

Washoe County E9-1-1
Emergency Response Advisory Committee
E911 Five-Year Master Plan
Implementation Update

May 18, 2023



Galena Group, Inc.

Information Technology / Communications Consulting

E911 Five-Year Master Plan Implementation Update

Task 1 -Develop a Process and Format with PSAP Management to Track and Report PSAP Metrics to the Committee

Task 2 -Establish a Structured Process for Purchase Authorization and Develop Funding Priorities

Task 3 -Provide Assessment of NG9-1-1 Readiness and Present Status of Current Upgrades

Task 4 -Develop Tactical (Current Design) and Prepare for Long-Term (Future) PSAP Backup Strategies

Task 1 -Develop a Process and Format with PSAP Management to Track and Report PSAP Metrics to the Committee

■ Present PSAP Related Metrics :

- Establish a defined process and consolidated format ✓
- Format and content will be reviewed & endorsed by primary PSAP management ✓
- Report will be presented to the Committee once per *quarter year**
 - First complete report -July 2023
 - Committee provided the definition & significance of data in report. & reason to review each category ✓

*Suggest Biannual presentation (January/July)

Task 1 -Develop a Process and Format with PSAP Management to Track and Report PSAP Metrics to the Committee

- *2007 Emergency 911 Review and Audit Report*

This recommendation originally presented in the *2007 Emergency 911 Review and Audit Report*

- **2013 5-Year Master Plan**

“...Develop shared PSAP statistical reports that provide value to Committee in making decisions on funding recommendations and identify areas of needed improvement”

- **2017 5-Year Master Plan**

“The Committee should require performance management information from the PSAPs to augment requests for E911 funding for various projects and initiatives. This will help ensure the Committee has sufficient operational information to place decision-making in an appropriate fiduciary context.”

Process and Format to Track and Report PSAP Metrics

■ Process

- Biannual request to provide data
- Acquire review and compile data on form
- Present to 9-1-1 advisory committee

Emergency Dispatch Operational Metrics Report

Telephone	Total	Average Answer Time (Seconds)	Average Call Duration (seconds)
9-1-1 Calls Wireless & Wireline	16,903	5.03	102.4
Text	229		231.2
Call Transfers	4,016		
Total Non-Emergency (Admin) & 10-digit Emergency	16,644		142.2
Outgoing Calls (Voice & Text)	7,457		
Radio			
911 Outbound Push to Talks (PTT)			
CAD			
Fire EMS (Entered & Initiated)	4,246		
LAW (Entered & Initiated)	22,456		
Other (Officer Initiated)	8,083		
Total Incidents (Entries)	34,785		

Reporting Period 04/01/23 – 04/30/2023 **Reno - for Example Only**

Telephone Category

- **9-1-1 Calls** = Total number of 911 calls in reporting period
 - Provides indication of total system traffic load (Wireless & Wireline) for direct 911 calls to primary PSAPs

- **Text**
 - Total of TEXT to 911

- **Call Transfers**
 - Total outbound (transferred) 911 calls

- **Total Non-Emergency (Admin) & 10-digit Emergency**
 - Total (all PSAPs) of non-emergency calls
 - Outgoing Calls – voice and text

Radio

- 911 Console Outbound Push to Talks (PTT)
 - Talk-Group activity summary for primary Talk Groups – 6 Months
 - Available from Washoe County Regional Communication System
 - Outbound does not include receive “listening” time.

Computer Aided Dispatch (CAD)

- Each is a “category” in CAD that may be combined and reported:
 - Fire/EMS
 - LAW
 - Other
 - Includes entries that do not fall into Fire/EMS or Law - such as Public Works, Utilities, Animal Control-

- Total number of CAD Incidents
 - Total of all CAD incidents for Washoe, Reno & Sparks PSAPs during reporting period.

Process and Format to Track and Report PSAP Metrics

Meaning of Reported Information & Allowable Funding Of Various 9-1-1 Technologies:

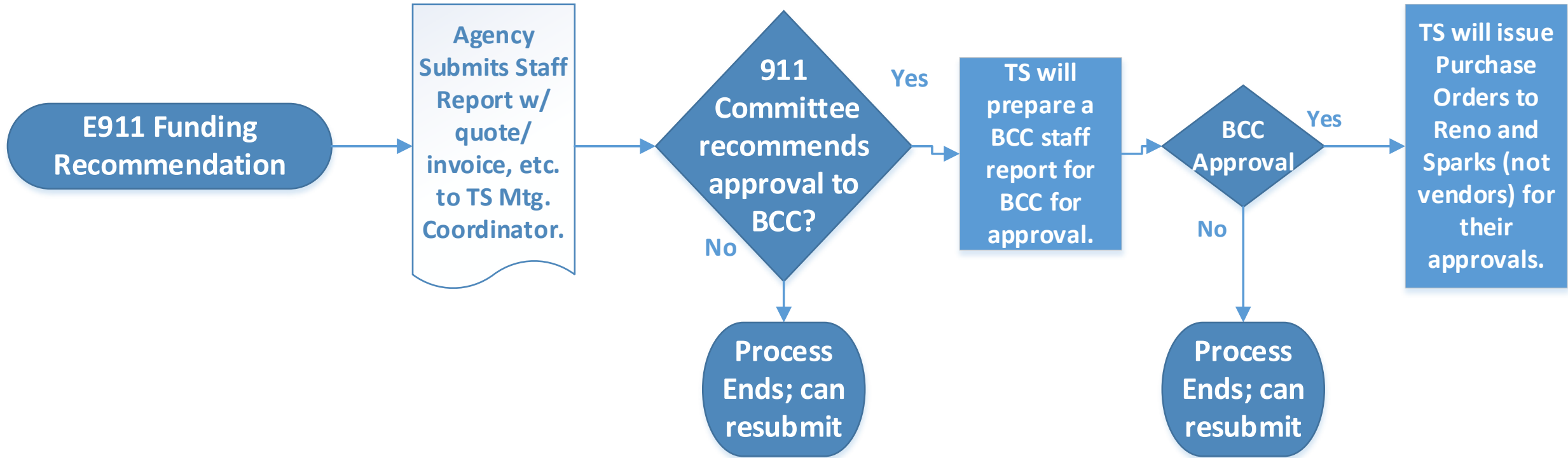
- Information indicates traffic and workload trends
 - *Examples of Use by PSAP Management:*
 - Impact of location-based routing
 - Backup location bandwidth requirements
 - Workload analysis
- Proposed format and content approved by PSAP managers
- Finalize process and resources needed for acquiring combining and presenting information
- First Presentation July 2023 meeting

Task 2 -Establish a Structured Process for Purchase Authorization and Develop Funding Priorities

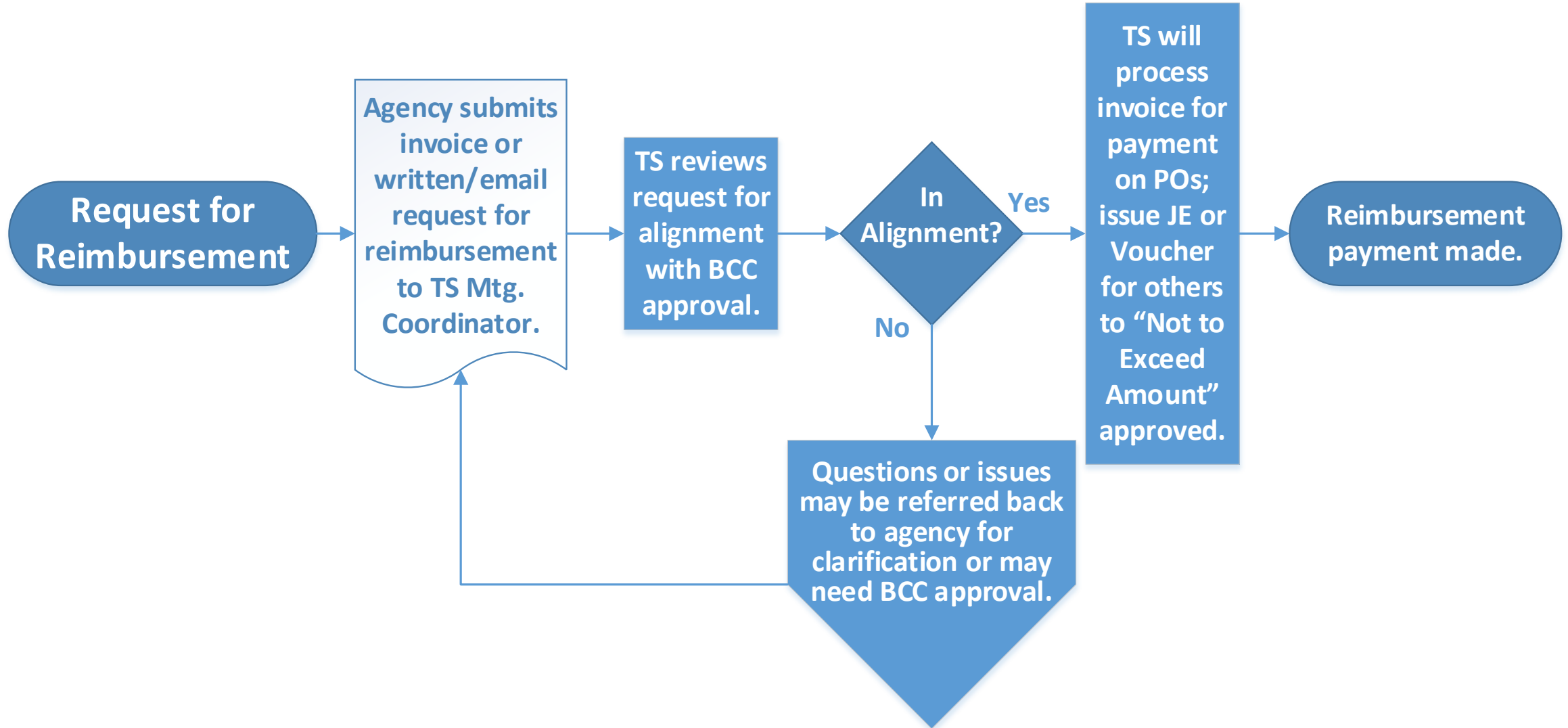
■ March Meeting:

Present and discuss the definition of acceptable and not acceptable expenses, analysis of the regulations, and gaining concurrence with a prioritization of the Committees fundable list.

Structured Purchase Process *-Request for Funding*



Structured Purchase Process *-Request for Reimbursement*



Use of 9-1-1 Surcharge Funding Priorities by Nevada State Statute - NRS 244A.7645 (9-1-1 Portion Only)

- (I) Paying recurring and nonrecurring charges for telecommunication services necessary for the operation of the enhanced telephone system;
- (II) Paying costs for personnel and training associated with the routine maintenance and updating of the database for the system;
- (III) Purchasing, leasing or renting the equipment and software necessary to operate the enhanced telephone system, *including, without limitation*, equipment and software that identify the number or location from which a call is made; and
- (IV) Paying costs associated with any maintenance, upgrade and replacement of equipment and software necessary for the operation of the enhanced telephone system.”

NRS 244A.7641 Definitions

- **“Telephone system”** means a system for transmitting information between or among points specified by the user that does not change the form or content of the information regardless of the technology, facilities or equipment used. A telephone system may include, without limitation:
 - (a) Wireless or Internet technology, facilities or equipment; and
 - (b) Technology, facilities or equipment used for transmitting information from an emergency responder to the user or from the user to an emergency responder.

Sample of Ongoing Approved Items (Direct 911)

“Acceptable” Items: (Checkmarks are a Non-legal interpretation only)

- GIS ✓
- Training and travel ✓
- Intrado ✓
- Telephone Land Lines ✓
- Washoe County Sheriff's Office ProQA ESP ✓
- City of Sparks ProQA Dispatch Quality Performance Review ✓
- City of Sparks Pro-QA Priority Dispatch EFD ✓
- City of Reno ProQA Emergency Service Plan (EFD) ✓
- CodeRed ✓
- TMFPD ProQA EFD ✓
- Voiance ✓
- City of Sparks Live911 Software ✓
- Cell phones Incline Village ✓
- Washoe County Dispatch Carbyne c-Live Universe Solution 5-year contract ✓
- City of Sparks First Due Fire Response ✓
- TMFPD First Due Fire Response ✓
- City of Reno First Due Fire Response Annual Maintenance ✓
- Washoe County Tech. Services Employee Benefits ✓
- City of Sparks GIS Salary Reimbursement ✓
- Washoe County Tech. Services Salaries and Wages ✓
- City of Reno GIS Salary ✓

✓ = *Possibly allowable* under **State** funding priorities

✓ = Allowable under **State** funding priorities

ALL listed Items apparently acceptable 9-1-1 surcharge by FCC

FCC 47 CFR Part 9 (up to date as of 5/11/2023) 911 Requirements

- (b) **Examples of acceptable purposes and functions** include, but are not limited to, the following, provided that the State or taxing jurisdiction can adequately document that it has obligated or spent the fees or charges in question for these purposes and functions:
 - (1) PSAP operating costs, including lease, purchase, maintenance, replacement, and upgrade of customer premises equipment (CPE} (hardware and software), computer aided dispatch (CAD} equipment (hardware and software), and the PSAP building/facility and including NG911, cybersecurity, pre-arrival instructions, and emergency notification systems (ENS}. PSAP operating costs include technological innovation that supports 911;
 - (2) PSAP personnel costs, including telecommunicators' salaries and training;
 - (3) PSAP administration, including costs for administration of 911 services and travel expenses associated with the provision of 911 services;
 - (4) Integrating public safety/first responder dispatch and 911 systems, including lease, purchase, maintenance, and upgrade of CAD hardware and software to support integrated 911 and public safety dispatch operations; and
 - (5) Providing for the interoperability of 911 systems with one another and with public safety/first responder radio systems.

Federal Communication Commission (FCC)

47 CFR Part 9 (up to date as of 5/11/2023) 911 Requirements

§ 9.23

(c) **Examples** of purposes and functions that are **not acceptable** for the obligation or expenditure of 911 fees or charges for purposes of section 902 include, but are not limited to, the following:

(1) Transfer of 911 fees into a State or other jurisdiction's general fund or other fund for non-911 purposes;

(2) Equipment or infrastructure for constructing or expanding non-public safety communications networks (e.g., commercial cellular networks); and

(3) **Equipment or infrastructure for law enforcement, firefighters, and other public safety/first responder entities that does not directly support providing 911 services.**

Task 2 -Establish a Structured Process for Purchase Authorization and Develop Funding Priorities

- Event Recording / Body Camera Funding
 - Use of streaming from event recording cameras is increasing as part of the emergency dispatch function (what %) argue in front of FCC?

Federal Communication Commission

for Discussion:

- (d) If a State or taxing jurisdiction collects fees or charges designated for "public safety," "emergency services," or similar purposes that include the support or implementation of 911 services, the obligation or expenditure of such fees or charges **shall not constitute diversion provided that the State or taxing jurisdiction:**
 - (1) Specifies the amount or percentage of such fees or charges that is dedicated to 911 services;
 - (2) Ensures that the 911 portion of such fees or charges is segregated and **not commingled** with any other funds; and
 - (3) Obligates or **expends** the **911 portion** of such fees or charges **for acceptable purposes** and functions as defined under this section.

Reasons to Pursue Separation of Funds & Issues

- Allows a *possible* path to pay specific amount towards body/vehicle cameras with approval by FCC
- Permits funding of actual 9-1-1 / incident recording use
 - e.g., Body or vehicle camera stream of certain incidents
 - Possible removal from FCC diverging 9-1-1 funds list
- Requires fund separation process
- Percentage of surcharge dedicated towards Event Recording would need to be defined
- Would not necessarily require a change to State law
- **Needs to be explored with WC Legal and Financial**

§ 9.24 Petition Regarding Additional Purposes And Functions

(a) A State or taxing jurisdiction may petition the Commission for a determination that an obligation or expenditure of *911 fees or charges for a purpose or function other than the purposes or functions designated as acceptable in § 9.23* should be treated as an acceptable purpose or function. Such a petition must meet the requirements applicable to a petition for declaratory ruling under § 1.2 of this chapter.

(b) The Commission shall grant the petition if the State or taxing jurisdiction provides sufficient documentation to demonstrate that the purpose or function:

- (1) Supports public safety answering point functions or operations; or**
- (2) Has a direct impact on the ability of a public safety answering point to:**
 - (i) Receive or respond to 911 calls; or**
 - (ii) Dispatch emergency responders.**

Task 3 -Provide Assessment of NG9-1-1 Readiness and Present Status of Current Upgrades

- The assessment included ability to handle call routing, resiliency, CAD interface capabilities, and capacity to leverage the latest in new or developing technologies.
- Reviewed compliance to NENA i3, APCO, NG911 Institute, NFPA and other standards.
- Intrado provided a presentation on product direction and how it meets i3 and other standards. –April 19th 2023 included PSAP Managers and PSAP selected personnel

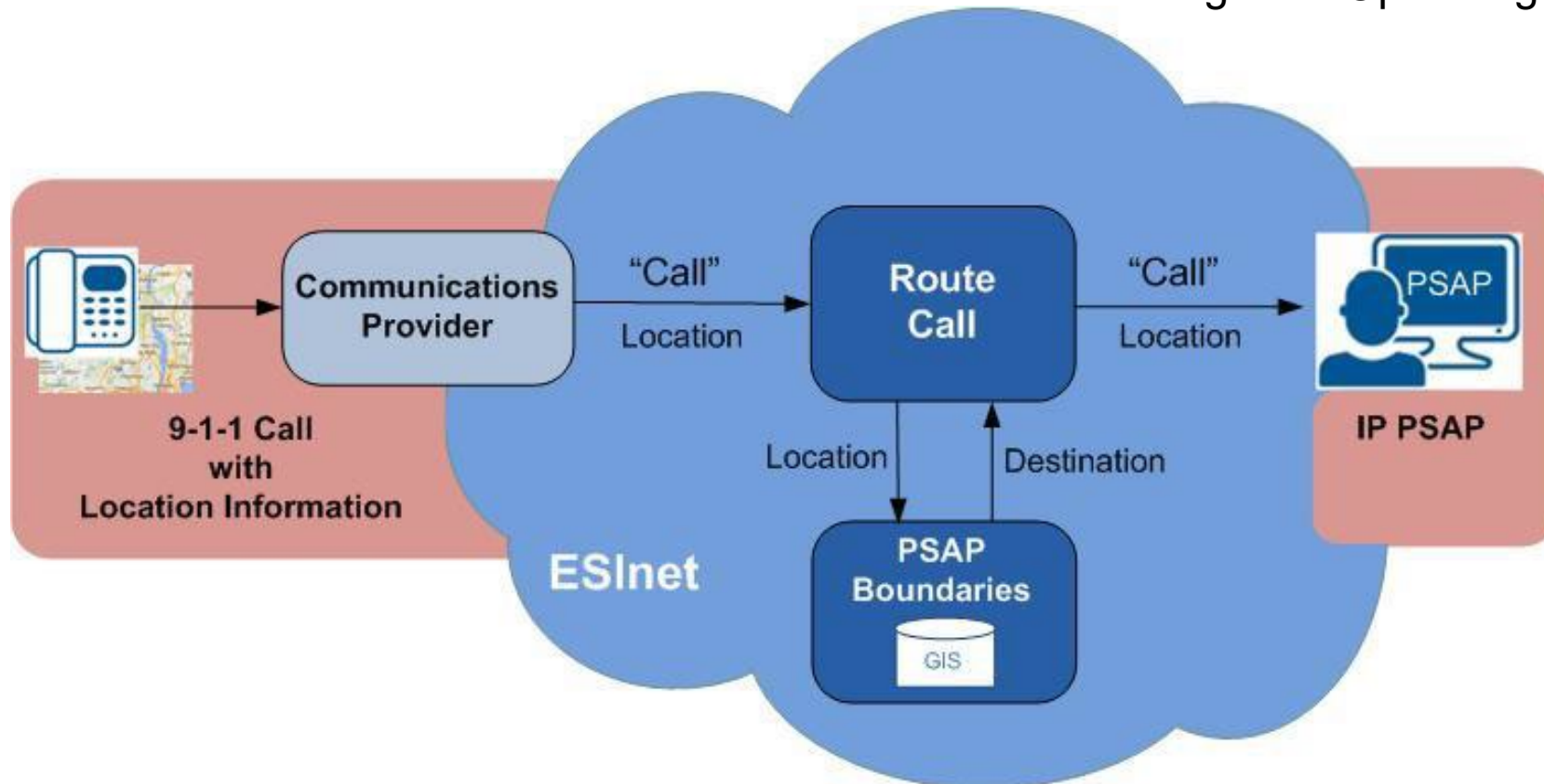
What is Next Generation 911?

Dedicated Public Safety Grade IP Network (ESInet)

Based on Caller's Location

Delivering Calls, Data and Advanced Services

Integrated Operating Environment



Intrado Systems Status (Presented April 19, 2023)

Recent Implementations

- VIPER 7 –Completed
- TDMS –Completed (Transitional Data Management Service)

Next Steps

- Network Re-Architecture (September)
 - Diversity
 - Bandwidth
 - PSAP Admin Lines
 - Future Applications
- GIS Routing and i3 (1-5 months)
 - All layers completed –with the exception of PSAP Boundary Layer
- Reporting Availability (Available Now)
 - Tableau/Standard Reports
 - CMP (Customer Management Portal)

Intrado Systems Status

■ Roadmap/Current Capabilities

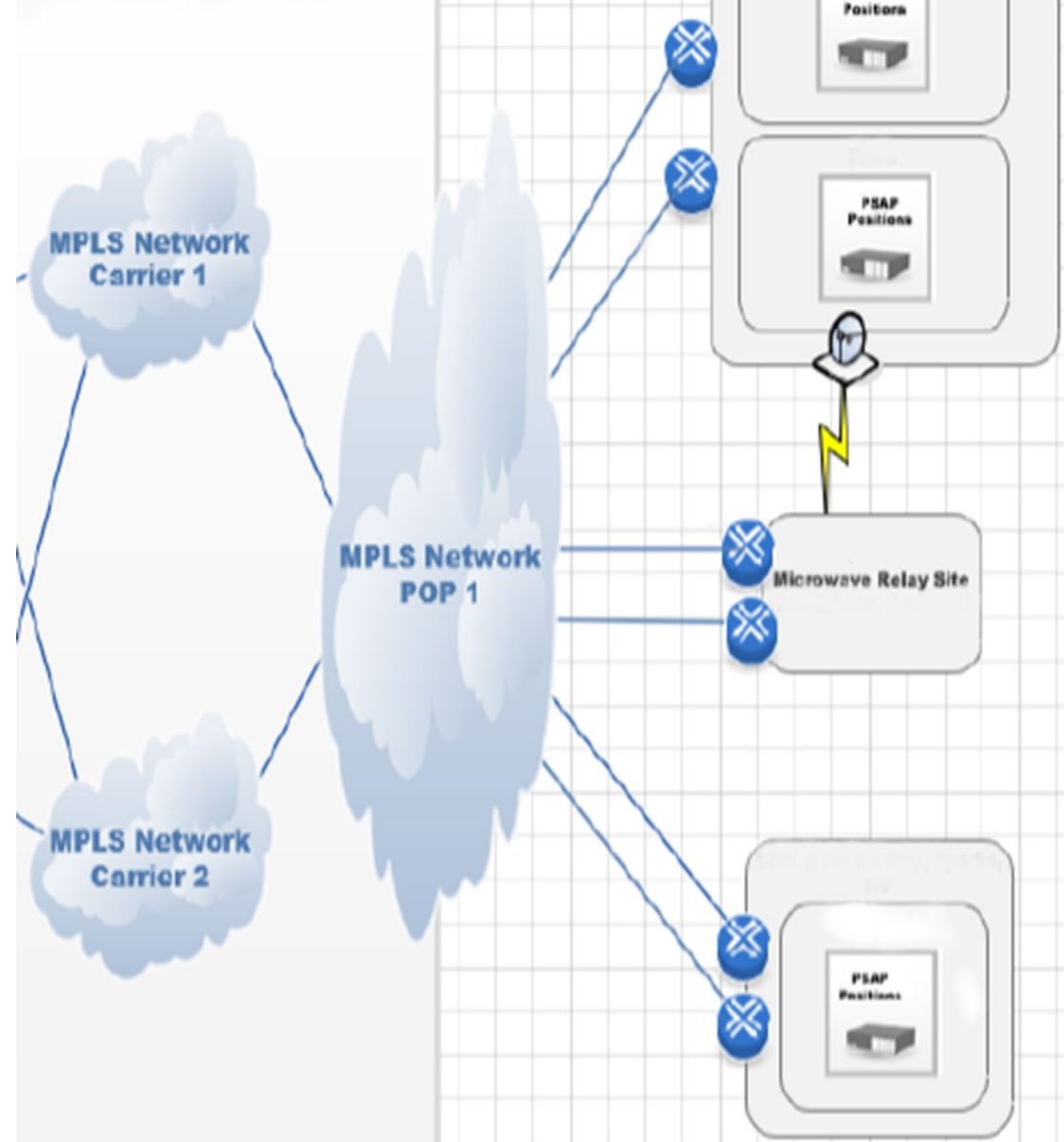
□ Intrado Portal Access

- Customer Management Portal
- Standard Reports/Tableau

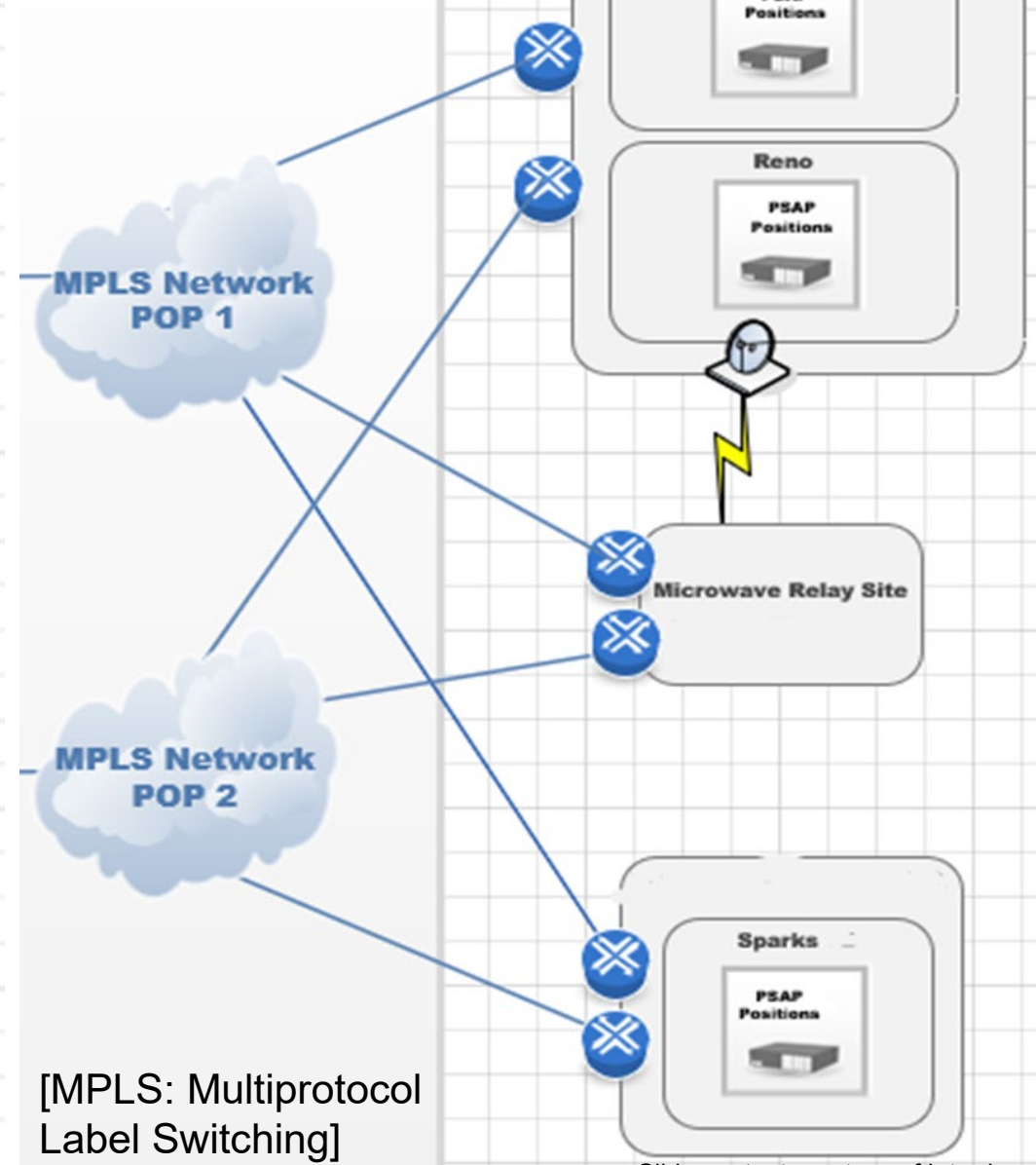
□ Future Capabilities -

- TDOS Prevention (included) (Telephony Denial of Service)
- SafetyNet Recording (Included)
- Executive Dashboard

Intrado A9-1-1 Routing Core Site Architecture - Current



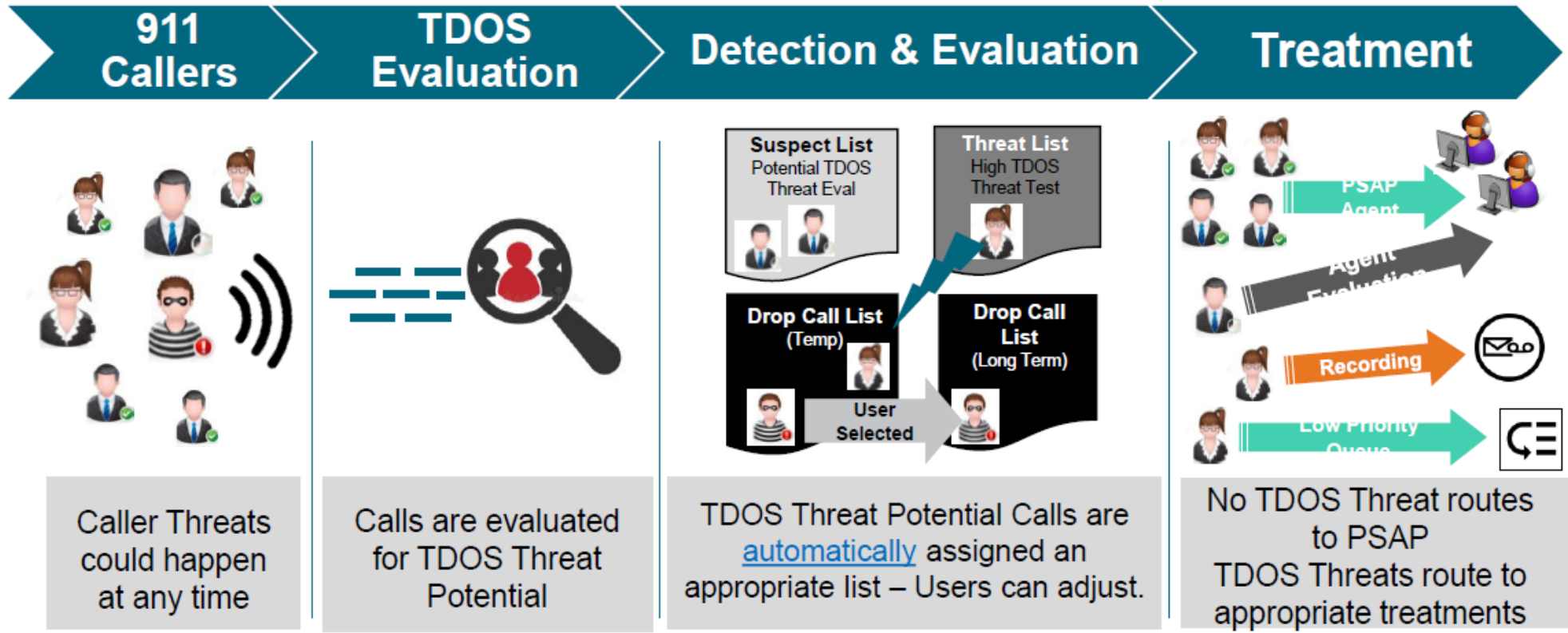
Future (Sep-Oct 2023)



[MPLS: Multiprotocol Label Switching]

TDOS (Telephony Denial of Service)

Intrado Automated TDOS Solution with AI Evaluation



Automated TDOS Protection with Customized List & Treatment Control

Task 3 -Provide Assessment of NG9-1-1 Readiness and Present Status of Current Upgrades --Summary

■ Assessment of NG9-1-1 Readiness

□ Current System meets or is evolving to meet:

- Developing NENA i3 and other NG9-1-1 Standards
- Current and planned needs

□ Recommend biannual report of NG9-1-1 direction & progress

- Should be a meeting with Emergency Dispatch Centers as Lead- Not necessarily an open meeting - with a report to the Committee

Task 4 -Develop Tactical (Current Design) and Prepare for Long-Term (Future) PSAP Backup Strategies

- Previous approach – “Go to Site” or “Flee-to”
- 2017: A Regional PSAP backup plan should be revisited. The plan should include procedures, technology, and adequate facilities. It should include a backup site design that provides geographic and technical resiliency.
- 2021: “...three PSAPs create a regional back-up plan that details the capabilities, capacities, networking/bandwidth needs, technology, and equipment needs for each of the PSAPs. ...”
- Expensive, separate location

Previous Approach for PSAP Back-up

■ Separate “Flee-to” location

1. Reciprocal locations – Other PSAP centers provide operational positions
 - This was, and is the Primary backup approach
2. Standby PSAP location, fully equipped and functional
 - Expensive, separate location
 - Partially planned, never implemented

New Approach for PSAP Back-up

■ New thinking

- Product of newest available communications technology “Go to anywhere”
- No longer a need for expensive, duplicate location

Benefits:

- Very Flexible
- Greater Resiliency
- Less expensive
- Available today

Basics Needed for PSAP Backup

- Call Taking
- CAD
 - Other Applications
- Radio

Example: Intrado system



New Approach for PSAP Back-up

■ Cost and Effort

- Requires continual assessment of
 - Current technology
 - Acceptable / available locations
 - Needs and changes to communication requirements
 - Ability to connect/operate ancillary public safety applications

- Investment in communications and technology

- Assessment of potential locations (ongoing)
 - Long term availability
 - Infrastructure (e.g. bandwidth / power / security / hardened)
 - Ergonomically acceptable for medium to long term use if needed

- Ongoing Planning, testing and training

New Approach for PSAP Back-up

- Tactical PSAP backup plan due first part of June
 - Prepare for Long-Term (Future) PSAP Backup Strategies
 - Will be based on present configuration

- PSAP Management developed current planning approach
 - First level used just over a week ago
 - Calls came to Sparks
 - Reno Moved to Sparks for Call Taking
 - Washoe County routed 911 to Admin lines

FCC

- On **December 22, 2022**, the FCC released the Notice of Proposed Rulemaking (“NPRM”) seeking comment on a proposal **requiring** wireless carriers and covered text providers **to implement location-based routing** for 911 calls and texts nationwide. The item was adopted at the December Open Meeting.
 - **DA/FCC #:** FCC-22-96
 - **Docket No:** 18-64



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Questions / Discussion



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