



Regional Advisory Council Meeting

December 05, 2017

Virtual Exchange





Agenda

1. Welcome
2. Approval of Minutes from Nov 14th call
3. NG9-1-1 Deployment Plan
4. Standard Development Process Document
5. Updates/Reminders
6. Public Comment
7. Adjourn



Virginia Information Technologies Agency

NG9-1-1 Deployment Plan





Contents

- Executive Summary
- What is NG9-1-1
- Process of Change
- Recommended Solution
- Path Forward
- Conclusion
- Participation Agreement (Appendix)

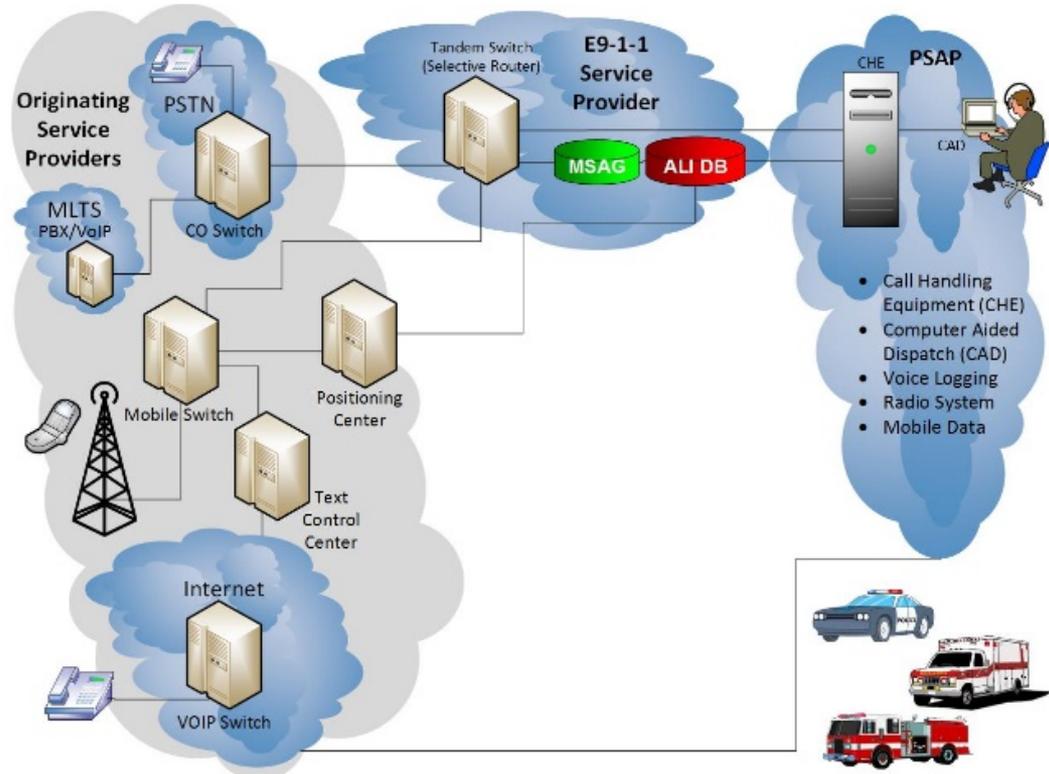
What is NG9-1-1

- Current E9-1-1 Network

- How it works

- Shortcomings

- Nine networks
 - Analog circuits
 - Limited data
 - National OSPs
 - Limited flexibility
 - Limited mobility
 - Infrastructure going away





What is NG9-1-1

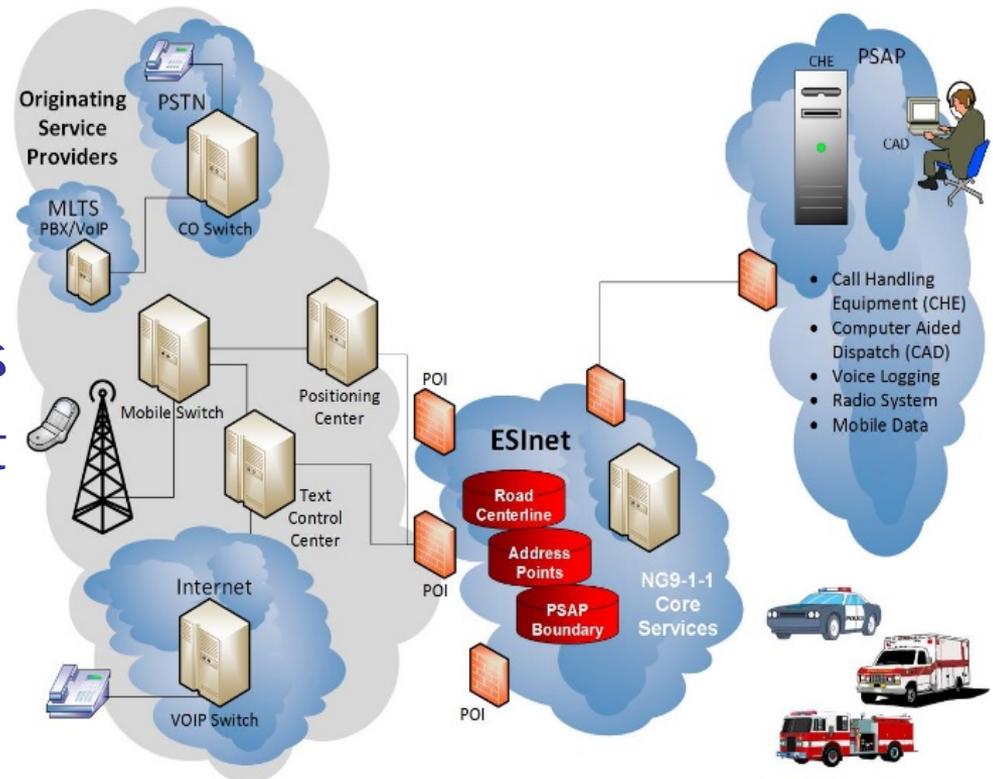
(continued)

- Case for Change
 - Service providers abandoning analog, circuit switched networks
 - Public using IP-based services
 - Texting heavily used especially hearing-impaired
 - NG9-1-1 service:
 - connects call more quickly
 - integrates data and voice
 - allows transfer of call anywhere

What is NG9-1-1

(continued)

- NG9-1-1 Network
 - NENA definition
 - IP network
 - Shared network
 - System of systems
 - Direct replacement for current E9-1-1
 - Not CHE
- How it works





What is NG9-1-1

(continued)

- Benefits of NG9-1-1
 - Integration of voice and data so direct path into PSAP
 - Policy or rule-based routing
 - Additional information about caller, incident or from other PSAPs
 - Replacement of aging infrastructure
 - Ability to transfer calls to any other PSAP needed
 - Limited training impact



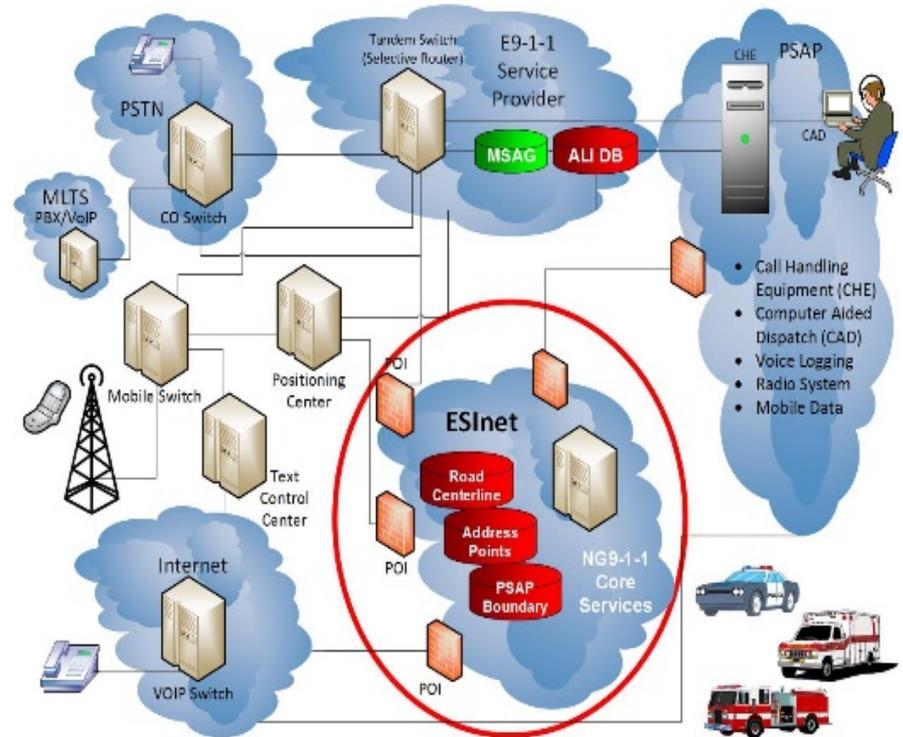
What is NG9-1-1

(continued)

- GIS Data in NG9-1-1
 - MSAG and ALI replaced with road centerline and address points
 - Location information “geocoded” to determine responsible PSAP
 - PSAP Boundary polygons required
 - Maintenance requirements may increase to ensure GIS data is always current and accurate
 - Investment has other positive impacts

Process of Change

- Feasibility Study
 - Stakeholder driven
 - Over 100 task identified
 - Tasks associated with governance completed
 - 9-1-1 Services Board established as governance





Process for Change

(continued)

- Guiding Principles
 - 9-1-1 is an essential, local/regional, public safety service
 - Need to address ALL of 9-1-1 not just NG
 - Full stakeholder engagement is needed
 - Services must not be degraded
 - Economies need to be leveraged
 - Doing nothing is NOT an option



Process for Change

(continued)

- Northern Virginia NG9-1-1 Project
 - Two PSAP grants from Board
 - Request for proposals conducted
 - Exhaustive selection process
 - VITA ISP staff as observers
 - Spatial interface awarded to GDIT
 - NG9-1-1 ESInet & core services awarded to AT&T
 - Implementation near end of 2018



Process for Change

(continued)

- Statewide Procurement Decision
 - VITA has planned to issue own RFP
 - Provide statewide contract for localities to use
 - Local RFP still an option
 - Factors impacting decision
 - NG9-1-1 requirements same statewide
 - Increased complexity
 - Same results
 - NOVA contract still available
 - Time commitment
 - Limited resources at VITA



Recommended Solution

- AT&T Solution
 - There are 2 major phases of the AT&T ESInet Service Life Cycle:
 - Implementation and Turn-Up
 - Maintenance and Life Cycle Management
 - Roles and responsibilities of each phase
- Deployment Methodology
 - Managed for no interruption & reduce cost
 - Solution provider is a local decision
 - Migration off selective router
 - Commitment to deployment period



Recommended Solution

(continued)

- Deployment Methodology (continued)
 - 36-month deployment by selective router pair
 - Significant preparatory work required

| Selective Routers | 9-1-1 Service Provider | Population |
|------------------------------|------------------------|------------|
| Fairfax/Alexandria | Verizon | 2,494,184 |
| High St Portsmouth/Jefferson | Verizon | 1,662,247 |
| Stuart/Chester | Verizon | 1,660,182 |
| Staunton/Salem | Verizon | 453,065 |
| Charlottesville/Farmville | CenturyLink | 403,369 |
| Fredericksburg/Winchester | Verizon | 343,031 |
| Blacksburg/Norton | Verizon | 340,101 |
| Johnson City/Wytheville | CenturyLink | 338,311 |
| Danville/Lynchburg Church St | Verizon | 320,247 |
| Shenandoah County ECC | Shentel | 43,175 |
| Covington | Ntelos | 21,556 |
| New Castle | TDS Telecom | 5,158 |
| Monterey-Highland Telephone | Highland Telephone | 2,216 |



Recommended Solution

(continued)

- OSP Transition
 - Moving traffic from selective router to point of interconnection (POI)
 - One POI to replace each selective router
 - OSP transition plan to the 9-1-1 Services Board
 - NENA i3 standard routing encouraged
 - Alternate routing through legacy network gateway permissible initially
 - Must plan for full i3 implementation



Path Forward

- Gantt chart

| ID | Task Name | Q4 17 | | | | Q1 18 | | | Q2 18 | | | Q3 18 | | | Q4 18 | | | Q1 19 | | | | | | | | | | | | |
|----|--|-------|-----|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------------------------|--|--|--|--|--|--|--|--|--|
| | | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | | | | | | | | | | |
| 1 | Develop State Level Plan | █ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Socialize State Level Plan with Stakeholders | | | | | █ | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Board Approval of Plan | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Develop PSAP Specific Plans | | | | | █ | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Outreach/Education | | | | | █ | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | PSAP Opt-In/Opt-Out Decision | | | | | | | | | | | █ | | | | | | | | | | | | | | | | | | |
| 7 | Funding Requests/Determinations | | | | | | | | | | | | | | █ | | | | | | | | | | | | | | | |
| 8 | NG9-1-1 Deployments | | | | | | | | | | | | | | | | | | | | Continue through 2022 → | | | | | | | | | |



Path Forward

(continued)

- Major milestones
 - Board approval of plan
 - Develop PSAP & GIS Specific Plans
 - Outreach/Education
 - PSAP Opt-In/Opt-Out Decision
 - Funding Requests/Determination
 - NG9-1-1 Deployments



Path Forward

(continued)

- Opt-In/Opt Out Process
 - PSAP is in control
 - May opt-in or opt-out at any point
 - Opting in
 - Notifying Board through VITA
 - Participation Agreement
 - Opting Out
 - Notifying Board through VITA
 - Encouraged to include cooperative procurement
 - Must be interoperable to existing solutions
 - Can change decision at any time
 - Coordination still required



Path Forward

(continued)

- Funding Process
 - Purpose

Provide funding to Virginia local governments and originating service providers (OSPs) based on cost guidelines for eligible NG9-1-1 implementation expenses during the established implementation and pay-back period



Programmatic Elements

- Program would remain in place through implementation and pay-back period
- Not an annual grant program
- Cost guidelines based on required equipment and services for NG9-1-1 deployment
- Cost estimates to be developed for local governments and OSPs
- No additional local costs to impact budgets



Programmatic Elements

- Localities can choose to “opt out” and select another solution provider
- Funding will be available to localities that select another solution provider
- Adjustments can be made in funding for material change
- Contingency fund for ISP staff to address issues between Board meetings



Eligible Participants

- Virginia local governments
- OSPs



Eligible Uses

- Local Governments
 - One-time costs related to ESI-net set-up and transitioning PSAP off SRs
 - GIS data prep work
 - Recurring costs during transition
 - CHE (if End of Life issued by vendor)



Eligible Uses

- OSPs
 - Connecting to ESInet Points of Interconnection (POIs)
 - ESInet interconnection
 - Database



Continuation of PSAP Grant Program

- Annual PEP would remain in place
- PSAP Grant Program reimbursement requests would continue to be processed for all grant awards
- Begin to discuss transition back to annual grant program during last year of NG9-1-1 deployments
- Consolidation funding would continue to be available



Continuation of PSAP Grant Program

- Board approve FY 20 PSAP Grant Program and NG9-1-1 Funding Program Guidelines at May 2018 meeting



Deployment Milestones

- Create local government implementation plans
- Local governments decide whether or not to utilize Fairfax contract
- Board approve implementation plans and funding estimates
- Participant Agreements



Additional Items

- Definitions and development of specific programmatic details consistent with legislative outcome
- Establish process for OSP funding requests and conduct outreach for carrier community
- Review process for funding requests from localities that decide to not utilize the Fairfax contract



Path Forward

(continued)

- Overall Budget
 - Transitional costs – limited in duration

| Category | Amount |
|--|--------------|
| NG9-1-1 non-recurring cost | \$476,000 |
| Special construction costs | \$31,830,516 |
| GIS data preparation | \$3,246,226 |
| Originating service provider (OSP) transition cost | \$5,000,000 |
| Legacy 9-1-1 service provider transition costs | \$5,000,000 |
| Project management assistance | \$1,750,000 |
| Data analytics expansion | \$59,500 |
| Total | \$47,362,242 |



Path Forward

(continued)

- Overall Budget
 - Recurring costs – annual ongoing costs

| Category | Amount |
|---|--------------|
| NG9-1-1 recurring costs | \$10,749,443 |
| Originating service provider (OSP) recurring cost | \$5,000,000 |
| Data analytics recurring costs | \$561,404 |
| Total | \$16,310,847 |

- Sufficient funding exists within \$69M planned by the Board, borrowing authority and existing local funding



Conclusion

- Deployment plan lays out statewide approach/methodology
- 9-1-1 is a local service so decision is local
- Use of Fairfax County contract only a recommendation
- Locality can issue own RFP for services
- VITA will not be conducting a procurement
- Still much to learn
- PSAP specific plans next major step



Conclusion

(continued)

- Key to success
 - Cooperation
 - Communications
 - Coordination
- Local decision impacts neighboring localities, entire state and surrounding
- Cost of failure too high
- Must work together as we move forward



Conclusion

(continued)

- What to do now
 - Stay informed/involved
 - Start meeting regionally
 - PSAPs
 - GIS
 - IT
 - Prepare GIS data
- This plan will evolve as we learn more
- Now is the time to start
- Together we can do this!!!



Standard Development Process Document





Updates/Reminders





Public Comment





Wrap -Up

- Next RAC conference call is Dec 19th
- Anything else for the good of the order?