Broadband Focus Group Meetings: 
A Vision of the Possibilities 

Arlington County, Virginia 

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Broadband Focus Group Meetings: A Vision of the Possibilities

I. Overview

In 2011, an extensive Community Needs Assessment was undertaken in Arlington County in preparation for cable franchise renewal negotiations with Comcast. After the completion of the Community Needs Assessment, the County continued the process of gathering information regarding the technology and connectivity needs of public agencies, schools, community groups, and the public. Focus group meetings were held in October 2012 with a diverse group of representatives of various groups, organizations, agencies, businesses and institutions interested in using high speed (broadband) communications in Arlington County.

The goal of these sessions was to facilitate discussion, gather information, and exchange ideas regarding current and future broadband needs in Arlington County. The process included a discussion about the capabilities of current County broadband resources through: (1) the Institutional Network provided by Comcast; and (2) ConnectArlington, the new broadband community network under construction in Arlington County.

A group of 40 selected community leaders and local experts from education, business, technology, government, and community organizations participated in four focus group meetings on October 3-4 2012. During those meetings, information was provided about existing communication networks within Arlington County, how those networks are currently used, and their strengths and weaknesses. Additional, detailed information was provided about ConnectArlington and its potential applications. Then, three questions were posed to these participants for discussion:

- What are the connectivity and technology issues/barriers faced by local government agencies, educational institutions, community and neighborhood groups, and residents?
- How do you think ConnectArlington can be used to help address those connectivity and technology barriers?
- What future applications/uses of ConnectArlington do you think are important for Arlington local government agencies, educational institutions, community and neighborhood groups, and residents?
The information presented below is an analysis and synthesis of the hundreds of responses to these questions by the participants. The areas of agreement and groupings of responses to each question are presented. A copy of the notes from each focus group is included as Appendix A to this report.

II. Responses to Questions by Participants at Initial Four Focus Groups

The participants in the October 3-4 focus groups provided a great deal of input regarding their desired technical attributes and priority uses and applications of a broadband network and ConnectArlington. A summary of their comments is provided below and on the following pages:

A. Desired Technical Attributes

1. Available in all areas of the County
   a. Communitywide -- ubiquitous communications
   b. Equitable connectivity County-wide
   c. Broad community emergency communications anywhere in the County
   d. Potential for alleviating need for physical facilities to deliver services

2. Universal free or low cost Wi-Fi
   a. Available to students and low income populations
   b. Student friendly “mobile” technology
   c. User mobility

3. Nimble -- Able to be expanded to meet future broadband needs
   a. Future proof to accommodate unexpected future technology needs
   b. Accommodate virtual reality applications
   c. Prototyping/sandbox development/coordination of ideas/best solutions/test bed

4. Regional Interconnectivity
   a. Interconnectivity with other local governments
   b. Linking up with DC Connect

5. Remote monitoring of all types
   a. Sensor technology for internal building awareness/security
   b. Air/water quality sensors
   c. Heath care at home monitoring
   d. RFID parking meters/lots
**Desired Technical Attributes** (continued)

6. Redundant network with a high level of network security that can survive in disaster
   a. Survivability of ConnectArlington in catastrophic situations
   b. SCADA system security
   c. Secure physical access to public ports
   d. Emergency mitigation response

**B. Priority Uses and Applications**

1. Address digital divide issues
   a. Provide low income populations network access
   b. Provide network access to non-governmental organizations to serve digital divide populations
   c. Network technology available in community spaces with funds to support ongoing costs in those facilities/networks
   d. Provide grants/incentives for providing technology assistance to seniors and others who are not technology-savvy

2. Build and enhance civic dialogue and greater government transparency
   a. Connect public into civic dialogue
   b. Archive/stream public meetings
   c. Live 2-way video communications to County functions
   d. Virtual board meetings, mass participation
   e. Public gathering spaces connected to ConnectArlington (community centers, hospitals, libraries, etc.)

3. Enhance public safety and disaster preparedness
   a. Disaster recovery through effective communication
   b. Public & private building access for emergency communications -- public safety needs
   c. Broad community emergency communications -- anywhere in the community
   d. Geo-tagging of room locations in public and/or private buildings for emergencies
Priority Uses and Applications (continued)

4. Expand and improve education and educational opportunities (K-College and Job Retraining)
   a. Stimulus to re-think teaching, learning, and professional development
   b. Improve delivery of current educational resources – to home and classrooms (academic, vocational)
   c. Connect schools for online classes at other locations such as community centers
   d. Connectivity for workforce development (schools, higher education, general populations of workers)
   e. Education for non-English speakers
   f. Expand and improve connections between K-12 and post secondary institutions

5. Greater efficiency and effectiveness in delivery of government services
   a. Use communications/technology to transform delivery of government services to the public
   b. Collaborative efforts with other government levels and organizations for delivery of services
   c. Easier access to public health information
   d. Reliability of data -- better/more accurate law enforcement records
   e. Kiosks for public information in public areas of County
   f. Utility meter reading

6. Expand and improve delivery of services by nonprofit and community organizations
   a. Free network connectivity available to social/nonprofit services to coordinate services
   b. Grants/resources available to assist with providing expertise/human resources
   c. Videoconferencing facilities at community centers
   d. Interactive HD video with local, state and regional public TV and public access organizations (Arlington Independent Media)
   e. HD quality access for medical/health applications
   f. Open up to non-governmental non-profit organizations as local communication providers to benefit local economy and business development
An analysis of the many desired applications identified during these meetings revealed the following categories of the highest priority uses of ConnectArlington:

- Enhance public safety and disaster preparedness
- Expand and improve educational opportunities (K-12 and job retraining)
- Improve civic dialogue for greater government transparency
- Expand and improve the delivery of services by government, nonprofit and community organizations
- Address digital divide

III. October 25 Meeting of Arlington County Executive Leadership

The comments from the initial four focus groups as provided above were compiled, analyzed, and presented on October 25 to a meeting of the Arlington County Government Manager and the Arlington County School Superintendent and some of their senior staff. The meeting participants responded to the information provided with enthusiasm and the desire for a more in-depth exploration of opportunities and demonstration projects.

IV. October 25 Follow-Up Meeting with Participants from Initial Four Focus Groups

On October 25, a group of 16 persons who participated in the four focus groups held in early October met to review the outcomes of the four groups (see Appendix B) and provide reaction and input. The participants in this focus group provided additional comments during this meeting, as listed below and on the following pages:

- A desired outcome of ConnectArlington should be WiFi hotspots throughout the County.
- Concerns about how to make the transition from desired applications to reality.
- How do we define the “value proposition”?
- WiFi delivery of K-12 class content to be accessed outside of the classroom (e.g., at home to a tablet).
- Smarter use of technology by government in its interaction with area business and residents (e.g., permits obtained on-line).
- More mobility of government workers – many jobs would be desirably handled by workers mostly in the field (e.g., use of tablet by traffic officer to handle issuance and immediate payment of a traffic violation citation).
Comments by Participants at October 25 Meeting (continued)

- Get app developers involved with the community – apps needed that are specific to the needs of County agencies, educators, residents, etc.
- Cross-platform compatibility needed for all hardware & software to be used by all users.
- Role of government needs to be determined re providing connectivity to organizations, residents, etc.
- Most nonprofits do not have funds available to pay for connectivity, so connectivity for nonprofits by County would be a good investment because if nonprofits go out of business, their clients would seek services from government instead.
- What is the incremental value of very high bandwidth internet connection vs. existing internet service levels? (Response: it is analogous to the value of building out the water distribution system to all County locations, rather than having everyone rely on their own well for water.)
- ConnectArlington should encourage and support the ability of end users to create and deliver content, rather than merely being a system for fast downloads.
- Advantage of ConnectArlington is standardization of its use, regardless of the location of the connection.
- Real time tracking of buses in the County.
- Ability to attend meetings of the County Board or other government agencies from home.
- Ability to deliver real-time displays of audience comments, in order of how many online participants “like” the comments (a common activity in social media today).
- Interface with ConnectArlington must be user-friendly.
- Need to gather more input regarding potential applications for ConnectArlington from diverse set of community residents and groups.
- HD video demonstration (while connected to participants from another community) needed to show what ConnectArlington can do.
- ConnectArlington and its applications need to be available to everyone (Digital Divide concerns).
- Plan needs to be developed to make applications available (e.g., how can needed information be access from the cloud?).
- Improvements needed re network reliability, speed and cost to access.
- Training in the use of ConnectArlington hardware and software must be emphasized for distance learning and other apps to succeed.
- Cell towers and other technical components will need power source redundancy to continue operating during adverse weather and other crisis situations.
Comments by Participants at October 25 Meeting (continued)

- Scrutiny needed re determination of activities, their associated costs, and how to pay these costs.
- Technological applications and connectivity to enable on-line activities instead of the need to come to an office to pay fees, get permits or information, etc.
- Need to set up a temporary ConnectArlington open access point (e.g., at the Courthouse) so people can experience what a very fast internet connection can do.
- Need to identify criteria for a demonstration that would really “dazzle.”
- Demonstration should be able to show what high bandwidth transmissions look like on mobile devices, including wearable media.
- Use Arlington’s established sister cities in demonstration of high bandwidth connectivity.
- Demonstration should illustrate a day in the life of Arlington in 2025 (government, education, community). In addition, illustrate what is possible right now.
- Show how ConnectArlington can improve democracy and government with a story that knits together all of the ideas suggested for the demonstration.
- PSAs created by students.
- Use ConnectArlington in real time to locate nearest charging station for electric cars.
- WiFi in dog parks.
- Use ConnectArlington to help communicate with and monitor elderly relatives.
- Use ConnectArlington to interface with personal emergency notification devices that monitor someone’s health and safety at all times.
- How can ConnectArlington tie in with the IBM “Smart Cities” initiative?
- New buildings in County should include up-to-date media communications technologies.
V. Primary Conclusions

After reviewing and analyzing the information gathered from the initial four focus groups, the meeting of the County Manager and Superintendent of Schools, and the follow-up meeting on October 25 with participants of the four focus groups, the following are primary conclusions.

*ConnectArlington is viewed as a transformative asset* -- a path to information and knowledge that will provide benefits that can be both identified now and many that are yet to be identified and articulated. The participants agreed that ConnectArlington should encompass the following traits:

- Ubiquitous -- Anywhere/Anytime free or low cost broadband access
- Efficient and effective service delivery by local government, education, and community organizations
- Ensure community resiliency in times of crisis
- Future proof to accommodate unexpected future technology needs

Other primary conclusions include the following.

- One or several demonstration projects need to be implemented in the next 12 months to demonstrate the enormous potential and opportunities presented by ConnectArlington for broadband communications. One of these demonstration projects should involve students and link with a post secondary educational institution. This sort of project can assist in beginning a process that moves from identifying desired applications to the actual implementation of such projects and applications.

- A need to more clearly explain ConnectArlington and broadband to community leadership and to engage the educational, government, and business sectors of the community in partnerships for the development of innovative and as well as practical broadband applications which can run on ConnectArlington.

- A need to make free or affordable broadband available through ConnectArlington to community service organizations who are often called upon to step in the service gap when government and school budget cuts result in the cut back of services.
GROUP #1

What are the connectivity and technology issues/barriers faced by local government agencies, educational institutions, community and neighborhood groups, and residents?

1. Access to tech to "tap in" affordable technology for public user
2. Connection to online'
3. Importance of SCADA security in an integrated network
4. Costs for nonprofits to produce programs—direct services, education need some help to use technology
5. Lack of back up for network facilities
6. Education for non-English speakers
7. Uncertainty of future capability (e.g., equipment)
8. Rapid rate of change to technology leads to rapid obsolescence of technology
9. Quality of Service issues
10. Education for seniors and digital divide
11. Need for communication technology in community spaces and the cost of ongoing support of those facilities
12. Need for more "on site "services ongoing not one time
13. Videoconferencing at community centers
14. Need available technology close to the home
15. Privacy security issues for health and other types of records
16. Cyber security
17. Need for easier access to public health information
18. Need for educators who need health information
19. Research to justify cost of advance technology
20. IP standard changes
21. Operational cost of running facilities
APPENDIX A – Notes from Broadband/ConnectArlington Focus Group Meetings

How do you think ConnectArlington can be used to help address those connectivity and technology barriers?

1. Public gathering space connected to Connect Arlington (e.g. hospitals, community centers)
2. Patient monitoring and other public health monitoring
3. Campaign to educated community about importance of completing construction
4. Network driving job creation
5. Maximize access throughout community – hardwired
6. Marketing and education to reach vulnerable groups
7. Sponsorships- Jointly w/ non-government agency
8. Public private partnerships
9. Ensure support and services are in place to support Phases I-II b before securing funding for Phase III
10. Physical security in public spaces to deter crime and increase quality and value in densely populated areas
11. Use kids as training resources for other residents and seniors
12. Connect schools for online classes or other locations such as community centers
13. Develop grants from nonprofit organizations to create funds for applications
14. Get faith community organizations involved with existing I.F. community network
15. Enhance the human side of the technology

What future applications/uses of ConnectArlington do you think are important for Arlington local government agencies, educational institutions, community and neighborhood groups, and residents?

1. Diverse connectivity for local business
2. Back-up in case of emergency
3. Education for non-English speakers
4. Having the resources for low income areas in order to empower people to use them
5. Dedicated community video conferences.
6. Having spaces for people in the community to come together and use Connection Arlington (public gathering)
7. Public health applications, public chat helplines
8. Vitals at hospitals monitored through electronics
9. Education direct services
10. Cameras to be used for public safety in high density area
11. Schools and online classes
12. Matching tech savvy youth with seniors to use
13. Also having the connectivity in low income places
14. Use for faith communities for their followers-meeting spots
15. Help monitoring elders
16. Skype type services to monitor elders/family
17. Virtual Arlington connect to a government employees for help
18. Resource center for applications development
19. Live 2 way communications to county functions (videos)
20. Taping/archiving work for people to view at a later time
21. Arlington Villages Senior Again in Place
22. Sharing learning resources cools
23. Online “digital “teen hangouts
24. Teen network Board
25. Public safety in Parks and Recreation
26. Live coverage of Youth sports
27. Anonymous reporting of County issues, health issues/mobile safety
28. ER consults with doctors
29. Mobile clinics having connectivity
30. Libraries bookmobiles
31. Green applications
32. Arlington Social Networking
GROUP #2

What are the connectivity and technology issues/barriers faced by local government agencies, educational institutions, community and neighborhood groups, and residents?

1. Sustain technology investment
2. Sustain personnel support/training
3. No connectivity w/applications with regional and state jurisdictions
4. Disaster recovery with effective communication
5. Uniformity of sharing infrastructure and information
6. Cost of lighting network and satisfying growing demand for usages of bandwidth and support (who pays and how paid)
7. Info producers, consumers connectivity, management policy and structures, security of network
8. Standards for interfacing with others
9. Tech refresh for cable franchise renewal
10. PR for emergency purposes-knowledge base
11. Reliability of date accessed- better/ more accurate law enforcement records
12. User mobility, Wi-Fi/cell tower support
13. In building design – distributed antennas w/ funding model
14. Sensor technology for internal building awareness/security
15. Mapping and occupant locations in building
16. Multi lingual needs
17. Electrical power insufficiencies n older area
18. Immigrant/senior digital divide
19. System silos
20. Compatibility of core to last mile bandwidth levels
21. Disconnect between schools/county protocols
22. Public safety and security/cyber security/practical issues
23. Protocols for different levels of crisis affecting speed of decision making
24. Policy making
25. Need HD video conferencing for stay in home case with privacy compliance for patient info
26. End user information appropriately available, liability issues
27. Public safety, public health silos, public emergency notice
28. Secure physical access to public ports
29. Fault tolerant systems in severe storm situations
How do you think ConnectArlington can be used to help address those connectivity and technology barriers?

1. Inter-jurisdictional expansion of communication across regional computer-aided dispatch (CAD2CAD, etc.)
2. Use police system for school emergency communications
3. HD Quality access for medical/health applications
4. Interface with National High School Networks and facilitate private nets
5. Sensor technology communications for public awareness for public safety
6. Use video information for PSAP (911 call centers)
7. Interactive HD video/with local, state and regional public TV and public access organizations
8. Shared video bank and archive for public-educational-government (PEG) broadcast purposes
9. Correctional institutions video applications, courts-medical-legal psychiatric
10. Early release-probation tracking
11. In-building communications for public safety
12. Social media for public safety and emergency
13. Prototyping/sandbox development/coordination of ideas/best solutions/test bed
14. Incident response with knowledge base of directory of available resources for rapid response
15. Incident tracking
16. Public safety port development for on street communications
What future applications/uses of ConnectArlington do you think are important for Arlington local government agencies, educational institutions, community and neighborhood groups, and residents?

1. Interconnectivity with other local governments
2. High quality video conferencing
3. Share high quality video with the schools/Arlington Independent Media/local government (PEG)
4. Video archive
5. Video arraignments, any video arraignments
6. In-building communications/underground (Metro, etc.)
7. Sandbox for testing new apps (developments)
8. Developing a list of experts (directory)
9. Kiosks for public information
10. Increase broadband capabilities of libraries and local community centers
11. Disseminate information – public safety ports
12. Cameras at public locations for safety/security
13. Regional technical protocols information exchange
14. Reverse 911 network
15. Emergency mitigations response
16. Nursing homes – aging at homes
17. Doctors monitoring patients after discharge
18. Augments reality to support first responders and work force
19. Individualize push technology
20. 2-way communications, public hearing-public to use information and share
21. Voting from home
22. Public transportation information Kiosks
23. Medical sensor diagnostic monitoring
24. Archive/stream public meetings over Internet
25. Electronic public maps for information
26. Neighborhood resource exchange for day to day and emergency
27. Community intranet
28. Support for non-government apps – customer tracking/behavior enrollment
GROUP #3

What are the connectivity and technology issues/barriers faced by local government agencies, educational institutions, community and neighborhood groups, and residents?

1. Equity of connectivity
2. Lack of access for students at home (Digital Divide)
3. Unequal availability of higher speed communications
4. Affordability of broadband in home
5. IT as opportunity innovation center vs. cost center
6. Availability of time and facility for IT training in video labs for students
7. Tendency to design to lowest common denominator
8. Accommodate flipping classrooms
9. Unreliability of connection for classrooms
10. “Competition” issues
11. Upstream capacity
12. Firewall issues that prevent access to student videos
13. Multiplicity of and compatibility with student devices
14. Federal and state requirements and learning content
15. Bandwidth demand – applications and devices
16. Commercial service or any broadband availability for NOVA, George Mason (GM) and other northern VA higher education schools
17. Increase in automated communications & geo-tagging (video surveillance).
18. Security of information on network (e.g., protecting minors)
19. Reliability of infrastructure
20. General lack of high speed broadband (100 Mb) at any time of day when needed anywhere
21. Community awareness
22. “Student friendly” mobile technology
23. Disconnect with other media agencies – WETA
24. Resistance to change among some in schools to use available technology
25. Need for understand of using technology by teachers and faculty
26. Equitable provision of mobile technology and content through them
27. Using right tool for the task at hand
28. Access, availability and knowledge of distance learning between K-12 and higher education resources
29. Media storage resources for large data and archives and transfers
30. Future proofing to accommodate unexpected future technology needs
31. Staff to investigate future apps
32. Linking with DC Connection
33. Multi-tasking
34. Technology vs. educational challenges
35. Political obstructions

How do you think ConnectArlington can be used to help address those connectivity and technology barriers?

1. Accommodate security of viewing acceptable sites for minors
2. Connectivity for workforce development (schools, higher education, general populations of workers)
3. Accommodate virtual reality apps
4. Broad international connectivity to educational institutions, non-governmental organizations (NGO’s), etc.
5. Connectivity all the way to the home for students
6. More access for mobile devices
7. Community wide – ubiquitous communications – anytime/anywhere
8. Accommodate data plan cost for low income
9. Create environment for “human side” of learning
10. Support teleconferencing and video conferencing on multiple devices and platforms
11. Provide support and staffing for video teleconferencing, etc.
12. Provide “full range” of the technical side-communications/laptop/SW complete needs
13. Adapt technology to various teaching styles
14. Foundation for set of complementary devices-public and private
15. Provide codes for student accounts or library card type ID to authorized access to free or low cost connectivity for low income student
16. Support for seniors at senior centers for learning opportunities for technology education
17. Upgrade current programs
APPENDIX A – Notes from Broadband/ConnectArlington Focus Group Meetings

18. Publicize advantages of technology to encourage use of broadband and applications
19. Broad community emergency communications anywhere in the community
20. Ubiquitous access to an Arlington “portal” for local information
21. Survivability of ConnectArlington in catastrophic situations
22. Stimulus for rethinking teaching, learning, and professional development
23. Access to data to enable real world projects
24. Enable-simultaneous interactions across distances such as musical collaborative performances, etc.
25. Two way-multipoint capability

What future applications/uses of ConnectArlington do you think are important for Arlington local government agencies, educational institutions, community and neighborhood groups, and residents?

1. Having future public connectivity to schools/George Mason/NVCC etc
2. County-wide hotspots
3. Distance learning connectivity apps
4. Expand interactions with schools to help people with job preparation
5. Virtual reality
6. Linking up with DC Connect
7. International exchange
8. Public information kiosks
9. Equipment available at senior centers (with staff support)
10. Creating collaborations between schools and senior/community centers with student technology mentors
11. Utility reading
12. Security for SCADA systems
13. Opportunity for economic development
14. Opportunity for easy access and reduce geographic distances and income requirements for use of technology
15. Educational institutions can bring more technology into schools
16. Connecting people into civic dialogue
17. Convene topic based town hall meetings
18. Connection to people around the world for educational purposes
19. Be aware of negative impacts of technology
20. Healthcare at home (monitoring systems)
21. Be prepared for exponential expansion in the future
22. Public broadcasting as a resource initiator
23. Internet Protocol Television (IPTV) broadcasting
24. Arlington Independent Media as a resource and innovator
25. ConnectArlington portal (auto connect to portal page)
26. Apps designed to assess a person’s skill sets and help to match-up with potential employment
27. Tutoring support resources (professional or K-12)
28. Enhanced crowd sourcing (ad hoc data collection)
29. Citizen science collaborations
30. Enhanced service learning
31. Citizen enforcement (public safety)
32. Video monitoring/webcam
33. Geo-tagging of room locations in public and/or private buildings for emergencies
34. Enhances intranets and extranets
35. Inexpensive devices
36. Arlington cloud/archiving/data storage
37. Video over IP
38. Apps that ensure safety of minors
39. Cost savings
40. University to community interactions
GROUP #4

What are the connectivity and technology issues/barriers faced by local government agencies, educational institutions, community and neighborhood groups, and residents?

1. Alternative broadband services for residents
2. Security of network in open environment
3. Panoply of communication options - film, wireless needs transformation to government services – and how they are provided
4. Using mobile technology for virtual government services
5. Potential for alleviating need for physical facilities
6. Need for physical presence for interactions with local government
7. Maintain human contact with evolving technology environment
8. Home-based interaction with community
9. Support automated fund transfer for service – parking
10. Regulatory and legal barriers
11. Last mile link to homes issues
12. Public safety agencies need access to private buildings for emergency communications
13. Public/private sector divisions – competition with private sector?
14. Drivers for broadband transformation of information activities into new paradigms
15. In context, information/data-based routine actions, to meet transformation for convenience, cost avoidance, nuisance avoidance with fee-based support
16. Need for connectivity to coordinate resources for social/nonprofit services in real time
17. Age/generational views of users of technology
18. Cost issues for developing incubator facilities – real estate costs
19. Small business communications needs
20. Collaboration for public/private organizations
21. Commercial metering – cost caps for exceeding allotted bandwidth
22. SCADA system security
23. Taking advantage of entrepreneurial attitudes, energies, for more advanced apps
24. Competitive/grant-based resources
How do you think ConnectArlington can be used to help address those connectivity and technology barriers?

1. Improve delivery of current educational resources – to home, classroom lectures, etc.; to adults, etc. (academic, vocational)
2. Enhanced transportation facilities – commuting emergencies, etc. – with sensors to guide emergency vehicles to fastest routes
3. Demonstrate to businesses and investors how Arlington is different than other places
4. Open up to non-governmental organizations as local communication providers to benefit local economy and business development
5. Provide wholesale facilities to non-government entities
6. Review all County/citizen interactions
7. Collaborative efforts with other government levels and organizations for delivery of services
8. Hub for healthcare – doctor visits, diagnosis, alternative interaction by Connect Arlington
9. Lower healthcare and government services costs with broadband communications
10. Employ consumer-based technology to deliver services
11. Better decision support with “Big Data” in real time power management (“Smart Grid”)
12. Video security on the street – market capability with private sector
13. Saturated video coverage of designated riskier neighborhoods (public safety)
14. Employer/employee communications for connecting workers and hiring companies
15. Support for Arlington as “Innovation County”
16. Support directory of expert knowledge base for other jurisdictions to deliver solutions on demand
17. Universal free wireless
18. Communications “test bed” environment
19. Context-specific communication platform
20. Deep transformation for one or two major areas – public health (virus alerts), public safety (crimes in progress) with communications
How do you think ConnectArlington can be used to help address those connectivity and technology barriers?

1. Network security while transporting public data
2. Government transformation with apps
3. Virtual board meetings, mass participation
4. Virtual voting
5. RFID parking meters/lots
6. Using traffic cabinets to view inside of building in time of crisis
7. Virtual government
8. Virtual/physical lab
9. Connectivity between faith-based communities and government (social services)
10. Real-time tracking of public transportation vehicles
11. Remote diagnostics (health) in real-time
12. Using traffic and other information to make analytical decisions in real-time
13. Big data
14. Matching employment opportunities with employers and employees
15. Provide vocational training
16. Instructional materials available to the public (ESL)
17. Virtual reality
18. Fundamental reexamination of education
19. Fundamental change at local government business
20. Virtual meeting, two-way communication
21. Create resource directory of specialized expertise
22. Partnering with private sector to create applications
23. App to connect hospitals to first responders
24. App to connect citizen records to first responders from hospital
25. Identify information that schools and government want to push out to the community
26. Air/water quality sensors
APPENDIX B

Presentation on Outcomes of Focus Group Meetings
Questions Discussed/Brainstormed by All Groups

- What are the connectivity and technology issues/barriers faced by local government agencies, educational institutions, community and neighborhood groups, and residents?
- How do you think ConnectArlington can be used to help address those connectivity and technology barriers?
- What future applications/uses of ConnectArlington do you think are important for Arlington local government agencies, educational institutions, community and neighborhood groups, and residents?
Public Input: What We Learned?

Focus Groups participants viewed ConnectArlington as a transformative asset!

A path to information & knowledge that will provide benefits that can be both identified now and many that are yet to be articulated.

- Ubiquitous- Anywhere/Anytime free or low cost broadband access
- Efficient & effective service delivery by local government, education, and community organizations
- Ensure community resiliency in times of crisis
- Future proof to accommodate unexpected future technology needs
Summary
Categories of Findings

- Desired Technical Attributes
- Priority Uses/Applications

Desired Technical Attributes of ConnectArlington

- Available in all areas of the County
- Universal free or low cost Wi-Fi
- Nimble -- Able to be expanded to meet future broadband needs
- Regional interconnectivity
- Redundant network with a high level of network security that can survive in disaster
- Ability to do remote monitoring of all types
### Desired Technical Attributes of ConnectArlington

- Available in all areas of the County
  - Communitywide -- ubiquitous communications
  - Equitable connectivity County-wide
  - Broad community emergency communications anywhere in the County
  - Potential for alleviating need for physical facilities for delivery of services

### Desired Technical Attributes of ConnectArlington

- Universal free or low cost Wi-Fi
  - Available to students and low income populations
  - Student friendly “mobile” technology
  - User mobility

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Desired Technical Attributes of ConnectArlington

- Regional Interconnectivity
  - Interconnectivity with other local governments
  - Linking up with DC Connect
- Remote monitoring of all types
  - Sensor technology for internal building awareness/security
  - Air/water quality sensors
  - Health care at home monitoring
  - RFID parking meters/lots

Desired Technical Attributes of ConnectArlington

- Redundant network with a high level of network security that can survive in disaster
- Survivability of ConnectArlington in catastrophic situations
- SCADA system security
- Secure physical access to public posts
- Emergency mitigation response
<table>
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<td>- Provide low income populations network access</td>
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<td>- Provide network access to non-governmental organizations to serve digital divide populations</td>
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<td>- Network/ technology available in community spaces with funds to support ongoing cost in those facilities/network</td>
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<tr>
<td>- Provide grants/incentives for providing technology assistance to seniors and others who are not technology-savvy</td>
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### Priority Uses of ConnectArlington

- Build and enhance civic dialogue and greater government transparency
  - Connect public into civic dialogue
  - Archive/stream public meetings
  - Live 2-way video communications to County functions
  - Virtual board meetings, mass participation
  - Public gathering spaces connected to ConnectArlington (community centers, hospitals, libraries, etc.)

### Priority Uses of ConnectArlington

- Enhance public safety and disaster preparedness
  - Disaster recovery through effective communication
  - Public & private building access for emergency communications -- public safety needs
  - Broad community emergency communications -- anywhere in the community
  - Geo-tagging
Priority Uses of ConnectArlington

- Expand and improve education and educational opportunities (K-College and Job Retraining)
  - Stimulus to re-think teaching, learning, and professional development
  - Improve delivery of current educational resources – to home and classrooms (academic, vocational)
  - Connect schools for online classes at other locations such as community centers

Priority Uses of ConnectArlington

- Expand and improve education and education opportunities (K-College and Job Retraining) [continued]
  - Connectivity for workforce development (schools, higher education, general populations of workers)
  - Education for non-English speakers
  - Expand and improve connections between K-12 and post secondary institutions
**Priority Uses of ConnectArlington**

- Greater efficiency and effectiveness in delivery of government services
- Use communications/technology to transform delivery of government services to the public
- Collaborative efforts with other government levels and organizations for delivery of services
- Easier access to public health information

**Priority Uses of ConnectArlington (continued)**

- Reliability of data -- better/more accurate law enforcement records
- Kiosks for public information in public areas of County
- Utility meter reading
Priority Uses of ConnectArlington

- Expand and improve delivery of services by nonprofit and community organizations
  - Free network connectivity available to social/nonprofit services to coordinate services
  - Grants/resources available to assist with providing expertise/human resources
  - Videoconferencing at community centers

Priority Uses of ConnectArlington

- Expand and improve delivery of services by nonprofit and community organizations [continued]
  - Interactive HD video/with local, state and regional public TV and public access organizations (AIM)
  - HD quality access for medical/health applications
  - Open up to non-governmental organizations as local communication providers to benefit local economy and business development
Discussion

- Questions and Answers
- Your thoughts & input!
  - What additional technical attributes are needed?
  - What additional uses or applications should be available?