Cloud Based CPE

CALNENA Annual Conference
La Jolla, CA
March 3, 2020

Briefing Overview

- Cloud Based CPE
  - Cloud native and data center based call processing equipment
  - Overview of the cloud concept
  - Status of the RFP
  - Highlights of the functional requirements
- Discussion and Questions

Moving Call Processing Equipment to the Cloud

CPE and Cloud / Data Center Model

- Moving away from per position costs and toward call volume pricing

  - Monthly recurring costs based on call volume

  - All other costs are one time, non-recurring costs

- No more trunks = No more busies

- No more 9-1-1 Branch denials for training positions, mobile positions, EOC positions, etc.

Goals and Long Term Vision

- Access to maps and GIS data of other jurisdictions
- Ability to provide surge capacity staffing without having to physically relocate
- Integrated visibility into alerts and warnings and other emergency management functions
- No downtime for PSAPs as new features are deployed, non-intrusive software vs intrusive hardware upgrades

- Potential cost savings and faster speed to deployment
- Facilitates technology innovation, minimal equipment required at PSAP
- Increased security capability
- Flexibility. Features and functions can be added as needed and available

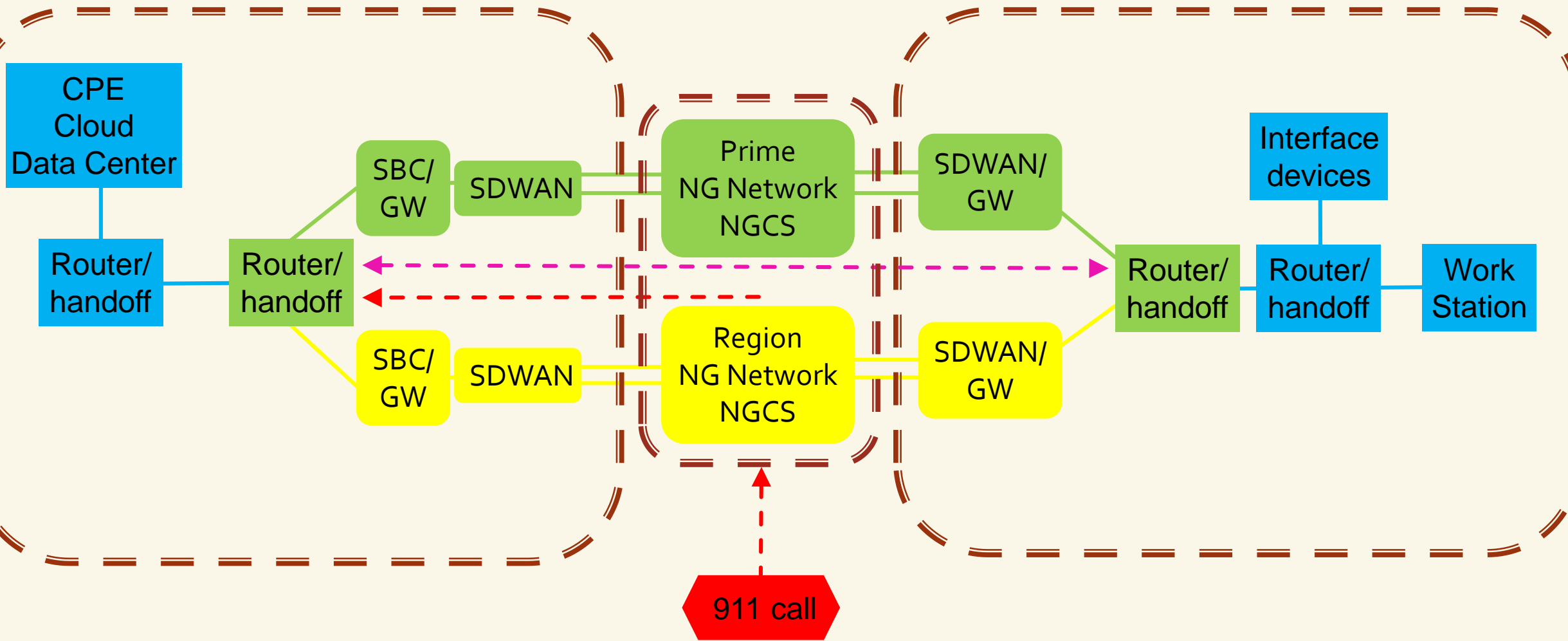# NG 9-1-1 Connectivity: PSAP's Perspective
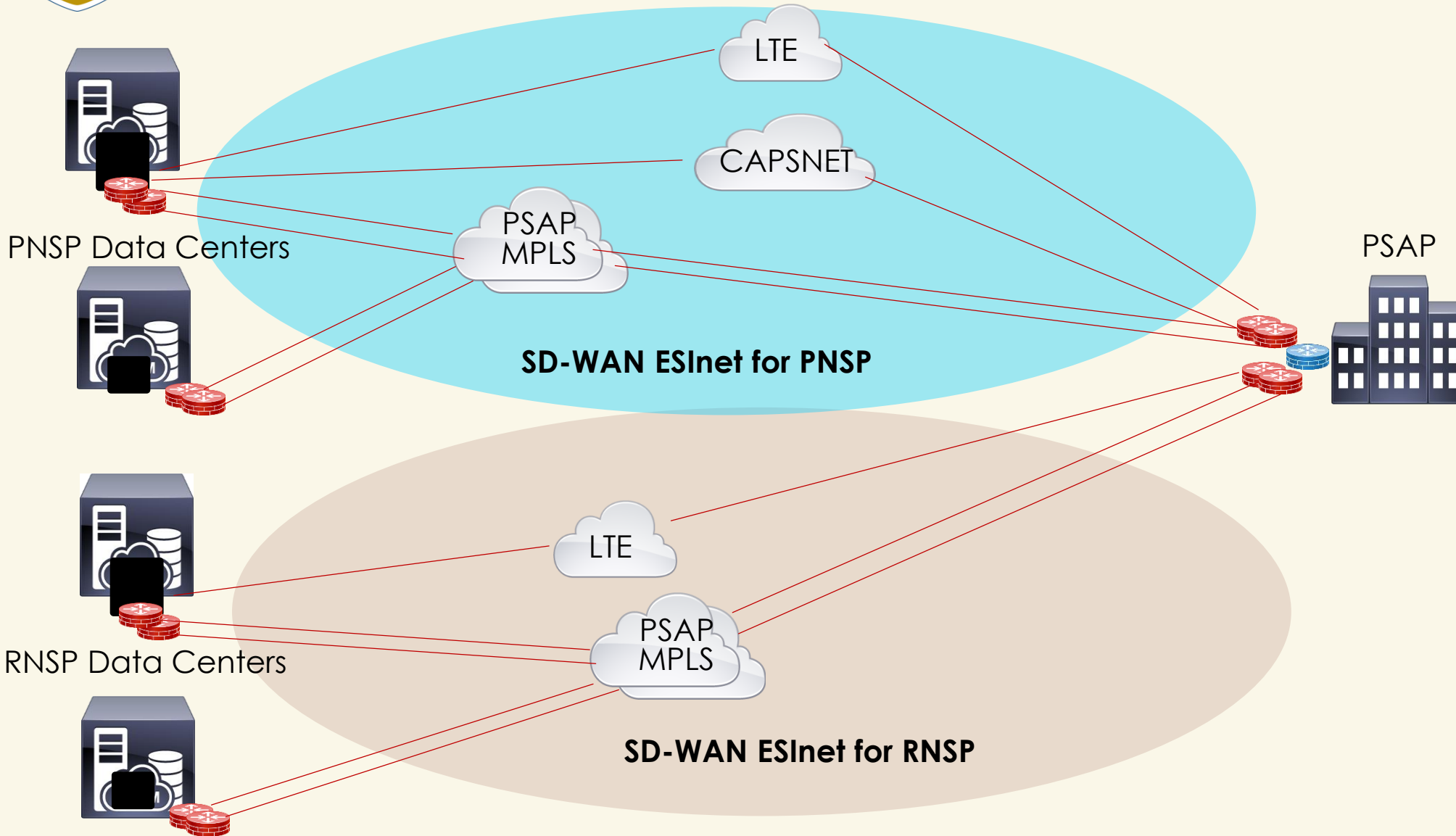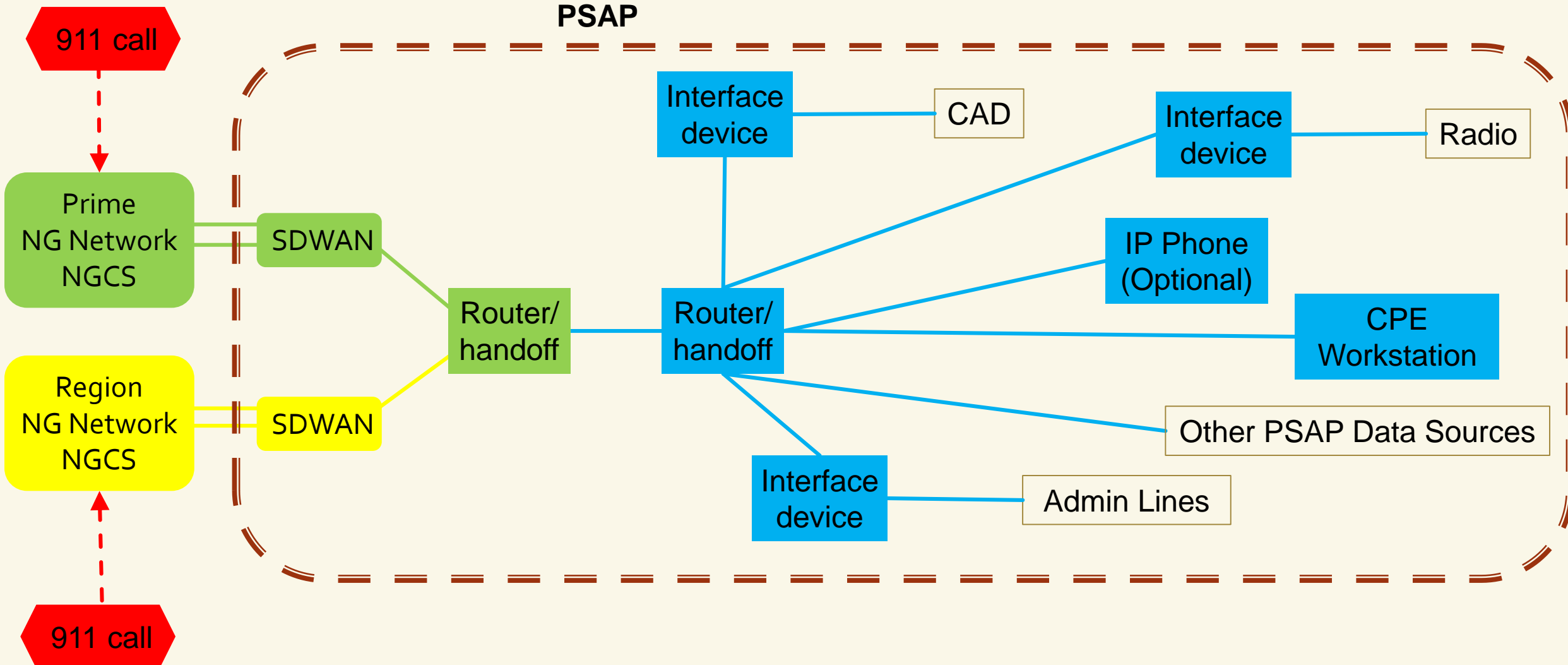
Device Interface at the PSAP

Cloud CPE RFP Key Action Dates

- Release pre-solicitation   Dec 20, 2019
- Meetings with potential bidders   Jan-Feb, 2020
- Release solicitation   March 26, 2020
- Intent to bid submission   April 9, 2020
- Response to bidder's questions   April 23, 2020
- Last day to submit proposal   May 15, 2020
- Cost workbook and draft plans   June 19, 2020
- Negotiations   July 1-31, 2020
- Contract award   August 28, 2020

Cloud Based CPE Security and Availability

- FedRAMP certified cloud providers
  - The Federal Risk and Authorization Management Program (FedRAMP)
  - Developed using experts from GSA, NIST, DOD, and NSA
- High Availability (99.999%)
  - Multiple instances of software across multiple datacenters
  - Each instance supports 100% of the need
  - Active / Active deployment of each Instance with automatic failover
  - Secure network connections with logical and physical diversity
- Dedicated and Secure
  - Private, closed networks
  - Dedicated to California
  - Must utilize both a PNSP and RNSP NG 9-1-1 trunk

Cloud Based CPE Ordering Process

- CPE provider gets on the CA State Master Service Agreement
- CPE provider successfully demonstrates capabilities by passing acceptance testing in the CA 9-1-1 Branch Lab
  - CPE vendors are not allowed to talk to PSAPs until they pass testing in the lab
- CPE provider is selected by PSAP
- PSAP works with CPE provider and CA 9-1-1 Branch PSAP Advisor to complete SOW and TDe-288
- CPE provider works with CA 9-1-1 Branch to establish NG 9-1-1 network connections in PSAP's region
- CPE provider has 90 days from completion of TDe-288 and establishment of NG 9-1-1 network to install CPE at the PSAP

Functional Requirement Overview

- Cloud CPE shall support:

  - MIS, ACD, auto-abandon call back, etc.

  - Goal is to ensure we do not take a step backward in functionality

- Video will be push/pull. Dispatchers have control over what they see. Option to record to logger and bypass them completely.

- IoT, traffic camera, sensor integration will be toggled by the PSAP. All functionality is included, PSAP decides to turn it on or off.

- Alert and Warning display at the PSAP, no more confusion.

- Positions for EOC, mobile command, training, etc.

- Trunking goes away. Large scale emergency management becomes easier.

Functional Requirement Overview

- Ticket e-bonding. PSAP can call CPE, PNSP, or RNSP and get answers.

- Transfer to any PSAP in the state, on 9-1-1 trunks.

- 9-1-1 Calls can be transferred as 9-1-1, not 10-digit transfers.

- Dashboard available to PSAPs

- New function integration in the future, at no cost to the PSAP, at direction of OES and the PSAPs.

- Evergreen: if they like their CPE, there will be no need to change until contract expires in 10 years. They can just get workstation refreshes.
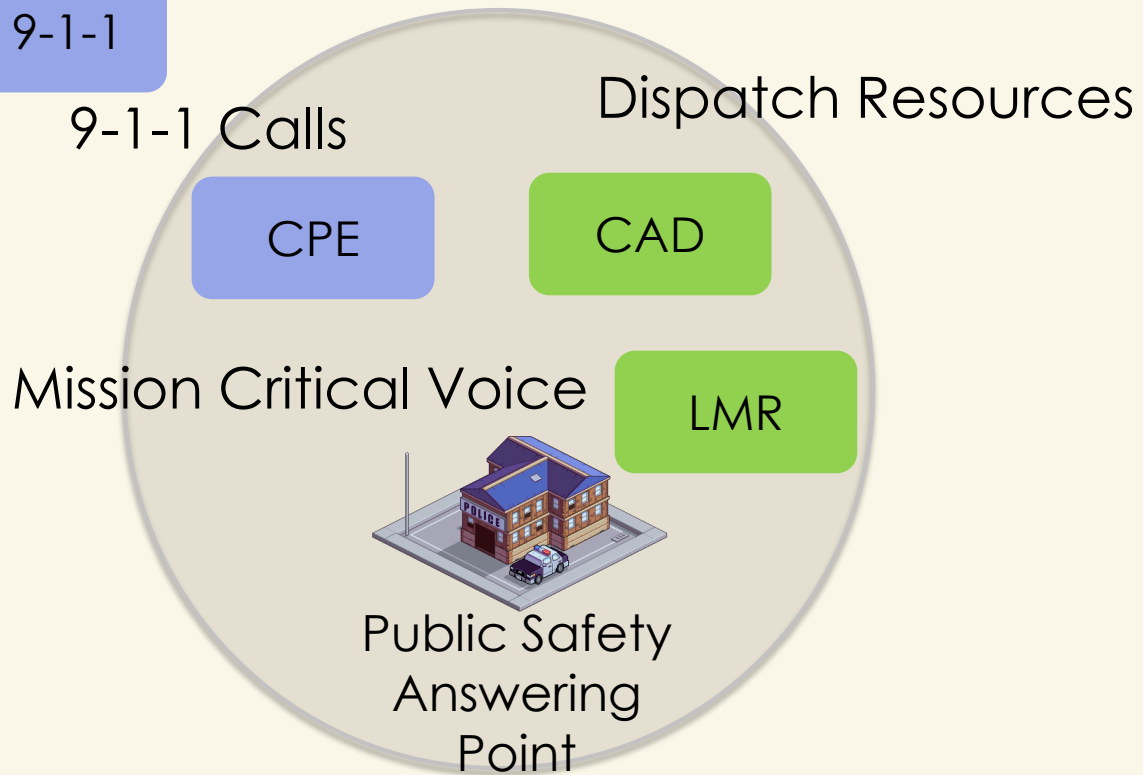
Questions and Discussion

CPE Funding Model

- No more haggling, ability to bargain shop won't decide a PSAPs residual spending amount

- The CA 9-1-1 Branch will establish an authorized list of recurring funding on a 5 year cycle

  - Funding will be used for work station replacement

  - Funding will be used for all peripheral 9-1-1 equipment replacement not included in the CPE contract

- Residuals are not going away!

Upgrading Technology at the PSAP

NG 9-1-1

9-1-1 Calls

Dispatch Resources

CPE

CAD

Mission Critical Voice

LMR

Public Safety
Answering
Point

CPE – 9-1-1 Call Processing Equipment
CAD – Computer Aided Dispatch
LMR – Land Mobile Radio

Legacy 9-1-1 System Limitations
1) Only 50% of calls arrive with location data
2) Limited to 512 bytes of location data in ANI/ALI
3) Lack of ability to integrate new technology
4) Requires onsite technicians for most upgrades
5) Slow deployment and refresh cycle
6) Lack of reliability (typically 99.9%)
7) Inability to integrate with other Emergency Management technologies
8) Inability to transfer incidents, not just calls
9) Limited security capabilities
10) Does not align with available technology

AB 9-1-1 and the future of CAD

- AB 9-1-1 requires the CA 9-1-1 Branch to:
  - Complete a statewide assessment on ability to establish a statewide system that:
    - Provides the ability for Public Safety Answering Points to aid in dispatching activities
    - Provides the ability for all Californians, including the elderly, individuals with disabilities, and other at-risk persons to voluntarily provide vital health and safety information to enable first responders to better assist them during an accident or emergency
    - Informs responders of information contained in database during a response
- CA 9-1-1 Branch has selected 9-1-1 Authority through a competitive bid process
- Assessment must be presented to the 9-1-1 Advisory Board in Nov 2020

Questions and Discussion
Budge.Currier@caloes.ca.gov