON-COLLUSION: The undersigned certifies that this proposal is not the result of or affected by (1) any act of collusion with another person engaged in the same line of business or commerce (as defined in Virginia Code §§ 59.1-68.6 *et seq.*) or (2) any act of fraud punishable under the Virginia Governmental Frauds Act (Virginia Code §§ 18.2-498.1 *et seq.*).

CONTACT PERSON AND MAILING ADDRESS FOR DELIVERY OF NOTICES
Provide the name and address of the person who is designated to receive notices and other communications regarding this solicitation. Refer to the "Notices" section in the draft Contract Terms and Conditions for information regarding delivery of notices.

NAME: David T.Metnick

ADDRESS: 800 N Glebe Rd, Arlington,

VA 22203

E-MAIL: david.t.metnick@accenture.com

OFFEROR'S PRINTED NAME: Accenture LLP

PROPOSAL FORM, PAGE 4 OF 5

ACKNOWLEDGEMENT OF COUNTY COVID-19 VACCINATION POLICY

I, _David T.Metnick_(hereinafter referred to as "Offeror"), certify that I will comply with the COVID-19 Vaccination Policy as a condition of contract award which requires that all contractor employees or subcontractors who will be working on the contract are fully vaccinated against COVID-19, being tested on a weekly basis, or are exempt pursuant to a valid reasonable accommodation under state or federal law.

Signed: _____ **Date:** 1/19/2022

Name of Offeror: **Accenture LLP**

PROPOSAL FORM, PAGE 5 OF 5

CONFLICT OF INTEREST STATEMENT

I, whose name is subscribed below, a duly authorized representative and agent of the entity submitting this proposal to Arlington County in response to its Request for Proposal No. 22-CPHD-RFP-500, and on behalf of the Offeror certify that:

1. Neither the Offeror nor any affiliated entity has, within the past five years, been employed by or represented a deliverer of services that reasonably could be expected to be considered for purchase by the County as a result of this solicitation.

2. if the Offeror is awarded a contract under this solicitation and during the term of that contract prepares an invitation to bid or request for proposal for or on behalf of the County, the Offeror must not (i) submit a bid or proposal for that procurement or any portion thereof or (ii) disclose to any potential bidder or offeror information concerning the procurement that is not available to the public.

3. The Offeror will not solicit or accept any commissions or fees from vendors who ultimately furnish services to the County as a result of any contract award made as a result of this solicitation.

OFFEROR'S NAME: Accenture LLP

SIGNED BY: [signature]

PRINTED NAME/TITLE: David T. Metnick, Managing Director

DATE: 1/18/2022

NOTARY STATEMENT

COMMONWEALTH OF VIRGINIA/STATE OF Virginia)

CITY/COUNTY OF Arlington) to wit:

David T. Metnick personally appeared before me this 18 day of January, 2022 the undersigned a Notary Public in and for the State and County of aforesaid, William Patrick Pan Yenchong known to me (or satisfactorily proven) to be the person whose name is subscribed to within the instrument as an agent of the Offeror and acknowledged that he/she has executed the same for the purposes therein contained.

[signature]

(Seal)

William Patrick Pan Yenchong
NOTARY PUBLIC
REG. #7826725
MY COMMISSION EXPIRES
12/31/2023
COMMONWEALTH OF VIRGINIA

Notary registration number: 7826725

My commission expires: 12/31/2023

2. ACKNOWLEDGEMENT OF MANDATORY REQUIREMENTS

Accenture acknowledges and hereby states that will comply with all Mandatory Requirements as stated in Section 7.2.

3. COVER LETTER

Dear Mr. Gezachew:

On behalf of Accenture, I am pleased to submit our response to Arlington County's Request for Proposals No. 22-CPHD-RFP-500 for a Broadband Study. We applaud Arlington County's leadership in closing the digital divide, and we are excited about the opportunity to partner with the County to achieve your digital equity goals. We understand the critical importance of this effort to plan for broadband access for all as federal funding is aligned to prioritized strategies. This letter includes our company information (see **Table 1.**), a summary of why Accenture is uniquely qualified for this work, and a summary of our approach.

Company Name	Accenture LLP
Company Address	800 North Glebe Road, Suite 700 Arlington, VA 22203
Company Website	www.accenture.com
Contact Person	David Metnick David.t.metnick@accenture.com Office: (703) 947-4072

Table 1. Accenture's Company and Contact Information

Our response and approach are based on key factors we believe Arlington County requires in an effective partner for this engagement:

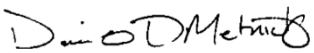
- **Accenture has deep knowledge of network strategy and operations in both the private and public arenas, and we have demonstrated experience working with clients to expand connectivity in the Northern Virginia area.** We have helped design, build, and operate wireless and wireline networks, relying on our deep data analytics to provide focused and targeted results. We have a dedicated team that supports the communications industry and has been at the forefront of broadband and 5G strategy. Accenture has been working with communication service providers (CSP's) like Verizon and Comcast to develop their next generation strategy and business models for broadband cable, Fiber-To-The-Home (FTTH), Fixed Wireless Access (FWA), as well as 5G and the expansion of broadband to their customers. Our communications professionals are already familiar with Arlington County's underlying infrastructure through our work with a large DC-based REIT, helping them develop their technology strategy for their journey to transform the Crystal City/Potomac Yards area into a "smart city".
- **Accenture is deeply committed to a connected Arlington County and its social and economic success.** Accenture has a longstanding commitment to Arlington County and the greater metro DC area– evidenced through our three flagship office locations in the County, over 10,000 jobs in the area, and organizations supported through both our work and volunteer efforts. We have supported organizations like Arlington Free Clinic and Bridges to Independence through volunteer or financial resources. **In fiscal year 2021, Accenture won the corporate Arlington Cares award through Volunteer Arlington.** We are familiar with the unique considerations and factors facing local governments in the DC, Maryland, and Virginia (DMV) area – for example, we have recently worked with Fairfax County, the District of Columbia, Leadership Fairfax, Anne Arundel County, the City of Baltimore, the City of Richmond, Connected DMV, and DC Public Schools, as well as the state of Virginia and Maryland as well as major nonprofit and higher education clients.
- **Accenture has experience working with other public sector entities on their digital equity goals.** Accenture has a longstanding and proud history of being recognized as a leader in Diversity, Equity, and Inclusion (DE&I). Accenture is committed to equity and inclusion, and this commitment carries through to work with our clients. Specifically, we collaborate with our clients to design and implement strategies that help clients achieve diversity goals that are of increasing importance to their organizational success. Digital access and literacy are more important than ever before for education, work, and full participation and contribution to the economy, and we recognize that digital inequality often falls along socio-economic lines. We have worked with several clients locally, including Fairfax County, to incorporate an equity and inclusion lens into strategic initiatives. We also worked with DC Public Schools during the pandemic to bridge the digital divide and enable remote learning for their student population.

- **Accenture is the right partner to help you continue the momentum and capitalize on federal funding opportunities to achieve broadband access for all.** Recent federal legislation – the American Rescue Plan Act (ARPA) and the Infrastructure Investment and Jobs Act (IIJA) – present a generational opportunity to local governments to invest in broadband. Accenture has worked with 14 state and local governments (representing over 45% of the US population) to manage the influx of these federal dollars and help these jurisdictions determine how to realize the greatest impact for these funds. This work is powered by our State and Local Government Center of Excellence, which is comprised of former government leaders and program experts in policy, operations, regulations, and administration. Using this resource, our team can help identify financing options for the strategic recommendations presented to Arlington County. Moreover, we can leverage our broader team to inform the County on what other state and local governments are doing with regard to broadband investments and strategies in alignment with ARPA and IIJA.

Accenture has developed a client-tested approach, focused on analytics and data-driven decision making, to execute the three requested elements of Arlington County's broadband study**. This approach was designed with the goal of achieving Arlington's digital equity vision and the mindset of making Arlington County the most equitably connected county in the country.** Element 1 focuses on data collection and the Accenture team will leverage numerous public and private data and research sources. We have also designed an approach to gather additional information from Arlington's unserved and underserved populations to better inform conclusions regarding barriers to access. Our model evaluation (Element 2) and strategy development (Element 3) approaches focus on placing typical internet delivery models into the right context for Arlington so the County can make an informed decision on how to move forward. Throughout all of these elements, the Accenture team will leverage our Accenture Insights Platform and Network Decision Platform to visualize gaps in service and potential costs and benefits of various models. Importantly, these platforms consider more than just internet access, they will allow you to focus on the true public benefits of access – such as better education and participation in the economy.

We believe Accenture is the best partner for Arlington to conduct this broadband study, but more importantly we realize this is only the next step in Arlington's journey. With our broad team of telecommunications professionals combined with our public service experience, we are the right team to help you go from strategy to reality. Thank you for the opportunity to provide our response for this important project. Please feel free to contact me with any questions at (703) 947-4072 or via email at david.t.metnick@accenture.com.

Sincerely,



David Metnick
Managing Director, Commonwealth of Virginia Account Lead

4. PROJECT APPROACH

4.1 Our Understanding

Arlington County's leadership position in driving towards a digital ecosystem and connectivity is evident through its well-documented digital strategy. In addition, the County is committed to its digital equity principles of connectivity, access, education and training, and program sustainability and community capacity. Despite previous efforts of the County to improve broadband connectivity and presence of several service providers, 8 percent of households still lack an internet connection at home or on their mobile device, 6 percent rely on a cellular service, and 16 percent of households do not have a fixed broadband connection. The onset of the COVID-19 pandemic has further illuminated the need for bridging this digital gap which has impacted students, households, and businesses and has hindered delivery of effective public services and full participation in the digital-based economy.

The County has conducted several studies and various initiatives over the past several years aimed at closing the digital divide. Many of these studies have covered separate, disparate topic areas within the scope of broadband connectivity; this broadband study will build on these previous work efforts to provide the County with a holistic view of its broadband service across its numerous communities. The strategies provided at the conclusion of the study will provide the County with a path forward at an opportune time for the County to take advantage of federal funding opportunities to build out broadband infrastructure, particularly for disadvantaged communities.

We have designed an approach with the **goal of achieving Arlington's digital equity vision and the mindset of making Arlington County the most equitably connected county in the country**. Our approach relies on Accenture's unique combination of strengths.

- **Accenture has deep knowledge of network strategy and operations in both the private and public arenas, and we have demonstrated experience working with clients to expand connectivity in the Northern Virginia area.** We have helped design, build, and operate wireless and wireline networks, relying on our deep data analytics to provide focused and targeted results. We have a dedicated team that supports the communications industry and has been at the forefront of broadband and 5G strategy. Accenture has been working with communication service providers (CSP's) like Verizon and Comcast to develop their next generation strategy and business models for broadband cable, Fiber-To-The-Home (FTTH), Fixed Wireless Access (FWA), as well as 5G and the expansion of broadband to their customers. Our communications professionals are already familiar with Arlington County's underlying infrastructure through our work with a large DC-based REIT, helping them develop their technology strategy for their journey to transform the Crystal City/Potomac Yards area into a "smart city".
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- **Accenture is the right partner to help you continue the momentum and capitalize on federal funding opportunities to achieve broadband access for all.** Recent federal legislation – the American Rescue Plan Act (ARPA) and the Infrastructure Investment and Jobs Act (IIJA) – present a generational opportunity to local governments to invest in broadband. Accenture has worked with 14 state and local governments (representing over 45% of the US population) to manage the influx of these federal dollars and help these jurisdictions determine how to realize the greatest impact for these funds. This work is powered by our State and Local Government Center of Excellence, which is comprised of former government leaders and program experts in policy, operations, regulations, and administration. Using this resource, our team can help identify financing options for the strategic recommendations presented to Arlington County. Moreover, we can leverage our broader team to inform the County on what other state and local governments are doing with regard to broadband investments and strategies in alignment with ARPA and IIJA.

We are confident that our approach will help enable Arlington County to reach its vision of all residents having "affordable, reliable access to high-speed broadband internet and the necessary devices and technology skills to fully participate in the community and economy." We bring a breadth of experience not only to give the County a holistic view of its connectivity needs but also the depth to design strategies that can be implemented to realize successful outcomes.

4.2 Proposed Scope and Methodology

We developed our proposed scope and methodology based on our broadband experience in the private sector and our digital equity experience in the public sector. Our approach leverages Accenture's pre-developed tools to help Arlington County better understand where to focus its efforts to make the County's digital equity vision a reality. **Figure 10** in Project Schedule gives an overview of the different tasks involved in each element.

4.2.1 Element 1. Resource Evaluation and Needs Assessment

Our shared goal for the Resource Evaluation and Needs Assessment will be to give the County a comprehensive picture of access in the County with a particular focus on the unserved and underserved populations. Our approach for this initial element underscores how the Resource Evaluation and Needs Assessment is the foundation for the rest of the broadband study (see **Figure 1** for an overview of our analysis components). The four key steps we will take for this element include collecting data, analyzing that data, evaluating current resources, and identifying remaining needs. These steps will also consider Arlington's four digital equity principles of connectivity, access, education and training, and program sustainability and community capacity. We will gather data to evaluate how well the County is doing in each of these areas to better inform strategies to reach Arlington's digital equity goals.

We are also proposing an optional survey to gather primary data / local input from unserved/underserved populations should the existing data sources from the County and Accenture not prove sufficient to draw meaningful conclusions in the area of digital equity. Additionally, as Arlington County referenced in Addendum No. 1, we anticipate that conversations with local non-profit housing developers and the other stakeholders referenced will be useful. We do not anticipate community site visits will be required at this time.

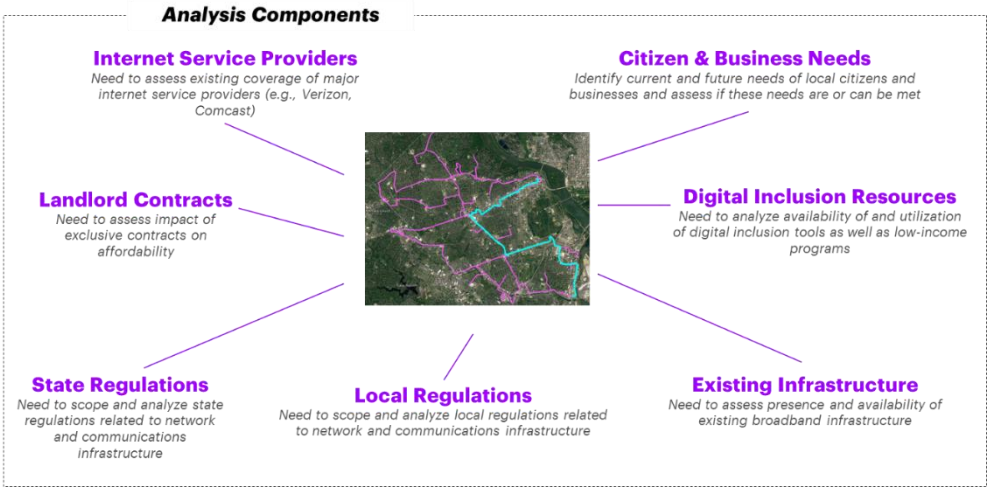


Figure 1. Components of the Resource Evaluation and Needs Assessment

Data Collection

We will examine and consolidate available studies and data on broadband access and public outcomes from existing public sources (e.g., FCC, U.S. Census, Ookla, etc.), County data sources as noted in Addendum No. 1, and Accenture data and research resources (see **Figure 2**). We will determine, in conjunction with the County, if these data sources will be sufficient to evaluate current resources and assess the County's broadbands and digital needs. Specifically, we will expect our combined data to inform the following questions:

Advantage Accenture
Accenture owns datasets like UMLAUT and invests periodically in research like Telecom/data growth trend to provide relevant and sustainable recommendations.

- Where are the pockets of unserved/underserved households, social/public institutions, and businesses?
- What is current state of broadband in unserved/underserved areas and elsewhere in Arlington?
- What are the barriers to connectivity besides access (e.g., cost, technology literacy)?
- What skills and training are required for businesses and citizens to be successful on the internet?
- How do current federal, state, and local policies influence broadband access in Arlington?

We will map these public and County data resources to the above questions, including the research questions highlighted in the Statement of Work (SOW) under Element 1. Based on that mapping, Accenture will customize a data collection methodology to fill in the gaps and gather data to answer the remaining questions.

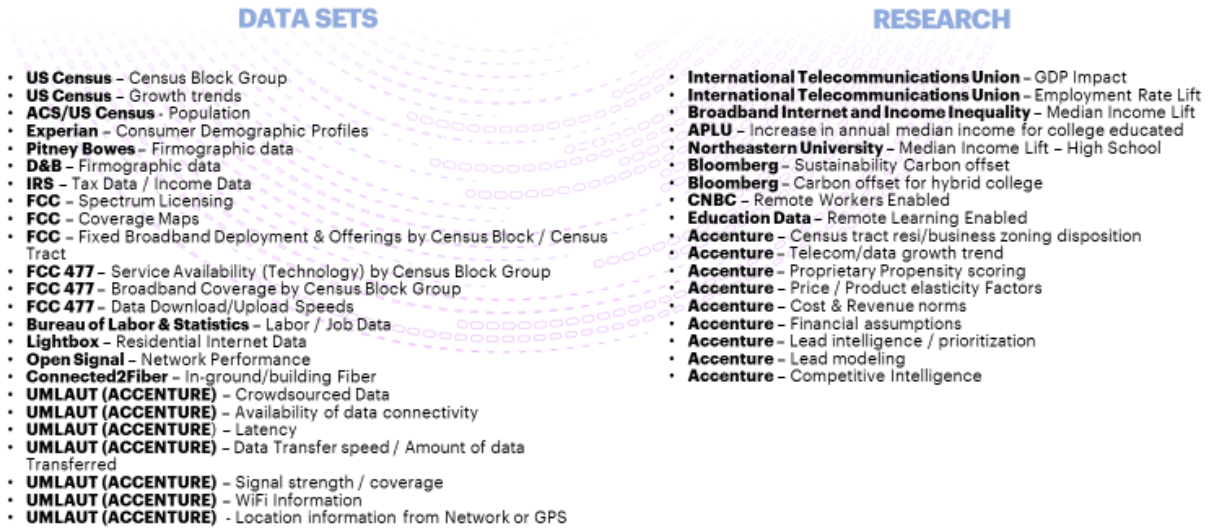


Figure 2. Typical Data Sets and Research Sources used by Accenture in a Broadband Needs Assessment

For example, we anticipate that the County may be interested in gathering additional data on its unserved/underserved population to help inform its needs and ultimately the strategies to be proposed in a later stage. Although the RFP notes that a community survey should be of a representative sample of Arlington's population, we are proposing a survey that would be representative specifically of Arlington's unserved/underserved population. Given that the majority of County residents may be considered adequately connected, we propose that a targeted survey would prove more useful to informing solutions to achieve the County's digital equity vision. Specifically, we will use existing data to identify "dark areas" within the county and design a phone survey to understand reasons currently preventing the unserved/underserved populations from adequate internet access and gather data on what solutions test well with this population**. Figure 3** describes our approach to data collection at a high-level. Accenture is proposing this survey as optional, and we would first want to assess the data available to determine if a survey is necessary to inform the resource evaluation and needs assessment.

Figure 3. Data Collection Approach

Together with the County, we may also determine that a questionnaire of public institutions such as schools, libraries, and community centers may be another good source of information regarding residents without broadband access. Following our initial data analysis, we will work with you to determine the most efficient, effective way to gather more contextual information about the unserved/underserved population.

Analyze Data

As data is collected, the Accenture team will harmonize and map out the data to identify geographic service gaps and to quantify the size and impact of the opportunities to bridge those gaps. Two of our proprietary tools we use to accelerate data analysis are highlighted below – the Accenture Insights Platform (AIP) and the Network Decision Platform (NDP). Both platforms have Tableau interfaces; our team can also provide ArcGIS maps to correspond.

We developed and used the Accenture Insights Platform (AIP) to work with our state and local government clients to create data-driven insights and inform impactful policymaking regardless of zip code. AIP integrates client, third-party, and Accenture-provided data on a single platform with cloud-based ready-made dashboards to reduce the timeline between research and insights. The system is secure by design, using a high-trust FedRamp-compliant environment with ongoing security updates and support.

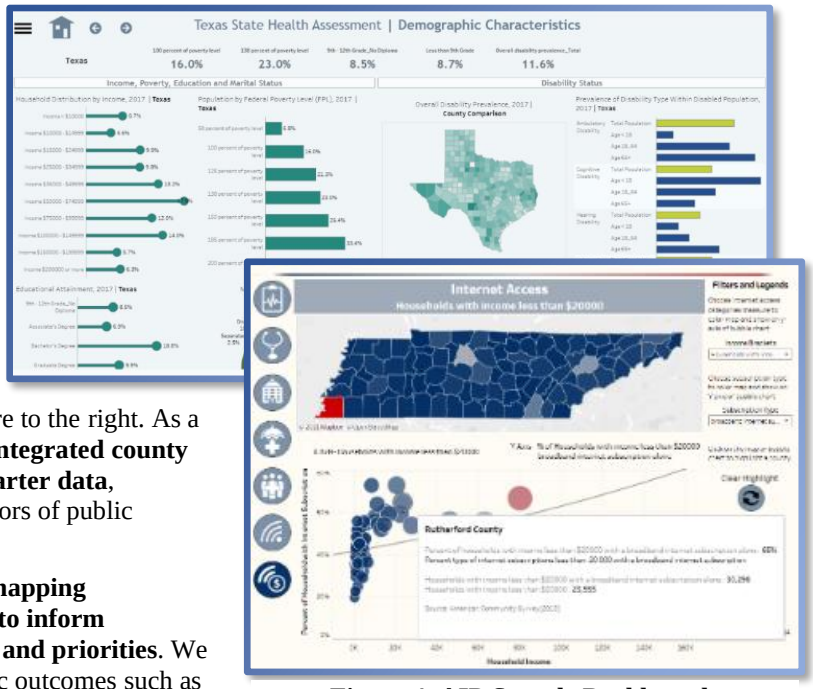


Figure 4. AIP Sample Dashboards

We can incorporate data from any source, including from County agencies and other County partners. This is demonstrated in work we did with the State of Tennessee, overlaying access to broadband by income as shown in the figure to the right. As a starting point, we bring **pre-loaded / pre-integrated county and Census Block Group (CBG) level starter data**, analysis, and dashboards, including indicators of public health, education, and economy.

As Arlington County already recognizes, **mapping broadband access alone is not sufficient to inform equitable and impactful policy decisions and priorities**. We must understand and overlay priority public outcomes such as health, education, and safety in context to broadband access. AIP helps us do just that—from informing recommendations to informing decisions about investment priority areas and measuring impact.

As a more technical companion to the AIP, Accenture has invested in a GIS-based network analysis tool called the Network Decision Platform (NDP). This platform captures and analyzes key network information with population demographic information, enabling a data-driven conversation about the impact of having (or not having) broadband access in Arlington County communities. The NDP has the ability to openly ingest APIs including ArcGIS shapefiles. Updating NDP with data about communities throughout Arlington, we will

document: (1) demographics of the various communities, (2) barriers specific to each community that prevent people from using technology, (3) any programs (municipal and/or nonprofit services) offered in each area that address barriers to technology, and (4) any other information that will be beneficial in evaluating the County's resources and assessing its needs. We will work with the County to determine the meaningful level of granularity at which to display this information.

NDP is a geospatial analysis tool which evaluates opportunities at the CBG level and can be aggregated at the county level. The NDP also estimates the impact of providing broadband access to unserved/underserved residents in terms of measurable success outcomes including economic impact (e.g., potential Gross Domestic Product increase), education impact (e.g., projected high school graduation rate increase), potential tax revenue increases, and other impacts. The team will use this tool to model the fastest and most cost-effective way to address unserved and underserved needs and the potential economic and educational impact. Sample dashboards resulting from the NDP are provided below.

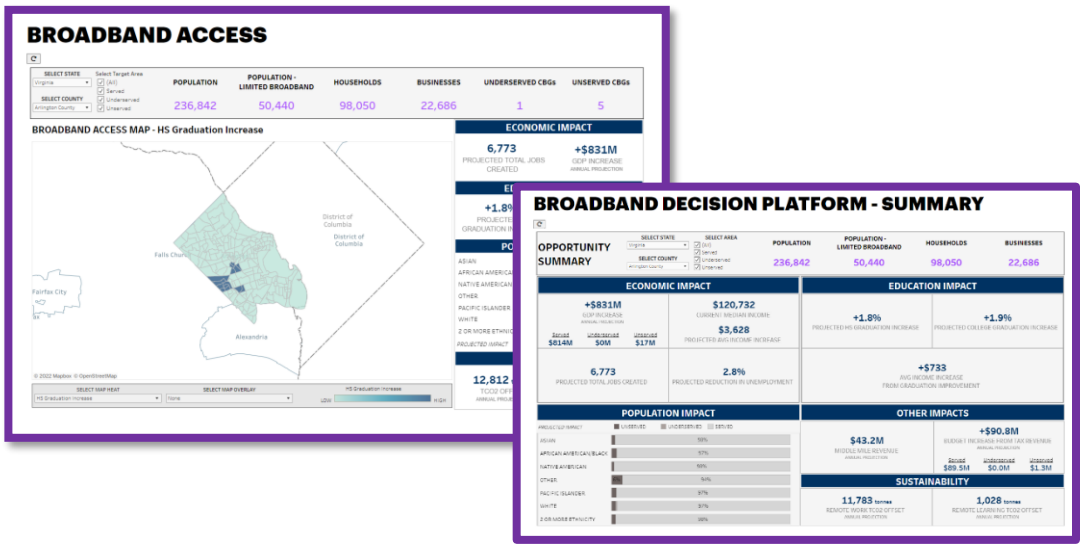


Figure 5. Network Decision Platform Sample Dashboards

By mapping data we collect in the NDP, we will be able to look at information at the quadkey level and tie it to number of households. This insight will allow us to look precisely at which blocks in Arlington County are underserved. In preparing for the next phase of the engagement, we will be able to generate four groups for prioritization and action: 1) unserved/underserved and disadvantaged, 2) unserved/underserved, 3) disadvantaged but served, and 4) adequately served and resourced. These groups can also capture demographic and income information to help inform our racial equity assessment and better describe the communities impacted by insufficient internet access.

Evaluate Current Resources

Based on our analysis of the gaps in connectivity, access, education and training, and program sustainability and community capacity, the Accenture team will research currently available resources to bridge those gaps. This research will include evaluating current Internet Service Provider (ISP) coverage and services, low-income programs available, and digital inclusion resources. For example, we may look at the recent work Arlington conducted with the 123 CONNECT pilot and start to examine how well a program like this one could close the digital divide for students.[1]

Our team will also inventory the policies and programs related to broadband development from the federal to the local level. We will work with our State and Local Government Center of Excellence (COE) to compile this research

[1] MIN-ITAC-JAN-27-2021.pdf (arlingtonva.us)

and understand best practices from other states. As part of this research, we will inventory upcoming funding opportunities related to broadband (e.g., resulting from IIJA) relevant for Arlington County.

This task will result in matching current resources to the gaps identified through our data analysis. We will work to review, refine, and validate this mapping with the County Project Manager or other County staff in an effort to build an exhaustive inventory.

Identify Needs
Finally, we will use the comparison of gaps identified and current resources to identify and evaluate the County's needs with regards to broadband. In identifying these needs, we will apply Arlington's Racial Equity Assessment to understand the implications of these gaps and impacts of resources on different segments of Arlington's population.

This element will result in a written report and presentation summarizing our finding in terms of current state of broadband, current resources available, and gaps identified. We will focus primarily on opportunities for Arlington to close digital gaps and achieve greater digital equity. This analysis will be presented across the four principles of Arlington's digital equity work.

4.2.2 Element 2. Model Evaluation

Accenture's work for Element 2 Model Evaluation will start with working with the County to develop a model evaluation framework, including the evaluation criteria, scoring and weighting of the evaluation criteria, and the models to be researched and evaluated. In **Figure 6**, we show our general broadband entry evaluation framework that we have developed in our telecommunications work. This accelerator provides a general framing / starting point for our work in Element 2.

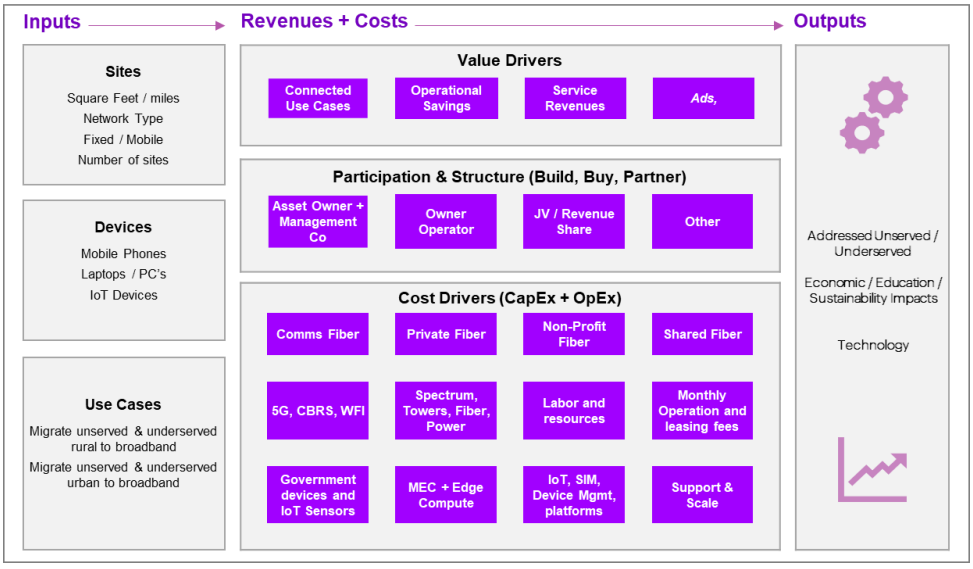


Figure 6. Illustrative Evaluation Approach (Sample, Created by Accenture)

The baseline of the evaluation criteria will be the needs identified in Element 1. The criteria to be documented and evaluated will be prioritized and/or scored, where applicable, to allow for comparison. Based on the SOW and other available information, Accenture currently suggests the following prioritization of the evaluation criteria. We would work to refine and finalize the evaluation criteria with the County.

1. Ability to meet the County's needs based upon the assessment completed in Element 1
2. Technical / technological feasibility of implementation given Arlington's infrastructure and building stock - and the technology's ability to meet broadband speed goals
3. Opportunities to advance digital equity and inclusion
4. Order of magnitude costs
5. Implementation considerations
6. Risk and benefit considerations

7. Necessary policy changes
8. Appropriate scale
9. Ability to leverage Arlington County's middle-mile network, ConnectArlington

Once the criteria are finalized, the Accenture team would describe the models to be evaluated, including the following sample models. These models may not be mutually exclusive and may be evaluated in various combinations as appropriate to meet different needs of different populations:

- County-built infrastructure with network and service management provided by a Wireless Service Authority, as allowed per Virginia State law
- Potential of offloading full-scale network and service management outside of County and Arlington Public Schools facilities to a third party
- Potential for partnerships that lower cost and encourage private sector investment, including open access network, land use controls, and financial incentives (e.g., are there incentives the County can use to encourage ISPs to improve service in their low-cost options?)
- Financial subsidies to underserved populations to offset user costs with a private internet service provider
- Potential for deploying a wholesale fiber network for ISPs to retail
- Other models that may be identified during outreach

We will focus / apply the models and evaluation criteria across the four groups defined during the work for Element 1 (underserved and disadvantaged, underserved, disadvantaged but served, adequately served and resourced). For areas that are unserved/underserved, we will identify costs and likelihood of success for various policy options such as:

1. Making Arlington Fiber assets available to carriers
2. Building feeder networks in target areas and make them available to carriers
3. Building feeder and access networks in target areas and make them available to carriers or new entrant ISPs; and/or
4. Facilitating fixed wireless for carriers through fiber and pole access in target areas

For each policy option/alternative, we will evaluate the cost per household, likelihood of success, and likely impact as well as availability of funding and possible funding models.

We will use tools (such as the Accenture NDP) to estimate the cost of deploying a network for certain geographic areas in the ways described above. For example, we may to model a feeder broadband network from the County's currently existing fiber to new nodes in neighborhoods, then model an access network from those nodes to households, and then estimate the cost of that work. This analysis will provide the County a very detailed bottoms up view of what would be needed to fund network expansion in target areas.

Once we align with the County on the evaluation criteria, associated prioritization and scoring, and inventory of models to be evaluated, the Accenture team will conduct research and analyses leveraging our internal tools, including the research tools noted in under Element 1 in **Figure 2** and the AIP and NDP to measure the impact of these models across different outcome areas. We will proceed with documenting each model's attributes across the evaluation criteria and scoring them according to the predefined framework. At this stage, we will begin to identify case studies the County may learn from to be further elaborated on in Element 3. We will update the County on our progress along the way and can iterate on the potential models evaluated. Ultimately, we will document our analysis in a written report and provide a presentation on our findings to the County.

4.2.3 Element 3. Strategic Recommendations

Element 3 will start with the most appropriate model(s) for Arlington County as evaluated by the weighted evaluation of models in Element 2. For the selected models, we would further elaborate on the implementation considerations already started in Element 2. For example, we would begin noting timelines and actions required for the County to implement as well as anticipated timelines for realizing expected outcomes. We anticipate producing alternative models at this stage for the County to consider. For example, with another client, we evaluated the following combination of strategic recommendations – we may want to explore something similar with Arlington

County:

- Fund a wholesale network across the county and enlist retail ISPs;
- Subsidize carriers to build out networks to target areas and provide low-cost high bandwidth service; and/or
- Make a feeder network available to carriers (wireline and fixed wireless) for entry into target areas.

We would then analyze these models using the methodology detailed on the following page. The analysis would consider items such as industry norms, risks, associated costs, and likelihood of producing successful outcomes.

Our overall methodology for strategic recommendations will be based on 'Value' and 'Urgency' dimensions which will define the priority of their implementation (see **Figure 7**). Each recommendation will include one or more strategic initiative spanning across areas of action such as Arlington' digital equity principles, collaboration, etc. These action areas shall be finalized in consultation with the County Project Manager and other relevant stakeholders from the County. Further, the recommendation shall also be classified into short-term (less than 3 years), mid-term (3-5 years), and long-term (more than 5 years) goal timelines.

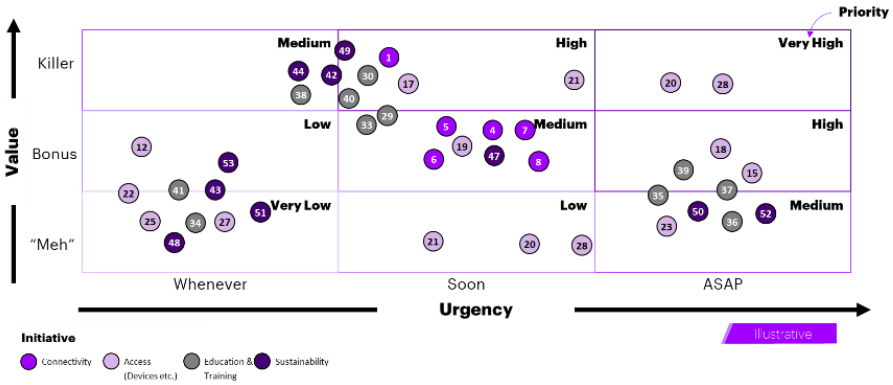


Figure 7. Initiative prioritization matrix

The 'Urgency' dimension shall define the timeline/ priority of Arlington County's action (e.g., 1 month for onboarding vendors for laying optical fiber) while the goal timeline shall define the time for implementation of the goal (e.g., 4 years for laying optical fiber by the vendor across the county). The 'Value' dimension of each initiative will be based on the assessment of models. For each metric defined in the model, potential drivers will be identified which shall be mapped to initiatives (see **Figure 8**). The value of each initiative shall be determined from the impact that the underlying metric has towards achieving the proposed model vis-à-vis its ease of implementation.

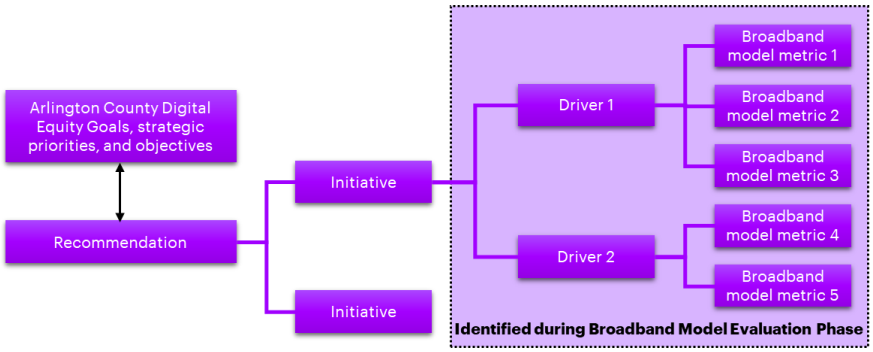


Figure 8. Strategic Recommendation Mapping

For each initiative, we will detail aspects such as task owner, its impact, outcome, and next steps to enable action and serve as a roadmap (see **Figure 9**). Importantly, we will help the County understand the risk involved with each alternative and prepare our presentation to appropriately explain this risk to stakeholders, including the County Board.

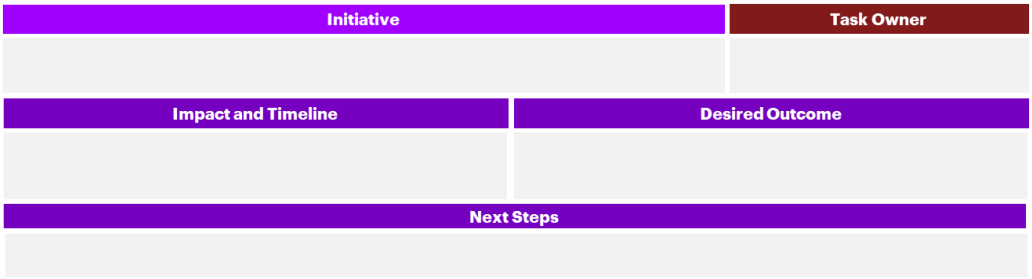


Figure 9: Initiative Roadmap

Additionally, as part of the strategic recommendations, Accenture will prepare three case studies demonstrating how other jurisdictions implemented the envisioned models, including relative effectiveness of the implementation as well as lessons learned and/or pitfalls to avoid during implementation. Accenture's breadth of subject matter advisors within the telecommunications and public sector industries will be able to provide Arlington County with experienced-based lessons learned to best prepare Arlington County for next steps. We will hone in on specific areas of each case study that will be relevant for the County to learn from and identify contact information for individuals the County can reach out to in order to learn more.

We will document our recommendations in a written report and deliver a presentation regarding key takeaways.

4.2.4 Element 4. Project Deliverables

As noted in the SOW, Accenture will provide the following deliverables. Accenture is primarily responsible for development of these deliverables.

Deliverables	Description	Due Date
Data Collection Methodology	Accenture will provide a methodology for engaging with members of the community and/or other stakeholders for the County Project Manager's approval. This methodology will be provided in Microsoft PowerPoint or Word.	March 10, 2022
Needs Assessment – Written Report & Oral Presentation	Accenture will deliver a written report, in Microsoft Word, evaluating the County's current resources and assessing its citizen's needs. The report will be coupled with an oral presentation, including Microsoft PowerPoint slides, summarizing findings and key takeaways of this element. The presentation may be delivered to the commission and/or the County Board.	April 26, 2022
Model Evaluation Framework	Accenture will develop an evaluation framework to support completing the Model Evaluation, documenting the internet delivery models to be evaluated and outlining the evaluation components for the County Project Manager's approval. This will be delivered in Microsoft PowerPoint or Word.	April 19, 2022
Model Evaluation – Written Report & Oral Presentation	Accenture will deliver a written report, in Microsoft Word, evaluating different internet delivery models. The report will be coupled with an oral presentation, including Microsoft PowerPoint slides, summarizing findings and key takeaways of this element. The presentation may be delivered to the commission and/or the County Board.	May 24, 2022
Strategic Recommendations – Written Report & Final Oral Presentation	Accenture will deliver a written report, in Microsoft Word, with its strategic recommendations. The report will be coupled with a final oral presentation, including Microsoft PowerPoint slides, summarizing findings and key takeaways of this project. The presentation may be delivered to the commission and/or the County Board.	June 14, 2022
Project Communications	Biweekly updates on progress completed during the work period via email or phone calls with the Project Manager.	Biweekly
Map Shapefiles	Accenture will deliver ArcGIS compatible shapefile(s) at the conclusion of each phase, as relevant, with the written report and presentation deliverables.	See above for deadlines

Table 2. Project Deliverables

The acceptance criteria for the deliverables developed by Accenture shall be compliant with the deliverable description set forth in the SOW, or such other acceptance criteria as the parties may agree to in writing subject to a change order. The only basis for rejection of deliverables will be the failure of the deliverables to materially comply to such description or acceptance criteria.

If no notice of acceptance or rejection specifying in detail the variances from the acceptance criteria is provided by the County to Accenture within five (5) business days after delivery, or if the Deliverable is used in a live production environment, the Deliverable shall be deemed accepted.

4.3 Anticipated Challenges & Mitigation Strategies

Our approach was designed considering the typical challenges faced in a broadband study. Some of these challenges are presented below with our proposed mitigation strategy. Accenture is a flexible partner committed to working with the County through challenges encountered during this engagement and we look forward to incorporating your feedback.

Element	Anticipated Challenge	Proposed Mitigation Strategy
1	Gathering sufficient data on unserved/underserved populations to understand their needs.	We propose using a powerful combination of publicly available and County-specific datasets. If existing data sources are not sufficient, our proposal includes an optional survey task.
1	Compiling and analyzing disparate data sources can prove challenging and lead to project delays.	Our AIP and NDP serve as accelerators, meaning we can analyze data more quickly with these tools Accenture has already built.
2	Some internet delivery models may not be easily compared and may act better in tandem.	Our model evaluation will consider the option of the county choosing multiple delivery options to meet the needs of its communities.
3	Strategies developed may be impressive on paper but challenging to implement.	Our telecommunications industry experience means we understand how to translate concepts into realistic implementation plans. We will develop tactical action plans for the County for each recommendation.
All	Other county priorities may overtake this project and result in timeline extensions.	During project planning, we will collaborate with the County to align on goals and objectives for the engagement, and to define governance structures. This will include designating stakeholders to be involved in the project, and in the review of deliverables. The Accenture team will work to keep stakeholders up to date on project progress and equip them with the information necessary to facilitate efficient reviews and feedback.

Table 3. Anticipated Challenges and Mitigation Strategies

5. PROJECT SCHEDULE

Based on our experience with other jurisdictions on similar scope, we recommend a 15-week duration for this engagement. We look forward to incorporating the County's feedback.

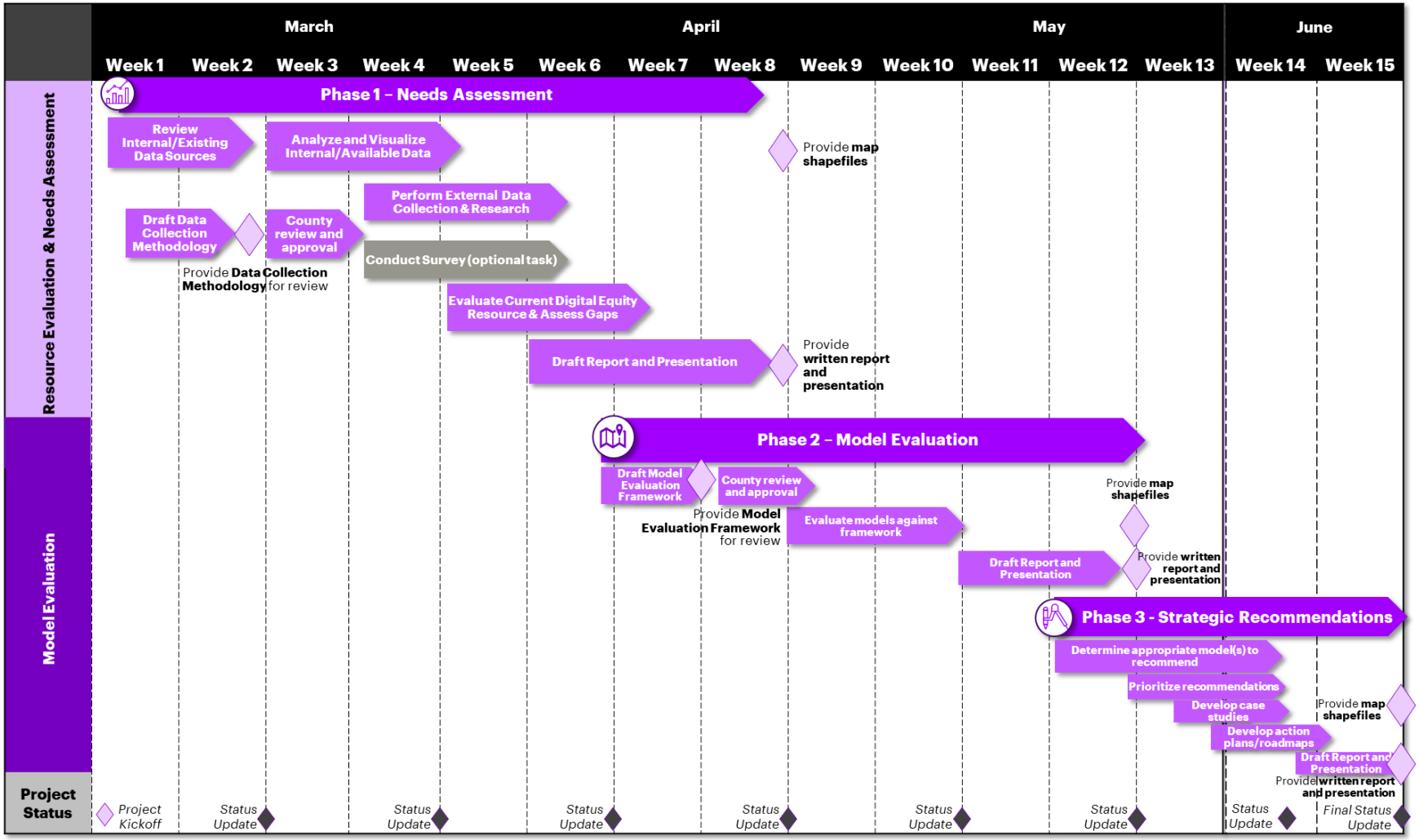


Figure 10. Anticipated Project Schedule for Elements 1, 2, and 3

We have presented a schedule in three phases, corresponding with the three elements in the SOW. A written report and oral presentation (with corresponding PowerPoint slides) will be provided at the conclusion of each phase summarizing our findings and key takeaways. We look forward to incorporating Arlington County's feedback on our proposed timeline and approach.

- **Phase 1 -** As the Resource Evaluation and Needs Assessment phase is the foundation of the rest of the project, we estimate this phase may take about eight weeks, including time to collect relevant data from internal and external stakeholders. As we anticipate that a survey may be required to gather information on current and future needs of County residents, we have allowed two weeks for conducting the survey. During these two weeks, the team members will also work on gathering and analyzing other data as noted in the SOW, such as information about the incumbent service providers. In the concluding weeks of this phase, the team will assess the data in aggregate and identify gaps between the current state and future state of connectivity in the County.
- **Phase 2 -** We anticipate that the Model Evaluation phase will take about six weeks to complete, including time for the County to review and approve the Model Evaluation Framework. During this phase, staff will gather any additional data required to evaluate the models. We will document the findings of our evaluation and present visuals where applicable.
- **Phase 3 -** Finally, we anticipate that the Strategic Recommendations phase will take about five weeks to complete. At the conclusion of this phase, we will present our final findings and key takeaways. Accenture's goal at the conclusion of this project is to leave the County with actionable next steps to achieve their digital equity goals. Map shapefiles will be provided at the conclusion of each phase.

We bring proven project management practices to each engagement to drive clarity in project scope, activities, and milestones, and in communicating the status thereof. We will regularly meet with and report progress to the County Project Manager at least every two weeks to provide status updates (see **Figure 11**). We will continually monitor and report on progress as it pertains to pre-established milestones and deliverables.

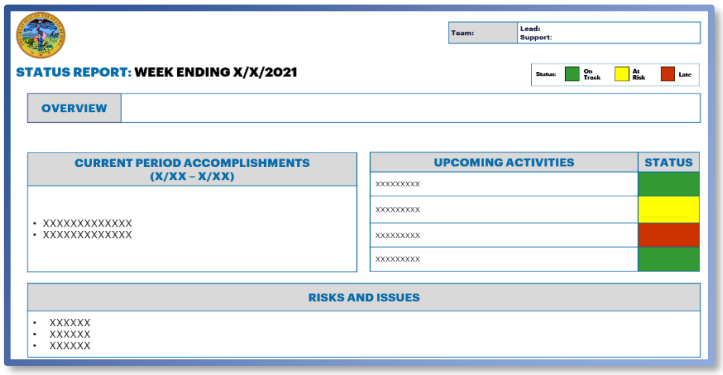


Figure 11. Sample Status Report Template

5.1 Assumptions

The following are key assumptions and principles upon which Accenture's proposal and schedule is based.

- Accenture acknowledges and hereby states that will comply with all Mandatory Requirements as stated in Section 7.2.
- The parties may mutually agree to modify dates or end dates and will do so in writing.
- If the parties agree that if the nature of the project requires changes in scope, the parties will all address via a formal contract change control process.
- By its performance of these services, Accenture shall not be precluded from performing any related or follow-on services for Arlington County, either as a prime contractor or a subcontractor to another vendor.
- If Accenture is selected for this work, we will present the county with similar resources to the proposed team if the proposed team members are not available.
- Client will commit the necessary resources and management involvement to support the project and will make all decisions promptly and without delay.
- Accenture assumes that the majority of the work for this engagement will be performed remotely. We acknowledge that travel may be required for the final presentation meeting. We will work with Arlington County to align on any other travel requirements as appropriate Any future travel or on-site presence will be negotiated in line with COVID-19 pandemic policies of the Arlington County and Accenture.

- Client will assist Accenture with coordinating communications and relevant participation of Client stakeholders.
- Client is responsible for any translations required during execution of the Services.
- Client will obtain access for Accenture for any Client systems required for project activities.
- Access to the Accenture Insight Platform (AIP) will be limited to Accenture personnel.
- Client will provide data and documentation as requested and appropriate for completion of project activities.
- Accenture shall have no access to Arlington County's personal data (commonly referred to as Personally Identifiable Information) to perform tasks or complete work outcomes or deliverables described herein.
- Client shall be responsible for obtaining, at no cost to Accenture, consents for Accenture's use of any third-party products, including but not limited to software (including purchase of any licenses), necessary for Accenture to perform its obligations under this proposal.
- Client shall be responsible for its operation and use of the Deliverables and for determining whether to use or refrain from using any recommendation that may be made by Accenture. Client will be solely responsible for determining whether any Services provided by Accenture (i) meet Client's requirements; (ii) comply with all laws and regulations applicable to Client; and (iii) comply with Client's applicable internal guidelines and any other agreements it has with third parties.
- Accenture's Services do not include functions for which Accenture is not licensed or authorized to provide, including functions that are subject to special licensing or other regulatory oversight (including but not limited to audit, accounting, investment banking, legal advisory, tax advisory, telecommunications, or other regulated services).
- Neither Party will be liable for any delays or failures to perform due to causes beyond that Party's reasonable control (including a force majeure event). Without limiting the foregoing, to the extent Arlington County fails to perform any of its responsibilities described in the SOW, Accenture shall be excused from failure to perform any affected obligations under the SOW and, in the event of delay, be entitled to a reasonable extension of time considering the particular circumstances, and a reasonable reimbursement of cost. Each Party will notify the other as promptly as practicable after becoming aware of the occurrence of any such condition.
- Without limiting the foregoing, to the extent Client fails to perform any of its responsibilities described in the agreement, Accenture (i) shall be excused from failure to perform any affected obligations under the agreement, (ii) shall be entitled to a reasonable extension of time considering the particular circumstances, and a reasonable reimbursement of additional costs incurred as a result, and (iii) shall not be responsible for any consequence or liability arising from Client's failure. Each Party will notify the other as promptly as practicable after becoming aware of the occurrence of any such condition.
- Accenture maintains insurance customary to similar companies of its financial size and strength. If awarded the work, Accenture would request to have the opportunity to negotiate in good faith and maintain specific types and limits of insurance that are mutually agreed upon and appropriate to the scope of work, contract terms, engagement term and fees.
- Accenture proposes a standard 30 days' warranty period starting from the delivery of the Deliverable and an objective standard of performance. Also, Accenture proposes to include an implied warranties disclaimer.

6. PROJECT COST

Accenture understands the importance of this project as a generational investment in the future of Arlington County. We are pleased to offer Arlington County a firm fixed price of $509,950 for this project. Should the County wish to pursue a survey, the cost for that task will be $40,000. As "Element 4. Project Deliverables" includes deliverables to be produced for the subsequent project elements, the cost of those deliverables is included in the relevant element below.

Description	Anticipated Deliverables	Total Cost
Element 1. Resource Evaluation and Needs Assessment	Written Report, Oral Presentation, Data Collection Methodology, Map Shapefiles, Project Communication	$230,000
Element 2. Model Evaluation	Written Report, Oral Presentation, Model Evaluation Framework, Project Communication	$173,840
Element 3. Strategic Recommendations	Written Report, Oral Presentation, Project Communication	$106,110
Total Direct Expenses		**$509,950**
Optional Survey Task for Element 1	Survey Questions, Survey Results	$40,000
Estimated Travel Expenses		$2,000
Total Cost (Including Optional Survey Task & Estimated Travel Expenses)		**$551,950**

Table 4. Project Cost by Element

Team Member	Hourly Rate	Anticipated Hours			Total Hours	Total Cost
		Element 1	Element 2	Element 3		
Project Leadership / SMAs	$470	15	22	23	60	$28,200
Project Manager	$350	165	130	70	365	$127,750
Consultant 1	$230	280	200	120	600	$138,000
Consultant 2	$230	280	200	120	600	$138,000
Analyst	$130	280	200	120	600	$78,000
				Total	**2,225**	**$509,950**

Table 5. Project Cost by Team Member for Direct Expenses, Excludes Optional Survey Task

Accenture's proposed deliverable payment milestone schedule is below. Please note that the dates below indicate the last working day of the month. Should Arlington County wish to include the optional survey task, that amount would be billed with the second invoice for an additional $40,000. Travel expenses will be billed at cost following the month they are incurred, up to the $2,000 estimated here.

Invoice #	Milestones / Deliverables	Date	Invoice Amount
1	Project Kick-off Deck, Initial Project Plan, Project Communication, Element 1 Deliverable - Data Collection Methodology	March 31, 2022	$80,000
2	Element 1 Deliverables - Written Report, Oral Presentation, Map Shapefiles, Project Communication	April 29, 2022	$150,000
3	Element 2 Deliverables - Written Report, Oral Presentation, Model Evaluation Framework, Project Communication	May 31, 2022	$173,840
4	Element 3 Deliverables - Written Report, Oral Presentation, Project Communication	June 30, 2022	$106,110

Table 6. Proposed Payment Schedule for Direct Expenses

7. ORGANIZATIONAL EXPERIENCE & CAPACITY

Accenture is one of the leading professional services firms in network and connectivity strategy, deployment, and operations. We have 6,000+ network focused professionals globally, working with 16 out of the 17 telecom operators in the Global Fortune 500 list. We have made strategic acquisitions and invested in building tools and accelerators in the broadband space to ensure that we deliver world class client experience in this space. These investments have resulted in tools and processes that help our team deliver value on day one.

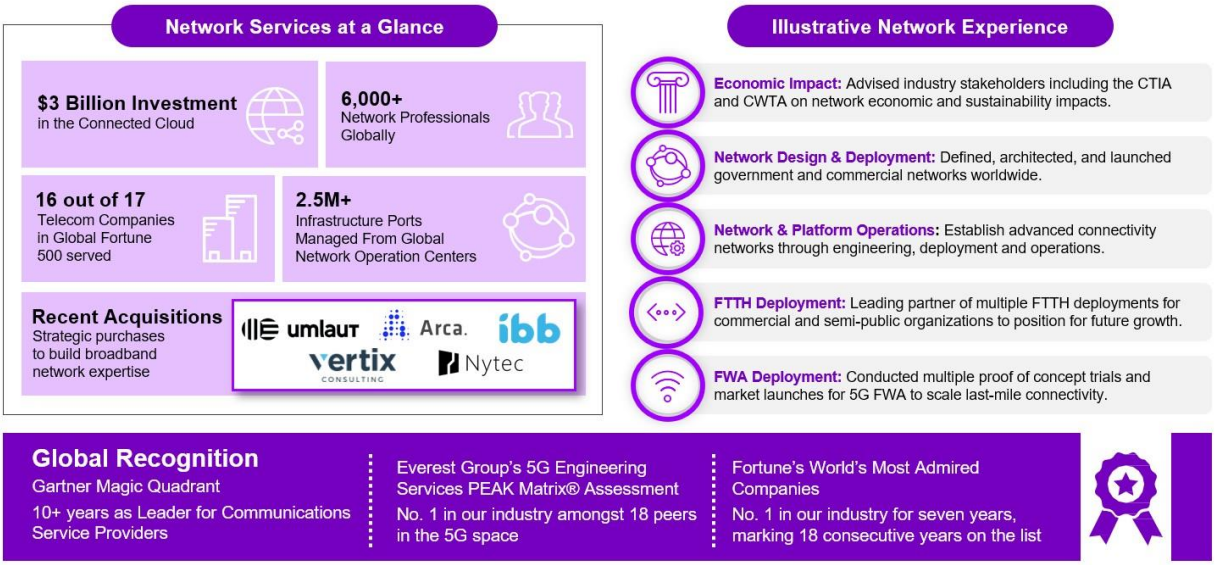


Figure 12. Overview of Accenture's Network Capabilities

In addition to these network and communications and media capabilities, our Arlington-based public service group is committed to making an impact in local communities through our work. Our work with DC Public Schools on digital equity is highlighted below, and we've worked with numerous government, non-profit, and higher education organizations in the DMV area. For example, our team recently worked with Fairfax County to develop their strategic plan (Countywide Strategic Plan | Strategic Plan (fairfaxcounty.gov)). Our plan is to bring our extensive experience and innovative solutions to Arlington County for the greater benefits of its citizens, stakeholders, and workers.

Accenture's Commitment to Arlington
At Accenture, our breadth is global, but our commitment is local. Arlington County, VA is where we work, live, serve, and recruit. We have three flagship offices in Arlington, including two on Wilson Blvd. and our marquee metro DC office at 800 North Glebe Road. We employ more than 10,000 professionals in the metropolitan DC region. Many of our professionals have strong personal ties to their communities and have helped numerous Arlington-based businesses and public service organizations. We have supported organizations like Arlington Free Clinic and Bridges to Independence through volunteer or financial resources. **In fiscal year 2021, Accenture won the corporate Arlington Cares award through Volunteer Arlington.** Many of our local executives serve on non-profit, educational, and civic boards. Our ties to local businesses, civil society and communities demonstrate our commitment to support Arlington County.

Figure 13. Fast Facts Regarding Accenture and its Work in the DMV

7.1 Accenture's Prior Experience Performing Similar Services Relevant to Arlington County

We have summarized some of our relevant prior experience in **Table 7** below, with more detailed examples in the following sections of three specific projects.

Project	Description
Network Architecture for a regional smart city hub	**The aim of the project was to transform the physical and digital environment of a city in the DMV area by targeting components of connectivity within the city such as Fiber and 5G**. As part of the development of technology strategy, Accenture evaluated the existing Fiber model against the needs of the current market whilst identifying areas for potential growth. Following the initial analysis, a Go-To-Market Strategy and an integrated project plan was established, enabling the client to begin its smart city journey.
Wireless LTE Analysis for German Schools	Accenture was tasked to carry out an analysis on which areas of Germany and which operators provided the best 4G coverage to schools. **Accenture analyzed data for more than 25,000 schools across the country.**
Bridging the digital learning divide in DC Schools	Following the shift from in person learning to distance learning for DC public schools amidst the pandemic, the connectivity issues facing students in today's world such as a lack of broadband connectivity for an estimated 20,000 students became a top priority for the Office of the Deputy Mayor for Education (DME). **Accenture supported the DME by providing guidance on how to effectively implement distance learning with the ultimate goal of bridging the digital divide.** Key activities from Accenture include conducting assessments on connectivity for students and proposing both long term and short-term solutions to expand broadband access to students.

Project	Description
Major U.S. MSO – Broadband Stimulus Program Strategy	**Client sought help in identifying opportunities for broadband expansion in unserved, underserved, and rural areas,** coordinating application submissions for government funding, and conducting outreach to prevent overbuilds in existing footprint. Challenges for our client included, but were not limited to, vague parameters on the use of funding for broadband networks (which runs the risk of potential overbuild on existing infrastructure) and the ability to assemble a group of subject matter experts that can quickly develop in depth narratives with technology and system design inputs for broadband expansion projects. **As a result of all the actions taken by Accenture, we were able to drive network expansion deliverables and to successfully plan/execute build milestones including network designs, project plans, financial forecasting, ROI models and project playbooks.**
Federal Funds Support – State Client	We provided strategic counsel to the Office of Chief Information Officer (OCIO) and the Governor's Office on broadband expenditures related to ARPA, Coronavirus State and Local Fiscal Recovery Funds (CSLFRF). We reviewed the State's Notice of Funding Opportunity (NOFA) for broadband and compared it to requirements for broadband projects within CSLRF and advised OCIO on how the NOFA met/did not meet the requirements. We researched the eligibility of broadband projects under the Capital Projects Fund (CPF) and provided comparisons between CPF versus CSLRF, recommending how best the State allocate limited broadband resources effectively. We lead discussions with OCIO to determine Key Performance Indicators (KPIs) for broadband and five Information and Cyber Security programs that go beyond the required programmatic data collection under CSLFRF.
Diversity, Equity & Inclusion Work for Public Sector Clients – Selected Projects	**Building an Anti-Racist University –**We partnered with an East Coast private university to identify structural racism that may exist within processes, policies, and procedures for all schools and units of the university and recommend specific actions to address those areas of opportunity. **Delivering Racial Equity –** We partnered with a major West Coast city's Office of Racial Equity to facilitate an inclusive, city-wide process toward the development of an evaluation framework for Racial Equity Action Plans focused on identifying pathways for meaningful cultural/behavioral changes that lead to sustainable change.

Table 7. Summarized Prior Experience

7.1.1 Example 1: Definition of a Network Architecture for a Regional Smart City Super Hub

Project Title	Definition of a Network Architecture for a Regional Smart City Super Hub
Client	Large DC-based REIT
Period of Performance	1/2020 - Current
Specific Contact Information	Please contact Bora Goekbora to arrange a discussion with the client sponsor for this work. Phone Number: (917) 588-1840 Email: bora.goekbora@accenture.com
Firm Role	Prime Contractor
Role of Team Members Included in this Proposal	Dan Dodson
Final Report Link	Not available
Project Description	

Context & Objectives
This major metro covers 4 miles and 20M square feet of built residential, retail and office space located across the river from DC, directly adjacent to Ronald Reagan National Airport and the Pentagon.

Having recently become home to Amazon HQ2 and Virginia Tech's Innovation Campus, the metro is a "Living Lab" for world-class connectivity, co-creation, and innovation.

Accenture worked with a large U.S. REIT to underwrite and execute investments across a variety of communications infrastructure (CBRS Spectrum, small cells, DAS, and a world-class fiber network). The goal of this work was to transform the area into a differentiated physical and digital environment, targeting three key components of connectivity: Fiber, 5G, and CBRS Spectrum.

Key Actions
In helping to develop the technology strategy, Accenture evaluated the existing Fiber model against the needs of the current market whilst identifying areas for potential growth. We assessed the market needs for 5G wireless services and gathered requirements to enable a '5G ready' district and identified use cases for CBRS Spectrum ownership and monetization.

Across each of these components Accenture established a Go-To-Market Strategy, investment thesis, and an integrated project plan that enabled the client to begin its journey towards transforming the area into a truly Smart City.

Accenture continues to provide critical Consulting and Technology work across all connectivity infrastructure investments for the client.

Outcomes
As a result of this work, the U.S. REIT executed a commercial agreement with an adjacent county-owned fiber network. Additionally, Accenture assisted them with supporting an investment thesis of more than $50 million net new infrastructure investment across wireless and wireline assets. This work also led to the US REIT executing key deals with tier 1 wireless and wireline operators. Ultimately, this engagement supports the transformation of the area into Smart Campus attracting additional workers, residents, and commercial tenants to the area.

7.1.2 Example 2: Bridging the Digital Divide for DC Public Schools

Project Title	Bridging the Digital Divide for DC Public Schools
Client	Office of the Deputy Mayor for Education (DME)
Period of Performance	3/19/20-7/22/20
Specific Contact Information	Please contact Tiffany Lin to arrange a discussion with the client sponsor for this work. Phone Number: (240) 676-0565 Email: tiffany.a.lin@accenture.com
Firm Role	Prime Contractor
Role of Team Members Included in this Proposal	Matthew Burnham David Metnick
Final Report Link	Not available – See screenshots of deliverables below

Project Description

Context & Objectives
On March 11, 2020, Mayor Muriel Bowser declared a state of emergency in the District of Columbia due to COVID-19. DC Public Schools (DCPS) and DC Public Charter Schools (DC PCS) were immediately forced to close their physical facilities, and schools were faced with an immediate and unprecedented shift to distance learning. As the responsible governing body for District-wide education strategies, the DME led the effort to

understand and bridge the digital learning divide for students and ensure schools had the supports needed to effectively implement distance learning for all students.

Challenges of this situation included the following:

- **Bridging the digital learning divide during a global pandemic** - With over 90,000 students across the district, we estimate up to 20,000 students may have required support getting online and connected. DME needed to conduct a rapid baseline assessment to understand the access and connectivity needs of 90,000 students across the district.
- **Developing coordinated & actionable solutions to close the digital divide** – Questions regarding issues such as connectivity, learning device procurement and distribution, technology support, and best practices for distance learning quickly emerged. DME mobilized several work groups including the Digital Divide Working Group to develop coordinated and actionable solutions.
- **Understanding opportunities for cross-sector collaboration** - The digital divide has highlighted systemic inequalities across various sectors including education, health, and employment. DME hoped to identify potential opportunities for cross-sector collaboration.

Key Actions

To support the DME-led effort in bridging the digital learning divide, the Accenture team worked in tandem with multiple parties (including DME, DC Public Charter School Board (PCSB), DCPS, and charter school leaders) to conduct the following:

- Analyzed a public charter school digital device survey deployed by DC PCSB that provided data-driven insights and empowered PCSB to identify and support high-need Local Education Agencies (LEAs).
- **Produced a compilation of short-and long-term options to expand connectivity, ranging from expanding fixed home broadband, using school buses as roaming hotspots, to building a community Wi-Fi network.**

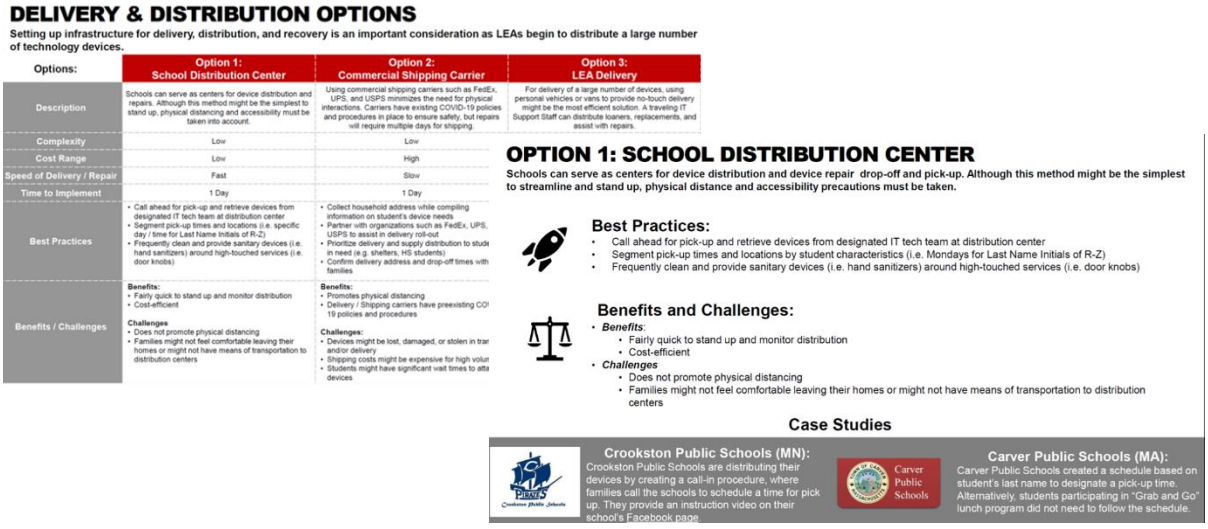


Figure 14. Deliverable Screenshots: Device Delivery Options

- Published a Connectivity Resources guide with free and reduced cost commercial and educational broadband services to keep students and their families connected during COVID-19.
- **Facilitated conversations with chief technology officers and sustainability officers from other school districts including Boston Public Schools and the Austin Independent School District to discuss innovative solutions to expand access and connectivity.**
- Reviewed 60+ Instructional Learning Plans and developed two-pagers on distance learning trends and innovative ideas tailored for students with disabilities and for students generally.

Outcome (Closing the Digital Learning Divide)

- Based on the data analysis of public charter school students, the team developed tailored support to LEAs representing the largest learning device and connectivity gaps. Support included application guidance for the T-Mobile Empower ED program and a comprehensive list of LEA-recommended vendors with in-stock learning devices.
- **Accenture presented short-, mid-, and long-term strategies to expand broadband access to the Deputy Mayor including a description of services, potential partners, key considerations, and rough estimates on complexity, cost range, and time to implement.**

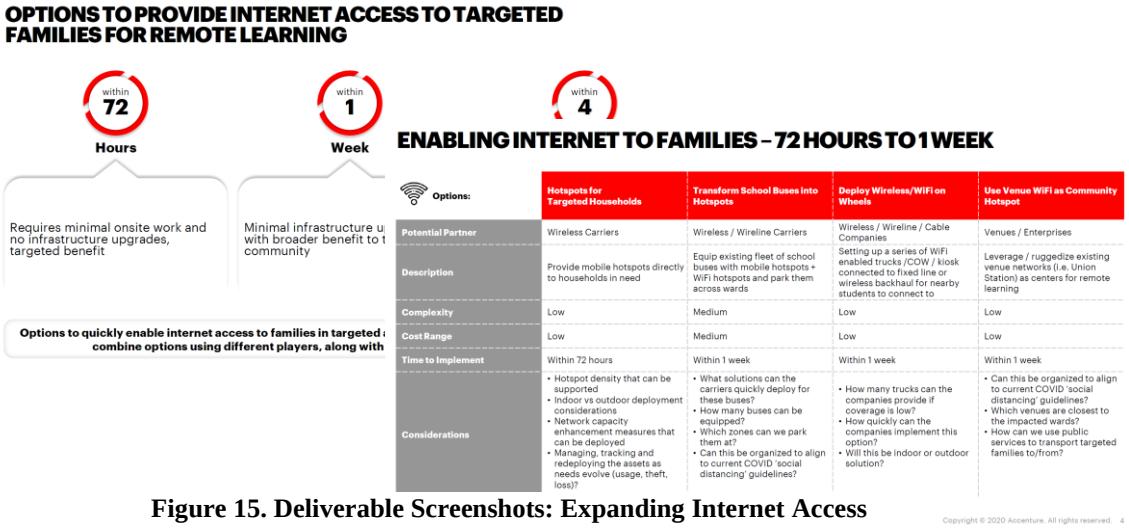


Figure 15. Deliverable Screenshots: Expanding Internet Access

- Based on conversations with other leading school districts, the team presented nationwide best practices for device distribution and delivery, asset tracking, and repairs with emphasis on student and staff safety through the PCSB Webinar Series.
- To assess evolving needs, the team prepared a revised technology survey to include DCPS and measure the needs of all 90K+ public school students for the upcoming school year. The team generated an automated process for data analysis including Excel and PPT dashboards.
- **Through the development of personas and journey maps, the team highlighted various aspects of student and family life that require technology including access to learning devices and connectivity. Through this assessment, the team highlighted potential opportunities for collaboration across sectors including the health and employment sectors.**

7.1.3 Example 3: Analysis of wireless LTE coverage distribution in German Schools

Project Title	Analysis of wireless LTE coverage distribution in German schools
Client	Connect Magazine
Period of Performance	7/6/2020 – 12/27/2020
Specific Contact Information	Name: Hannes Ruegheimer (please contact David Metnick to arrange a discussion with the client sponsor for this work) Phone Number: David Metnick - (202) 904-7527 Email: David Metnick – david.t.metnick@accenture.com
Firm Role	Prime Contractor
Role of Team Members Included in this Proposal	N/A

Final Report Link	Not available

Project Description:

Context & Objectives

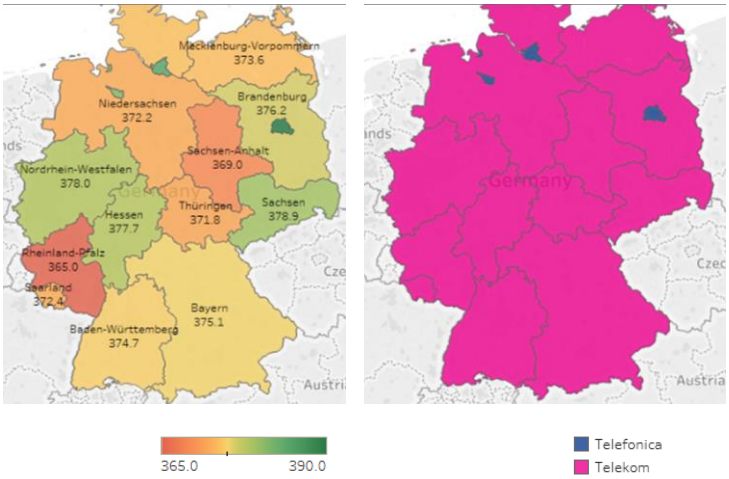
Accenture was tasked to carry out an analysis on which areas of Germany and which operators provided the best 4G coverage to schools.

Approach

Crowd data was collected from 25,000 schools across Germany within a six-month time frame for data and analytics.

Impact

The assessment done by Accenture concluded that schools in Nordhrhein-Westfalen and Sachsen seem to provide the best coverage services, provided specially by mobile operator, Telekom, for their students. The information is made publicly available in the research publications in Germany for targeting how improvements can be made across the country. The report included maps like the below.



7.2 Accenture's Proposed Team

Our objective when staffing our Arlington County team is to deploy the right blend of functional, technical, industry, and local knowledge to the engagement. By partnering with Accenture for this broadband study, Arlington County gains access to the breadth of Accenture's 674,000+ person organization. Our core team will consist of a Project Manager, two supporting consultants, and one supporting analyst. These individuals will bring the right mix of industry and technical experience to the engagement to develop quality deliverables. Our project manager, Dhanashree Bhandari, brings more than 10 years of experience in the telecommunications industry, including experience analyzing markets for expansion. She will be responsible for day-to-day management of the project and the primary point of contact.

The team will be advised by a group of Subject Matter Advisors from our Communications, Media, and Technology practice, who have a wealth of experience in broadband both in the public and private sectors. In particular, Dan Dodson brings experience working in the Northern Virginia area and so is familiar with Arlington's existing infrastructure. The team will provide regular updates to our DMV leadership team, David Metnick and Matthew Burnham, who will help ensure the appropriate local context is incorporated in our analyses and recommendations. These individuals also bring experience working with other public sector clients, including DC Public Schools and Fairfax County, on implementing equity-based strategies.

Figure 16. Accenture Proposed Team

Accenture will partner with PSB Insights should Arlington County wish to pursue a phone survey as described in the Project Approach section. PSB Insights is a modern global insights consultancy. They provide a unique integration of innovative research methodologies and strategic counsel to help solve clients' most complex challenges. The PSB Insights team would be staffed with experienced survey professionals who will assist with survey design, executing the survey, and deriving insights from the survey responses. More information about PSB Insights can be found on their website (https://www.psbinsights.com/). Accenture has successfully partnered with PSB in the past to execute surveys on behalf of our clients in the VA/DC/MD region.

Accenture will provide staff with similar qualifications for this engagement should the named staff be unavailable. Resumes are attached at the end of this document.

7.3 Organization and Team Qualification Mapping

Our organizational and team member experience are mapped to the RFP evaluation criteria below.

Evaluation Criteria	Organizational Experience	Team Member Experience
Demonstrated experience of the consultant team with designing and implementing broadband needs analysis, including at least two for jurisdictions with a population over 150,000 persons within the last five years.	Our experience studying Germany Public Schools and working with DC Public Schools reflect connectivity needs assessments for schools within large jurisdictions. Our work in with a DC-based REIT in Northern Virginia reflects our familiarity with Arlington County itself, and our success working with the infrastructure options available there. Our work with a Major U.S. MSO also demonstrates our experience working in the private sector on broadband expansions.	Numerous team members have experience advising clients on rollouts or other planning initiatives within large jurisdictions.

Evaluation Criteria	Organizational Experience	Team Member Experience
Demonstrated experience of the consultant team conducting comparative evaluations of broadband policies or models for at least three jurisdictions within the last five years.	Our DC Public Schools experience involved comparison of numerous options covering how to provide devices to students and options for facilitating better connectivity in the home. For our work with a DC-based REIT, we assisted the client in evaluating various technology models for creating a regional smart city. Our Broadband Stimulus Program Strategy for Major U.S. MSO involved evaluating opportunities for broadband expansion in unserved, underserved, and rural areas and how best to reach those areas within funding parameters and regulations.	Several of our proposed staff and SMAs have experience evaluating new markets for our clients and aiding in determining options for market entrance or market expansion.
Experience of the consultant team preparing concise, well-written reports with supporting documentation and demonstrated experience preparing and presenting subject matter of reports and supporting materials in public presentations.	Accenture frequently produces thought leadership in the network space. Research like this supports our team in preparing reports and supporting materials for our clients. Active Network Sharing to Boost 5G | Communications | Accenture	Deliverables produced by our staff on previous projects generally are in the format of a presentation or written report. One of our SMAs, Greg Weiner is a regular speaker at industry events and has published multiple articles and white papers on telecom infrastructure business models, trends, and operations.
Merit of qualifications, abilities, and experience of assigned staff to perform the proposed work.	Our organizational experience results indicate that Accenture provides well matched teams for our clients' needs.	Our staff and SMAs have deep industry knowledge they can bring to this engagement to aid the County in working with ISPs to close the digital divide in Arlington. Beyond the resumes included here, the team can leverage the firm's wider experience in the telecom industry and public service.
The extent to which the consultant is likely to be able to achieve the desired results with the team compiled.	Our organizational experience examples demonstrate our commitment to working closely with clients to make a valuable impact on their business, organization, or citizenry.	Our staff and SMAs will be equipped with the tools and accelerators described in our approach to help Arlington achieve its desired results.

RESUME ATTACHMENTS

Dhanashree Bhandari

Project Manager

Dhanashree is a senior manager in the telecommunication network services and products sector with more than 10 years of experience.

She has a wide coverage of experience in wireless and cable networks with a focus on new product offerings.

She also has held cross functional roles in client engineering, business strategy, business intelligence and analytics, finance, product management, vendor management, network & device labs, design, development, and QA teams.

Current Industry Vertical Experience

- Vendor assessment for mobile back-office systems, network and OTT partnerships
- Product use cases, feasibility analysis, operating model and change management
- Strategic technology evaluations for M&A, auctions and partnerships
- 5G competitive assessment & business case studies

Selected Relevant Experience

Network Strategy & Advisory: Leading MSO

- Responsible for driving client specific use cases as their representative in industry groups, technical evaluations, network opportunities as part of spectrum valuations in the FCC incentive auctions
- Identifying levers in business case feasibility studies, network modeling, new technology network planning and trials including 5G, small cells, and other wireless deployment scenarios for cable, wireless and MVNO clients. Tech strategy support for evaluating solutions focused on product differentiation and first to market launch timelines
- Responsible for identifying opportunities and driving solutions related to upcoming access technologies, core architecture, spectrum band, new wireless service and product offerings, integrated network features and operational efficiencies

RAN Deployment Analytics and Insights: Leading MNO

- Led analytics and reporting to expedite problem areas like power, backhaul, regulatory, RF equipment during a mega scale site decommissioning MNO program. Co-ordinated with multiple cross functional teams like national site development, construction vendors, MNO finance & legal and customer care to align forecasts, targets and savings

Heterogeneous Network Planning: Leading MNO

- Delivered a strategic plan for a Wireless Operator looking to expand coverage and capacity through a small cell solution. Provided recommendations focused on business needs, market forecast, competitor analysis, opportunity overview and network operational challenges

RAN Operations and Maintenance: Leading MNO

- Led design and development work for a team developing an automated performance platform to improve network capabilities, user visibility and reduce resolution time. Developed dashboards, reports, heat maps, alerts using the Vortex platform by analyzing OSS inputs for capacity, coverage and customer complaints.
- Prepared systems for Operational Readiness (ORT), created drive test plans, coordinated with field teams, identified and resolved impediments during maintenance windows as part of field-testing activities.

Education and Training

Education	Masters in Telecommunications Engineering from University of Maryland, College Park
Professional Licenses/Certifications/ Memberships	Cisco Certified Network Associate (CCNA) Certified Wireless Network Administrator (CWNA)

Tejas Vaidya

Telecom Consultant

Tejas Vaidya is a management consultant within Accenture's Communications, Media, and Technology practice.

Tejas has extensive experience working with Communications, Media and Technology clients and has worked on Busines Analysis, Digital Products, Channel Transformation & Order Management engagements across Southeast Asia and Middle East.

Functional Expertise		Industry Expertise
• Business Analysis • Process Design & Improvement • Requirements Management	• Functional Design • Stakeholder Management • Research & Benchmarking	• Telecommunications

Selected Relevant Experience

5G Strategy for Government & Public Sector | Use Cases & Op Model for nationwide 5G Rollout | Malaysian Telco Major | India

- Identified, qualified, and developed detailed specifications for ~22 government & public sector use cases
- Led the operating model workstream for the overall implementation and rollout for 5G enabled use case across Malaysia
- Defined the ecosystem charter, business model, and engagement model for the government use cases
- Investment and value case developed for the overall initiatives to the tune of over ~1b MYR over a 10-year span

Singapore's Leading Telco | Internet of Things – Smart Cities | Business Analyst | IoT Product Design & Development | Singapore, India

- Led requirement gathering and designing product model of AWS Hosted B2B IoT products using an API driven platform
- Engaged business stakeholders to elicit requirements and use cases for end-to-end component interaction processes
- Modeled & documented product backlog with user stories & acceptance criteria, managed requirements end to end
- Effectively translated system architecture design into design, built and test (DBT) efforts using best delivery practices
- Researched, gathered, and synthesized information based on latest industry trends in B2B IoT space

Major UK Telco | Digital Transformation – FFM | Business Analyst | Enterprise Service Management | India

- Conceptualized and designed workflows for 2 components in rationalized field force platform across 5 lines of business
- Analyzed as-is state for processes & systems, conducted root cause analysis, optimized operations & increased efficiency
- Translated client requirements for service management specifications for to-be customer and product model
- Provided detailed and technical walkthroughs for product design model and views to development teams
- Managed client communications, requirement gathering from business stakeholders and product line managers.

Prominent Saudi Telco | Telecom B2B Service Delivery | Technical Project Manager | Riyadh, Saudi Arabia

- Planned and orchestrated system integration projects for telco products from design to development, testing & launch
- Drove continuous improvement initiatives by liaising with key stakeholder and affected bottom-line gains
- Organized and reported master data using smart reports targeting timelines, cost, and quality of delivery
- Leveraged technical and business acumen to manage releases & launches communicate effectively with client business

	Education and Training	
	Education	Master's in Business Administration – Operations Bachelor's in engineering – Electronics & Telecommunications

Jordan Bockelman

GIS Specialist

Jordan is a Senior Manager in Augmented Insights at Accenture. He has over 8 years of experience in Telecommunications. He has experience in Data Visualization, Visual Analytics, Big Data, and Business Intelligence. Jordan has worked with various established network operators, focusing and advising on 5G, Fiber, and Fixed Wireless Access. He has created and modeled operational KPIs to advise the business on next best action and deeper insights into their business.

Functional Expertise	Industry Expertise
• Data Management • Agile Delivery • AWS • NPV/IRR	• Wireless Telco • Telecommunications • Fixed Wireless Access • Retail • Consumer Goods • Financial • Healthcare • Insurance

Selected Relevant Experience

Analytics Reporting Lead for Telecommunications Client

- Created actionable reporting tool through ETL and Data Visualization to drive KPI reporting
- Prioritizing call reduction initiatives and driving actions through tighter KPI correlations led to 10M+ cost savings
- Modeled various metrics including CIR, Job Start Success, TRR in conjunction with the creation of Quality Score metrics
- Identified pain points for customers, allowing leadership to improve Customer Satisfaction

Developed Fiber/5G Decision Model for Telecommunications Client

- Created model to analyze entrant pricing/speed, penetration, and network revenue/cost
- Utilized US Census to dictate competitor entrant locations, using NPV/IRR analysis and Census Block data
- Modeled analytic workflows in Alteryx and visualizations in Tableau with flexible data inputs
- Worked to cleanse, join, and integrate data across different data sources into one combined output

Deployment of Tableau Wi-Fi dashboards for Philadelphia-based Cable Client

- Created automated daily Tableau reports to display Wi-Fi access points (APs), tonnage, users, and executive operational metrics
- Competitive Intelligence/5G strategy to analyze net adds, subs, penetration, etc. by competitor
- Deployed and automated Wi-Fi Net Promoter Score (NPS) Tableau dashboards using Wi-Fi survey data

Visualization/Insights Lead for Global Telecommunications Conglomerate

- Developed data modeling and data visualization standards for optimized Tableau Server speed and reliability across enterprise
- Interactive design of Tableau dashboards allowed for business end users to easily data mine and filter on key metrics
- Launched program Tableau reporting suite, developing operational/financial reports utilized as company-wide source of truth
- Combined 6+ data environments and 150+ Tableau workbooks into one custom designed reporting portal
- Developed program report suite using Tableau and Oracle to convert over 40 Excel/ad hoc reports into automated dashboards
- Early adoption of Tableau solution led to expansion into 10+ program
- Integrated Natural Language Generation (NLG) with Tableau

	• Connected virtual voice assistants (Alexa) to data visualization dashboards (Tableau) with the ability to drill down and explore data points using your voice • Use voice enabled NLG technology to get daily briefs and insights from your dashboard and send notifications/alerts to leadership • Ability to research data alerts and drive dashboard insights on the go
Education and Training	
Education	BS – Miami University (Ohio)

Dan Dodson

Subject Matter Advisor – Network & Wireline

Dan brings 38 years of experience in the telecommunications industry, which includes 14 years at Nortel Networks and other vendors and 24 as a management consultant.

He has consulted on many large-scale transformation projects from corporate strategy, merger integration, technology strategy to HFC/FTTx network evolution, 5G fronthaul, capacity planning, operations improvement, and video delivery architectures. He is highly regarded and well respected by many senior MSO executives.

Functional Expertise	Industry Expertise
• Fiber Technology/Construction • Network M&A • Video Infrastructure • Network Infrastructure Strategy • Operational Due Diligence and Audit	• Telecommunications • Video Delivery • Home Automation & Security

Selected Relevant Experience

Fiber Infrastructure Strategy – Large Real Estate Developer

- For a large, 15M SF, commercial master development, developed a connectivity strategy including fiber/conduit acquisition and densification

New FTTH Operator

- Created a target OSS architecture to managed both acquired fiber assets and new
- Led client through vendor selection process plan to build, inventory, serviceability and assurance systems

Network Acquisition Due Diligence

- For the acquirer, developed an evaluation diagnostic for evaluating fiber, network equipment and other physical assets

Utility Fiber Strategy – Large Electric Utility

- Developed comprehensive strategy paper on utilities' entry into dark fiber business. Included revenue opportunity assessment including 5G and data centers. Proposed a “go to market” strategy

Delivery Network Engineering Audit of Acquired HFC Plant

- For a major national carrier, conducted an end-to-end audit of engineering specifications, proactive maintenance procedures, operational processes, bandwidth management practices and readiness for future needs
- Created prioritized punch list of issues and recommendations for action

Next Generation Across Network (NGAN) Planning – Large Leading MSO

- Created business case and plan for NGAN deployment, evaluated construction costs, savings, and capacity impact for Fiber Deep and Active Drop-in tech
- Developed Execution Management plan for multi-billion deployment plan

Bandwidth Planning – Multiple MSOs

- Conducted a study for major MSOs to evaluate BW saving strategies
- Reviewed and modelled SDV, analog reclaim, D3.1 conversion, increased compression and DTA options
- Included modelling of growth from VOD, HSD and channel expansion, advising client on cost impacts including node and service group splitting

Education and Training

Education	MBA - Harvard Business School Bachelor’s Degree from North Carolina State University

Greg Weiner

Subject Matter Advisor – Telecom Industry

Arlington-based

Greg has more than 20 years of consulting and industry experience on telecom infrastructure; including towers, small cells, Distributed Antenna Systems (DAS), and fiber networks. He has broad telecom industry experience including merger integration, network deployment program management, process improvement, supply chain optimization, strategic sourcing, and negotiation of complex agreements.

Greg is a regular speaker at industry events and has published multiple articles and white papers on telecom infrastructure business models, trends, and operations.

Functional Expertise	Industry Expertise
• Network Infrastructure • 4G/5G Private Wireless Networks • Network Construction and Operations • Sourcing and Supply Chain Management	• Operations Improvement • Strategy Development • Pricing and Profit Optimization • Growth and New Business Development • M&A • Due Diligence

Selected Relevant Experience

US DAS and Tower Company

- Executive in charge of strategy and network deployment for an owner and operator of neutral host indoor and outdoor DAS

US Telecom Construction Firm

- Performed end-to-end vendor management maturity assessment, developed improvement roadmap, and executed certain resultant initiatives

US Tower/Small Cell Company

- Stood up national program management organization in support of newly executed small cell agreements; developed reporting tools, refined processes, defined PMO org, conducted role/headcount analyses, and developed plan to scale to 25,000 nodes per year

LATAM Wireless Carrier

- Execution of deployment get-well programs in Chile and Brazil to accelerate on-air production and more effectively manage costs

US Telecom Construction Firm

- Developed strategy and implemented preferred vendor program to address nationwide general contractor shortage

US Tower Company

- Performed end-to-end assessment of leasing operations processes, organization, and tools; defined future state that reduced cycle times, improved quality and predictability, and provided better visibility into the customer experience

US Tower Company

- Stood up and led integration management organization for a tier one tower owner managing the acquisition and integration (data, documents, legal, and operational) of more than 10,000 tower sites

Mexican Wireless Carrier

- Decommissioned legacy wireless network including strategy, planning, supplier sourcing, and program management

Education and Training

Education	BSE, Computer Engineering – University of Michigan

Peters Suh

Subject Matter Advisor – North America Communications & Media Lead

Peters is a managing director and leads their Communications & Media Practice in North America. Peters advises many c-suite executives and government officials in the wireless, cable, fixed, and network equipment industries.

Peters covers solutions ranging topics from 5G, private networks, cloud, IoT, OSS/BSS, fiber, network equipment evolution, devices in the home and business, field services, and communications industry strategy.

Functional Expertise	Industry Expertise
• Operating models and business cases • Segmentation analysis • Organizational design and governance • Communications strategy • Fixed and wireless communications	• Network Planning and Build • Fiber deployment • 5G planning & deployment • Towers • OSS

Selected Relevant Experience

FirstNet – Advisor to FirstNet Board of Directors and NTIA

- Served as subject matter advisor to FirstNet board and NTIA on wireless technology, applications, and security. Worked with NTIA on developing RFP, criteria, and assessment of key suppliers and operating model

US Communications Service Provider – Accelerate Fiber Deployment

- Assessed existing fiber infrastructure and recommended a data centric model for accelerating fiber deployment

US Communications Service Provider – Customer segmentation analysis and network quality impact on churn

- Developed analysis on network quality impact on customer satisfaction and churn (when a customer drops service for another competitor)

Education and Training

Education	BA & MBA University of California, Los Angeles

Matthew Burnham

DMV Public Service – Consulting Lead

Arlington-based

Matthew is the Consulting Lead for Washington, DC, and Virginia public sector organizations. He has been with Accenture for 13 years. He works with the elected and appointed executives at public sector organizations, including nonprofits as well as state, city, and county government agencies, on issues related to strategy, policy implementation, and organizational transformation.

He has authored numerous pieces on his work with government officials and has contributed to publications such as the American Public Human Services Association's Policy and Practice journal, and governing magazine.

Selected Relevant Experience

Fairfax County, VA

- Working with the County Executive's team to conduct a community-wide strategic planning process; conducting inclusive, broad-based community and staff engagement; defining a manageable number of resident-centric, quantifiable, and meaningful key performance indicators; and prioritizing and defining strategies and implementation approaches.

Washington DC

- Served as a senior public sector advisor for the Accenture team that partnered with the DC Public Schools to develop coordinated & actionable solutions to close the digital divide during the pandemic, including analysis and recommendations for equity, connectivity, device procurement and distribution, technology support, and business processes.

Washington DC

- Served as the Engagement Director for the Accenture team that partnered with DC Water's new CEO to redesign the agency's organizational structure as well as conduct an organizational assessment intended to prioritize focus and investment to enhance customer service, employee experience, and affordability.

Fulton County, GA

- Worked with Fulton County's new County Manager and Leadership Team and led the implementation and coordination of multiple projects for the $1 billion County, including defining a new strategic plan, redesigning the County's budget process, developing a performance management strategy and roadmap, architecting a change management approach, and developing a system-wide Justice Reinvestment Initiative.

Southeastern Minnesota Counties

- Collaborated with county, state, and foundation stakeholders to redesign human services delivery and administration from a county-based to a regional governmental authority.
- Created a multi-county operating model framework for human services delivery that would reduce overall costs by 15 percent, yield economies of scale, and enable the 12 counties to deliver higher quality, more accessible services for citizens.

Education and Training

Education	BS – University of Virginia

David Metnick

DMV Public Service – Account Lead

Arlington-based, Arlington resident

David is a managing director in Accenture's Health and Public Service business. He is Accenture's Lead for Health and Public Service across Maryland, Virginia, and Washington, DC.

David's extensive career with Accenture spans 16 years. In his work, he has partnered with G2000 companies, education providers, governments, non-profits, healthcare, and financial services clients to design and implement profound business transformations. Most recently, he has served as the State & Local Government Human Capital Practice Lead, the North America Higher Education Management Consulting Lead, and the executive sponsor for global talent and organization capability development.

Selected Relevant Experience

Virginia, Washington, D.C., & Maryland

- Account lead for public sector entities in the DMV. Identifies and drives value for Virginia, DC, and Maryland agencies and departments, confirms delivery expectations are met, and brings the best of Accenture to VA, DC, and MD. Served as a senior public sector SMA for DC Public Schools digital divide program.

Accenture Talent & Organization Practice

- Led Talent & Organization Practice for North America State, Provincial, and Local Client Service Group - David is a senior management consulting executive specializing in designing and developing talent and organization, enterprise services transformation, shared services, software as a service, and other operational improvement strategies for organizations to better achieve their missions.

Accenture Education Practice

- Led Accenture Management Consulting's Education Industry Practice - Day-to-day responsibility spanned Education and focused on driving value and innovation to clients across four market segments (K-12, post-secondary / higher education, oversight, and for-profit education providers). Advised more than 40 government, education, healthcare, non-profit, and global industry clients.

Various State and Local Government and Education Clients

- Harnessed innovation, program management, leadership, and change management to tackle even the most complex issues with more than 30 industries, education, government, nonprofit and health-care clients. Representative clients have included, but are not limited to, Yale University, the University of Michigan, New York University, Nassau County, and the District of Columbia.

Education and Training

Education	BBA, Management Information Systems and HR Management – George Washington University MBA – The John Hopkins University
Professional Licenses/Certifications/ Memberships	Serves on Advisory Boards across The George Washington University and George Mason University Served as Board Member of College Summit – National Capital Region

LEGAL DISCLAIMER

This document is the response by Accenture ("Accenture") to the Request for Proposal ("RFP") issued by the County of Arlington, Virginia ("Client"). This document together will all related documents submitted by Accenture shall collectively constitute and be referred to as the "Proposal".

The information, material, ideas, and concepts contained in this Proposal are to be used exclusively to evaluate the capabilities of Accenture to provide assistance to Client. This Proposal is being supplied with the understanding and expectation that Client will keep it confidential and will not disclose, duplicate or otherwise use it, in whole or in part, without the prior written consent of Accenture.

The content of this Proposal is subject to formal contract negotiations. Nothing in this Proposal or the RFP shall form the basis for any contract and nothing contained in this Proposal or the RFP, including without limitation any statements regarding pricing or service commitment/guarantee, will be binding against Accenture unless expressly agreed to by Accenture under a formal contract. Without limiting the generality of the foregoing, any reference to a roadmap or potential future functionality in this Proposal is indicative and illustrative only, and no assurance is given by Accenture as to whether any or all of the functionality will be provided, either within the estimated timeframes or at all. All representations and warranties, whether express or implied by statute, law or otherwise, are hereby excluded.

This Proposal was prepared on the instructions and information given by Client and has not had the opportunity to conduct any due diligence or sought to independently confirm the completeness or accuracy of such information. Thus, this Proposal is an initial response for informational purposes only. Accordingly, no responsibility is accepted by Accenture for any inaccuracy or error or any action taken or not taken in reliance on this Proposal. Client should not rely on any matter set out in this Proposal which is not subsequently included in any contract between Accenture and Client.

This Proposal makes reference to trademarks that may be owned by others. The use of such trademarks herein is not an assertion of ownership of such trademarks by Accenture and is not intended to represent or imply the existence of an association between Accenture and the lawful owners of such trademarks.

Accenture interprets the following words and phrases used in the proposal in the manner indicated: "maximize", "optimize", "optimal" means to improve to a commercially reasonable degree; "minimize" means to reduce to a commercially reasonable degree; "best" means leading or of a high standard; "partner", "partnerships" does not mean a legal partnership, but rather a collaborative relationship; "right" where used as an adjective means appropriate; and "ensure" and "enable" means to use commercially reasonable efforts to implement.

Accenture reserves the right to modify its proposed pricing based on completion of due diligence activities, final approval by Accenture management, and Client and Accenture's agreement on a definitive agreement covering the work associated with this pricing.

These limitations are not in any way intended to restrict continuing business discussions between Client and Accenture.