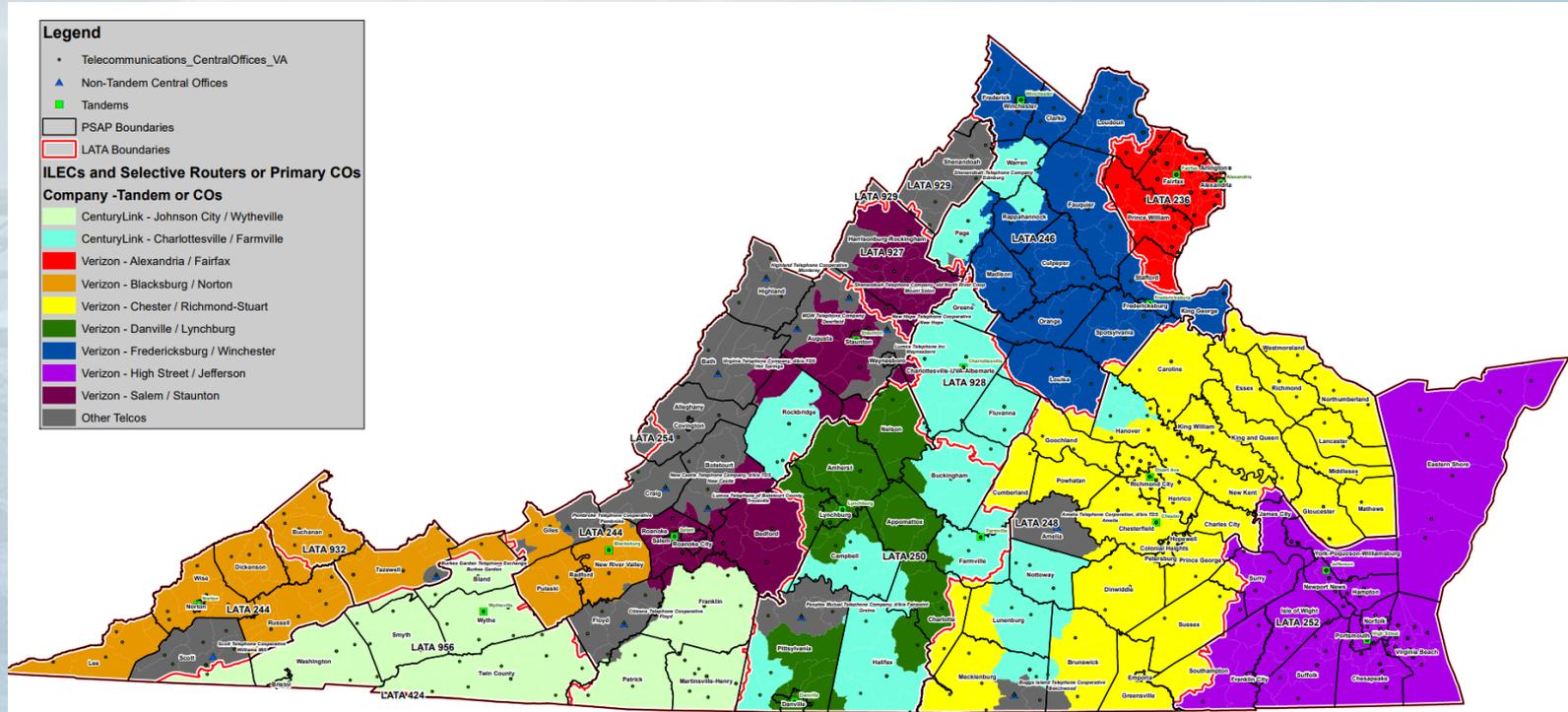


Next Generation 9-1-1

Migration to NG9-1-1 in Virginia Has Begun

- Code of Virginia section 56-484.16 requires migration by July 1, 2023
 - Fairfax County signed AT&T contract
 - Virginia Beach signed AT&T contract
 - Deployment of an ESInet and NG9-1-1 core services
 - Contract available to all localities
- Choice of NG9-1-1 provider is a local decision
- State 9-1-1 Services Board will fund the initial implementation through Grant Processes
- Migration will occur regionally throughout the State

Proposed Deployment Schedule



Challenges to Existing 9-1-1 System

- 9-1-1 now
 - Decades old technology
 - Creation of 9-1-1 was in 1968
 - Extremely limited ability to process data
 - Core Analog Technology is going away
- Evolving telecommunications
 - Multiple service providers/technologies
 - New technologies/applications continually developed
 - Increased flexibility/mobility of citizens / 5G Technologies
 - Over 80% of Americans use smartphones and mobile devices

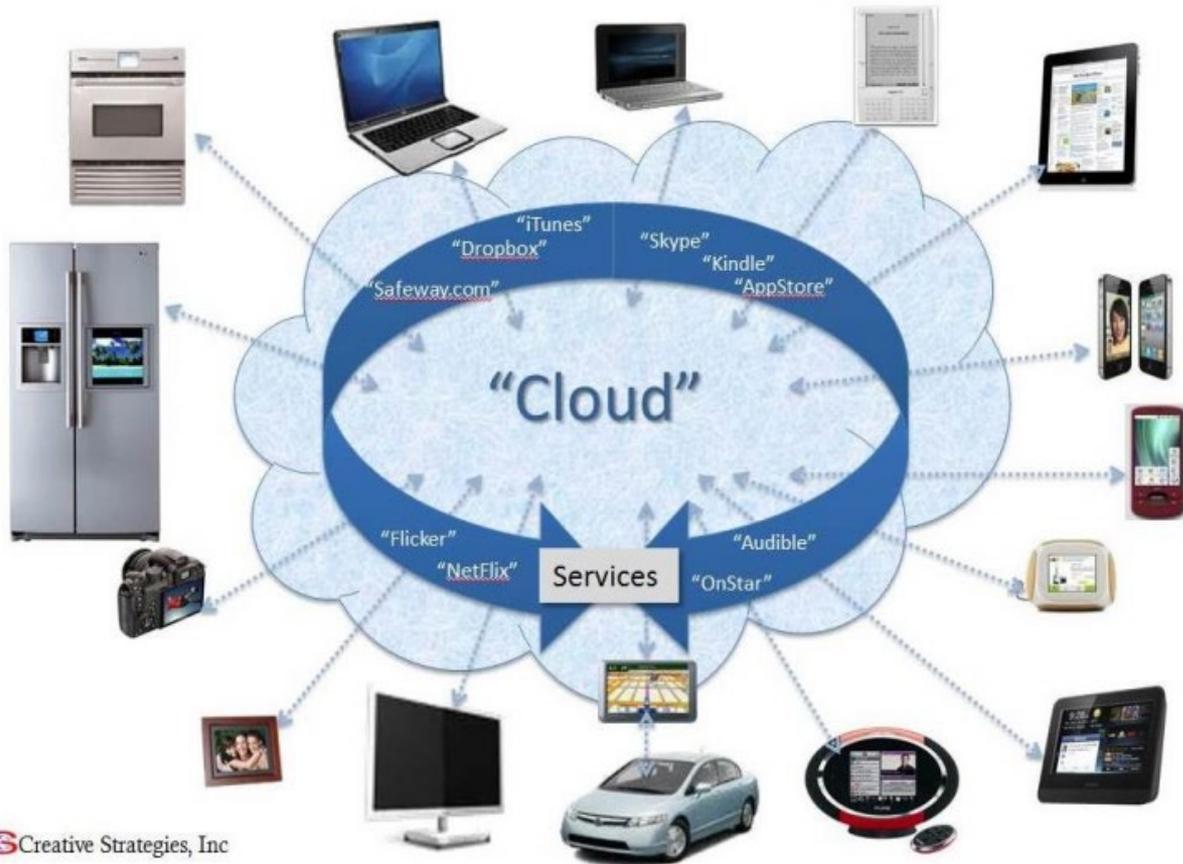
What is Next Generation 9-1-1?

- NG9-1-1 is the solution to existing challenges
 - Migration from circuit (analog) to packet switched (IP) technology
 - Comprised of hardware, software, and data circuits
 - Acquires and integrates additional data useful to call routing and handling
 - Unified network among PSAP's; data transferability and redundancy
 - Delivers the calls/messages and data to the appropriate PSAP's and other appropriate emergency entities
 - Required to meet the demands of new technologies
- Makes data available
 - About the caller, the incident, and among PSAP's and First Responders
 - This includes photos, texts, audio and video information from medical devices; data from car sensors, building monitoring systems, etc.

Today's 9-1-1 vs. NG9-1-1

Today's 9-1-1	Next Generation 9-1-1
Virtually all calls are voice callers via telephones over analog lines	Voice, text, or video information, from many types of communication devices, sent over IP networks
Most information transferred via voice	Advanced data sharing is automatically performed
Callers routed through legacy selective routers, limited forwarding / backup ability	Physical location of PSAP becomes immaterial, callers routed automatically based on geographic location, enhanced backup abilities
Limited ability to handle overflow situations, callers could receive a busy signal	PSAP able to control call congestion treatment, including dynamically rerouting callers

Internet of Things



Creative Strategies, Inc

Planning and Deployment

- NG9-1-1 Migration Proposal
 - Grant submitted and approved October 2019
 - Virginia Information Technologies Agency (VITA) and Integrated Services Program (ISP) developed a document based on the Fairfax County contract
 - Includes information on:
 - The AT&T solution
 - PSAP's existing systems and readiness for NG9-1-1 deployment
 - Description of network availability, redundancy and diversity for each PSAP / Locality

Deployment Funding

- NG9-1-1 Deployment – Amount Awarded
 - **\$245,437.04**
- 911 Services Board will fund:
 - Call Handling Equipment upgrade
 - Connectivity / Geo Diverse Fiber
 - Legacy 9-1-1 charges
 - Monthly recurring charges
 - Difference between current and future charges covered by 9-1-1 Services Board for 24 months

Monthly Recurring Charges

- Current monthly 9-1-1 Service Charge estimated at **\$8,000**
 - Based on current landline subscriber counts
- Proposed AT&T Monthly 9-1-1 Service Charge of **\$13,200**
 - Includes all the services and benefits mentioned
 - Set for a 10 year term
- A monthly increase of **\$5,200**
 - 9-1-1 Services Board will cover this difference in expense for 24 months after deployment

Unknown Future

- Exploring future operating costs
 - Associated costs still unknown – there isn't a process yet
 - Security / Network Security
 - Bandwidth
 - Storage / Capacity
 - Receiving and delivery methods for current and future technologies
 - Other emerging technologies

Questions

