Nevada Communication Interoperability Plan Overview

Developed by Nevada Communications Steering Committee

Version 2.0 – Adopted April 6, 2006

The Beginning

- 2 years in the making by the Nevada Communications Steering Committee (NCSC).
- NCSC stakeholders representing northern & southern NV, rural & urban, & state, county and local governments.
- Prompted by AB441 legislation.
- Developed with assistance from the SAFECOM office of the Department of Homeland Security.
- A living document revised as conditions change.

What is Interoperability?

"Interoperability is the ability of appropriate officials and personnel to effectively communicate by radio across jurisdictions and with each other, when authorized, as needed and in real time."

Who are Public Safety Agencies?

- Fire Services
- Law Enforcement
- Emergency Management
- Government Administrative Services
- Emergency Medical Services
- Public Health
- Health Care
- HazMat
- Private Industry
- Volunteer Organizations
- Public Safety Communication
- Public Works

Statement of Principles

- NCSC encourages & maintains a governance structure emphasizing transparency, accountability and collaboration.
- NCSC encourages comprehensive focus on key success factors – governance, SOPs, technology, training and exercises.
- NCSC reviews research on best practices/ lessons learned.
- NCSC **not to be** controlled by the State – must remain representative of entire NV public safety community.
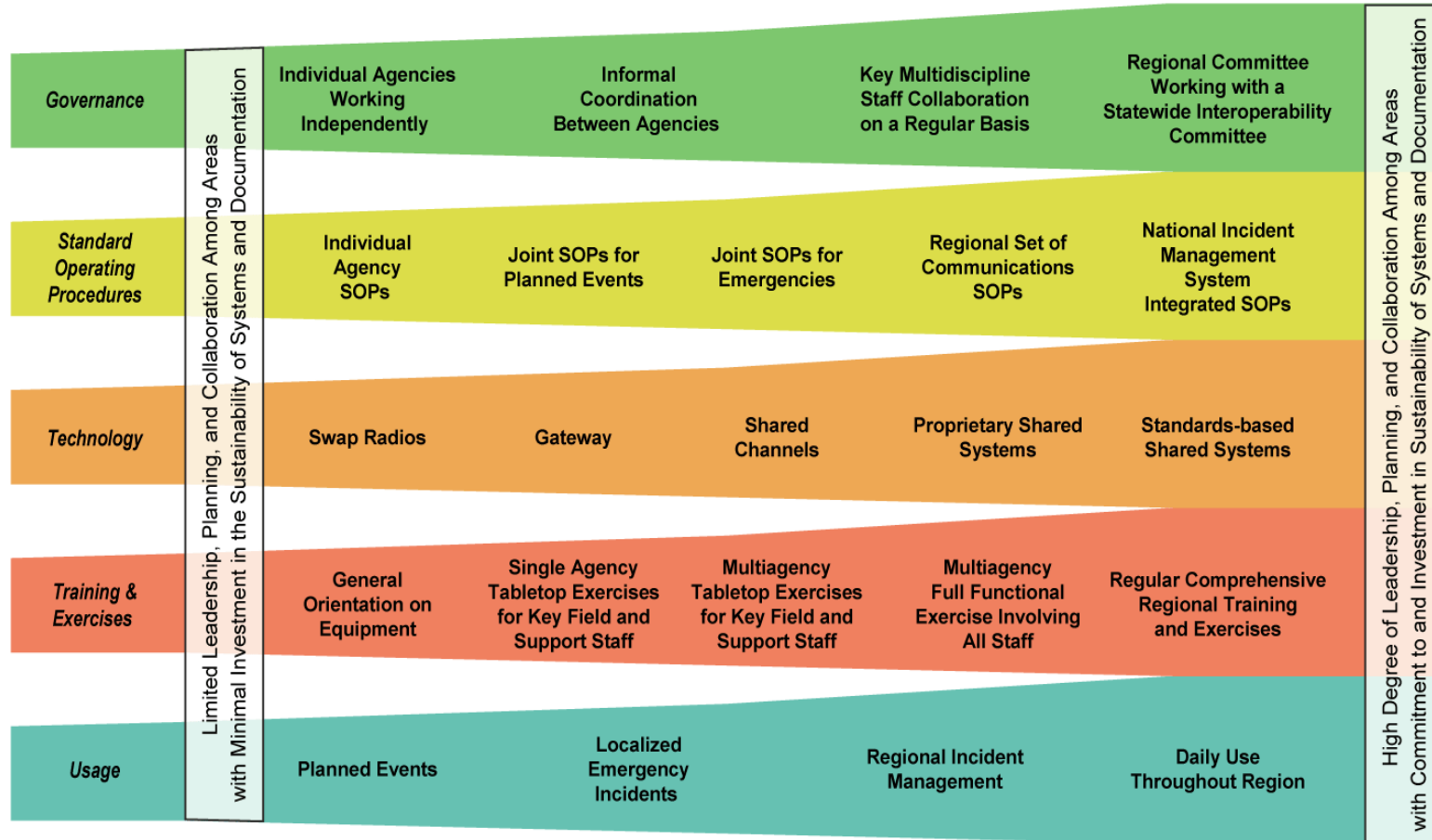
Interoperability Continuum - SAFECOM

○ Designed to help the public safety community and local, tribal, state and federal policy makers address critical elements for success as they plan and implement interoperability solutions.

○ Elements include governance, standard operating procedures, technology, training/exercises and usage of interoperable communications.

Interoperability Continuum

Homeland Security — U.S. Department of Homeland Security

SAFECOM

		Limited Leadership, Planning, and Collaboration Among Areas with Minimal Investment in the Sustainability of Systems and Documentation					High Degree of Leadership, Planning, and Collaboration Among Areas with Commitment to and Investment in Sustainability of Systems and Documentation
Governance		Individual Agencies Working Independently	Informal Coordination Between Agencies	Key Multidiscipline Staff Collaboration on a Regular Basis	Regional Committee Working with a Statewide Interoperability Committee		
Standard Operating Procedures		Individual Agency SOPs	Joint SOPs for Planned Events	Joint SOPs for Emergencies	Regional Set of Communications SOPs	National Incident Management System Integrated SOPs	
Technology		Swap Radios	Gateway	Shared Channels	Proprietary Shared Systems	Standards-based Shared Systems	
Training & Exercises		General Orientation on Equipment	Single Agency Tabletop Exercises for Key Field and Support Staff	Multiagency Tabletop Exercises for Key Field and Support Staff	Multiagency Full Functional Exercise Involving All Staff	Regular Comprehensive Regional Training and Exercises	
Usage		Planned Events	Localized Emergency Incidents	Regional Incident Management	Daily Use Throughout Region		

Minimal Level ← **Interoperability Continuum** → Optimal Level

Long-Term Convergence

- The plan emphasizes convergence over time.

- Upgrading when equipment otherwise needs replacement on maintenance schedules, not a wholesale change out.

- Preserving the public's existing investments in communications technology.

- Require new purchases comply with Plan.

- Allow existing equipment serve out its useful life.
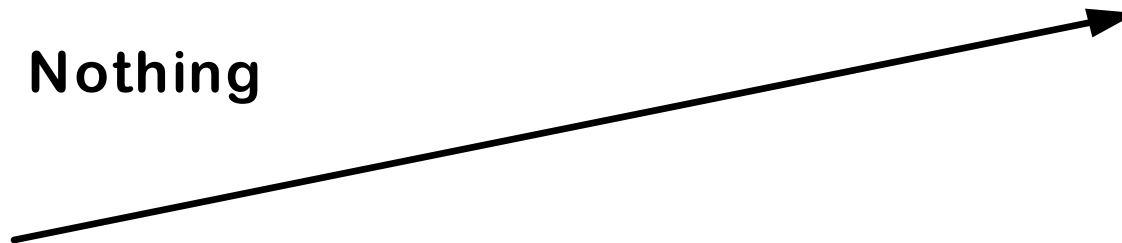
Long-Term Convergence (10-15 yrs)

Existing
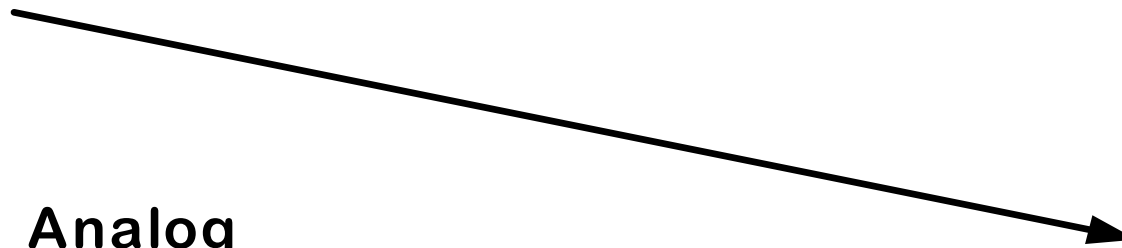
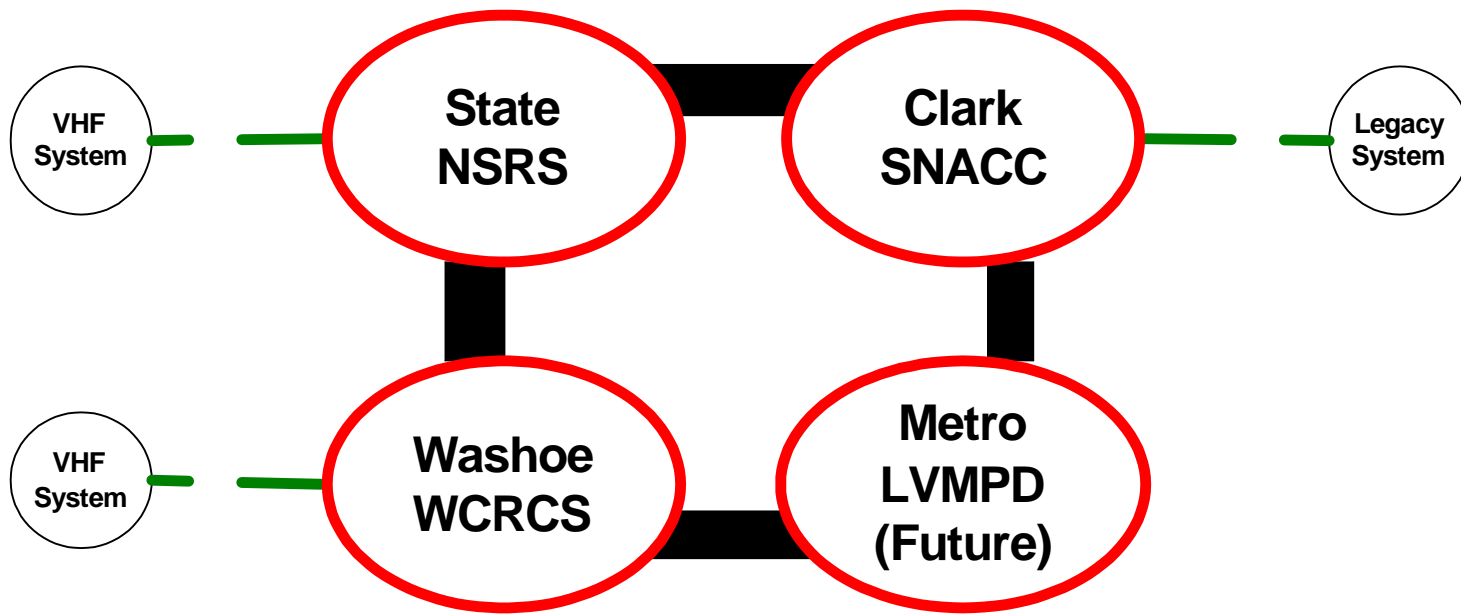**Future**

Analog

Digital

Proprietary

Nothing

Digital
Open
Standards
Technology

Core Four – Short & Long-Term
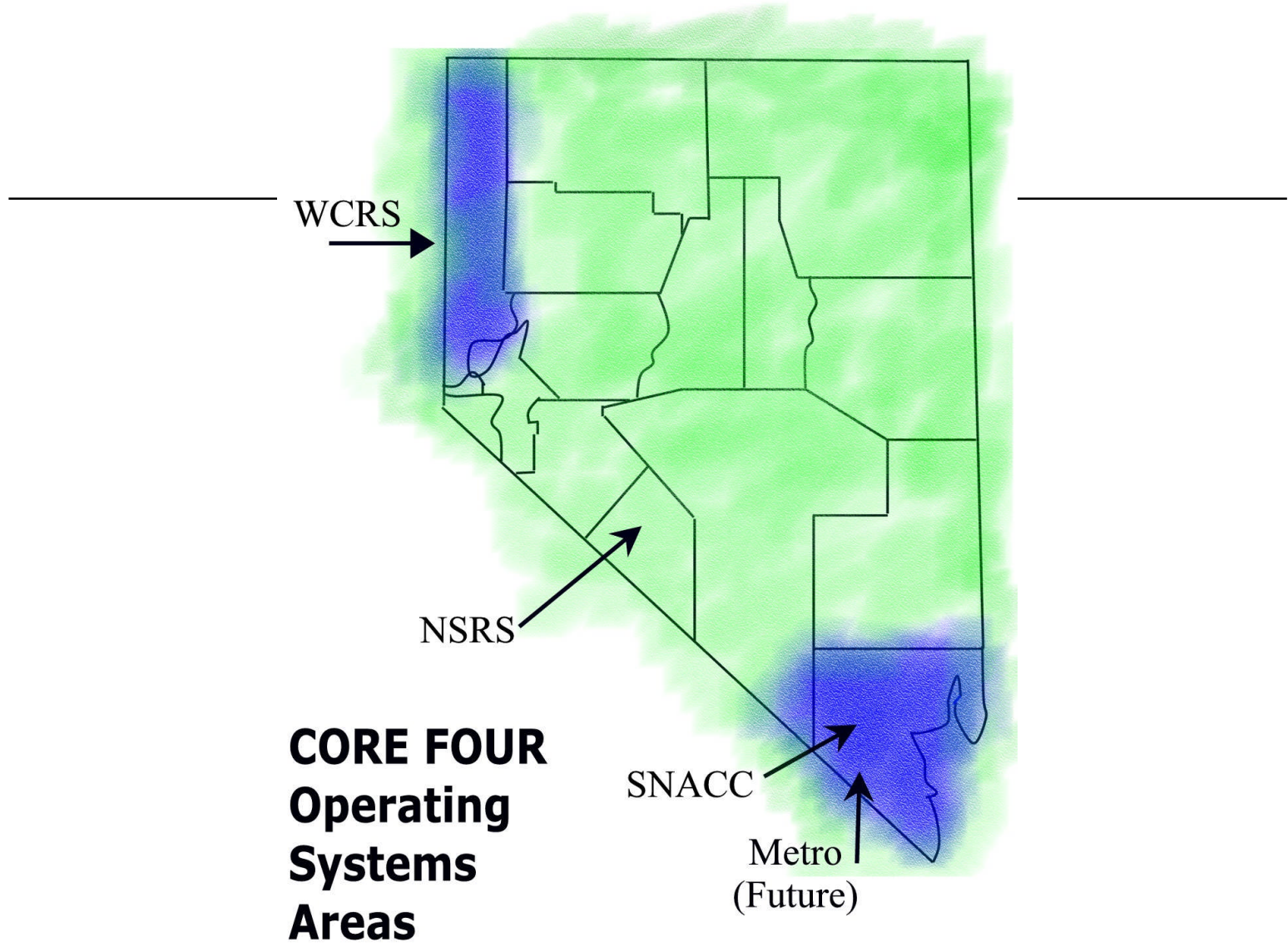
○ By connecting the 4 major trunked systems a single "virtual" system is created.

- Nevada Shared Radio System (NSRS)
- Southern NV Area Communication Council (SNACC)
- Washoe County Regional Communication System (WCRCS)
- Las Vegas Metropolitan Police (LVMPD)

The Core Four Concept

VHF System — State NSRS — Clark SNACC — Legacy System

VHF System — Washoe WCRCS — Metro LVMPD (Future)

Core Four Platforms

High-Level Interconnects

Gateways to Conventional Systems

WCRS →

NSRS →

SNACC →

Metro
(Future)

CORE FOUR
Operating
Systems
Areas

Short-Term Gateways

- Short-term proposal is to link the two main components of the Nevada radio system:

  - 700/800 MHz (Core Four) & 150 MHZ (rural)

- Some gateways currently exist, but need to be expanded statewide.

- Preliminary estimate for short-term: $2.4M

- Cost **does not** include integration of other frequency bands.

Short-Term Gateway (3-5 yrs)

150
MHz

700/800*
MHz

Gateways

Other
systems to
be
determined
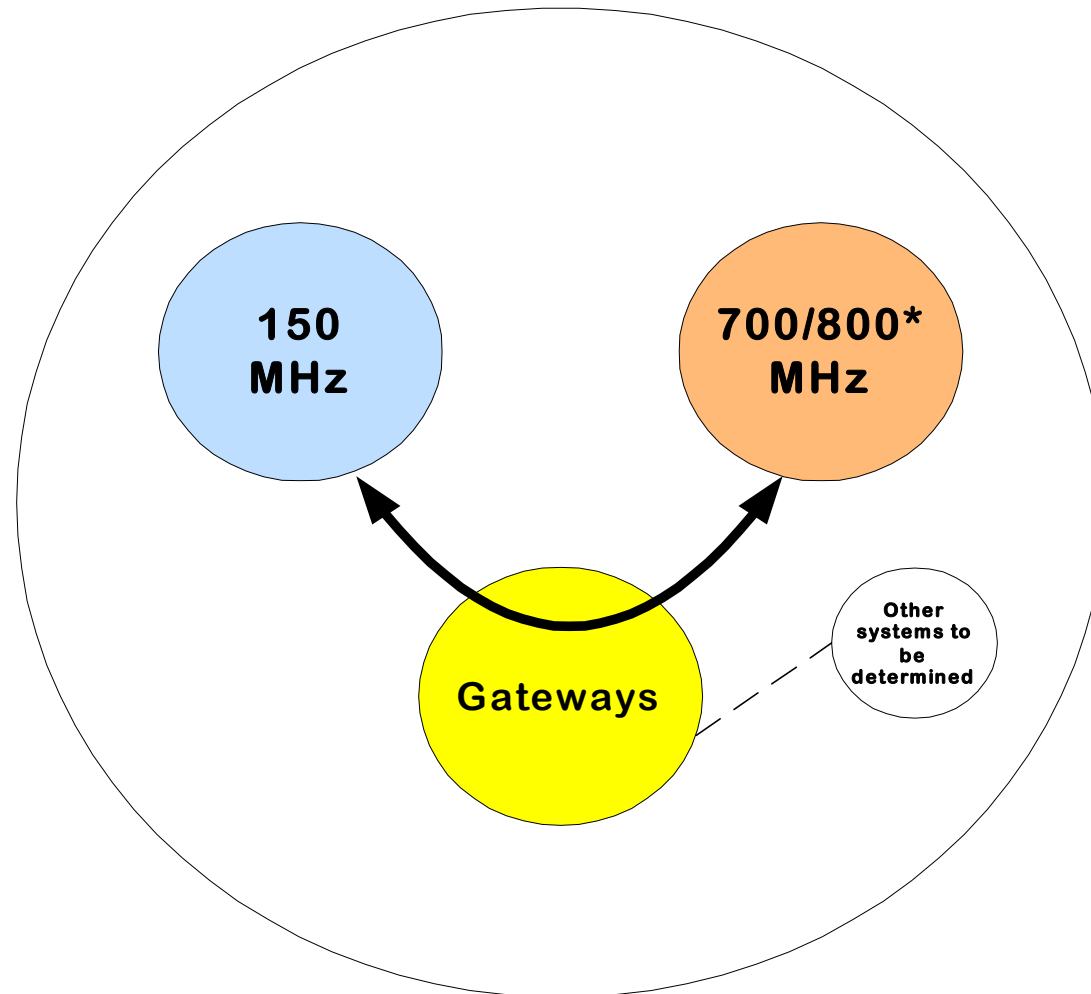
Tech Standard for P25

- To move towards long-term convergence, a technical protocol/standard must be adopted.

- P25 is an open system, developed nationally for over 15 years.

- P25 establishes a common protocol, allowing radios from different vendors to effectively communicate.

- P25 does not address radios operating in different frequency bands or issues such as standard operating procedures.

P25 Recommendations

○ Long–range plan includes long-term convergence of all radios within the state to digital, open standards technology, implementing current version of P25.

○ A phase-in timetable will be used.

○ Exemptions considered upon written notice showing good cause and approved by NV Homeland Security Commission.

TIMETABLE
Effective Oct. 1, 2005 (Fed YR 2006)

o All radio equipment (end user) purchased using grant dollars shall be P25 Common Air Interface capable.

o All radio equipment (consoles/backbone) purchased using grant dollars implemented and used in the new system shall be capable of supporting P25.

o The Core Four systems are exempt from mandatory compliance until July 1, 2009.

o Radio systems that do not use or apply for grant funding are exempt until July 1, 2007.

o Other exemptions granted by the Commission on a case-by-case basis.

Effective July 1, 2007

o All mobile & portable (end user) radio equipment purchased shall be P25 capable.

o All radio equipment (consoles & backbone) purchased shall be P25 capable.

Effective July 1, 2009

o All radio equipment purchased for use in systems operating below 512 MHz shall be P25 capable.

o Mobile radios and portable radios purchased for use in existing radio systems operating above 512MHz shall be P25 capable.

o Core Four systems and any system directly connected shall be P25 capable.

Effective July 1, 2011

- All radio systems and equipment in the State, regardless of operating frequency or the system it is purchased for, shall be P25 capable.

Effective July 1, 2013

o All radio systems and equipment in the state shall be operating in P25 mode for normal, operational voice communications. Multi-mode operating, for interfacing with out-state systems, may be retained and used as needed.

Assumptions

- "Capable" is defined as the ability to be quickly upgraded via the loading of a software program to actual P25 Common Air Interface operation.

- "Capable" in this context does not mean the equipment must actually operating in P25 mode when purchased, rather that it be "capable" of simple upgrade to such operational mode at a future time.

- In every case where purchase of P25 capability is mandated, the equipment is for capability to accommodate the most recently approved version of the P25 standard.

Thank you

Questions?

Visit Website at
http://nitoc.nv.gov/IT_NCSC.htm