

**October 1, 2019**  
**Regular Meeting**  
**Item # 7b**

**IT**

**Additional Documents:**  
**PowerPoint Presentation**

# NextGen Radio System

## Debriefing the Federal Engineering Strategic Engineering Study

Fall 2019



# AGENDA

- **Radio & Communications Effort Refresher**
  - Where We Were
  - Where We Are
  - Where We're Headed
- **Federal Engineering Report**
  - Background
  - Key Findings
- **Next Steps**

# PHASED APPROACH

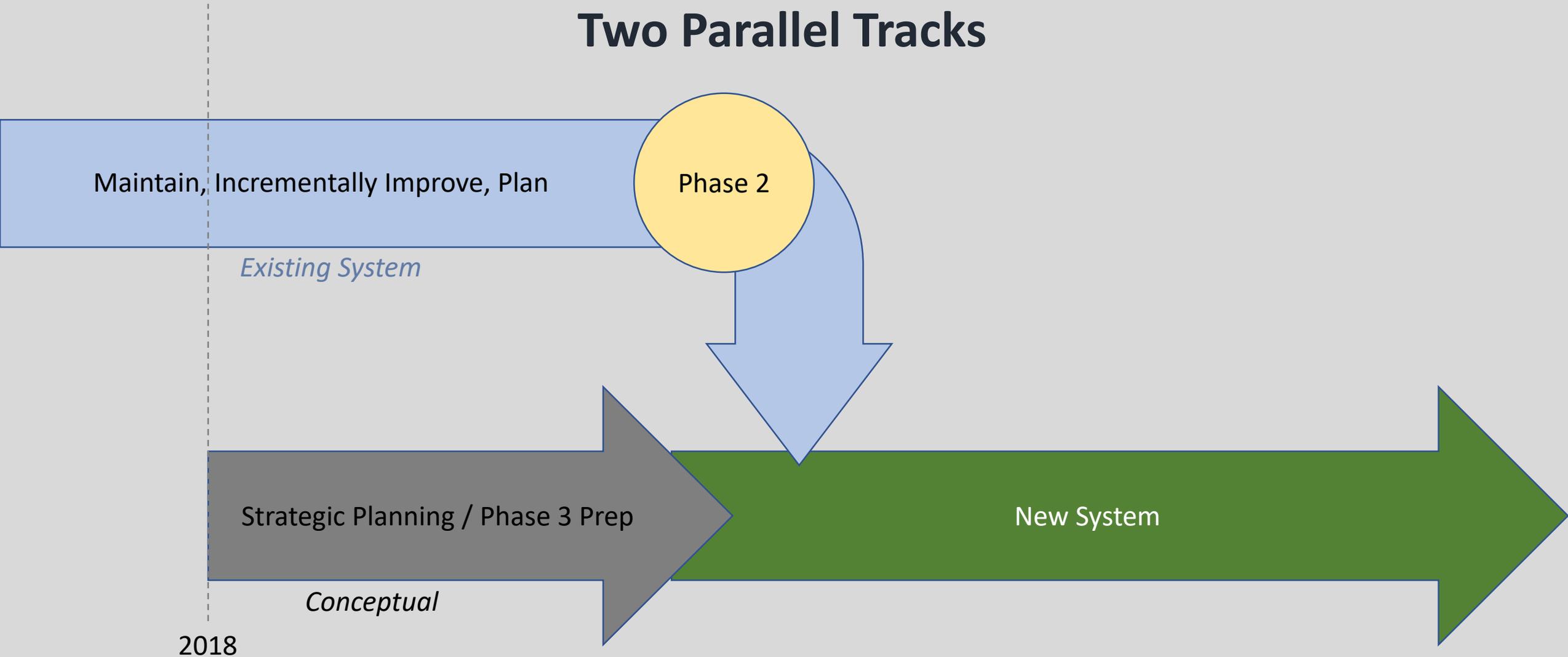
MCSD / Nielsen's Equipment

PHASE 0		PHASE 1		PHASE 2		PHASE 3	
Main Focus Areas	1. Technical 2. Operations	Main Focus Areas	1. Technical 2. Operations	Main Focus Areas	1. Policy 2. Funding 3. Governance	Main Focus Areas	1. Technical 2. Funding 3. Governance
Funding	~ \$150k - Radio budget	Funding	~ \$250k - Radio budget	Funding	~ \$TBD - Radio Budget - Cost-Share	Funding	~ \$TBD - Cost-Share
Source(s)		Source(s)		Source(s)		Source(s)	
Lead/Oversight	IT Director	Lead/Oversight	IT Director	Lead/Oversight	Interim Steering Committee	Lead/Oversight	Executive Committee
<b>Priorities</b> <ul style="list-style-type: none"> <li>✓ Review existing contracts &amp; budgets</li> <li>✓ Issue RFP and select new radio vendor</li> <li>✓ Develop pragmatic work plan with short-term priorities</li> <li>✓ Perform basic high-priority work/repairs</li> <li>✓ Evaluate deficiencies</li> </ul>		<b>Priorities</b> <ul style="list-style-type: none"> <li>✓ Stabilize system – fix broken infrastructure</li> <li>✓ Programmatic Maintenance (PM) &amp; stock program</li> <li>✓ Determine internal budget management practices</li> <li>✓ Establishing governance for Mid-Term</li> <li>✓ Begin Strategic Planning</li> </ul>		<b>Priorities</b> <ul style="list-style-type: none"> <li>✓ Build internal capacity</li> <li><input type="checkbox"/> <b>Establish interim Governance &amp; multi-agency collaborative</b></li> <li><input type="checkbox"/> Streamline support</li> <li><input type="checkbox"/> <b>Design new system</b></li> <li><input type="checkbox"/> Seek out grant funding</li> <li><input type="checkbox"/> Develop long-term Strategic Plan</li> <li><input type="checkbox"/> <b>Incremental system upgrades</b></li> </ul>		<b>Priorities</b> <ul style="list-style-type: none"> <li>• Continue to grow internal capacity</li> <li>• Further improve support structures</li> <li>• Implement new system and replace subscriber infrastructure</li> <li>• Leverage Executive Committee for long-term funding and maintenance program</li> </ul>	
2014	2015	2016	2016	2018	2018	2020	2020

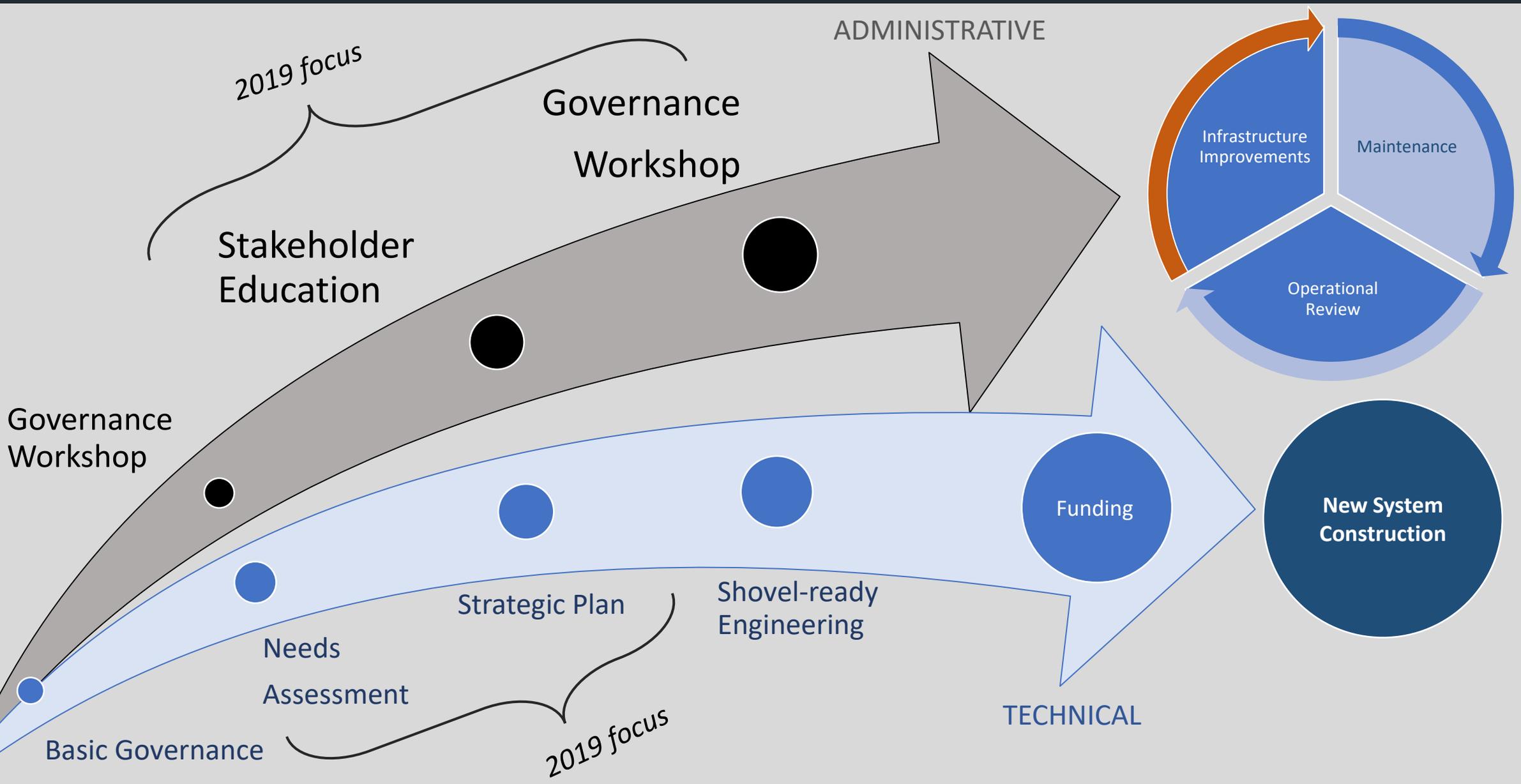


# HOW WE GET THERE

## Two Parallel Tracks



# DUAL TRACK TRAJECTORY



# FEDERAL ENGINEERING STUDY

- **County commissioned (~\$50k)**
- **Strategic Engineering for Next Generation radio system**
- **Vendor agnostic – Standards based**
- **Stakeholder need driven**
- **Provide ROM costing, roadmap, and timeframes**
- **Delivers three 'Alternatives' – really Phases**

# STUDY PROCESS

## **1. In-Depth Conversations with IT Staff**

Goals, priorities, desired outcomes, limitations

## **2. Stakeholder Input**

Survey & Sit-Down Meetings

## **3. Site Visits**

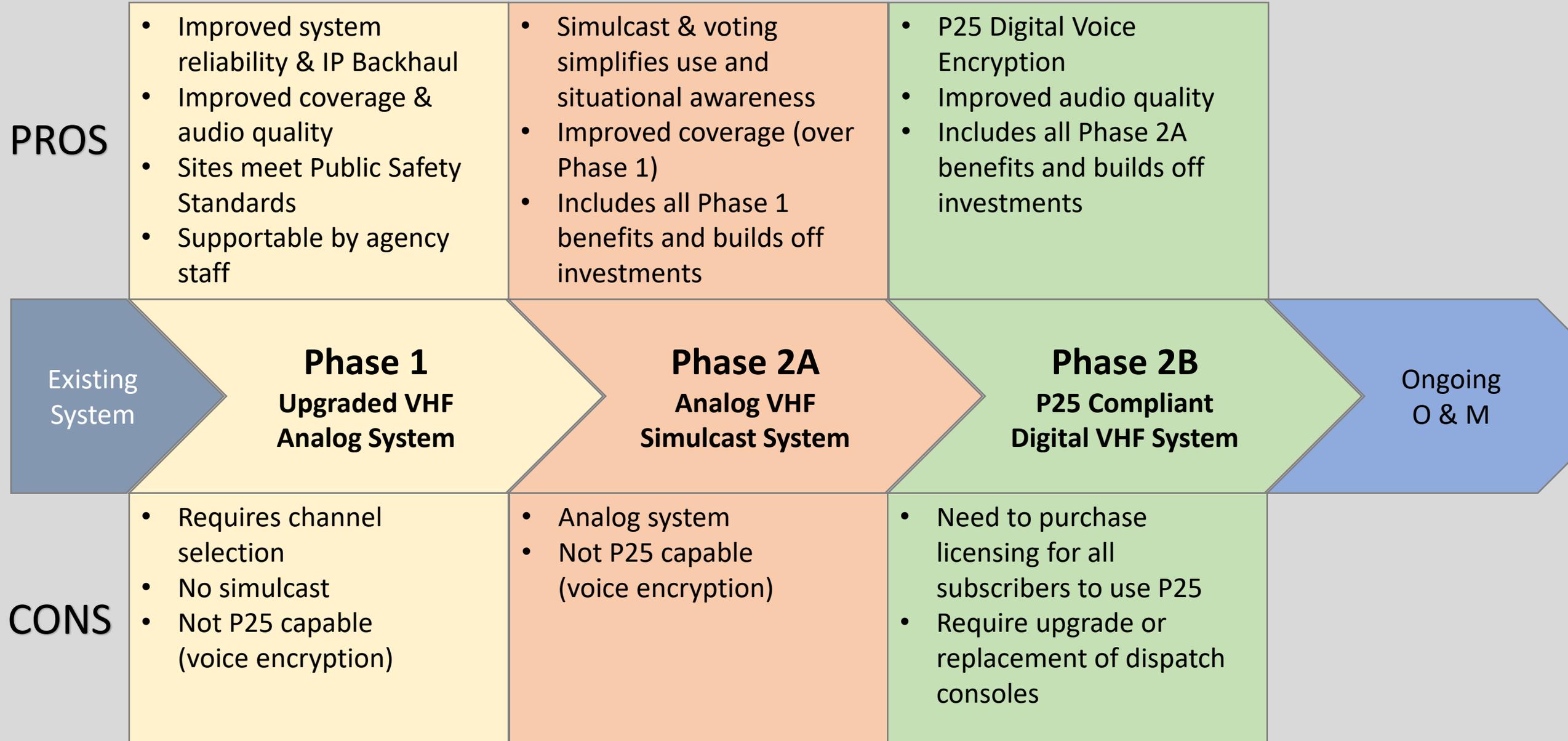
Dispatch, Conway Summit, Casa Diablo

## **4. Coverage Mapping & Analysis**

# **GUIDING PRINCIPLES**

- **Modern, reliable system built to industry/Public Safety standards**
- **Simple and easy to use**
- **Leverages Digital 395 wherever possible**
- **Utilizes emerging communication technologies when possible**
- **Extensible**
- **Can be supported by agency personnel**

# ALTERNATIVES (PHASES)



# COVERAGE & SITES

## COVERAGE COMPARISON ANALYSIS

Name	Existing	Alternative 1	Alternative 2A	Alternative 2B	Notes
Antelope Valley Fire	Yes	No	No	No	Superseded by Landfill
Benton	Yes	Yes	Yes	Yes	
Casa Diablo	Yes	Yes	Yes	Yes	
Conway Summit	Yes	Yes	No	No	Decomission in Phase 2
Dispatch - Bridgeport	Yes	Yes	Yes	Yes	
June Mountain	Yes	No	No	No	Swapped with June Garage
June Mountain - Garage	No	Yes	Yes	Yes	Implemented ASAP
Lee Vining	No	No	Yes	Yes	New site for simulcast
Leviathan Peak	Yes	No	No	No	Decommission
Long Valley	Yes	Yes	Yes	Yes	
Mammoth Mountain	No	Yes	Yes	Yes	Upgrade site for all channels
Mammoth Sub Hill	Yes	No	No	No	Decommission
Potato Peak	Yes	Yes	Yes	Yes	
Sweetwater Mountain	Yes	Yes	Yes	Yes	
Tioga Peak	Yes	No	No	No	Decommission
Walker Landfill	No	Yes	Yes	Yes	New site for improved coverage

# COST COMPARISONS

## Site Improvements

Infrastructure upgrades at repeater sites including towers, power systems, vaults, etc.

## Repeaters & Backhaul

Technology equipment located at repeater sites including repeaters, microwave links, antennas, etc.

## Subscriber Units

Radios and associated licensing in vehicles and on belts for use in talking across radio system

## Dispatch Equipment

Dispatch consoles and associated equipment needed to communicate across radio network

ITEM	ALTERNATIVE 1	ALTERNATIVE 2A	ALTERNATIVE 2B
Site Improvements	\$3,680,000	\$4,000,000	\$4,000,000
Repeaters & Backhaul	\$2,220,000	\$2,950,000	\$3,640,000
Subscriber Units	\$2,410,000	\$2,410,000	\$3,460,000
Dispatch Equipment	\$0	\$0	\$650,000*
<b>Total</b>	<b>\$8,310,000</b>	<b>\$9,360,000</b>	<b>\$11,750,000</b>
<b>Cost Increment</b>	<b>\$8,310,000</b>	<b>\$1,050,000</b>	<b>\$1,740,000</b>

\* All costs are estimates but based on qualified numbers, including local sales tax

# FINANCING

- Single vendor should be engaged for entire project aimed at Alternative 2B
- Look to cost-share with stakeholders
- Potential to pay incrementally (Lease to Own)
- Need to budget for current replacement and future life-cycle upgrades
- Variety of revenue raising options – each with pros & cons

Type of Levy
Special tax
General tax
Ad-valorem property tax
Assessment (also called benefit assessment or special assessment)
Property-related fee or charge
User fee
Regulatory fee
Fee for use of government property
Fine or penalty
Development fee

# NEXT STEPS

- **Restart governance conversations**
- **Develop and execute on a funding plan**
- **Make modest investments into existing system**
  - e.g. Relocate June Mountain repeater
- **Retain Federal Engineering for RFP development**



# THANK YOU!

Questions/Comments/Feedback



**October 1, 2019  
Regular Meeting  
Item # 10**

**Board Reports**

**Additional Documents:**

**Flyer, SCE Wildfire Safety Meeting**

# YOU'RE INVITED



SOUTHERN CALIFORNIA  
**EDISON**<sup>®</sup>

**SCE INVITES YOU TO A COMMUNITY MEETING  
ON SCE'S WILDFIRE SAFETY EFFORTS**

**Thursday,  
October 03, 2019  
6:30 P.M. to 8:30 P.M.**

**Tri-County Fair**  
*Location Changed to:*  
**Heritage Arts Building**  
475 Sierra Street  
Bishop, CA 93515

## **Agenda**

**6:30 P.M. – 7:00 P.M.**

- Doors Open
- Open House

**7:00 P.M. – 8:30 P.M.**

- Presentation
- Meet with the experts

As the State of California continues to experience a year-round fire season, SCE wants to make sure communities are informed and prepared as we implement our Wildfire Mitigation Plan.

You'll have an opportunity to learn more about the Public Safety Power Shutoff protocol, hear from emergency preparedness experts and update your contact information so you won't miss out on any important SCE emergency notifications.

**UPDATE YOUR CUSTOMER CONTACT INFORMATION SO WE CAN INFORM YOU ABOUT OUTAGES:**

**[sce.com/psps](http://sce.com/psps)**