# The "State of 911" Webinar Series

National 911 Program
July 10, 2013
12:00 PM

911.gov

- The National 911 Program designed this webinar series to provide a unique combination of useful tools, information about Federal and State participation in the NG911 process, and real experiences from early adopters about the NG911 transition process underway in regions around the country

- Webinars will be held bimonthly and consist of presentations from a Federal-level 911 stakeholder and state-level 911 stakeholder, each followed by a 10 minute question and answer period

- For more information on future events, past webinar recordings and presentations, and to learn more about the National 911 Program, please visit www.911.gov

# "State of 911" Webinar Series

9 1 1 .gov

- 12:00 – 12:20 PM
  - Laurie Flaherty, National 911 Program Coordinator
  - Eddie Reyes, Deputy Police Chief, Alexandria (VA) Police Department
    - NG911 for Law Enforcement

- 12:20 – 12:30 PM
  - Q&A

- 12:30 – 12:50 PM
  - Christy Williams, Chief 911 Program Officer, North Central Texas Council of Governments (NCTCOG)
    - NCTCOG's recent text-to-911 pilot & best practices for NG911 implementation

- 12:50 – 1:00 PM
  - Q&A

# Agenda

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# Next Generation 911

Laurie Flaherty, National 911 Program Manager

Deputy Chief Eddie Reyes, Alexandria, Virginia Police Dept.

**NG911**

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Next Generation 9-1-1

# What's Next Forum

Report From Law Enforcement, Fire-Rescue, Emergency Medical Services & Transportation Operations Stakeholder Panels
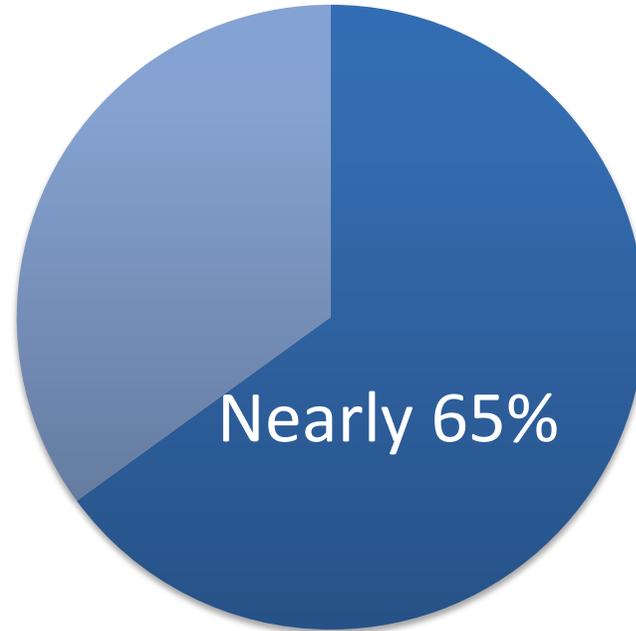
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# What's Next Forum

- American Ambulance Association
- American Association of State Highway and Transportation Officials
- American College of Emergency Physicians
- American College of Osteopathic Emergency Physicians
- Association of Metropolitan Planning Organizations
- Association of Public-Safety Communications Officials - International
- Governors Highway Safety Association
- I-95 Corridor Coalition
- International Association of Chiefs of Police
- International Association of Fire Chiefs
- International Association of Fire Fighters
- National Association of Counties

- National Association of Emergency Medical Technicians
- National Association of EMS Physicians
- National Association of State EMS Officials
- National Association of State Fire Marshals
- National Emergency Number Association
- National Fire Protection Association
- National Sheriffs' Association
- National Traffic Incident Management Coalition
- National Volunteer Fire Council
- Transportation Safety Advancement Group

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# National NG9-1-1 Progress



| | |
|---|---|
| IP network available at state level | Turquoise |
| IP network available at sub-state level | Yellow |
| NG9-1-1 preparation started | Light Blue |
| NG9-1-1 preparation activity at state level | Blue |
| NG9-1-1 preparation activity at sub-state level | Red |
| NG9-1-1 implementation in progress at state level | Green |
| NG9-1-1 implementation in progress at sub-state level | Light Green |

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# Law Enforcement & 911



**PSAP Management Nationwide**

- ■ Law Enforcement
- ■ Other

Nearly 65%

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INTERNATIONAL ASSOCIATION OF CHIEFS OF POLICE

POLICE

SINCE 1893

NATIONAL SHERIFFS' ASSOCIATION

NG911

# 100,000

- Understanding the benefits of NG911 to Law Enforcement



NG 911
NEXT GENERATION 911 FOR LEADERS IN LAW ENFORCEMENT

An Educational Supplement Produced in Coordination with the International Association of Chiefs of Police, the National Sheriff's Association and 911.gov

5 Ways NG911 Can Improve Your Agency

AND MORE:
› What is NG911 & Why Should You Care?
› People & Organizations Who Can Help
› Getting Started: A Chief's Checklist

Police Chief Jeff Olson, Cedar Falls, Iowa
Sheriff Tony Thompson, Black Hawk County, Iowa

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What is NG911 (and Why Should You Care)?

5 Ways NG911 Can Improve Your Agency

The Money Question

The Dos & Don'ts of NG911

People & Organizations You Should Know

NG911

2005

Luca Bruno / AP

2013

NBC NEWS

Michael Sohn / AP

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# Times are changing



U.S. Smartphone Penetration

February 2012, Nielsen Mobile Insights

71% 70% 70% 66% 64% 62% 63% 59% 58% 57% 56% 56% 54% 52% 52%

50%

29% 30% 30% 35% 36% 38% 37% 37% 40% 41% 42% 43% 44% 44% 46% 48% 48%

Oct-10 Nov-10 Dec-10 Jan-11 Feb-11 Mar-11 Apr-11 May-11 Jun-11 Jul-11 Aug-11 Sep-11 Oct-11 Nov-11 Dec-11 Jan-12 Feb-12

—— Smartphone          —— Feature Phones
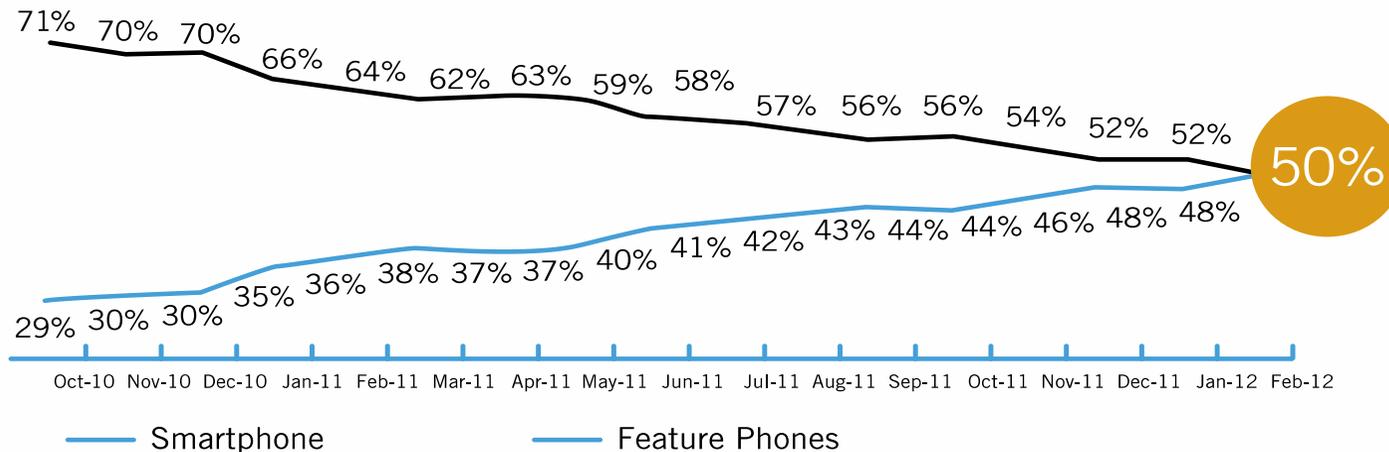
Read as: During February 2012, 50 percent of US mobile subscribers owned a smartphone

Source: Nielsen

nielsen

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Text usage by Age

Q2 '09 - Q2 '10, Customer Value Metrics, National
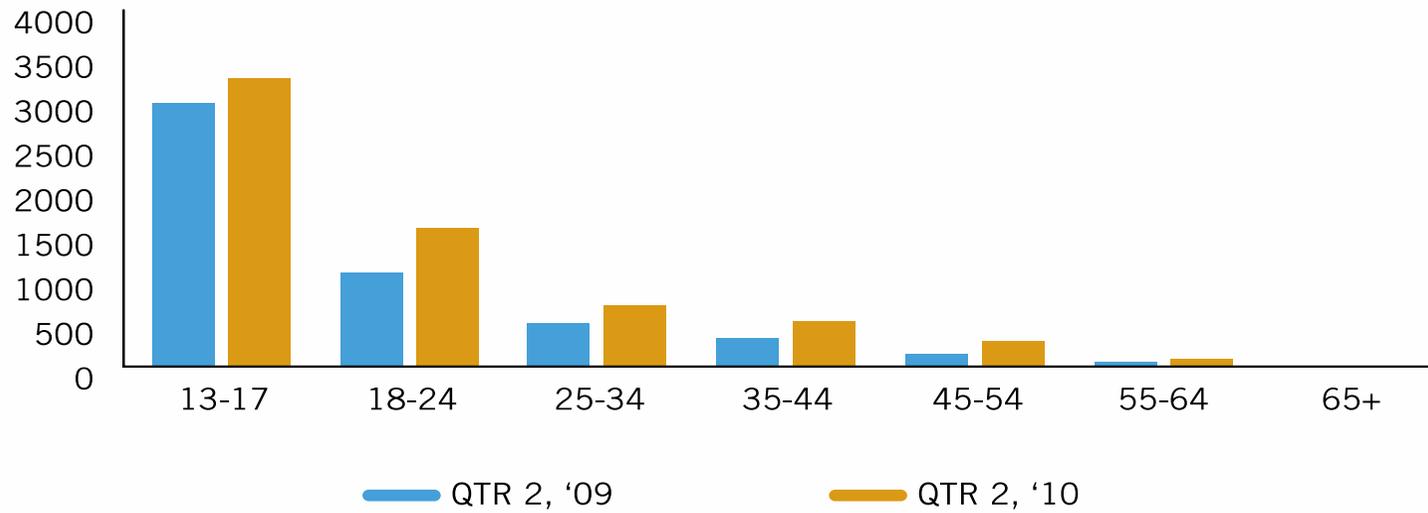
Source: The Nielsen Company

nielsen
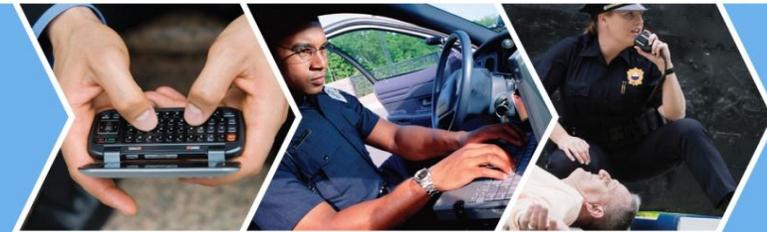
# Improved Officer Safety
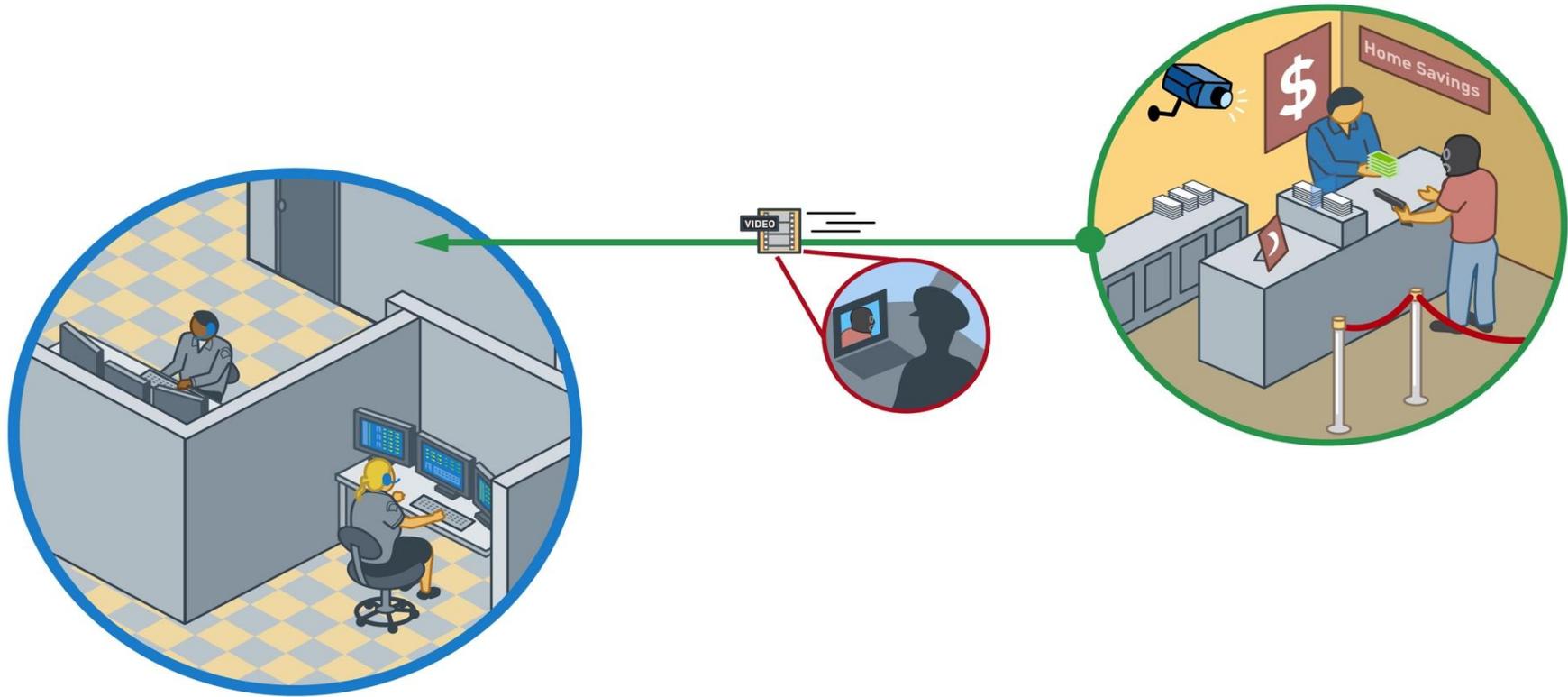
# Robust Evidence Immediately



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# Text to 911



Help! I'm in an alley at 4th and Main.

Help is on the way!

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# Better Service



I am deaf and having chest pain
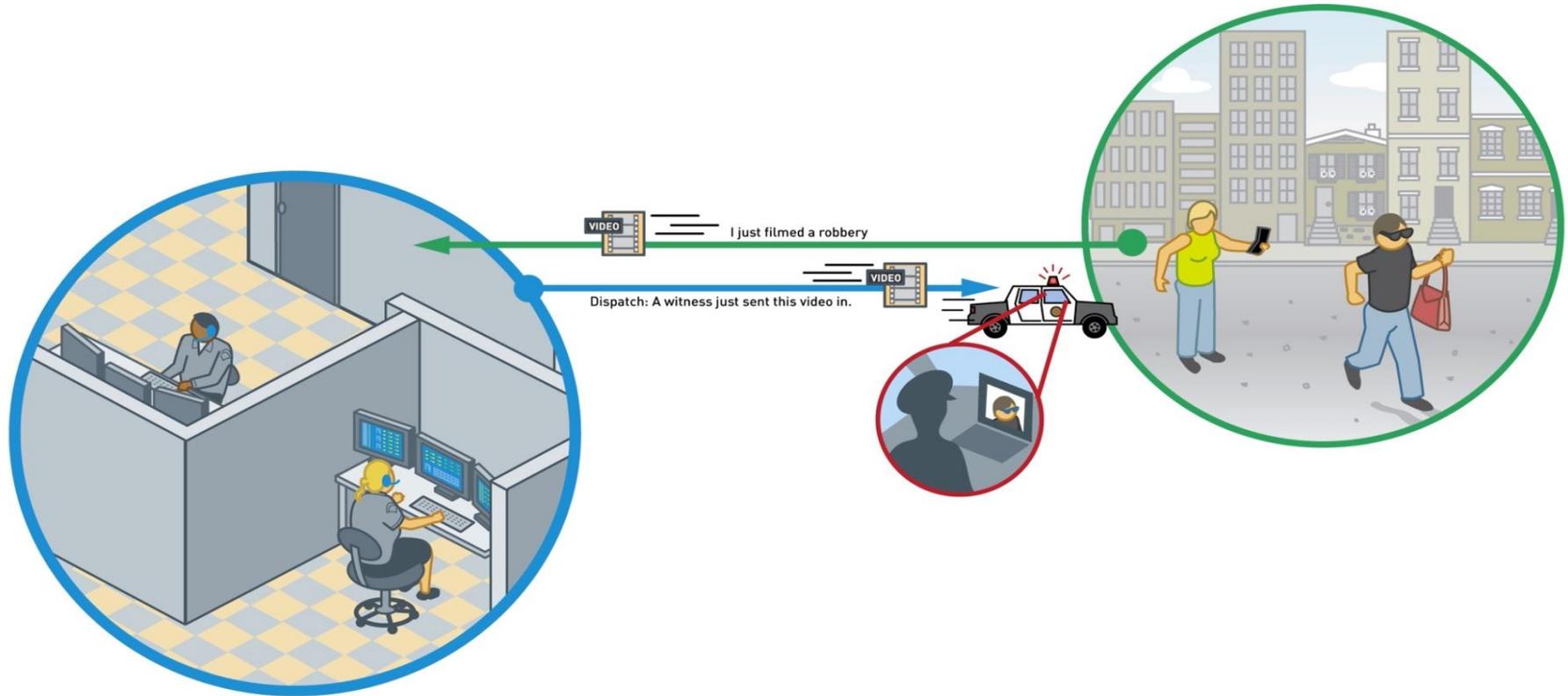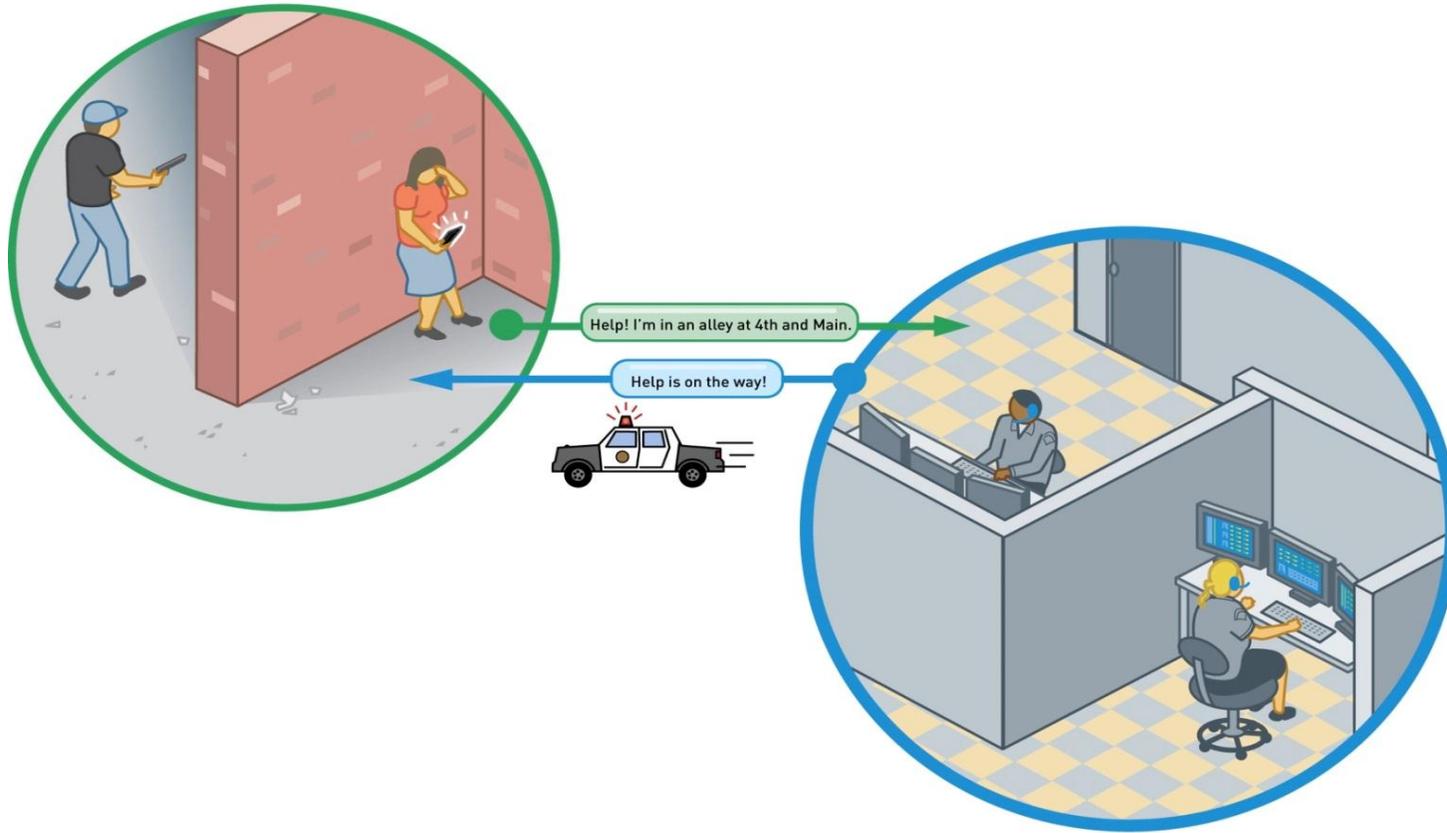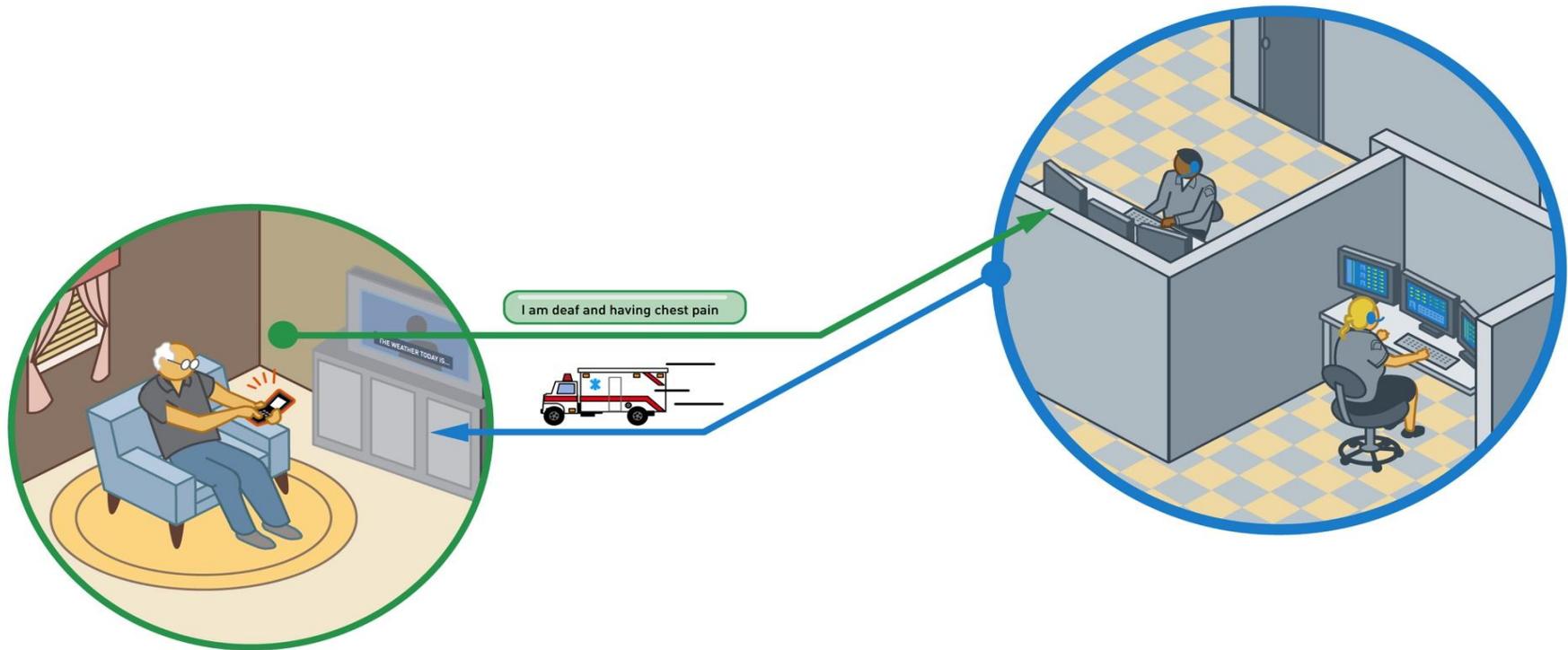
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# Better Situational Awareness



AAA-151

Citizen reports suspected drunk driver

Dispatch: "A citizen sent this photo of a suspected DUI."
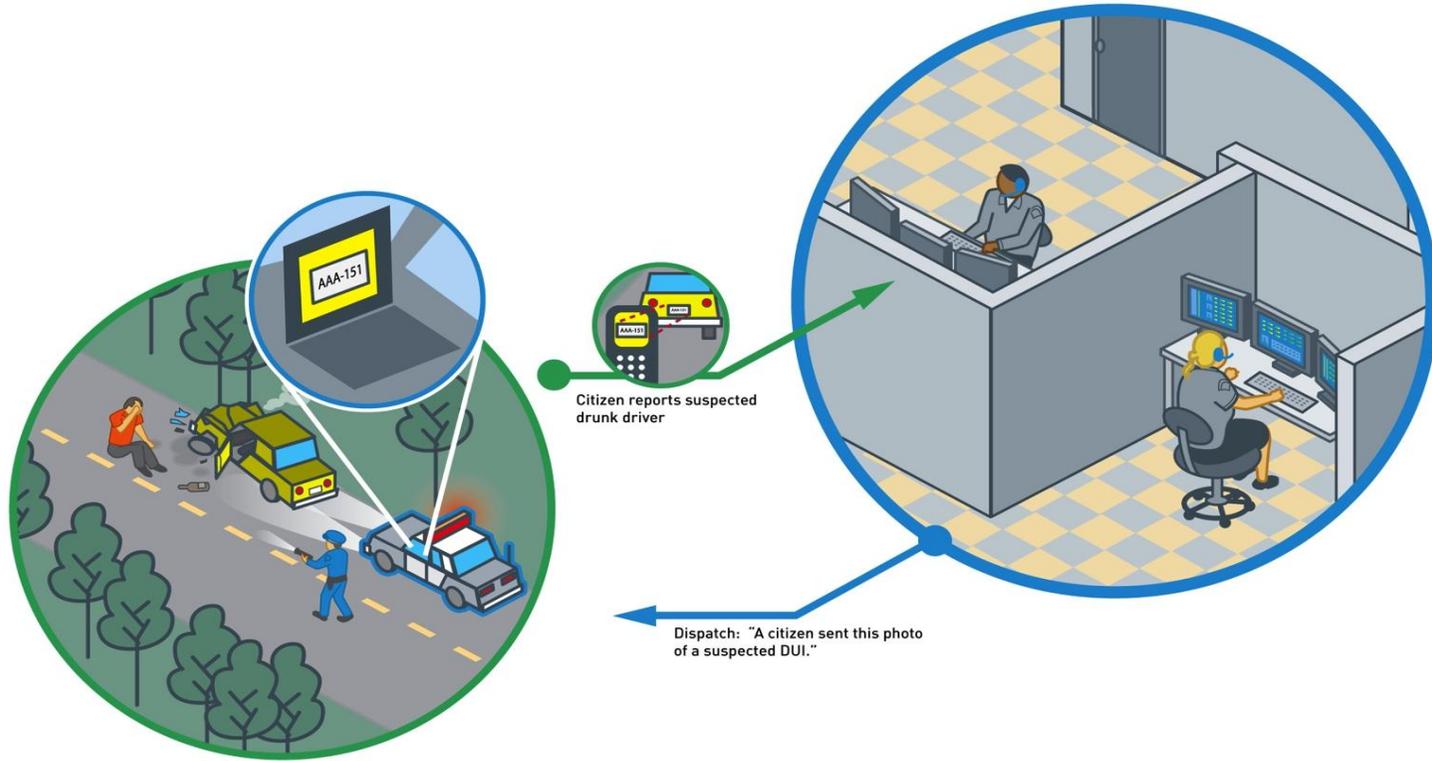
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# Redundancy/Interoperability
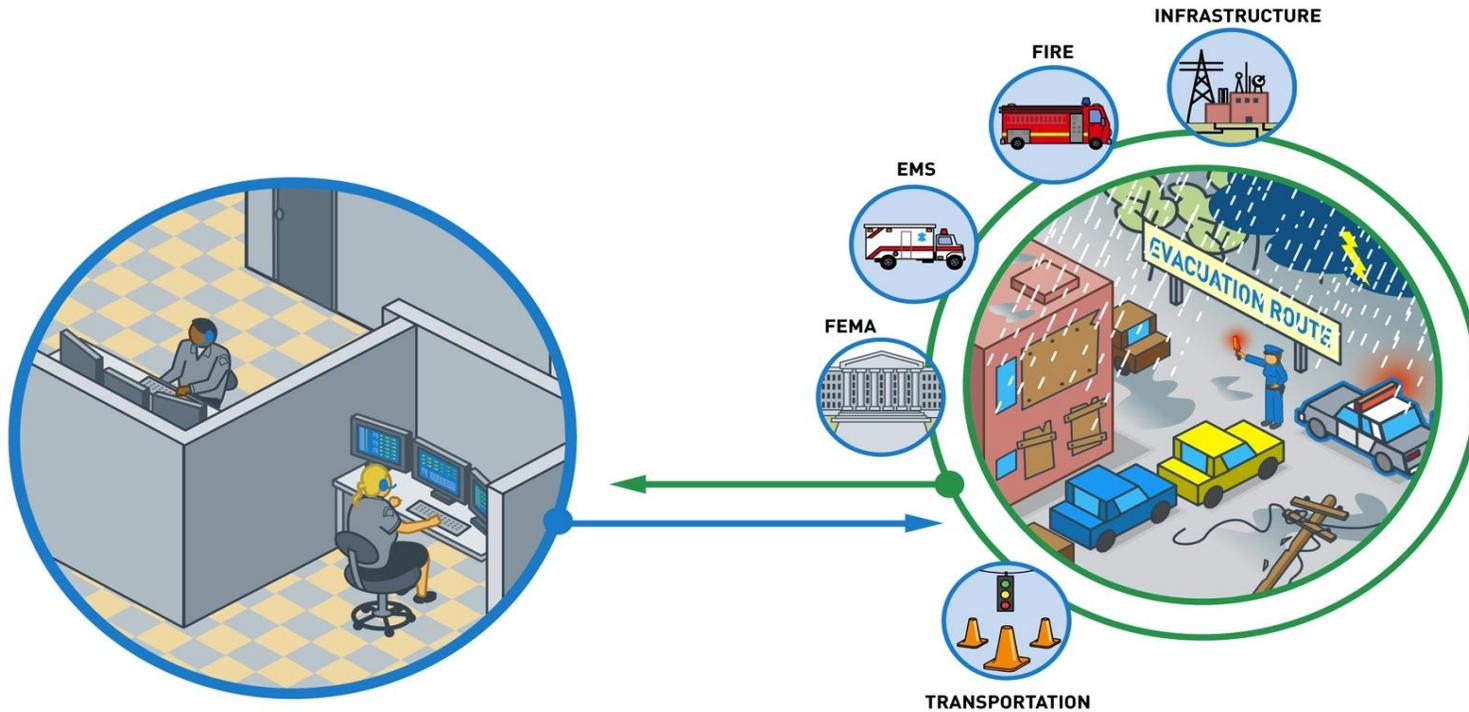
# Call For Service Statistical Data

Total calls (emergency & non-emergency) = 367,238

Total 911 calls (landline & wireless) = 91,146

Total wireless 911 calls = 67,577

Total calls for service = 51,182

20,000 crime and incident reports

# What Are the Barriers?

- Commercial providers continue to migrate to all-IP networks.

- PSAPs struggle to deploy Emergency Services IP networks (ESInets) that will enable them to receive the full range of IP-based traffic, including voice, text, photos, video, and data.

- Staffing, staffing, staffing!!!

- Text language is like a foreign language

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# Some Deployment Planning

- If part of a region, plan and deploy as a region:
  - Meet, discuss and strategize deployment
  - Adopt the same standard in preparation for call transfers
  - Phased approach:
    - Text to 911
    - Photo & Video to 911
    - NG 911 data to vehicles
  - Delay deployment until all carriers are ready
  - General consensus supports a web browser approach because it provides greater functional capabilities

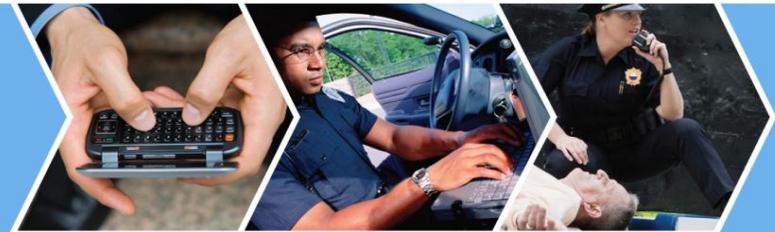**NG911**

# What Can Law Enforcement Do?

- Embrace the change

- Promote within your municipality

- Share information and resources as standards and systems are developed

- Participate in regional efforts to plan & deploy



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# Questions?

# ???

Please dial *1 to ask a question.

**Questions**

# The Journey to NG9-1-1

North Central Texas Council of Governments – Early Adopter

# North Central Texas Council of Governments 9-1-1

- **14 Counties** surrounding the Dallas Fort Worth Metroplex in 9-1-1 Program – 16 in Region
- **134 Cities** in the Program – 168 Cities in Region
- **44 Public Safety Answering Points (PSAPs)**
  - Enhanced 9-1-1 since 1991
  - Wireless Phase II, VoIP Pre-i2
- 12,800 Square Miles in Region
- Region is larger than 9 States
- Population in 9-1-1 Program 1.6 Million – Regional Population is 6.8 Million

# A Glance at the Region

# Services Provided NCTCOG 9-1-1

- Equipment Installation & Maintenance
- Technical Assistance – Network & Contingency Planning
- Database Services
- Mapping & GIS Services
- Public Education & Training
- CLEC and Private Switch Coordination
- Wireless Implementation
- Strategic Planning, Budgeting, Compliance and Monitoring
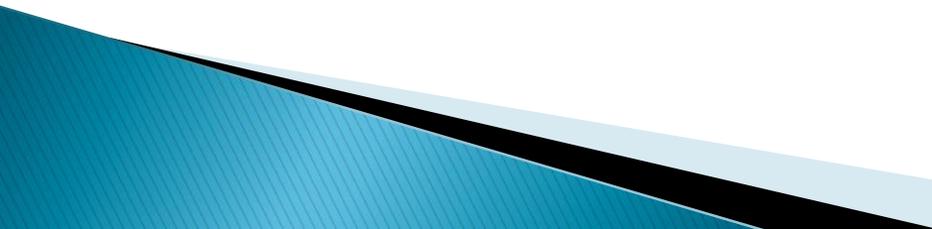
# NCTCOG 9-1-1 Staff & Services

- Technical Team (8)
  - Maintenance to 44 PSAPs
  - Preventative Maintenance
  - Technical Planning
  - Implementations
- Operations Team (7)
  - PSAP Relations
  - Public Education & Training
  - Database & Contingency Planning
  - Contracts & Liaison with vendors
- Administration (2)
  - Budeting & Strategic Planning

# Benefits of Regional System

- Purchasing Power!!!!!!!!
  - Sharing costs & services=reduced costs
  - Efficiencies
- Size allows for dedicated staff
  - Not wearing multiple hats
  - Specialization
- Continuity of Services
- Shared Resources and Knowledge
- Ability to be an Early Adopter
  - Providing Improved Services
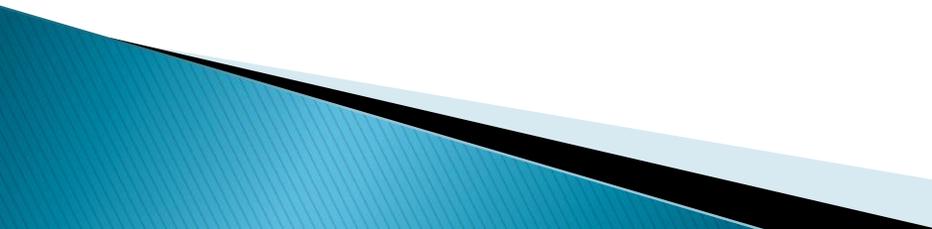
# Limitations of our 9-1-1 System (2007) – Why We Became Early Adopters

- Connectivity (can't transfer calls to neighboring 9-1-1 entities with data)

- Lack of Equal Access for Deaf/Hard of Hearing

- Lack of contingency options in a disaster scenario

- Not meeting public expectations!
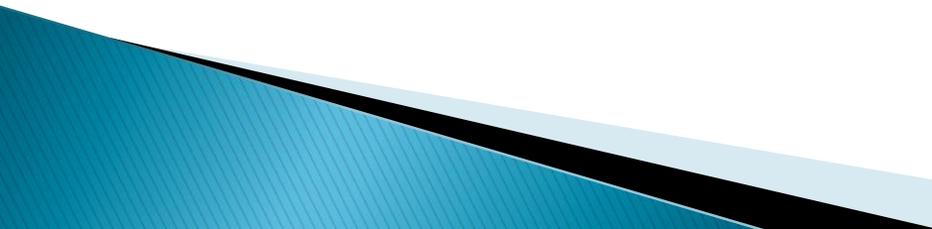
# Let the Journey to NG Begin. . .

- 2007 Master Planning – NG9-1-1Migration
- 2007 RFP for IP Network & Equipment
- 2008 Training  & Implementation
- 2009 - 2010 Design to Improve the Integrity of our regional 9-1-1 system
- 2011 - RFP for NG ESInet core services
- 2012 – 2013 Implementation of ESInet and new MPLS network
- 2013 Text to 9-1-1 Implementation begins with Verizon Wireless
- 2013 Working on backup wireless network
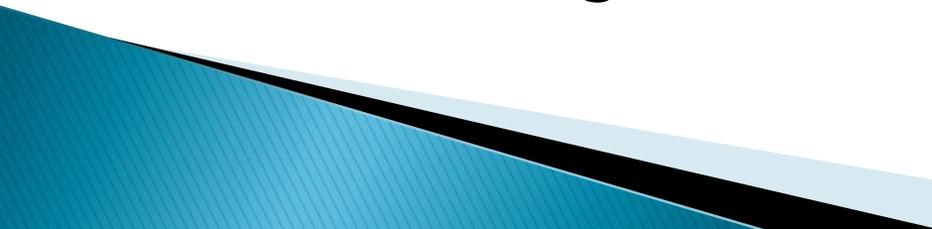
# NCTCOG 9-1-1Configuration

- 4 Mirrored Systems – Host and Remote
- 8 Host VIPERS (located in data centers)
  - 44 remote VIPERs
  - LAB & training PSAP divided into 2 testing sites
- 8 Hosts are connected (VIPER & Multinode)
- Survivability
  - If remote loses connectivity to host, they can still operate
    - Some hardship to PSAP – loss of some services
    - No impact on public
- MPLS connecting 44 PSAPs utilizing SS7 trunks & IP
  - Last mile T1s, DS3 at high call volume sites

# Network – Building a Foundation

▶ MPLS network is backbone or foundation and then we will add:
  ◦ Features (text & video)
  ◦ Applications (CAD, RMS, Recorders, etc)
  ◦ Functionality (GIS Based Routing & Policy Routing)
  ◦ Participants
    • Other 9-1-1 entities
    • Public Safety
▶ Solving Immediate Needs
  ◦ Connectivity
  ◦ Transfer Capabilities

# Applications

- Integration of CAD, RMS and Voice Logger
  - Network hosted services
  - As agencies up for replacement, option of getting licensing of a system over the network
    - Cost savings
    - Interoperability

- Ability to add radio to IP network

# Self Maintenance

- Moved to self-maintenance
  - Contracted with vendor for installation
  - Contracted with vendor for 1$^{st}$ year Tier I maintenance
  - Contracted with vendor for Tier II maintenance
  - Built into Contract – vendor to work with our technical staff and made sure warranties would not be voided
- Built technical team – CPE, Network, GIS
  - Started with retired AT&T tech – telephony skills
  - Added CPE Manufacturer tech – contemporary skills
  - Reclassified GIS analysts to technical operations

# Management & Monitoring

- Ongoing element of NG9-1-1
- Can be done in house or outsourced
- Can share resources with other 9-1-1 entities
- Remember that monitoring comes with notification, but not always repair

# GIS in the PSAP

- Regional maps
  - Boundary rectification (local then state)
  - Additional standards
  - Geodatabase & EGDMS
- Call routing based on GIS
  - Phase II mapping – Nice to have
  - Call routing – Have to have
- MSAG to GIS compare
- Accuracy is VITAL – 98% minimum
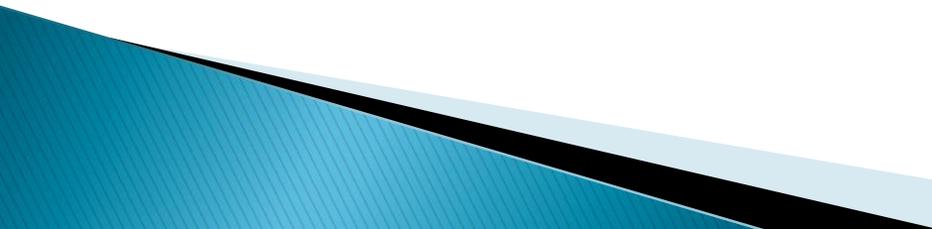
# Collaboration & Connectivity

- Need for Connectivity is now!
- Regional logistics & Ability to transfer
- Time to start building relationships
  - Neighboring 9-1-1 entities
  - Public service – first responders
  - Emergency management/homeland security
  - Transportation
  - 3rd party vendors
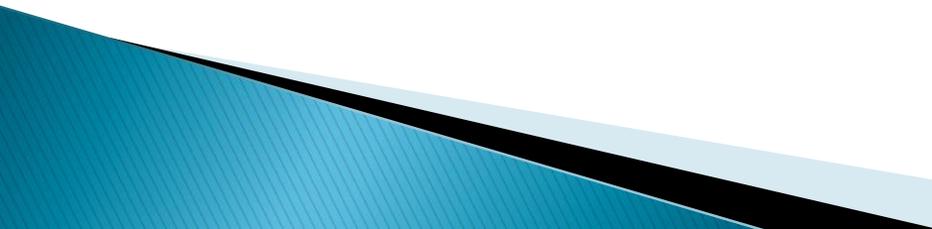
# Text to 9-1-1 Implementation

- Drivers for early adoption
  - Public Expectations –
  - Deaf, hard of hearing and speech impaired
    - Equal level of service
  - School, Public and Domestic Violence
    - When it is not safe to speak on a 9-1-1 call
  - Citizen Expectations
    - Survey showed 31% thought we had text to 9-1-1 already

# Limitations – Interim Solution

- We don't know your location
- You can't send photos or video
- You can't send message to multiple recipients
- You can't use applications
- Texting can take longer than calling 9-1-1
- Everyone doesn't have the service
  - Limited to geography and wireless carrier
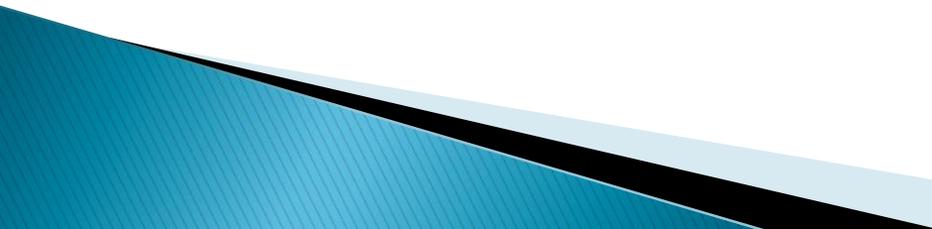
# Public Education Message

- Consistency is KEY!!
- Calling is still the best way to contact 9-1-1 - Text only when you can't.
- Location & what help is needed should be in first text to 9-1-1 - we don't  know where you are!
- Text in full words or plain language.
- Like a normal text, it may take longer -- messages can take longer to receive, messages can get out of order.
- Don't text and drive!

## 9-1-1:  Call if you can, Text if you can't!
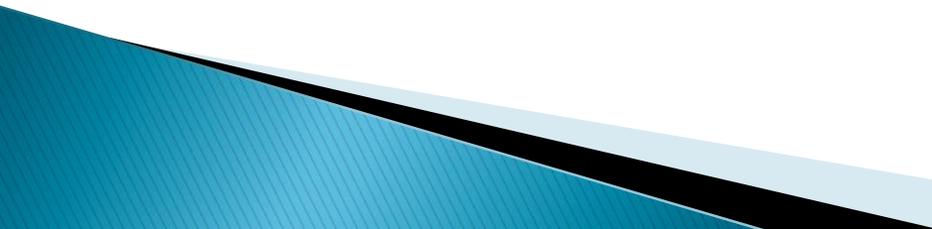
# Early Adopter Teachable Moments

- Can't buy enough diversity and redundancy!
- Didn't include IT at the local level enough in the beginning
- Mitigation Strategies and after action reports needed for Outages
- Data Centers are a great option
- Voice recording in the PSAP – trunk vs position
- Text to 9-1-1 early adopters with interim solution is difficult for public education but a great asset to the citizens.

# Lessons Learned – Top Ten

- ▸ #1 – Understand that this is a new world – we are stepping out of our comfort zone!
- ▸ #2 – You are responsible for the actions of your 9-1-1 team & consultants!
- ▸ #3 – Write requirements to determine the best solution for YOU!
- ▸ #4 – Don't believe everything you hear – if it is not documented in the contract, it didn't happen!  Define SLA in contract.
- ▸ #5 – Common points of failure on networks is local connectivity & IP          network maintenance– plan accordingly!

# Lessons Learned – Top Ten

- #6 – Carefully consider Host/Remote – Mitigate vulnerability!

- #7 – Locate Host Equipment in Data Centers

- #8 – Accuracy of GIS becomes paramount in Next Generation 9-1-1!

- #9 – Biggest Challenge of Text to 9-1-1 is Public Education – have a plan and use standard and consistent message!

- #10 – Take your time and do it right! Plan, Plan, Visit Others and Plan. . . .
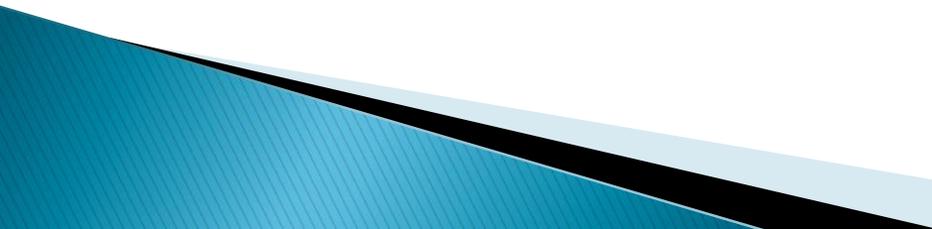
# Questions?

Christy Williams, ENP

Chief 9-1-1 Program Officer, NCTCOG

NENA 1st VP

cwilliams@nctcog.org

# ???

Please dial *1 to ask a question.

**Questions**

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- Thank you to all of today's presenters and participants and we look forward to seeing you at our next "State of 911" webinar

| Date | Presenters | Registration |
|---|---|---|
| **Wednesday, September 4, 2013** | • **Department of Homeland Security Office of Emergency Communications** (Presenter: Chris Essid)<br>• **Vermont – Text-to-911 Case Study** (Presenter: David Tucker) | Registration will open July 29, 2013 |
| **November TBD** | **TBD** | TBD |

# Future "State of 911" Webinars

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For questions regarding future webinars, please contact NG911wg@bah.com

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