Interoperability
What Does it Really Mean?

Rodney Reed, Chief Deputy

WHAT'S YOUR
OPINION?

DEFINE: INTEROPERABILITY

Merriam-Webster

Ability of a system to work with or use the parts of equipment of another system.

CYBERSECURITY & INFRASTRUCTURE SECURITY AGENCY — CISA

Is the ability of emergency response agencies to talk to one another via communication systems – to exchange voice and/or data with one another on demand, in real time, when needed, and as authorized.

PROBLEM = SOLUTION & SOLUTIONS COST MONEY

UASI & SHSP – 2003 to present
$Millions of dollars focused on public safety.

PSIC Grant – 2007
$968 million for interoperability

Enhanced 911 Grant – 2007
$43.5 million for 911 call center upgrades

911 Grant Program – 2019
$109 million for emergency communication support

IIJA – 2021
$Millions for broadband and cybersecurity

2003 2004 2005 2006 2007 2008 2009 2010 2019 2020 2021 2022

Deficit Reduction Act – 2005
$1 billion acquisition, deployment, and training for use of interoperable communication systems

IECGP – 2008 - 2010
$145 million for interoperability funds

BIDP – 2010
$25.5 million interoperable communication systems for border communities

CARES ACT – 2020
$Millions for new emergency communications funding

ARPA – 2021
$Millions for public safety

TEXAS – 2022
$6.79 Million authorized for emergency communications funding

IMPLEMENT INTEROPERABILITY

SHOULD BE SIMPLE

GO

STEP 1

MONEY & FREQUENCIES

Look for Federal & State grant dollars.
Pool or purchase available frequencies.

STEP 2

STANDARDS

Follow the P25 Standards

STEP 3

PURCHASE & DEPLOY

Follow procurement policies and purchase a radio system.
Deploy that system to my interested parties.

STEP 4

RADIOS & TEST

Deploy radios to first responders & public safety.
Test to ensure design meets needs.

STEP 5

SCALE SYSTEM

Make necessary enhancements to ensure the scalability and needs of the system are maintained.

STEP 6

SUSTAIN

Sustain the system through grant and local dollars to build and harden the system.

FINISH

(12+12) − 34 + 10 x 0 +
if x = y then y

ACHIEVEMENT
UNLOCKED

Lessons Learned

from real world incidents

There was a failure to establish direct communications links between the police and fire incident commanders and, to a lesser extent, with responding mutual aid units.

The most significant and pervasive lack of radio interoperability occurred in the mountains above Big Bear during the hours before Dorner was finally cornered and stopped. Because the sheriff's department could not communicate with these hundreds of personnel, not only was their presence not helpful, the sheer volume of police cars on the narrow, two lane roads, actually hampered the mission of the San Bernardino SWAT team that was managing operations at the cabin on Seven Oaks Road.

Some disciplines were unfamiliar with the Marathon communication plan and had difficulty initially accessing the designated channels and quickly reverted back to the internal systems that they felt most comfortable using. This limited the ability to coordinate across disciplines over interoperable communications systems.

Uvalde CISD police officers commonly carried two radios: one for the school district, and another "police radio" which transmitted communications from various local law enforcement agencies. While the school district radios tended to work reliably, the police radios worked more intermittently depending on where they were used.

FAILURES OF INTEROPERABILITY

01

02

03

04

05

Ov on in
fede dollars

dop

FRAMEWORK

Not sure how to make this look?

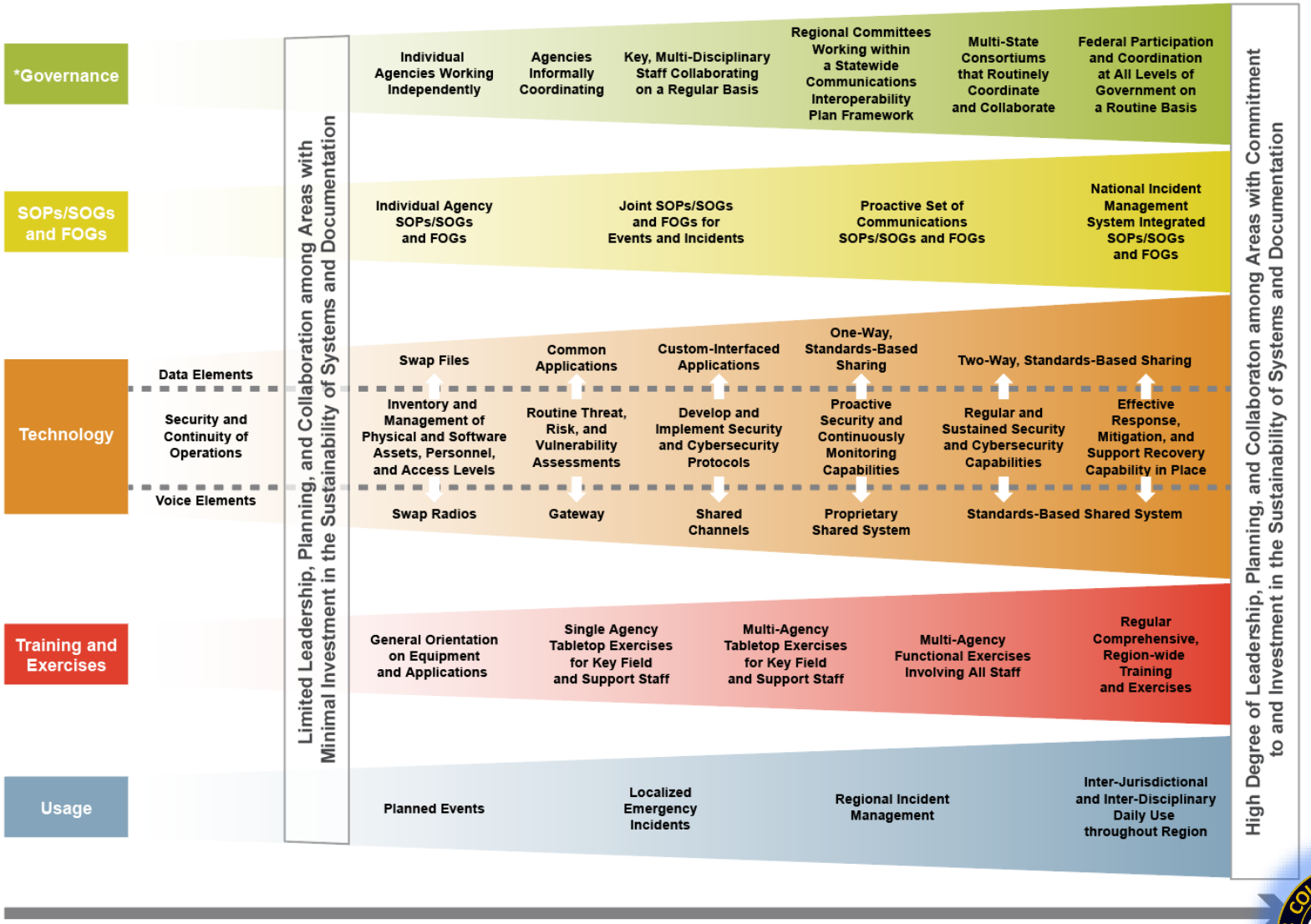
Rodney's Opinion

Interoperability Continuum

Drive progress along the **five elements** of the Continuum and improve interoperability:

- **G**overnance
- **S**OPs/SOGs & FOGs
- **T**echnology
- **T**raining & Exercises
- **U**sage

Ability of different systems, devices, or products to connect and communicate in a coordinated way.



FAILURES OF INTEROPERABILITY

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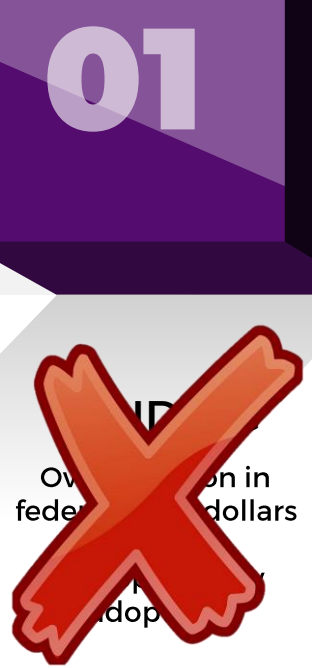


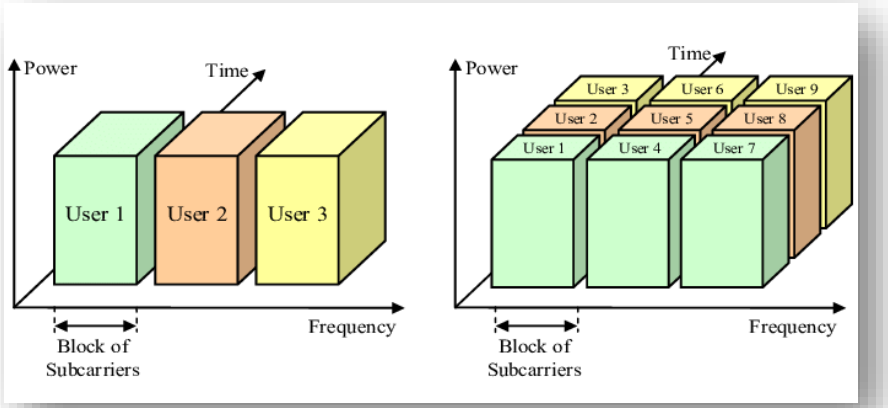
CAPABILITY

Systems don't possess the capability to building out the complexity Public Safety needs to be interoperable.

Rodney's Opinion

CAPABILITY

TXWARN INSIGHT



120 TG
HCSO

41 TG
GCSO

65 TG
BCSO

10 TG
Bryan FD

130 TG
INTEROP

3491
TOTAL TALKGROUPS

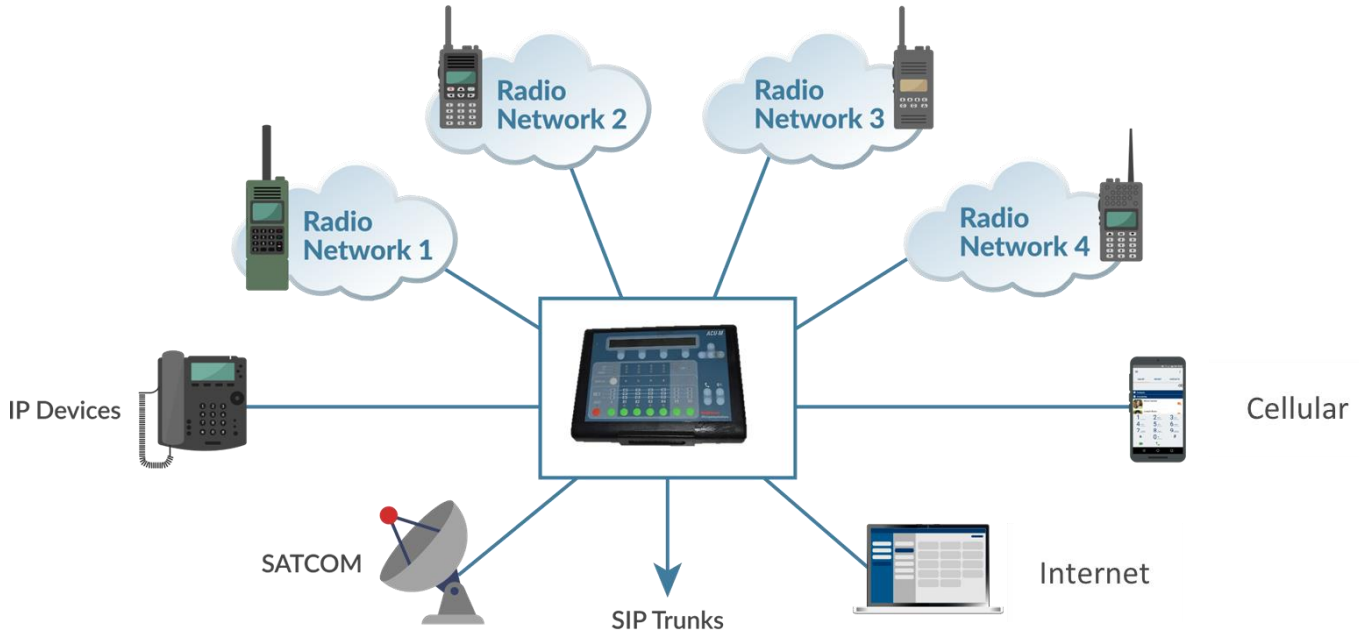
FAILURES OF INTEROPERABILITY

TECHNOLOGY

Technology hasn't developed to expectations.

Rodney's Opinion

Technology Issue



FAILURES OF INTEROPERABILITY

01

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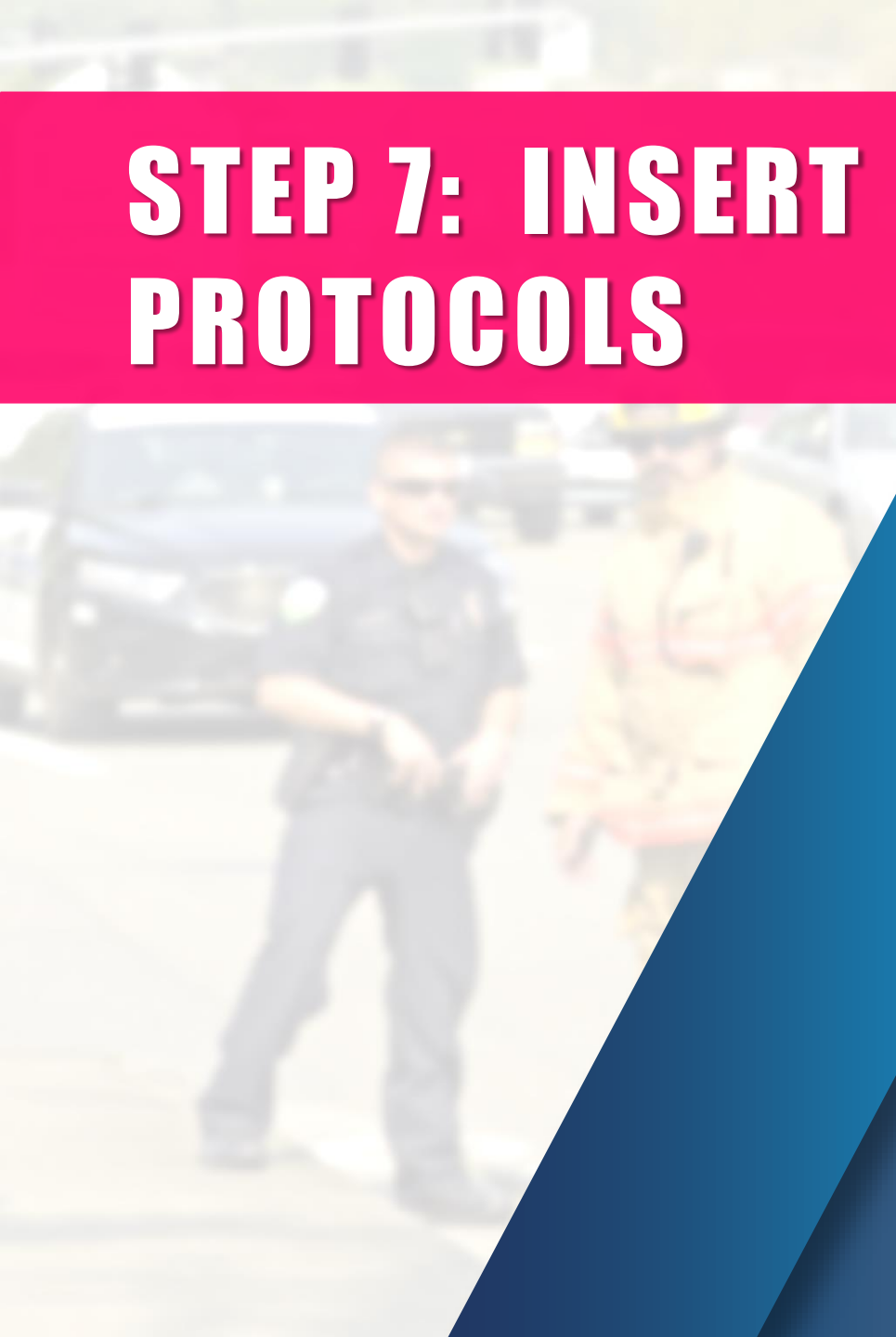
PPE

Personalities
Politics
Egos

STEP 7

Rodney's Opinion

STEP 7: INSERT PPE PROTOCOLS



FAILURE TO SET STRONG GOVERNANCE AT THE BEGINNING

ALLOW SOPS/SOGS TO BE DEVELOPED IN VACUUMS OR WITHOUT AGREEMENTS

EXPECT TECHNOLOGY TO SOLVE PROBLEMS AND DON'T FOCUS ON THE PEOPLE

FAIL TO TRULY INTEGRATE INTEROPERABLE COMMUNICATIONS INTO OUR TRAINING & EXERCISE

REFUSE TO ADAPT OUR EVERYDAY USAGE OF RADIO COMMUNICATION

HOW WE ACHIEVE INTEROPERABILITY

TOGETHER

PUT OUR EGOS IN CHECK AND FOCUS ON THE REAL ISSUES

RESPONDERS & SYSTEM OWNERS TOGETHER DRIVE CHANGE

WE BREAKDOWN SILOS AND IMPLEMENT INTEROPERABILITY EVERYDAY.

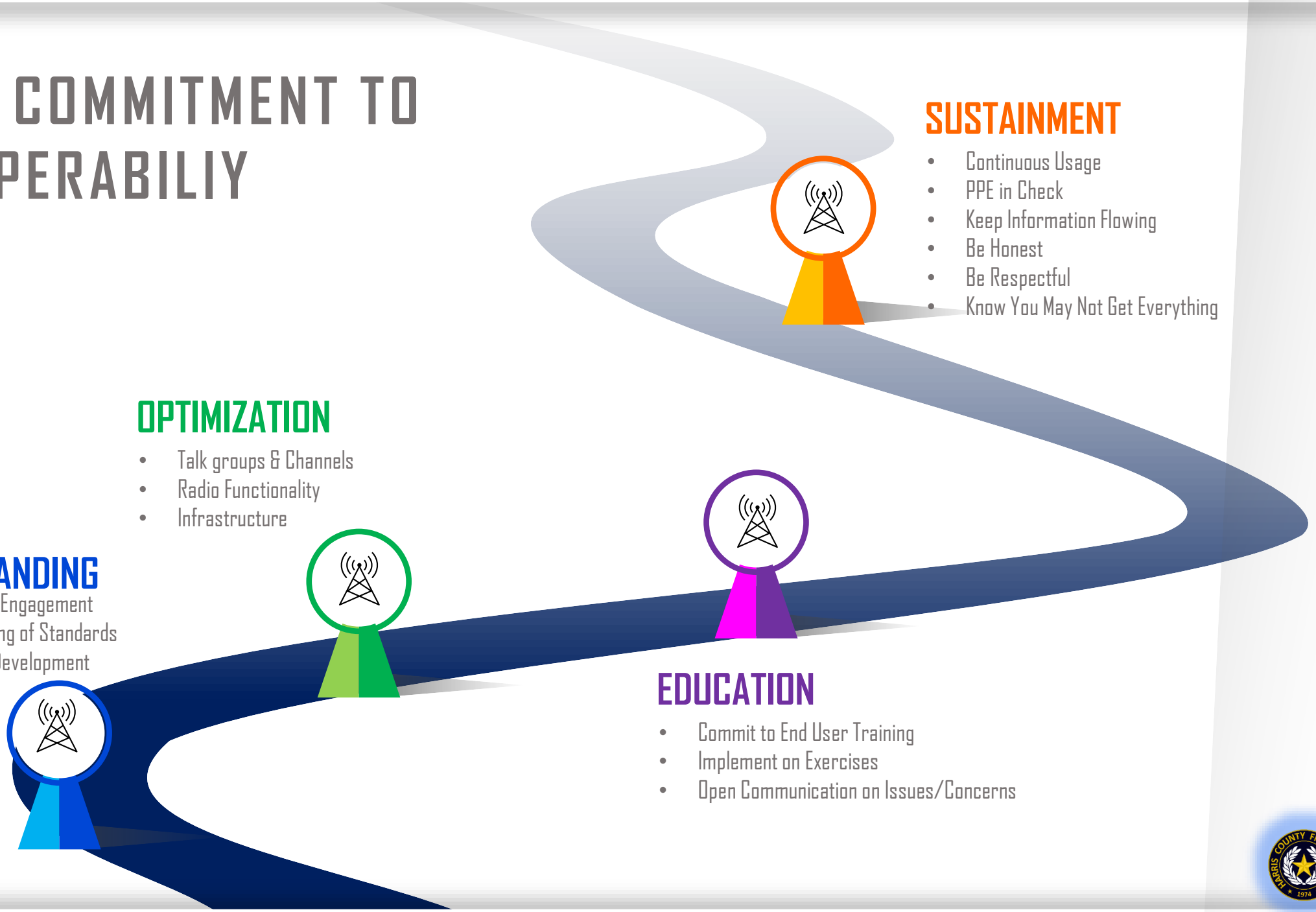
CREATE AN UNDERSTANDING THAT TECHNOLOGY WILL NOT SOLVE PEOPLE PROBLEMS

REDEFINE INTEROPERABILITY

Process of building and sustaining trust among stakeholders to effectively implement and maintain processes, technologies, training, and usage for exchanging voice and data as needed.

NOT A COMMS PROBLEM BUT PEOPLE PROBLEM

PATH & COMMITMENT TO INTEROPERABILIY



SUSTAINMENT

- Continuous Usage
- PPE in Check
- Keep Information Flowing
- Be Honest
- Be Respectful
- Know You May Not Get Everything

OPTIMIZATION

- Talk groups & Channels
- Radio Functionality
- Infrastructure

UNDERSTANDING

- Stakeholder Engagement
- Understanding of Standards
- SOP & SOG Development

EDUCATION

- Commit to End User Training
- Implement on Exercises
- Open Communication on Issues/Concerns

QUESTIONS