

*Memorandum of Understanding (MOU) for a
Regional NG9-1-1 Call Processing System
for Arlington County and City of Alexandria*

Arlington County and City of Alexandria, VA



DRAFT 16

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Memorandum of Understanding (MOU) for a Regional NG9-1-1 Call Processing System For Arlington County and City of Alexandria

This Memorandum of Understanding (MOU) for a Regional Next Generation 9-1-1 (NG9-1-1, see Appendix 5, Definitions), Call Processing System between the County Board of Arlington County (“Arlington”) and the City of Alexandria (“Alexandria”), VA, referred to singularly as “Party” and collectively as “Parties”, is effective as of the last date of execution of this MOU.

1. Regional NG9-1-1 Call Processing System (the “System”)

This MOU governs the planning, design, procurement, installation, configuration, implementation, operation and lifecycle management (see Appendix 5, Definitions), of a new shared NG9-1-1 Call Processing System, the “System” (see Appendix 5, Definitions), to support the region’s goals for interoperability, consistency and efficiency of handling 9-1-1 calls.

2. Statement of Purpose for the System

It is the purpose of *Phase One* to provide a single NG9-1-1 call processing System shared by Arlington County, Virginia and City of Alexandria, Virginia. This shared call processing capability is designed with goals of increasing resiliency, geo-diversity, cost-effectiveness, and interoperability, including the following primary and supporting objectives.

2.1 Primary System Objectives:

- a. Create a single integrated architecture allowing the Parties to receive and process their respective 9-1-1 and 10-digit telephone calls from either jurisdiction’s primary or backup 9-1-1 center. *Note: Phase one does not include the expectation that either jurisdiction will answer each other’s 9-1-1 calls, until other technical and operational issues are resolved.*
- b. Provide a NG 9-1-1 Call Processing System that is capable of integrating with the National Capital Region (NCR) partners and the Next Generation 9-1-1 (NG9-1-1) Emergency Services IP (Internet Protocol) Network (ESINet or NCRnet, see Appendix 5, Definitions).
- c. Through intergovernmental planning, design, procurement and implementation, create a System that provides increased resiliency for both Arlington and Alexandria, utilizing industry best practices. The limited resiliency currently available is not adequate for operation of the regional System. Goals for increased resiliency under the shared NG9-1-1 Call Processing System include the following:

- i. **Geo-Diversity:** Although the Alexandria backup site is a greater distance from its primary than is the case for Arlington's back up site, the new System will aim to improve geo-diversity of the core components for the Parties. Geo-diversity is one of the factors needed for high resiliency.
- ii. **Network Paths:** The new System will provide multiple, independent paths to be used for signaling, voice and data, to further increase resiliency.
- iii. **Redundant Core Components:** The System design will include redundant servers, power supplies, routers, switches, gateways, etc., which will ensure that no single element in the new System could, by failing, cause a System-wide failure, further improving System resiliency.
- iv. **No dropped calls:** The new System will be built such that failure of any single component will not cause a 9-1-1 call to be dropped.

2.2 Supporting Objectives:

- a. Create a shared architecture whereby System resources, telephony resources, servers and other components are part of a single shared solution.
- b. Provide a System that optimizes the use of local government dollars, federal, state grants and other funds that may be available for the development of the System as well as any special funding that may become available for sustainment or enhancement costs of the System.
- c. Create and mutually agree to an extensible and flexible System design to allow for growth and adjustments over time to address any changes in policy or process.
- d. Create a robust governance process, which provides a structure for adoption of the System by the parties and Associate Members (see Appendix 5, Definitions), as described in Section 7, with policies and procedures to allow for System change over time.
- e. Ensure the use of an open architecture that promotes interoperability.

2.3 Future Phases

- a. Future phases will expand upon the goals adopted in *Phase One* in addition to opening the System to additional users from other entities. As defined in Section 7, this MOU provides for additional participation through Associate Members. Associate Members will not join the owning parties of the System. Associate Members will be able to access the services offered under a service model.
- b. Future phases will also enable cross-jurisdictional dispatch, adding the capability to process calls from one another's primary and backup center. This will be addressed

via an amendment to this MOU accompanied by revisions to administrative and operational policies and procedures established in Phase one. Associate Members will be approved by the governing bodies and formalized in a User Agreement (see Appendix 5, Definitions), as defined in Section 7 of this MOU. Existing technologies and staffing may need to be modified to accommodate cross-jurisdictional dispatch.

3. Statement of Purpose of MOU

The purpose of this MOU is to set forth an agreed-upon structure and process to efficiently and effectively manage the implementation and long-term sustainability of a regional NG9-1-1 Call Processing System. The adopted System design must support the operational and strategic goals for the System and create a platform which is resilient, extensible, and cost effective.

Specific objectives of this MOU include:

- a. Establish the governance structure, to include named members of a Working Group to define and supervise the overall guidance, policy and executive governance of the System as set forth in this MOU;
- b. Establish an Administrative and Operational Committee to carry out the overall guidance, policy and defined governance of the System as set forth in this MOU; to define operational policies for the System, and institute efficient and prompt management and defined methods for handling all operational challenges and changes that affect the technology being governed; as well as to carry out other duties as defined in this MOU; and
- c. Establish a Change Management Committee (see Appendix 5, Definitions), to control and manage technology (hardware, software and network) configuration to optimize System benefits to the Parties and Associate Members and carry out other duties as defined in this MOU.

These governance entities are addressed in Section 5, Governance Structure.

4. Duration

This MOU shall continue in force and effect from its Execution Date, until terminated by either Party, as provided for under Section 18, Terminations of this Agreement.

5. Governance Structure (See Appendix 1 to this MOU)

5.1 Working Group

The Regional NG9-1-1 Call Processing System Working Group is created for the express purpose of providing for joint/multi-partner management, provision, operation, maintenance and lifecycle planning for the Regional NG9-1-1 Call Processing System

comprised of Arlington County and the City of Alexandria. It shall also provide direct liaison with the governing bodies of the Parties for budget matters as well as other policy, expansion and sustainment issues associated with the System. The Working Group, through the Administrative and Operational Committee, and the Change Management Committee, shall establish standards and provide for the coordinated maintenance, management, administration and lifecycle management of shared technology platforms and infrastructure as may be needed to optimize public safety operations within the governance area (see Appendix 5, Definitions).

5.1.1 Scope of Services and Operation

The Working Group shall oversee and direct the management, provision, operation, maintenance and lifecycle management of the Regional NG9-1-1 Call Processing System within the governance area. By this MOU, the Parties agree to cooperatively exercise their respective duties and responsibilities within the governance area in a manner consistent with this MOU.

5.1.2 Working Group Membership

Membership of the Working Group shall consist of following:

- i. Deputy Manager of Arlington County
- ii. Deputy Manager of City of Alexandria
- iii. Chief Information Officer for City of Alexandria
- iv. Chief Information Officer for Arlington County
- v. Public Safety Answering Point (PSAP see Appendix 5, Definitions) Director for Arlington County
- vi. Public Safety Answering Point (PSAP) Director for City of Alexandria
- vii. Representative from Arlington County Department of Finance
- viii. Representative from City of Alexandria Department of Finance

The Managers, by mutual agreement, can alter the membership for their own jurisdiction, but the membership shall always be balanced.

5.1.3 Working Group Authority

Each Party's Working Group members shall have the authority to provide input to the formulation of consensus based decisions on all matters before the Working Group, including financial recommendations that require the appropriation or expenditure of funds by the Parties. Such recommendations must be approved by each respective governing body for the Parties to the MOU.

5.1.4 Working Group Officers

Annually, in January, the Working Group shall appoint Co-Chairs (one each from Arlington County and City of Alexandria), and a secretary whose primary responsibilities are as follows:

5.1.4.1 Co-Chairs

The Co-Chairs shall be members of the Working Committee; shall conduct all meetings of the Administrative and Operational Committee; shall carry out any other duties assigned by the Arlington County Council or Alexandria City Council and shall act as the spokespersons for the Working Group when presenting information to the governing Board and/or Council.

5.1.4.2 Secretary

The Secretary may or may not be a member of the Working Group and shall be responsible for distribution of agenda notices and preparation of minutes of the Working Group. Agendas shall include an "Other Business" item to enable general discussion of matters that concern members. The agenda for each meeting shall be sent to the members one week (7 days) before the meeting date.

5.1.5 Responsibilities of the Working Group

The Working Group shall govern processes in support of shared public safety technologies in the governance area. In order to accomplish the purpose of this MOU, the Working Group shall have, in addition to other powers provided herein, the authority to adopt procedures for use of the System as well as to adopt standards for the coordinated management, provision, operation, maintenance and lifecycle management of shared public safety technologies required by the System. These shared components are listed in Appendix 2 to this MOU, "Inventory of Shared Public Safety NG9-1-1 Call Processing System Technology Assets Under Management". A Party shall not be financially obligated to fund an expenditure approved by the Working Group unless and until such expenditure is acted upon by the respective governing body or bodies. Discretionary powers of this Working Group shall include, but not be limited to, the following:

- i. Approve the Standard Operating Procedures (SOP) for the Working Group and its committees.
- ii. Adopt technology protocols and other procedures as recommended by the Administrative and Operational Committee or the Change Management Committee.
- iii. Recommend usage fees for shared public safety technologies for adoption by the Parties' respectively governing bodies.
- iv. The Working Group will establish procedures and standards as well as specific direction for allocation of resources in support of the System.
- v. Provide recommendations to the governing bodies of the Parties regarding the Parties' performance, actions taken, budget recommendations or other matters relevant to the governing bodies.

- vi. Identify matters that require approval of the Parties' governing bodies.
- vii. Oversee the adoption, administration and implementation of shared technology standards, protocols and procedures.
- viii. As outlined in Section 7, approve the introduction of Associate Members of the System and make recommendations to the governing bodies concerning addition of Associate Members.
- ix. Identify participants from the Working Group, Administrative and Operations Committee or Change Management Committee to serve as members of any Selection Advisory Committee (SAC) needed for review of NG9-1-1 Call Processing System solicitations and participate as required in preparation and review of solicitations for other public safety applications that have integration points with the System.
- x. Deal with other matters necessary and convenient in furtherance of the purposes of this MOU.

5.1.6 Meetings of the Working Group

The Working Group shall meet at least quarterly to receive reports from the Administrative and Operational Committee and the Change Management Committee; confer and carry out the business of the Working Group and take action on recommendations of the Administrative and Operational Committee and the Change Management Committee. The Working Group shall adopt rules of procedure for the conduct of their meetings that are consistent with the provisions of this MOU.

5.1.7 Reporting

The Working Group shall provide to the governing bodies of the Parties a written annual report concerning the Regional NG9-1-1 Call Processing System. The report shall provide a description of the System operations for the time period in question, a description of the financial status of the System, relevant data on requests for service and a description of System direction for the next year.

The annual report shall include all matters the Working Group determines to be relevant to the governance of shared technology and any other matter(s) that may be required by state or federal law, or as may be determined a priority for reporting by the Working Group, the Administrative and Operational Committee or the Change Management Committee.

5.2 Administrative and Operational Committee

5.2.1 Scope of Services and Operation

The Administrative and Operational Committee shall establish operational policies for the Regional NG9-1-1 Call Processing System, and for the purpose of efficient and prompt management and handling of all operational changes that have impacts for the technology

being governed. This Committee will determine what functions the System needs to perform and what operational processes and procedures need to be in place to efficiently and effectively operate and manage the System to meet each Party's operational objectives.

5.2.2 Purpose of Administrative and Operational Committee

The purpose of the Administrative and Operational Committee is to provide operational expertise to the Working Group in the development and maintenance of the technology platform. The Administrative and Operational Committee shall promulgate procedures that make public safety technology use and operations recommendations to the Working Group.

5.2.3 Administrative and Operational Committee Membership

Membership of the Administrative and Operational Committee shall consist of following:

- i. Public Safety Answering Point (PSAP) Director for Arlington County
- ii. Public Safety Answering Point (PSAP) Director for City of Alexandria
- iii. Representative from Arlington County Department of Finance
- iv. Representative from City of Alexandria Department of Finance
- v. Representative from Arlington County Information Technologies (IT) Department
- vi. Representative from City of Alexandria Information Technologies (IT) Department

5.2.4 Officers

Annually, in January, the Administrative and Operational Committee shall appoint Co-Chairs (one each from Arlington County and City of Alexandria), and a secretary whose primary responsibilities are as follows:

- a. The Co-Chairs shall be members of the Administrative and Operational Committee; shall conduct all meetings of the Administrative and Operational Committee; shall carry out any other duties assigned by the Working Group; and shall act as the spokespersons for the Administrative and Operational Committee when presenting information to the Working Group.
- b. The Secretary may or may not be a member of the Administrative and Operational Committee and shall be responsible for distributing agenda notices and preparing minutes of the Administrative and Operational Committee. Agendas shall include an "Other Business" item to enable general discussion of matters that concern members. The agenda for each meeting shall be sent to the members at least one week (7 days) before the meeting date.

5.2.5 Responsibilities of the Administrative and Operational Committee

- a. Develop functional and technical criteria that support each Party's operational needs;

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- b. Provide oversight for staff revisions and updates to ECC (Arlington County) and DEC (City of Alexandria) policies and procedures in support of the shared System.
- c. Document and validate system architectural component ownership, clearly delineating whether they are shared assets or belong to an individual Party. Specific points of demarcation for System architectural components, must be included in this documentation as Appendix 4: Arlington-Alexandria Network Topology Overview.
- d. Determine funding requirements for each Party for recurring and non-recurring expenses associated with this System;
- e. Determine initial and ongoing lifecycle support and management requirements;
- f. Identify integration points with other public safety applications and take all actions necessary to assure continued close integration as changes are considered for these systems;
- g. Manage the publication of a comprehensive solicitation for System implementation, as well as any future solicitations necessary for System enhancement and sustainment;
- h. Manage the evaluation and selection of a vendor System that best meets the operational needs (both for establishment as well as enhancement or sustainment of the System), as defined in any solicitation and agreed upon by the Parties;
- i. Manage the installation and configuration of the System to meet the current and ongoing operational needs of the Parties;
- j. Manage the testing of the System to ensure it meets the criteria established in the solicitation;
- k. Manage System maintenance training to all end users and support staff; and
- l. Manage the implementation of the System, as well as any future upgrades or enhancements, at a time or times deemed appropriate by the Working Group and the governing bodies of Arlington County and the City of Alexandria with input of Associate Members.
- m. Perform other responsibilities as assigned by the Working Group.

5.2.6 Meetings of Administrative and Operational Committee

The Administrative and Operational Committee will meet at least quarterly.

5.3 Change Management Committee

5.3.1 Change Management Committee Membership

The members of the Change Management Committee are as follows:

- System Administrator, Arlington County;
- System Administrator, City of Alexandria;
- Emergency Communication Center Manager, Arlington County;
- Department of Emergency Communication Center, Manager, City of Alexandria;
- Public Safety Information Technology representative, Arlington County;
- Public Safety Information Technology representative, City of Alexandria;
- Department of Technology Services representatives with approval by the ECC directors;
- Enterprise information technology representative from the Parties, as needed.

5.3.2 Officers of the Change Management Committee

The System Administrators from Arlington County and the City of Alexandria will serve as Co-Chairs of the Change Management Committee. They will be jointly responsible for meeting announcements, agendas, maintaining a comprehensive log of all changes and enhancements requested by system users or other Change Management Committee members, and any other documentation they deem necessary to carry out change management functions.

5.3.3 Responsibility of the Change Management Committee

The Change Management Committee is responsible for the overall management of system configuration and change management. The Change Management Committee will oversee the development, maintenance, and annual technical review of the System, including, but not limited to: shared technologies under management by the Administrative and Operational Committee, change management reporting and configuration management reporting; current and future change management items under consideration and six month, twelve month and 18-month lifecycle and change management requirements. This includes the following activities:

- a. Provide version and technical control of the System;
- b. Provide input and feedback to the Administrative and Operational Committee;
- c. Provide technical recommendations and feedback to the Working Group for action;
- d. On an ongoing basis, review and update all documentation to reflect change in the configuration of the System.
- e. Maintain an inventory of proposed configuration changes under consideration, specify those that are approved for implementation, those that are rejected for

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implementation and the current status of testing and implementation for each item.

- f. On an ongoing basis, review and update documentation concerning the integration points and configuration related to other applications that require call processing capabilities.
- g. Revise all relevant system documentation to reflect the shared System that is procured; coordinate with the Administration and Operations Committee; and brief the Working Group for oversight purposes prior to implementing the revised documentation.
- h. Provide for the technical coordination, information technology planning, and provision of shared public safety technologies.
- i. Consider current technology standards, existing service capabilities, trends, desired goals, and future service capabilities for shared technology with specific consideration of the funds available to provide maintenance support for shared technology services.
- j. Consider, along with its accompanying maps, charts and reports, the following components and criteria:
 - i. The shared technology platforms, infrastructure and performance;
 - ii. Services and resources required to support and maintain the System, including licenses, employees, contractors, volunteers and any forecasted need for upgrades, hardware replacement, software or network changes; other factors, including but not limited to response time standards, required staffing, equipment and standards currently in use by the Parties; and
 - iii. Recommended technology-related performance standards that are currently recognized under national, state and local standards and guidelines.
- k. Perform other responsibilities as assigned by the Working Group.

5.3.4 Meetings of the Change Management Committee

The Change Management Committee will meet at least quarterly.

5.4 Decision Making by the Governance Structure

All motions and actions on matters before the Working Group, the Administrative and Operational Committee or the Change Management Committee require consensus

agreement (see Appendix 5, Definitions), of the members. Members shall designate alternates who are authorized to act in the member's absence. A quorum is required to conduct the business of the committee. A quorum is determined by the physical or virtual presence of over one-half of the members of a committee, with representation from both parties.

If members are unable to participate in a particular decision, their designated alternate may participate to insure consensus is achieved.

If agreement by all cannot be accomplished, the proposed action fails.

Such decisions and actions shall be clearly described in the minutes of the meeting. To the extent that matters requiring decisions can be identified at the time that agendas are distributed, such decision making needs should be indicated on the agenda.

5.5 Ad Hoc Committees or Sub-committees

The Working Group may appoint ad hoc committees or sub-committees it deems necessary to effectively carry out its responsibilities.

Both the Administrative and Operational Committee and the Change Management Committee may request authorization from the Working Group to create "as needed" committees or sub-committees for a particular purpose or study. As-needed committees or sub-committees may be permanent or temporary in their existence. The ad hoc committee or sub-committee shall be defined in terms of the following:

- i. Specific objectives of the committee or sub-committee
- ii. Selection of a chair
- iii. Voting rules/procedures, if needed
- iv. Length of existence
- v. Requirements for reporting findings or recommendations

6. Obligations of the Parties

6.1 Compliance with State Standards

Each Party shall at all times comply with standards established by the laws of the Commonwealth of Virginia and associated regulations, as well as any other applicable federal law and/or regulation.

6.2 Bound by MOU

Each Party agrees to be bound by this MOU, its amendments, and by the resolutions and procedures adopted by the Working Group within the powers granted to it by this MOU.

6.3 Performance

Each Party further agrees to do all things necessary and lawful to accomplish the purpose of this MOU, including recommending adoption to the Party's governing body of any ordinance or resolution necessary to authorize or strengthen the ability of the Party to perform under this MOU.

7. Additional Participation – Associate Members

Requests for future participation shall be considered by the Working Group. The requestor shall address the following factors:

- i. Geographic proximity and size of the requesting entity;
- ii. Annual requests for service of the requesting entity;
- iii. Current technology platform of the requesting entity; and
- iv. Reasons and driving factors for requesting participation.

Future participation shall take the form of Associate Membership in the System. Associate Members may request services from the System, thereby becoming users of the System, but not becoming joint owners with Arlington County and the City of Alexandria. A User Agreement between the Associate Member and the owners will be prepared that documents the obligations of the Associate Member and the System owners, including technical and financial details related to the services that will be provided.

Future participants, Associate Members, will be required to fund their initial procurement costs, including integration costs and will share in the ongoing maintenance and enhancement costs. The cost distribution will be based on the call volume required by each of the Parties as well as the Associate Members.

Requests for Associate Membership shall be approved by the Working Group and a recommendation presented to the governing bodies of Arlington County and the City of Alexandria for final approval of the addition.

Associate Members will be invited to attend and have input to the Working Group, the Administrative and Operations Committee, the Change Management Committee and any ad hoc committees or subcommittees that may be formed. The Associate Members may designate participants to attend meetings of the Working Group, Administrative and Operational Committee and the Change Management Committee. Their input shall be solicited and may be considered by the governing groups defined in Section 5 of this MOU as decisions are made that impact the System.

8. Legal Counsel

The Parties agree to seek assistance from their respective legal counsel on issues related to the Regional NG9-1-1 Call Processing System, should the need arise.

9. Grant Funding

9.1 Joint Grant Requests

The Parties agree to cooperate in applications for federal, state and local grant funding used to expand, enhance, augment or expand the System. Such funds will be administered by the Working Group under supervision of the governing bodies, unless restricted by the funding entity. All grant funds will be used solely for the System.

9.2 Separate Grant Requests

Nothing in this MOU shall prevent the members of the Working Group from participating separately in grant-funding programs that promote the goals of a coordinated approach to shared public safety technologies.

10. Joint Purchasing

The Working Group may recommend to the Parties' governing bodies joint purchasing of any real or personal property required for operation of the System that is consistent with the laws of the Commonwealth of Virginia. Prior to recommendation by the Working Group of any joint purchase, the Working Group shall identify, by resolution, the plan for distribution of cost and/or ownership of property jointly owned by the Parties, including disposition upon the withdrawal or termination of a Party, to be proposed and recommended to the Parties' governing bodies.

11. Ownership of System Components

The Working Group shall not hold real property or assets. Therefore, the following provisions shall be made for the custody and ownership of System property and assets.

11.1 Ownership structure

An ownership structure will be developed by the Administrative and Operational Committee and approved by the Working Group. The conceptual framework for ownership is as follows:

- a. The System will be jointly owned by the Parties to the MOU;
- b. The System is comprised of components supporting individual members and components supporting all members (shared System functions), as shown in more detail in Appendix 2: Inventory of Regional NG9-1-1 Call Processing System Technology Assets Under Management
- c. Individual components will be assigned custody for purposes of management and accounting;
 - i. Individual components serving functionality of Arlington 9-1-1 call taking will be paid for, and in the custody of, Arlington County;

- ii. Individual components serving functionality of Alexandria 9-1-1 call taking will be paid for, and in the custody of City of Alexandria;
- d. Shared components serving both Parties as integration functions for the shared System will be in the custody of Arlington County, unless otherwise determined by the Working Group. Total expense for the jointly owned components will be identified in the responses to the solicitation and the cost divided between the Parties based on the service demand (requests for service) of each Party. This distribution will be negotiated as part of the joint procurement contract.

11.2 Additional System Components

The System may occasionally require the installation of additional infrastructure or System components. The Working Group will determine which Party should assume custody of the added components. The System will remain one of shared ownership by Arlington County and City of Alexandria.

If additional infrastructure or System enhancements are needed, the Working Group will oversee a technical evaluation of such enhancements to ensure there will be no degradation of service. Recommendations formulated by the Working Group shall be subject to approval of the governing body of each Party.

Additional capacity may be required when Associate Members request services of the System. All costs associated with this additional capacity shall be borne by the Associate Member, unless the Working Group determines that shared cost is appropriate due to needs of shared functionality or integration. Shared costs recommended by the Working Group are subject to approval of the governing bodies of the Parties as well as the governing body of any Associate Member.

11.3 Continuity of System Ownership

System ownership will be retained by Arlington County and the City of Alexandria when Associate Members are added to this MOU.

11.4 Grant Funds for System Expansion

The Working Group will develop a plan for the use of any available federal, state or local grant funds provided for System expansion or enhancements.

12. System Maintenance and Lifecycle Management

The ongoing System maintenance and lifecycle management of this System will be outlined in Appendix 3: Ongoing System Maintenance and Lifecycle Management, to this MOU and will be based on the final approved contract for the Regional NG9-1-1 Call Processing System that results from the joint solicitation.

13. Cyber Security

The Parties, and Associate Member as applicable, agree to implement appropriate cybersecurity practices, approved by the Administrative and Operational Committee, using guidelines from the Task Force on Optimal PSAP Architecture Working Group One, December 2016, and as subsequently adopted or amended.

14. Financial and Budget Responsibilities

14.1 Expenditures

The Administrative and Operational Committee shall propose a plan for review and approval by the Working Group for expenditures in support of the System prior to the respective budget cycle of the governing body for the appropriation of those funds.

The Administrative and Operational Committee is responsible for developing an initial and ongoing budget to support the lifecycle needs of the System, as detailed below. In addition, the Working Group will regularly review all invoices from vendor to ensure they are in agreement with figures agreed upon in the contract.

14.2 Initial Procurement Costs

Prior to release of the solicitation, a budgetary estimate of the overall cost will be obtained by the Administrative and Operational Committee and approved by the Working Group to enable each Party to request necessary funding, pursuant to their budget approval process.

Associate Members will be required to fund any and all costs necessary to add the Associate member to the System, including but not limited to costs for additional hardware, software and integration.

14.3 Maintenance Costs

After initial implementation, ongoing maintenance will be managed as a service to the Parties. Service costs will be distributed based on demand for service as represented by calls to the respective 9-1-1 centers. This will apply to both the System owners, Arlington County and the City of Alexandria, as well as any Associate Members.

- a. The Working Group will verify that the cost distribution methodology provides adequate and fair cost distribution among the Parties and Associate Members. The Working Group will review the actual expenditures based on the methodology quarterly, to ensure that the formula, and respective budgets are in alignment. If for any reason, discrepancies occur, the Working Group resolve that through the budget process, if necessary.
- b. The Working Group will work with the Parties and Associate Members to establish a projection of expenses and an annual budget for the System. This plan shall cover

the initial contract period (through November 2018) as well as three one-year renewals as permitted under the VITA contract (through November 2021). This plan shall take into account costs for maintenance, hardware upgrades/refreshes, software patches and updates and forecasted software X.0 version (major base functionality) upgrades.

14.4 Party Budgets

Each Party shall set its own budget in a timely manner with consideration of the goals and plans set forth for the support of the System.

If the funding request of the Working Group is not approved by the Party's governing body during annual or other periodic budget review processes, the Working Group and the Administrative and Operational Committee will reconvene to address the budget shortfall (or budget supplement if additional funding is granted) in a manner to insure optimal continuity of the System.

14.5 Additional Expenditures

Capital investments requiring additional expenditures may require additional funding through extra appropriations as proposed by the Working Group and subject to approval by each Party's governing body.

14.6 Role of Fiduciary Agent

The Administrative and Operational Committee will compile programmatic budgets, procurement needs, maintenance costs and any other pertinent financial information required. Arlington County will serve as the main fiduciary agent for this project, and in that capacity will be the agency responsible for creating purchase orders and paying invoices after review.

As the financial agent responsible for developing purchase orders and paying bills, all capital project budgets and ongoing maintenance costs determined by the Administrative and Operational Committee will be appropriated to the fiduciary agent on an annual basis during the respective budget process. This will result in Alexandria sending the agreed upon maintenance funds to Arlington via an interjurisdictional transfer between the Parties during the first month of the fiscal year in order for the fiduciary agent to encumber the funds outlined in the contract agreement.

As a result of this process, Alexandria's annual budget will include the funds being sent to Arlington in their budget, and Arlington's annual budget will include the funds received by Alexandria, as well as the corresponding increase in operating costs. This will result in a net neutral impact to the budget and will allow Arlington to pay the bills for both Parties.

For expenditures related to the System, the agreed upon amount will be transferred following approval of the Memorandum of Understanding by the Parties' governing bodies. The agencies responsible will develop a comprehensive project budget for all capital

expenses, as well as anticipated spend down plans to ensure the financial transparency of the System. Those funds will be transferred in the same manner as the maintenance funds. Once those funds are received by Arlington from Alexandria, all expenditures will be charged against the total budget of the System.

The scope of the invoices shall relate to the jointly owned components reflected in Appendix 2 of this MOU. Items that remain within each Party's control and purview will not be paid for under this agreement. Staff in Arlington will maintain a project budget and expenditure workbook, detailing invoices, payments, and other pertinent information to be shared with the Working Group on a quarterly basis. This will serve as a system of record to ensure that all funding allocation and expenditures are properly accounted for and are transparent to the Working Group. Alexandria will receive this information on a regular basis.

15. Personnel

This MOU does not create a separate legal entity and therefore the Working Group shall have no authority to employ personnel directly. Personnel additions and reductions are matters entirely under the authority of the Party employing the personnel. The Working Group shall not take any action which is intended to terminate the employment of any employee who is employed by a Party on the effective date of this MOU.

16. Withdrawal From This MOU

No Party may withdraw from this MOU, and no Associate Member may withdraw from the System, unless it demonstrates one or more of the following:

- a. This System no longer meets the needs of the withdrawing Party or Associate Member. This will require that the withdrawing Party or Associate Member notify the Working Group in writing, at which time a transition team will be established;
- b. The withdrawing Party or Associate Member is insolvent or otherwise financially unable to carry out its obligations under this MOU.
- c. A court has determined that it is unlawful for the Party or Associate Member to continue to perform under or be party to this MOU.

In no case shall a Party or Associate Member to this MOU withdraw before the duration of the contract between the Parties and the vendor selected for the System ("the Contract") has elapsed. The Contract will coincide with the Virginia Information Technology Agency (VITA) contract which states that the initial contract term is through November 2018. The initial term may be renewed for three (3) additional one (1) year terms, which makes the maximum duration of the contract through November 2021. If VITA does not renew its contract identified in the rider contract established between

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Arlington County, the City of Alexandria and the selected vendor, then the rider contract shall automatically expire on the date of VITA's contract expiration date. In the event the Contract is terminated or expires, the Parties to this MOU may negotiate a termination of this MOU

After November 2021, a Party or Associate Member may withdraw as a participant in this MOU or System by submitting a withdrawal notice letter from their governing body to the Working Group. The withdrawal notice letter shall detail the withdrawal reasons and be submitted no less than sixty (60) days before the proposed effective date of withdrawal.

An impact statement shall be prepared by the Working Group with input from the Administrative and Operational Committee. After review and discussion by the Working Group, the withdrawal notice letter, impact statement and any other related documentation of the Working Group's action on the withdrawal notice letter shall be forwarded to the respective governing bodies. If such withdrawal reasons can be resolved by the Working Group within sixty (60) days after the date of notice of withdrawal, the notice letter shall be withdrawn. Barring such resolution, withdrawal is finalized by action of the governing body of the withdrawing Party or Associate Member.

The withdrawing Party or Associate Member shall continue, after the sixty (60) day resolution period, to participate during a transition period of no less than one (1) year in order to prevent disruptions to call processing, implement necessary system changes and minimize the risk to public safety. The withdrawing Party, or Associate member, shall be responsible for all termination costs associated with its withdrawal including the termination costs with the contractor. The Working Group shall meet to determine appropriate termination costs.

17. Amendments and Appendices to the MOU

17.1 The Working Group shall have the authority to propose amendments to this MOU, as deemed necessary. Amendments shall be approved by a consensus agreement of the members of the Working Group and forwarded to the governing bodies of the Parties for approval. This MOU shall be reviewed at least every two years to assess any needed modifications.

17.2 Appendices to this MOU may be updated independently from the MOU and do not require an amendment to the MOU. Changes are subject to the approval of the Working Group.

18. Terminations

A Party or Associate Member may be terminated from this MOU in the event of non-payment, failure to implement agreed upon policies, or taking an action that causes System failure or failure of any of its components ("breach"). The Administrative and Operational Committee is responsible for notifying the Working Group of the nature of the breach and recommending termination. Upon receipt of notification from the Administrative and Operational Committee of the breach the Working Group shall advise the Party or Associate Member of the impending termination, thereby initiating a 60-day cure period. During the cure period the Working Group and its Administrative and Operational Committee shall work with the Party or Associate Member to resolve the breach. If the breach cannot be resolved, the Working Group shall have the responsibility to communicate the fact of the breach and describe the failed cure efforts to the Arlington County Board, the Alexandria City Council, and if required, the governing body of the Associate Member for action. Termination will be finalized by the action of the governing bodies of the non-terminating Party or Parties and notification will be sent to the governing body of the terminated Party, or Associate Member.

- a. The termination of any Party or Associate Member pursuant to this subsection may not result in the termination of shared System services and may enable negotiation to continue services.
- b. The terminated Party, or Associate member, shall be responsible for all termination costs associated with its withdrawal including the termination costs with the contractor. The Working Group shall meet to determine appropriate termination costs.
- c. An impact statement shall be prepared by the Working Group with input from the Administrative and Operational Committee. After review and discussion by the Working Group, the withdrawal notice letter, impact statement and any other related documentation of the Working Group's action on the withdrawal notice letter shall be forwarded to the respective governing bodies.

19. Notices

Unless otherwise provided in writing, all notices and other communications required by this MOU are deemed to have been given when either (a) delivered in person; (b) delivered by an agent, such as a delivery service; or (c) deposited in the United States mail, postage prepaid, certified or registered and addressed as follows:

ARLINGTON COUNTY:

David Mulholland
Director
Department of Public Safety Communications and Emergency Management
1425 North Courthouse Drive
Arlington, VA 22201

Copy to be sent to:

MinhChau N. Corr
Assistant County Attorney
Arlington County
One Courthouse Plaza
2100 Clarendon Blvd., Suite 403
Arlington, VA 22201

CITY OF ALEXANDRIA:

Renee M. Gordon, ENP, RPL, CPE
Director
Department of Emergency Communications
3600 Wheeler Ave Alexandria, VA 22304

Copy to be sent to:

Christina Zechman Brown
Assistant City Attorney
301 King Street, Suite 1300
Alexandria, Virginia 22314

20. Signature MOU

The undersigned hereby agree to the terms of participation and authorize our designated representatives to implement this Regional NG9-1-1 Call Processing System MOU.

Arlington County, Virginia:

City of Alexandria, Virginia:

Signature: _____

Signature: _____

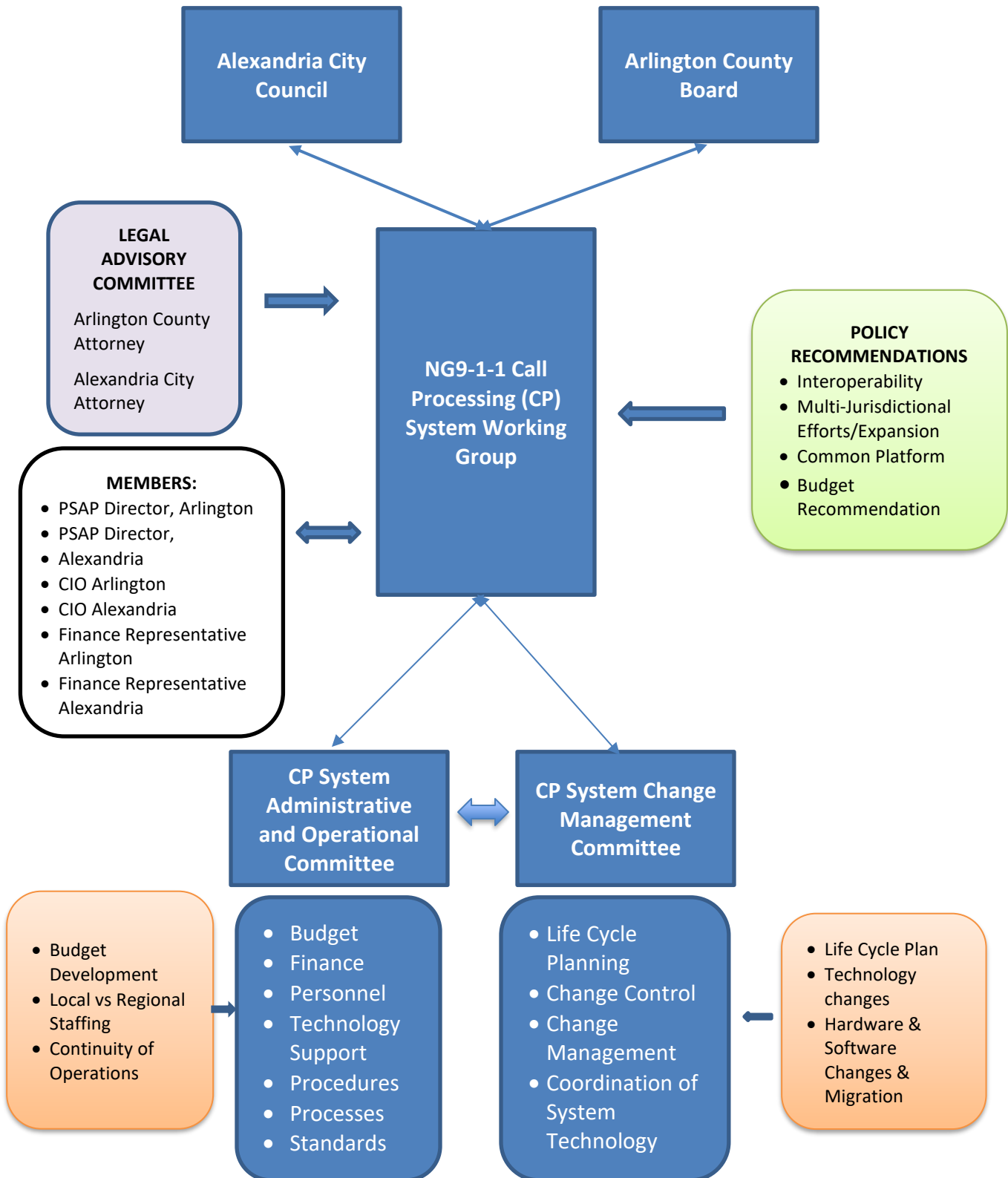
Mark Schwartz
County Manager

Mark B. Jinks
City Manager

Date: _____

Date: _____

Appendix 1: Regional NG9-1-1 Call Processing System Governance Structure



Appendix 2: Inventory of Regional NG9-1-1 Call Processing System Technology Assets under Management

Hardware Manufacturer	Equipment Type	Model	Serial #	Location/Owner

Software Vendor	Software Type	Version	Release Notes	Server(s), Location(s) & Owner

Other Item	Type	Model	Serial #	Location(s) & Owner

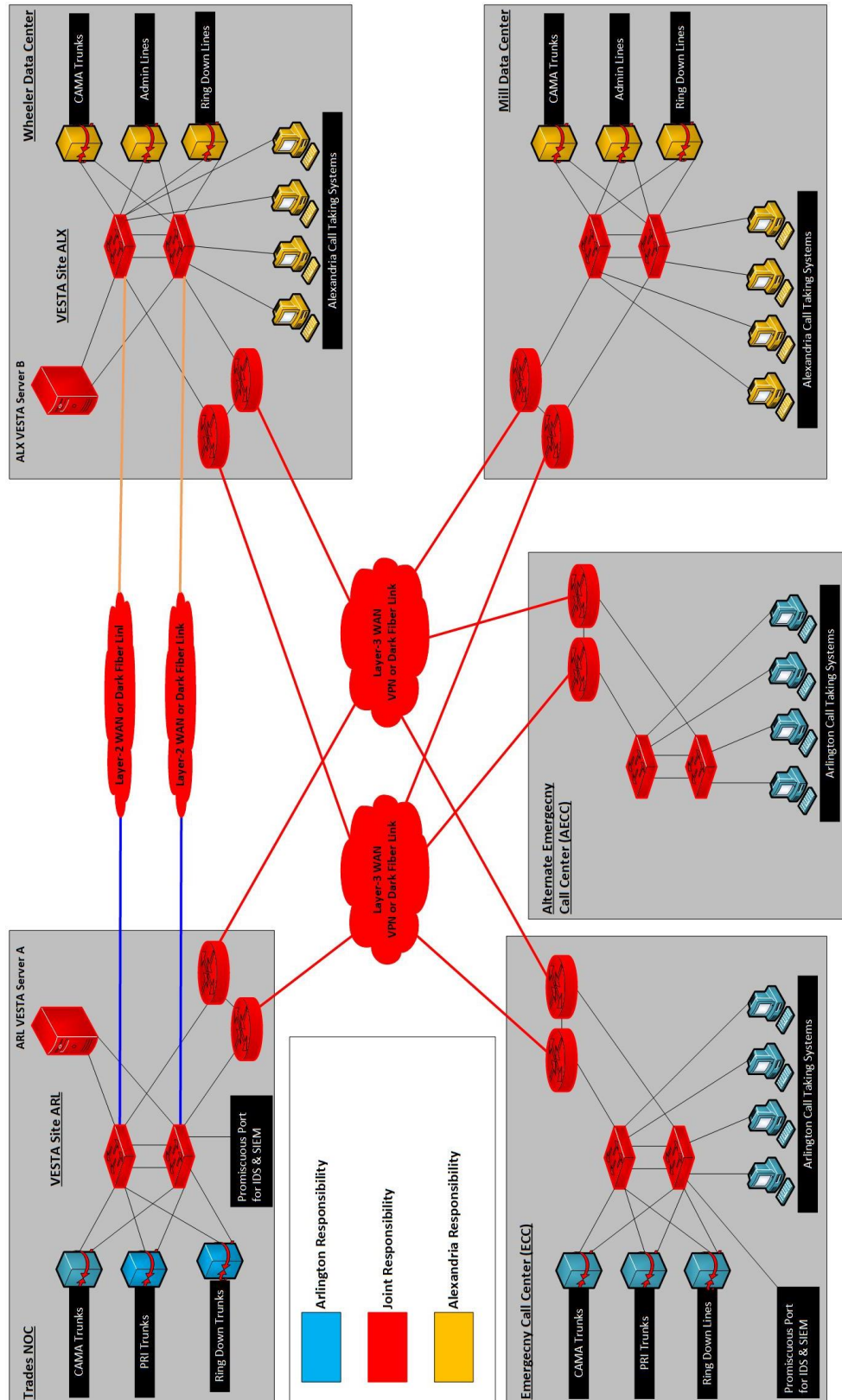
Appendix 3:

Ongoing System Maintenance and Life Cycle Management

This Appendix shall be defined after the solicitation process has been completed. The Change Management Committee shall prepare Appendix 3 and it shall be subject to the approval of the Working Group.

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Appendix 4: Arlington-Alexandria Network Topology Overview



Appendix 5: Definitions

The words and phrases used herein are as defined below:

- A. **Associate Member** – Any organization or entity with public safety responsibilities requiring NG9-1-1 call processing services may request Associate Membership in the System. Associate Members will be system users but not joint owners of the System.
- B. **Change Management** - The process of requesting, determining attainability, planning, implementing, and evaluating of changes to a system. The main goals are to support the processing and traceability of changes to an interconnected set of requirements.*
- C. **Consensus Agreement** – A group decision-making process in which group members develop, and agree to support a decision in the best interest of the whole. Consensus may be defined professionally as an acceptable resolution, one that can be supported, even if not the "favorite" of each individual. For the purposes of Working Group or committee functioning this goal may be attained by a polling process, with the desired result that all members will be in agreement on any particular poll taken. Working Group and Committee Chairs may also test for consensus by asking if the assembled members are able to support a particular position. If opposition arises, Consensus Agreement or consensus decision-making requires continued modification of the position until agreement by all can be accomplished. If agreement by all cannot be accomplished, the proposed action fails.*
- D. **ESINet or NCRnet** – National Capital Region's Emergency Services IP network. Managed IP network used for emergency communications and which is shared by public safety agencies. Provides IP transport infrastructure upon which independent application platforms and functional processes can be deployed to provide NG9-1-1 services in the National Capital Region. Also called NCRnet.
- E. **Governance Area** – Refers to the combined geographical area represented by the geopolitical boundaries of the Parties to this MOU. Addition of Associate Members to this MOU shall alter the governance area.
- F. **Lifecycle Management** – Activities associated with lifecycle management include requirements management, software architecture, computer programming, software testing, software maintenance, change management, continuous integration, project management and software release management.*
- G. **NG9-1-1** – Next Generation 9-1-1 is a nationwide effort to replace the legacy infrastructure for 9-1-1 call delivery to the PSAP with Internet Protocol (IP) technology, based on specified standards, enabling the PSAP to receive data from citizens, while maintaining or enhancing interoperability with all neighboring PSAPs.

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- H. **NCRnet** – existing regional network in the National Capital Region, a private regional network of jurisdictional I-Nets and other network assets, called NCRnet.
- I. **PSAP** – Public Safety Answering Point - the actual recipients of 9-1-1 calls.
- J. **SOP** – Standard Operating Procedures.
- K. **System** – The Regional NG9-1-1 Call Processing System is comprised of hardware, software, networks and people, all organized to accomplish a set of specific tasks and functions. Call processing requires telecommunications hardware located at the customer premise which manages call handling from telephony trunk lines to Computer Aided Dispatch Systems. People involved in the System include end users, managers, trainers and several categories of technologists. The System enables participating parties and Associate Members to share specific technology components, as agreed upon, to support the region's goals for interoperability, consistency and efficiency of handling 9-1-1 calls.
- L. **User Agreement** - Documentation of the obligations of the Associate Member to the System owners, including technical and financial details related to the services that will be provided.

***Note:** Wikipedia was consulted Sep 26, 2107 in the formulation of several of these definitions.