



State of 9-1-1

Terminology

- **Short code** - 911
- **PSAP** – Public Safety Answering Point (Dispatch Center)
- **CPE** – Customer Premises Equipment – Call handling equipment. Also know as CTI – Computer Telephony
- **GIS** – Geographic Information Systems - Mapping

Terminology

- **Selective Routers** – Phone company equipment that automatically sends 911 call to the appropriate PSAP
- **ANI** – Automatic Number Identification
- **ALI** – Automatic Location Identification
- **MSAG** – Master Street Address Guide

Evolution of 9-1-1

- First 3 digit Short code – UK 1937



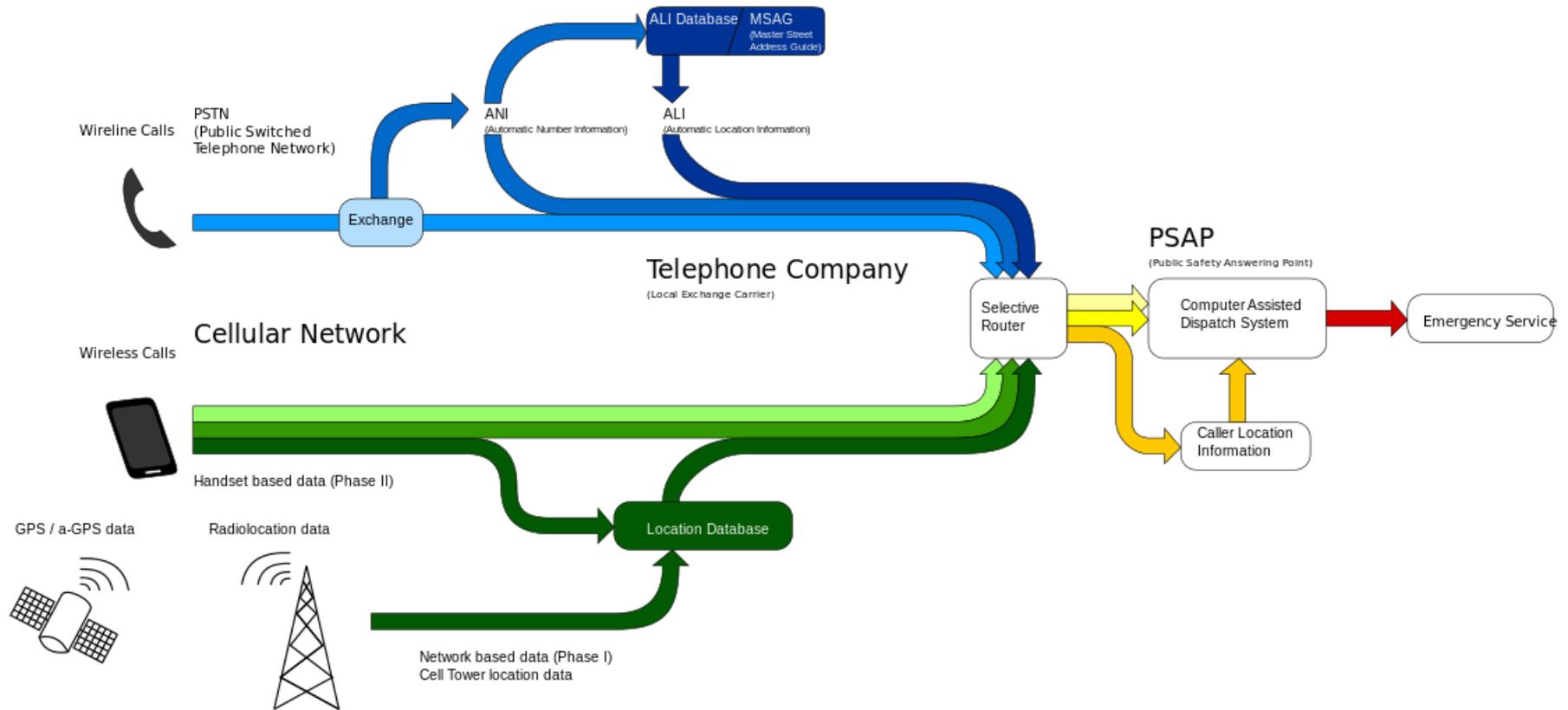
- First 911 Call in USA - 1968



- Selective Routers in USA – 1976



Today's 9-1-1



Future - NG9-1-1

Must be able to answer a “Call for Service” from any location, at anytime, using any device.

- Text
- Smart Phones
- Camera
- Skype
- Wireless connection - Computers, Tablet....
- The Z Coordinate

Transitional plan to NG-911

Keys to Success

- Governance
 - Legislative emphasis on Public Safety?

- Funding
 - Where's the money coming from?
 - Infrastructure Cost

- Community
 - Public demand improved services
 - Consolidation of PSAPs.

Governance

- Executive Authority
- Distribution of Funding
 - ✓ 80% to 90% of 911 calls are wireless
 - ✓ Landline totals are plummeting.
- Standards
- Performance Measures and Accountability

Funding

□ The funding “waterfall” State 911 Surcharge

□ Dedicated allotments of surcharge funding

+ Spectrum Auction Completed (\$X):

□ + \$2 billion to repay borrowing authority for public safety network. + \$135 million for state & local implementation grants.

+ \$7 billion for public safety broadband network build-out.

□ Public Safety Reserves

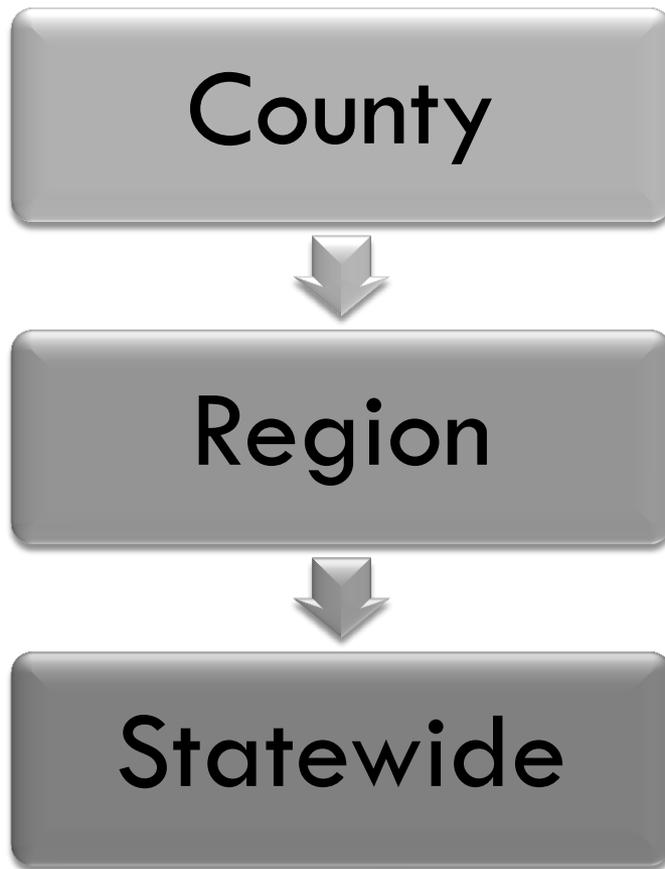
+ \$100 million for public safety research.

+ \$20.4 billion for deficit reduction.

+ \$115 million for 9-1-1 implementation grants.

+ \$200 million for additional public safety research

9-1-1 Community



9-1-1 Economy of Scale

System configuration choices significantly impact the expense for 9-1-1

Stand Alone

- Existing/Historical Practice

Co-Location

- Owned, Centralized, Regional – Geo-Diverse?, Peers, Survivable Local CPE, Mutual Aid)

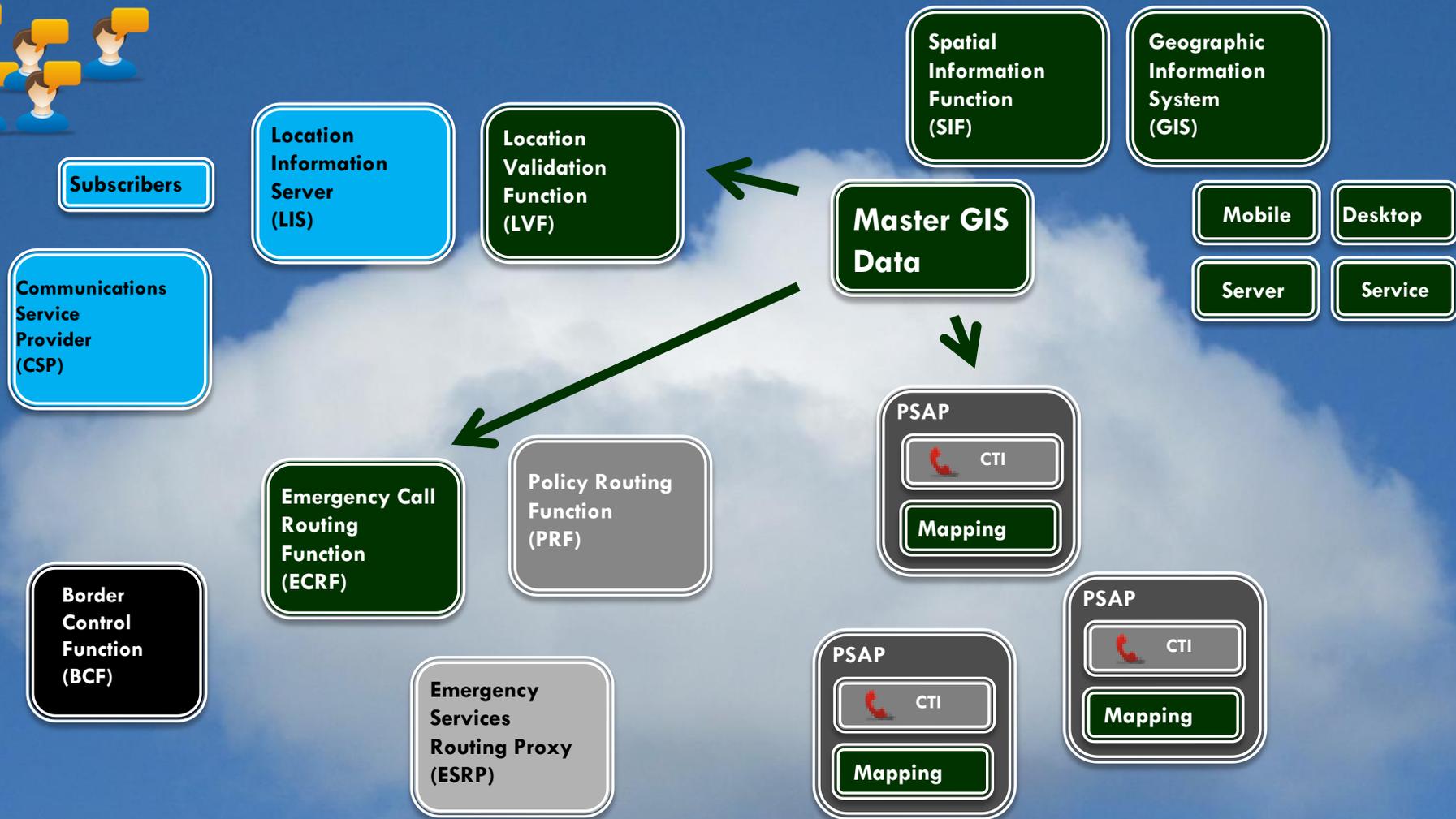
PSAP Hosted

- Geo Diverse, 2 Host PSAPs, others are Remotes)

Cloud

- Vendor Hosted Subscription Model

How does NG9-1-1 Work?



GIS is the source for all geospatial call routing

Confidential. Please do not distribute.



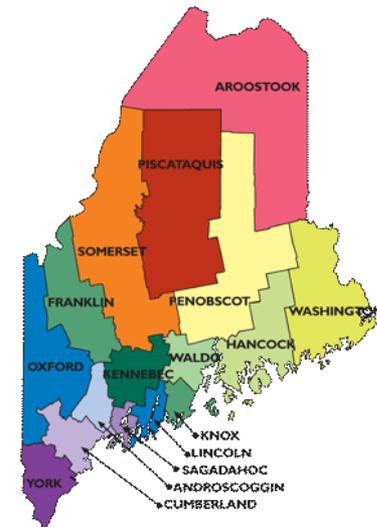
NG9-1-1 Models

The one size fits all approach is convenient, but it's lazy.

James Dyson

Maine

- GIS-Based Call Routing
 - ▣ GeoLynx Spatial Router (ECRF)
- Service Order Location Validation
 - ▣ GeoLynx Spatial Router (LVF)
- GIS Data Management & Workflow
 - ▣ GeoLynx Server WebDMS / Change Requests
 - ▣ GeoLynx DMS
 - GIS Manager
 - Workflow Manager (WebDMS/CR, dispatch mapping discrepancies)
- Network-Based Dispatch Mapping
 - ▣ GeoLynx Server Dispatch Add-On



1.3 million population

16 counties

26 PSAPs

Texas Commission on State Emergency Communications – Rural Statewide

- ❑ State 911 Coordinating Agency
 - 12 member Commission
 - Appointed by the Governor, Lieutenant Governor, and Speaker of the House
- ❑ Diverse Mix of 911 Entities
 - 51 Emergency Communication Districts
 - 23 Regional Planning Commissions (COGS)
- ❑ Statewide SIF Implementation
 - Coalescing data from the COGS
 - Managed Services
 - 3 Year Agreement
- ❑ Planned RFO's:
 - State level ALL-LVF Services
 - IP based Call Routing

Commission on State Emergency Communications
The Authority on Emergency Communications in Texas



*Serving 224 of the States 254
counties*

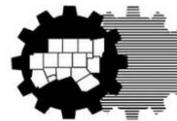
Over 6.8 million 9-1-1 calls annually

One Third of the Population

80% of the States Area

North Central Texas Council of Governments

- GIS-Based Call Routing
 - GeoLynx Spatial Router (ECRF)
- GIS Data Management & Workflow
 - GeoLynx Server WebDMS / Change Requests (50+ users)
 - GeoLynx DMS
 - GIS Manager
 - Workflow Manager (WebDMS/CR, dispatch mapping discrepancies)
- Network-Based Dispatch Mapping
 - GeoLynx Server Dispatch Add-On (145 positions)



North Central Texas
Council of Governments



2 million population

14 counties

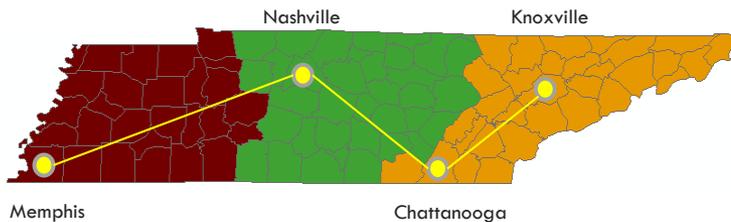
44 PSAPs

1.1 million 9-1-1 calls annually

Tennessee



The Options are Endless



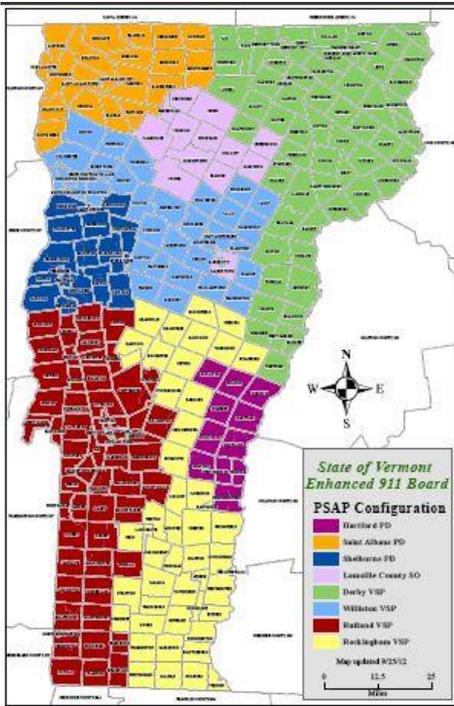
6.5 million population

95 counties

100 PSAPs

- ❑ NetTN developed for all branches of government, schools and NG9-1-1
 - ❑ Serves as backbone for NG9-1-1
- ❑ NG9-1-1 based on NENA i3 Standards
 - ❑ Four Aggregation Points
 - ❑ Two NetTN Control Centers
 - ❑ All ECDs Connected to NetTN
 - ❑ All ECDs Updated with NG9-1-1 Equipment
- ❑ Seamless GIS Data Format
 - ❑ Tennessee Information for Public Safety (TIPS)
 - ❑ Required NG9-1-1 GIS Data Standards
 - ❑ Annual GIS Audits
 - ❑ GIS Data Synchronization
 - ❑ Incentive Funding
- ❑ Next Steps
 - ❑ GIS Based Call Routing
 - ❑ Wireless
 - ❑ Wireline

Vermont



626,000 population

14 counties

8 PSAPs

- ❑ Early adopter of NG911 nationwide, especially text to 9-1-1
- ❑ State Enhanced 9-1-1 Board
 - Universal Service Fund (USF)
 - Scope: Statewide system with improved GIS functionality (future)
- ❑ State has only 28 call-taker positions
 - Using a hosted NG911 IP network platform
 - Text to 9-1-1 running natively through the CPE
- ❑ Vastly improved access to the deaf and hard-of-hearing community.
- ❑ All PSAP locations back up each other for all 9-1-1 calls.



Q&A