State Interoperability Executive Committee

April 9, 2024

9:00 am – 11:00 am

Agenda

- Welcome & Introduction
  - Review agenda
  - Member News and Information Roundtable
  - **Approval** of Feb. 13 meeting minutes

- WSP LMR Strategic Plan – Tom Wallace

- SCIP Updates – Bill Kehoe/Jon Lee

- SWIC Updates – Jon Lee

- Carrier Update – Carrier Representatives

- Good of the Order / Public Comment

Review Feb. 13 Minutes

Washington State Patrol Land Mobile Radio (LMR) Strategic Plan

Aligning Investments with Business Needs

April 2024

WSP's Technology Vision

WSP technology enables strategic planning, tactical efficiency and operational effectiveness while promoting transparent accountability and risk mitigation in the delivery of safety and security services to the citizens of Washington State.

Support an Elite Workforce

Ensure Safe Highways

Reduce Public Safety Risks

Deliver Statewide Public Safety Services

Improve Quality Service and Innovation

We are supported, engaged, and empowered to meet the agency's goals and priorities because:

- *We are connected anytime, anywhere via voice, radio, data, systems, and the Internet.*
- We review and assess our hiring, retention, and promotion systems so that employees can flourish and reach their full potential.
- We receive the training and information we need online.
- We have systems to easily manage our equipment, facilities, actions, and results.
- We can rapidly automate forms, workflows, and reports.

We maximize the time field personnel spend on roadway safety and accident prevention because:

- We collect enforcement and investigative data quickly and accurately.
- *We use our operations data to support safe contacts, rapid response and coordination with our partners.*
- We leverage new transportation technology to move traffic, predict and avoid issues, and promote safe behavior.

We proactively reduce safety risks and can respond in a rapid coordinated manner because:

- *Our technology is mobile, resilient, and survivable in disasters.*
- *We have interoperable communications for coordinated response to emergencies.*
- *We securely partner with local law enforcement on investigations and criminal interdiction.*
- We monitor for threats at all ports of entry covering diverse transportation modes.
- We efficiently inspect for fire and safety risks in public facilities.

We deliver outstanding data, training, and forensic services statewide because:

- Our investigative and laboratory systems use modern technology to solve problems.
- We provide online training and certification for fire first responders.
- We quickly make law enforcement data available to police agencies, partners, and the public.
- We put public records online for easy access enhancing service and trust.
- *We make our essential services available 24x7 even during disruptions and disasters.*

We maximize the efficiency of administrative processes and the use of our resources because:

- *Our systems enable fast statewide access to data and services reducing costs and wasted time.*
- We efficiently manage internal operations, fiscal, and safety risks.
- We have complete data on our recruits and personnel to better find, develop, and support them.
- Our facilities and high value assets are tracked and maintained.

WSP's LMR Technology Strategies Support Agency Outcomes

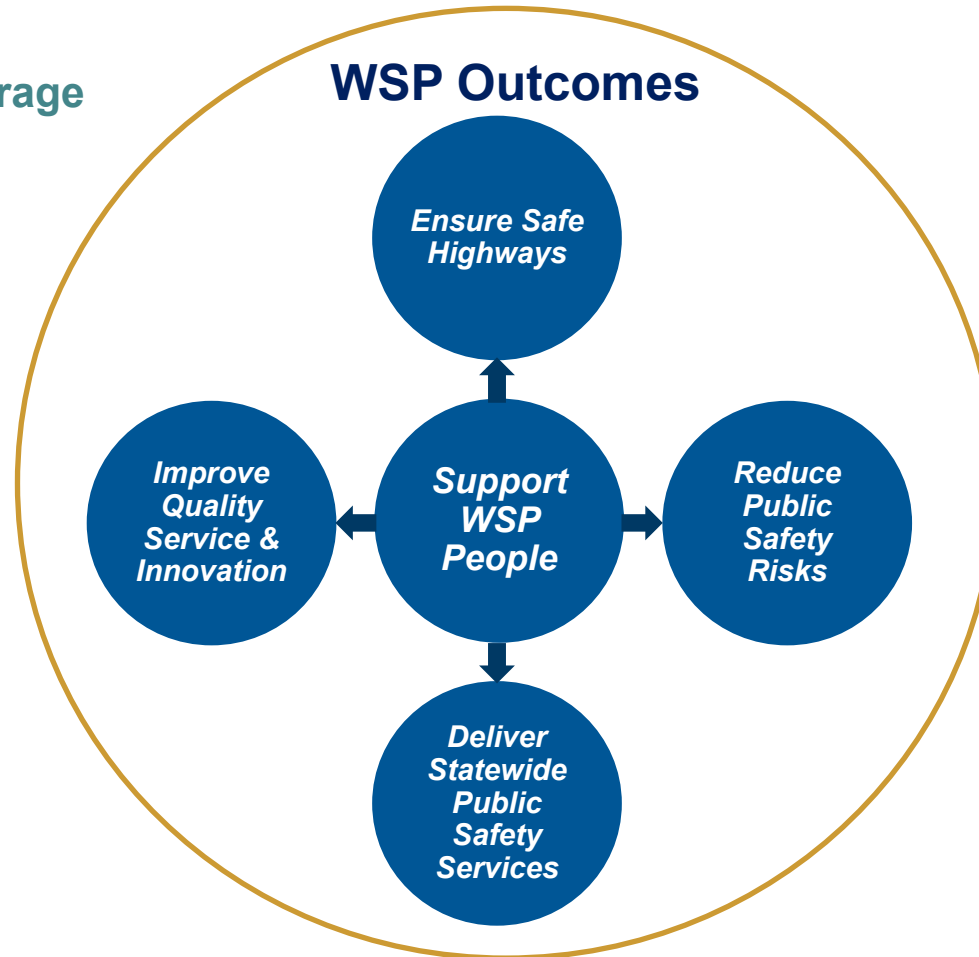## Technology Roadmap Strategies

Increase Statewide Coverage

- Subscribers have maximum connectivity to dispatch and supporting users for safety and coordination.

Improve Reliability

- The subscribers will have a reliable LMR network in the event of a large-scale disaster.
- The state will have a sustainable lifecycle schedule to allowing planning and funding.
- System administrators will be able to troubleshoot and support the LMR network meeting industry standards and scalability.

WSP Outcomes

- Ensure Safe Highways
- Improve Quality Service & Innovation
- Support WSP People
- Reduce Public Safety Risks
- Deliver Statewide Public Safety Services

Simplify Useability

- Subscribers use industry best practices channel nomenclature, making interoperability more scalable and sustainable
- Users are provided a standardized code plug allowing them to move across the state without the need for reprogramming
- Dispatchers can intuitively use dispatch consoles and associated tiles while providing emergency services support.
- All subscribers are trained to the same repeatable standards allowing confidence in the use and function of the tools provided

Adopt New Technologies

- Emerging technologies will be continually evaluated and implemented, allowing increased coverage, simplified useability, improved reliability, and reduction of operational costs.

Implementation Overview
WSP LMR Strategic Plan

LMR Roadmap Strategies

WSP's LMR roadmap strategies are structured and sequenced to build a **technology architecture** (essential pieces that work together) that enables and maximizes the value of technology and staff investments.
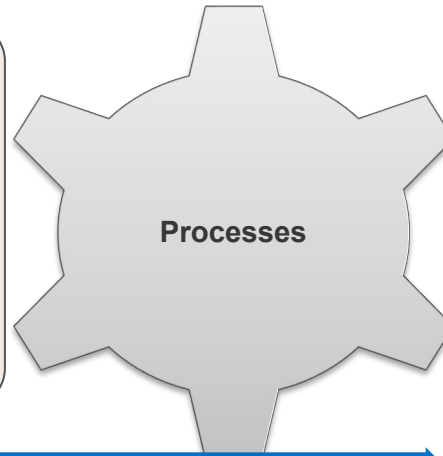
1. Increase Statewide Coverage

2. Simplify Useability

3. Improve Reliability

4. Adopt New Technologies

• Coverage – VHF/700MHz Trunked
• Over –the-Air Programming (OTAP)
• Long Term Evolution (LTE)
• Dispatch Consoles (update)

• Redundancy
• System Management
• Asset Management
• Change Management
• Interoperability
• Standard Operating Procedures
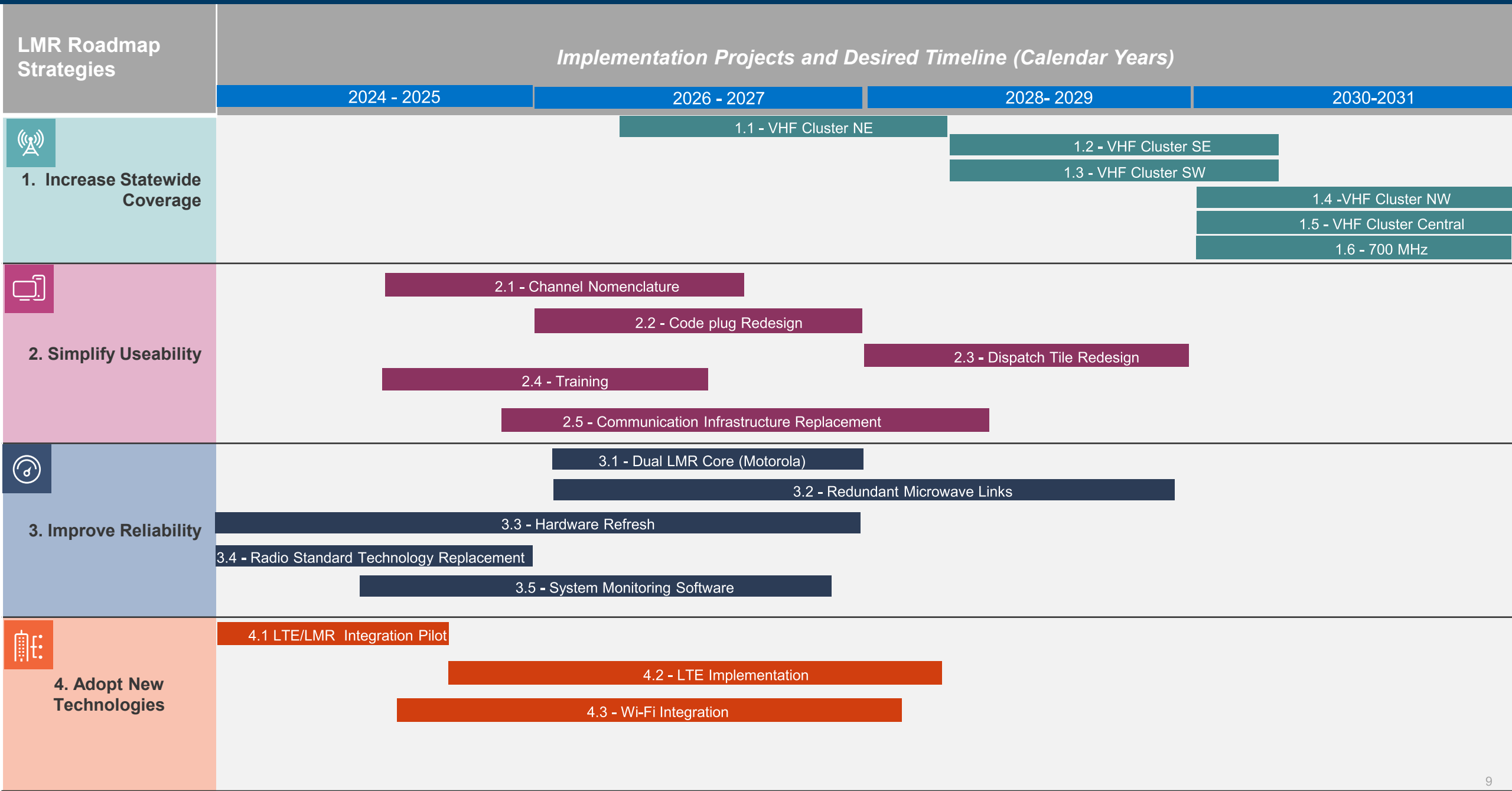• Standardized Channel/Talkgroup Names
• Network Monitoring
• Governance

Technology

Processes

People

• Staffing
• Training

LMR Roadmap Strategies	Implementation Projects and Desired Timeline (Calendar Years)			
	2024-2025	2026-2027	2028-2029	2030-2031
1. Increase Statewide Coverage		1.1 - VHF Cluster NE	1.2 - VHF Cluster SE	
			1.3 - VHF Cluster SW	
				1.4 - VHF Cluster NW
				1.5 - VHF Cluster Central
				1.6 - 700 MHz

Strategy 1 ensures we have cost effective LMR coverage approaching the goal of 90% for mobiles. The prioritized installation/expansion of five regional VHF clusters will increase coverage in order of importance/return on investment. Strategy timeline is based on approved Decision Package beginning 25-27 Biennium.

Projects include:

- **1.1** VHF Cluster NE includes installation/expansion of fifteen VHF transmit (TX) and receive (RX) sites. The cluster will improve key areas for District 4. 1.1 is the preliminary step, demonstrating the viability of the strategy and the first financial leg funded gate in the roadmap.

- **1.2** VHF Cluster SE includes six VHF TX/RX sites. This cluster will improve key areas in D3 and D4 and continues the phased approach of VHF expansion in low coverage areas of the state.

- **1.3** VHF Cluster SW will be conducted simultaneously with 1.2 and includes fourteen VHF TX/RX sites. This cluster will improve key areas in D5 and D8.

- **1.4** VHF Cluster NW includes five VHF TX/RX sites to benefit D7 and D8 (currently benefits from some 700 MHz sites)

- **1.5** VHF Cluster Central includes ten VHF TX/RX sites (currently benefits from some 700 MHz sites)

- **1.6** 700 MHz expansion on the I-5 and I-90 corridors

LMR Roadmap Strategies	Implementation Projects and Desired Timeline (Calendar Years)			
	2024-2025	2026-2027	2028-2029	2030-2031
2. Simplify Useability	2.1 Channel Nomenclature			
		2.2 Code Plug Redesign		
			2.3 Dispatch Tile Redesign	
	2.4 Training			
			2.5 Communication Infrastructure Replacement	

Strategy 2 builds on the other strategies to enable future technology support. Useability, Interoperability, and Scalability are key outcomes of this strategy. Internal restructure and formalization will enable ease of subscriber use (both internal and external) allowing increased support while reducing Total Cost of Ownership.

Projects include:

- **2.1** Channel nomenclature - due to the complexities of inconsistent channel/talk group naming the WSP will incorporate the channel nomenclature defined within the *APCO/NPSTC Standard Channel Nomenclature for Public Safety Interoperability Channels Standard*.

- **2.2** Code Plug Redesign – We will work with Allied agencies to reduce the complexity and duplications between partner agencies.

- **2.3** Dispatch Tile Redesign - District tiles are at capacity and not able to incorporate additional technologies, such as LTE.

- **2.4** Training will address subscriber, dispatch, system administration and repeatable practices ensuring consistent statewide application.

- **2.5** LMR Infrastructure Replacement addresses end of life hardware such as consolettes.

LMR Roadmap Strategies	Implementation Projects and Desired Timeline (Calendar Years)			
	2024-2025	2026-2027	2028-2029	2030-2031

3. Improve Reliability

- 3.1 Dual LMR Core (Motorola)
- 3.2 Redundant Microwave Links
- 3.3 Hardware Refresh
- 3.4 Radio Standard Tech Replacement
- 3.5 System Monitoring Software

Strategy 6 recognizes an ongoing need to create administrative systems that work productively and consistently across the agency. Every WSP division has expressed needs for these systems. This strategy will ensure both reliability and useability into the future.

Projects include:

- **3.1** Invest in a geographically separated core. The separated core will provide system backup in the event of a failure of the primary core. The agency will engage in researching and procurement of a cloud-based core in support of the state's cloud initiative.

- **3.2** WSP will increase the microwave backhaul presence and design by implementing redundant microwave links to 29 existing and proposed paths, increasing its resiliency.

- **3.3** WSP will continue implementing funded projects for LMR Hardware Refresh through the end of the 25-27 biennium. This will complete the replacement of all Radio Base Stations, Alternative Power Units, and Microwave Radios at 100+ WSP radio sites.

- **3.4** WSP will continue to procure and deploy the funded project for replacement of all Motorola mobile and portable radios.

- **3.5** Implement and configure a Manager of Managers (MOM) capability for incorporating multiple monitoring systems into a high-level management system. This capability will be increasingly important to facilitate effective network management.

LMR Roadmap Strategies	Implementation Projects and Desired Timeline (Calendar Years)			
	2024-2025	2026-2027	2028-2029	2030-2031
4. Adopt New Technologies	4.1 LTE / LMR Pilot			
		4.2 LTE Implementation		
		4.3 Wi-Fi Integration		

Strategy 4 will look to emerging technologies to further enhance coverage, useability, and reliability. Focus will continue to be Interoperability strategy, Cost of Ownership, and Return on Investments.
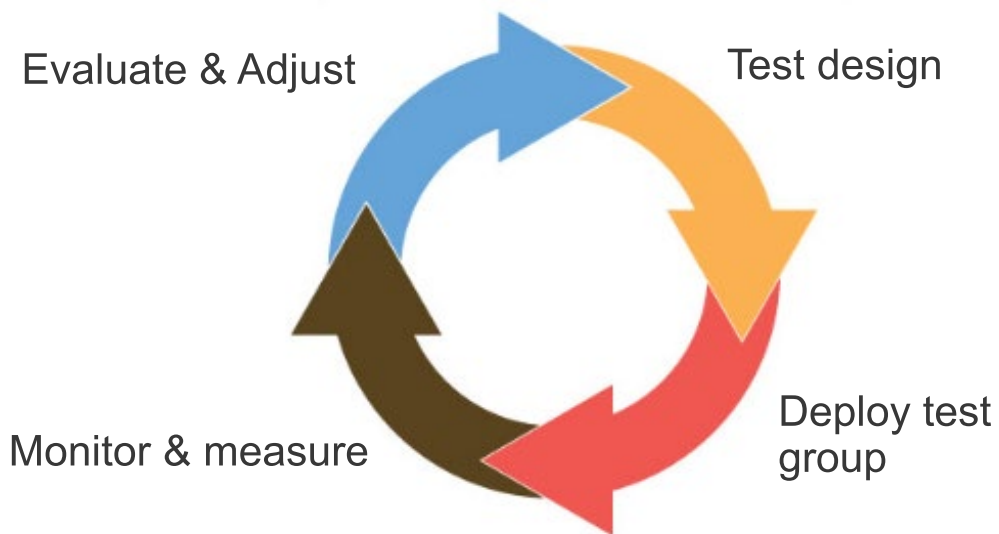
Projects include:

- **4.1** Long-Term Evolution (LTE) technologies in public safety use cases. We will continue to test, pilot, review capabilities, user workflows, and integration options to supplement the existing WSP LMR network (VHF and 700 MHz). Impacted stakeholders include subscribers, communications, and allied agencies.

- **4.2** Based on success and approvals, we will shift from pilot strategies to an implementation plan. Due to associated costs to both the LTE and LMR platforms, funding will be required for a phased implementation.

- **4.3** The current subscriber procurement includes Wi-Fi technology in both the mobile and portable radios. We will adopt the new capabilities in both platforms. Vehicles with routers, will extend coverage to portables within range where LMR coverage is poor. We will look to allow the subscribers to connect to local Wi-Fi (WSP, hospitals, schools, etc.).
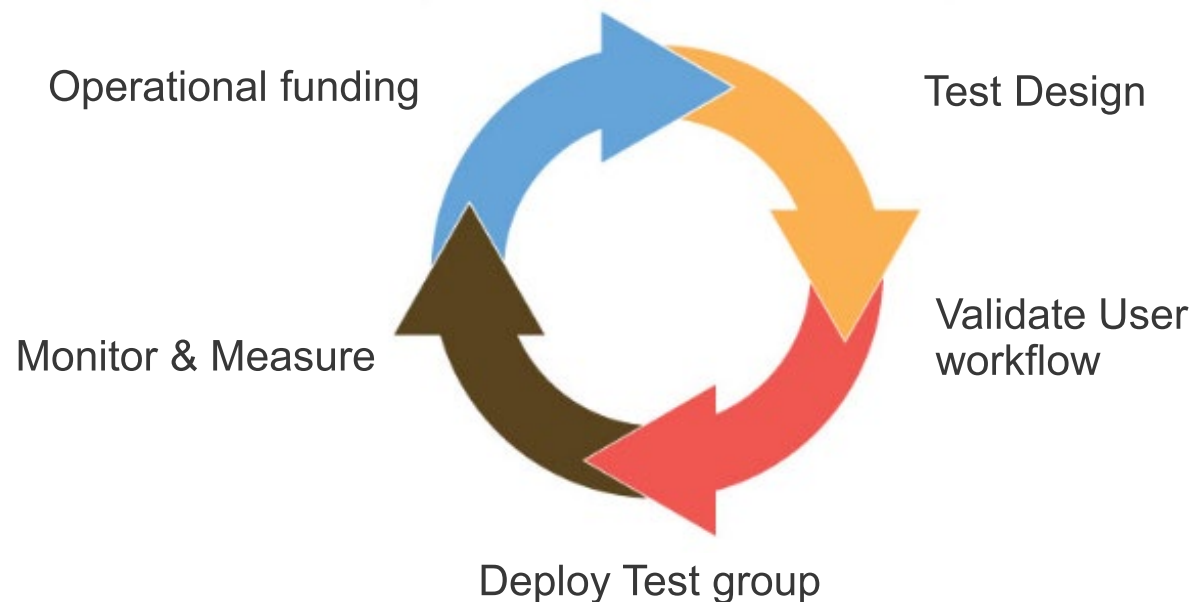
4. Adopt New Technologies

WSP LTE Integration – 2 phases

Body Camera & Taser Vehicle Implementation

LTE / LMR Implementation

Design LTE Connectivity to Vehicle

Evaluate & Adjust

Test design

Monitor & measure

Deploy test group

Design LTE / LMR Infrastructure

Operational funding

Test Design

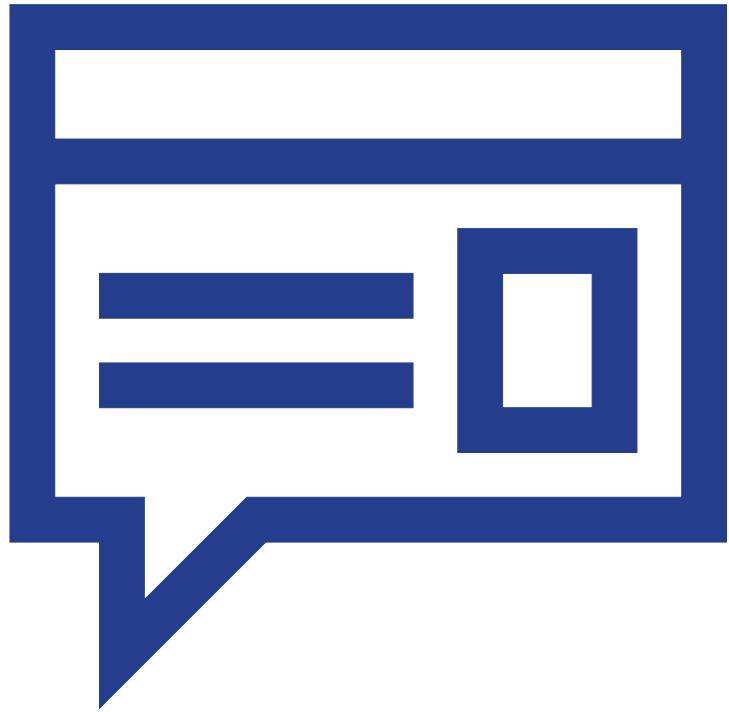Monitor & Measure

Validate User workflow

Deploy Test group

Questions

SCIP Updates

SWIC Updates

Carrier Updates

Public Comment