# SAFECOM Nationwide Survey

National-Level Results Summary

# Methodology

- The 2023 iteration of the SAFECOM Nationwide Survey utilized a **census study design.** Every organization in the targeted public safety disciplines across each level of government was invited to participate.

- Responses were requested at the **organizational level.**

- The target population for the 2023 iteration of the SNS included organizations with an operational role in emergency communications from the following disciplines:

  o **Emergency Management**
  o **Emergency Medical Services**
  o **Law Enforcement**
  o **Fire and Rescue**
  o **Emergency Communication Centers (ECCs)/ Public Safety Answering Points (PSAPs)**

# Contents and Caveats

- This resource contains post-processed data descriptions and visualizations of survey results from **local organizations** (county and municipal).

- The emergency communications ecosystem across the United States is diverse and complex. **Survey findings characterize trends across this ecosystem** and should not be interpreted to describe any specific organization or subset of organizations unless explicitly noted in data descriptions.

- To protect the privacy of our respondents, **all results are provided in aggregate.**

- Quantitative findings are subject to minor variations over time, caused by refinement and enhancement of datasets and methods.

- For guidance on interpreting survey results, assistance accessing additional SNS data products, or to report a problem with this file, **please contact the SAFECOM Nationwide Survey Team at** sns@cisa.dhs.gov.

# DEMOGRAPHICS

# Level of Government

Local public safety organizations characterize their agency's level of government. Values are proportions of all respondents.

**SHARE OF RESPONSES:**

# 92% Local

**4**% State/Territorial

**1**% Tribal

**2**% Federal

**ALL PUBLIC SAFETY:**

# 96% Local

**2**% State/Territorial

**1**% Tribal

**2**% Federal

# Organization and Jurisdiction Size

**92%** of public safety organizations are local agencies with **municipal or county jurisdictions**

**69%** of local organizations have **fewer than 50 personnel**

**62%** of local organizations serve small communities with populations of **25,000 or less**

# Public Safety Discipline

Local public safety organizations identify their public safety discipline. Values are proportions of all respondents. Totals sum to more than 100% due to many organizations providing services in multiple disciplines.
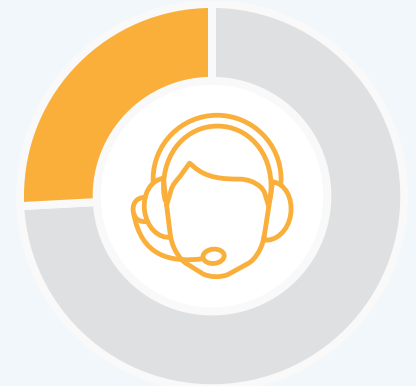
**44%**
Fire and Rescue

**36%**
Law Enforcement

**33%**
Emergency Medical Services

**26%**
Emergency Management

**26%**
ECC/PSAP

# GOVERNANCE

# Inclusive Governance

Local public safety organizations indicate whether their formal decision-making groups invite participants beyond first responders. Values are proportions of all local respondents.

**WHY IT MATTERS:** Inclusive governance structures ensure that emergency communications resource allocations and initiative prioritizations are informed by the needs and capabilities of emergency response providers, mutual aid partners, and other government and non-governmental organizations that provide specialized equipment and personnel to response operations.
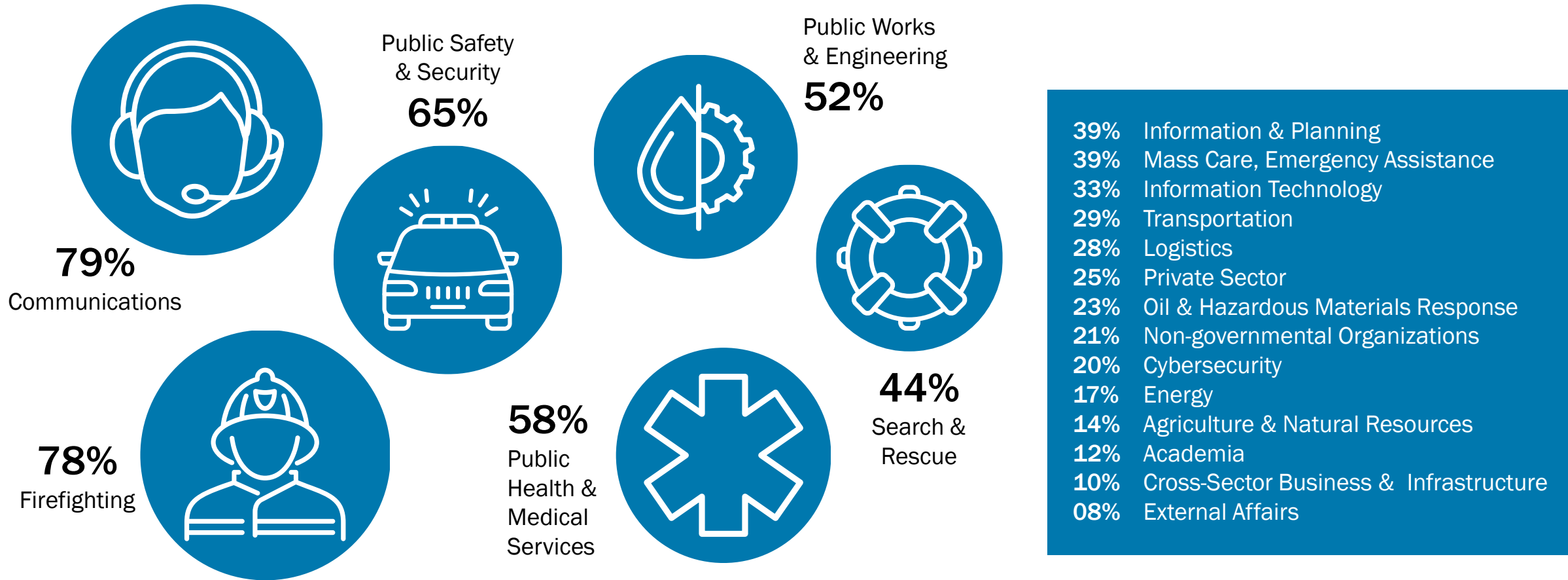
Do your organization's formal decision-making groups invite participants beyond first responders?

**64%**
Yes

**36%**
No
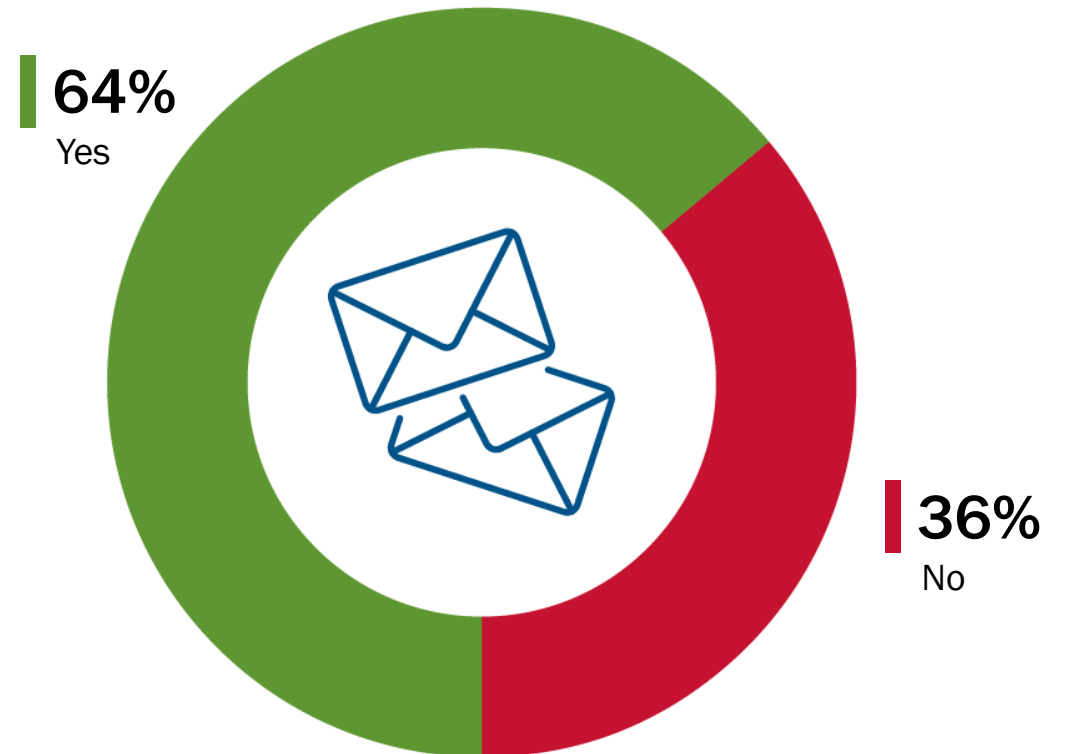
# Decision-Making Groups

Local public safety organizations describe the participants their formal groups include. Values are proportions of local respondents with inclusive groups.

**79%** Communications

**78%** Firefighting

Public Safety & Security **65%**

**58%** Public Health & Medical Services

Public Works & Engineering **52%**

**44%** Search & Rescue

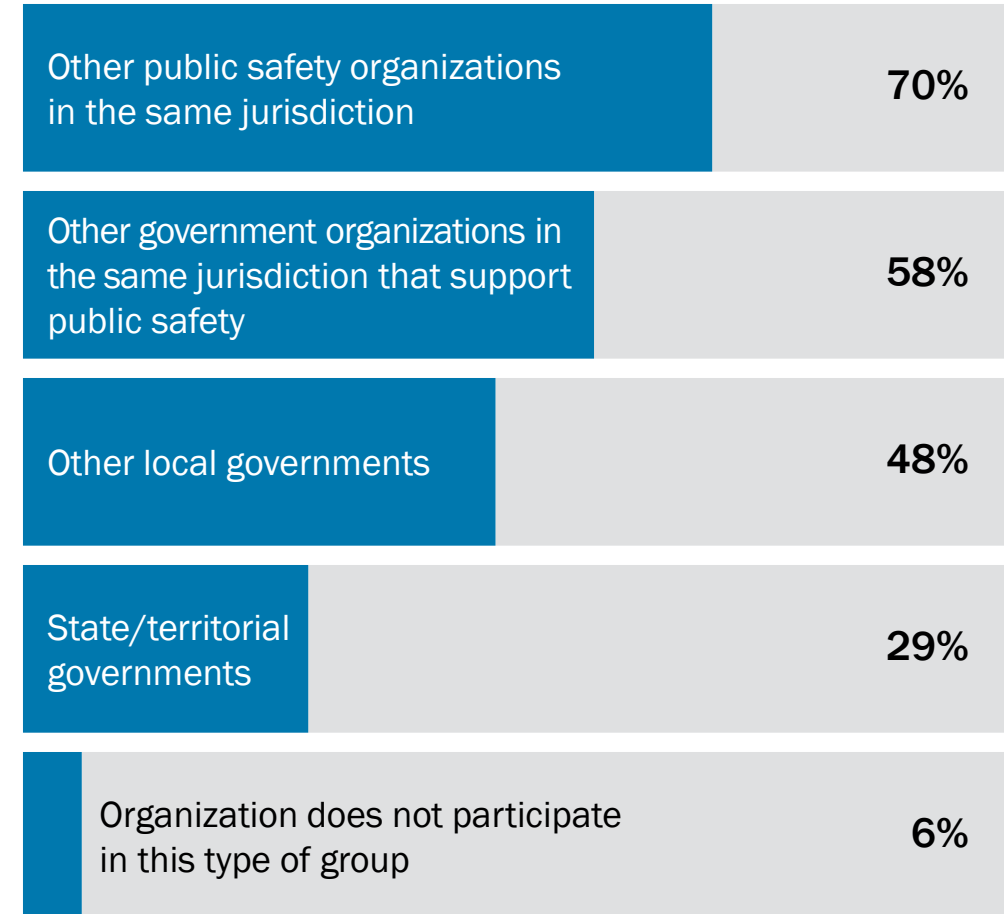| | |
|---|---|
| **39%** | Information & Planning |
| **39%** | Mass Care, Emergency Assistance |
| **33%** | Information Technology |
| **29%** | Transportation |
| **28%** | Logistics |
| **25%** | Private Sector |
| **23%** | Oil & Hazardous Materials Response |
| **21%** | Non-governmental Organizations |
| **20%** | Cybersecurity |
| **17%** | Energy |
| **14%** | Agriculture & Natural Resources |
| **12%** | Academia |
| **10%** | Cross-Sector Business & Infrastructure |
| **08%** | External Affairs |

# Decision-Making Groups

Local public safety organizations describe the membership of the formal decision-making groups in which their organizations participate. Values are proportions of all local respondents.

WHY IT MATTERS: Inclusive governance structures ensure that emergency communications resource allocations and initiative prioritizations are informed by the needs and capabilities of emergency response providers, mutual aid partners, and other government and non-governmental organizations that provide specialized equipment and personnel to response operations.

## Formal decision-making groups include representatives from...

| | |
|---|---|
| Other public safety organizations in the same jurisdiction | 70% |
| Other government organizations in the same jurisdiction that support public safety | 58% |
| Other local governments | 48% |
| State/territorial governments | 29% |
| Organization does not participate in this type of group | 6% |

# Governance Agreements

Local public safety organizations describe the formality of their governance agreements with other agencies. Values are proportions of all local respondents.
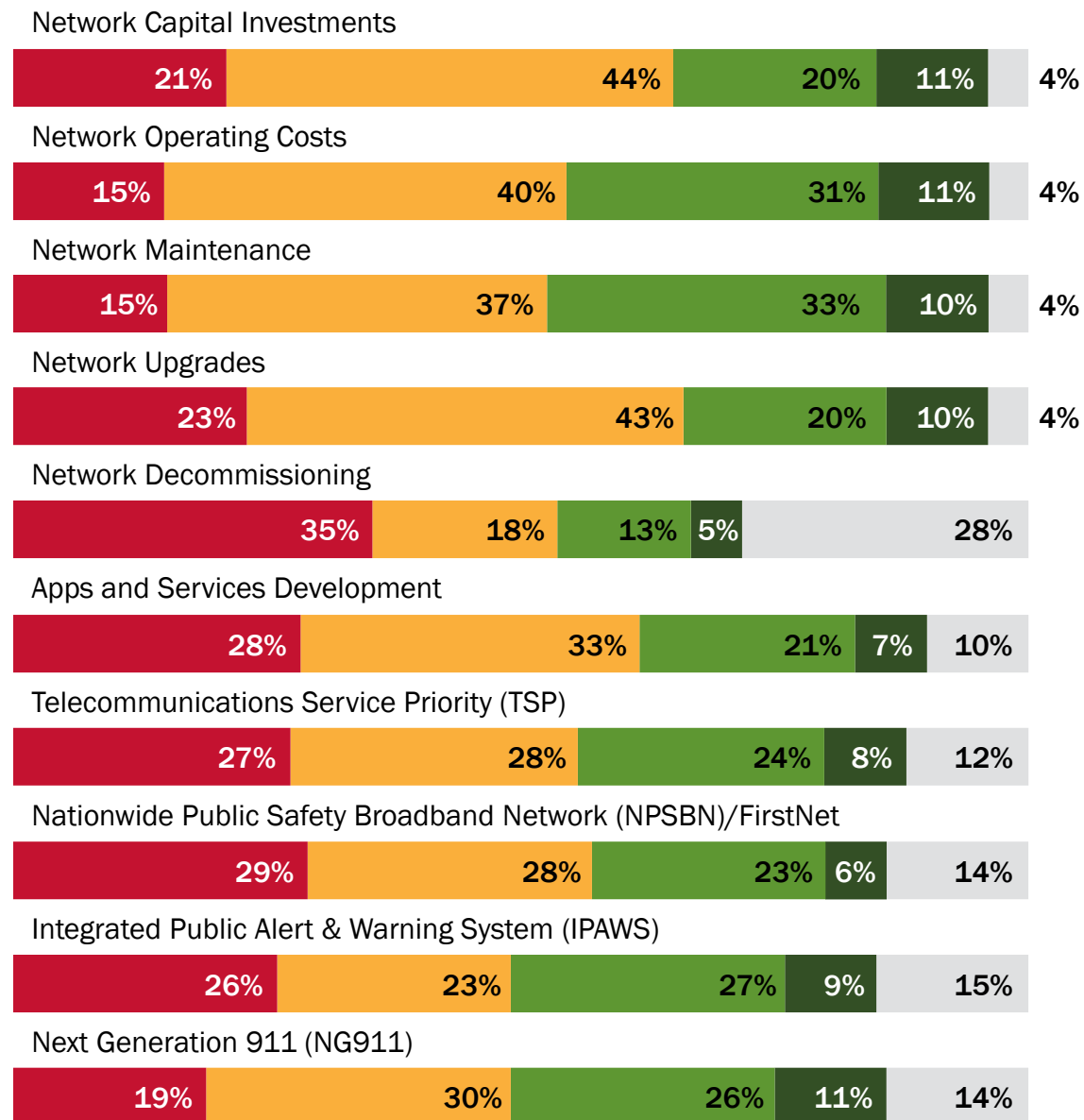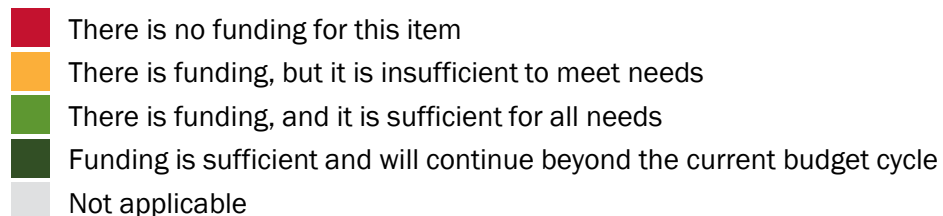
BOTTOM LINE: Almost all public safety organizations have governance agreements in place with other public safety organizations and organizations that support public safety in their jurisdictions.

**KEY**

- ■ Other public safety organizations in the same jurisdiction
- ■ Other government organizations in the same jurisdiction that support public safety
- ■ Other local governments
- ■ State/territorial governments

| There are informal, undocumented agreements in practice with | There are published and active agreements with some | There are published and active agreements with most | Agreements are reviewed every 3-5 years, after system upgrades, or incidents that test capabilities with | Not applicable |
|---|---|---|---|---|
| 27% 29% 25% 19% | 21% 22% 24% 23% | 27% 25% 23% 20% | 18% 15% 13% 13% | 6% 9% 14% 25% |

# Funding for Emergency Communications Networks and Applications

Local public safety organizations characterize the funding status for emergency communications networks and applications at their organization. Values are proportions of all local respondents.

BOTTOM LINE: More than half of public safety organizations do not have the funding they need to build new emergency communications networks, maintain the networks they have, or decommission networks that are obsolete.

**Legend:**
- There is no funding for this item
- There is funding, but it is insufficient to meet needs
- There is funding, and it is sufficient for all needs
- Funding is sufficient and will continue beyond the current budget cycle
- Not applicable

## Funding Status by Category

| Category | No funding | Insufficient | Sufficient for all needs | Sufficient & continue | Not applicable |
|---|---|---|---|---|---|
| Network Capital Investments | 21% | 44% | 20% | 11% | 4% |
| Network Operating Costs | 15% | 40% | 31% | 11% | 4% |
| Network Maintenance | 15% | 37% | 33% | 10% | 4% |
| Network Upgrades | 23% | 43% | 20% | 10% | 4% |
| Network Decommissioning | 35% | 18% | 13% | 5% | 28% |
| Apps and Services Development | 28% | 33% | 21% | 7% | 10% |
| Telecommunications Service Priority (TSP) | 27% | 28% | 24% | 8% | 12% |
| Nationwide Public Safety Broadband Network (NPSBN)/FirstNet | 29% | 28% | 23% | 6% | 14% |
| Integrated Public Alert & Warning System (IPAWS) | 26% | 23% | 27% | 9% | 15% |
| Next Generation 911 (NG911) | 19% | 30% | 26% | 11% | 14% |

# Funding for Emergency Communications Equipment

Local public safety organizations characterize the funding status for emergency communications equipment at their organization. Values are proportions of all local respondents.

BOTTOM LINE: Almost two-thirds of public safety organizations nationwide lack the funding they need to manage their emergency communications equipment, and almost three-quarters cannot afford necessary equipment upgrades.

### Equipment Management

| 13% | 48% | 29% | 9% | 1% |

### Equipment Upgrades

| 19% | 52% | 20% | 9% | 1% |

### Equipment Disposal

| 36% | 22% | 23% | 7% | 12% |

- There is no funding for this item
- There is funding, but it is insufficient to meet needs
- There is funding, and it is sufficient for all needs
- Funding is sufficient and will continue beyond the current budget cycle
- Not applicable

# Funding for Emergency Communications Interoperability

Local public safety organizations characterize the funding status for emergency communications interoperability at their organization. Values are proportions of all local respondents.

**BOTTOM LINE:** Emergency communications interoperability solutions go completely unfunded in approximately one-third of public safety organizations nationwide.

**WHY IT MATTERS:** The ability for emergency response providers to communicate across networks, equipment, and technologies is critical for enabling responders to complete their mission to protect property and human life.

### Interoperability Capital Investment

| 32% | 39% | 18% | 7% | 4% |

### Interoperability Operating Costs

| 26% | 39% | 24% | 8% | 3% |

### Interoperability Maintenance

| 27% | 38% | 24% | 8% | 3% |

### Interoperability Research and Development
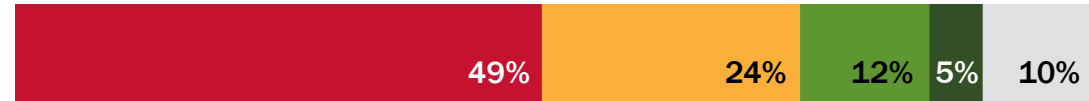
| 49% | 24% | 12% | 5% | 10% |

- There is no funding for this item
- There is funding, but it is insufficient to meet needs
- There is funding, and it is sufficient for all needs
- Funding is sufficient and will continue beyond the current budget cycle
- Not applicable

# Funding for Emergency Communications Cybersecurity

Local public safety organizations characterize the funding status for emergency communications cybersecurity at their organization. Values are proportions of all local respondents.

BOTTOM LINE: Almost two-thirds of public safety organizations lack the funding they need to protect sensitive, mission-critical information and communications systems against cyber attacks.

WHY IT MATTERS: As communications technologies grow increasingly digital and interconnected, the cyber "attack surface" exploitable by malicious actors expands, requiring adoption of robust cybersecurity postures by public safety organizations.

## Cybersecurity Capital Investment

| 35% | 33% | 20% | 6% | 6% |

## Cybersecurity Operating Costs

| 31% | 34% | 25% | 6% | 5% |

## Cybersecurity Maintenance

| 31% | 34% | 23% | 6% | 5% |

- There is no funding for this item
- There is funding, but it is insufficient to meet needs
- There is funding, and it is sufficient for all needs
- Funding is sufficient and will continue beyond the current budget cycle
- Not applicable

# Funding Sources

Local public safety organizations identify the most common sources of funding used by their organization. Values are proportions of all local respondents.

BOTTOM LINE: Two-thirds of public safety organizations rely on grant funding to support emergency communications. Many organizations cannot afford large capital investments for network, system, or equipment upgrades without grant support.
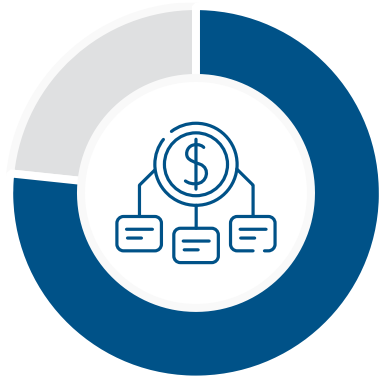
**73%**
Appropriated/
Dedicated Funding
(e.g., operational and/or
capital budgets)

**66%**
Grants

**34%**
Discretionary
Funding

**30%**
Shared
Resources
(e.g., operational and
maintenance, systems,
equipment, real estate)

**18%**
Fees

# Strategic Planning for Emergency Communications

Local public safety organizations characterize their strategic plan and strategic planning process for emergency communications. Values are proportions of all local respondents.

WHY IT MATTERS: Strategic planning allows organizations to establish their organizational goals and requirements, as well as identify the resources needed to achieve and sustain them.
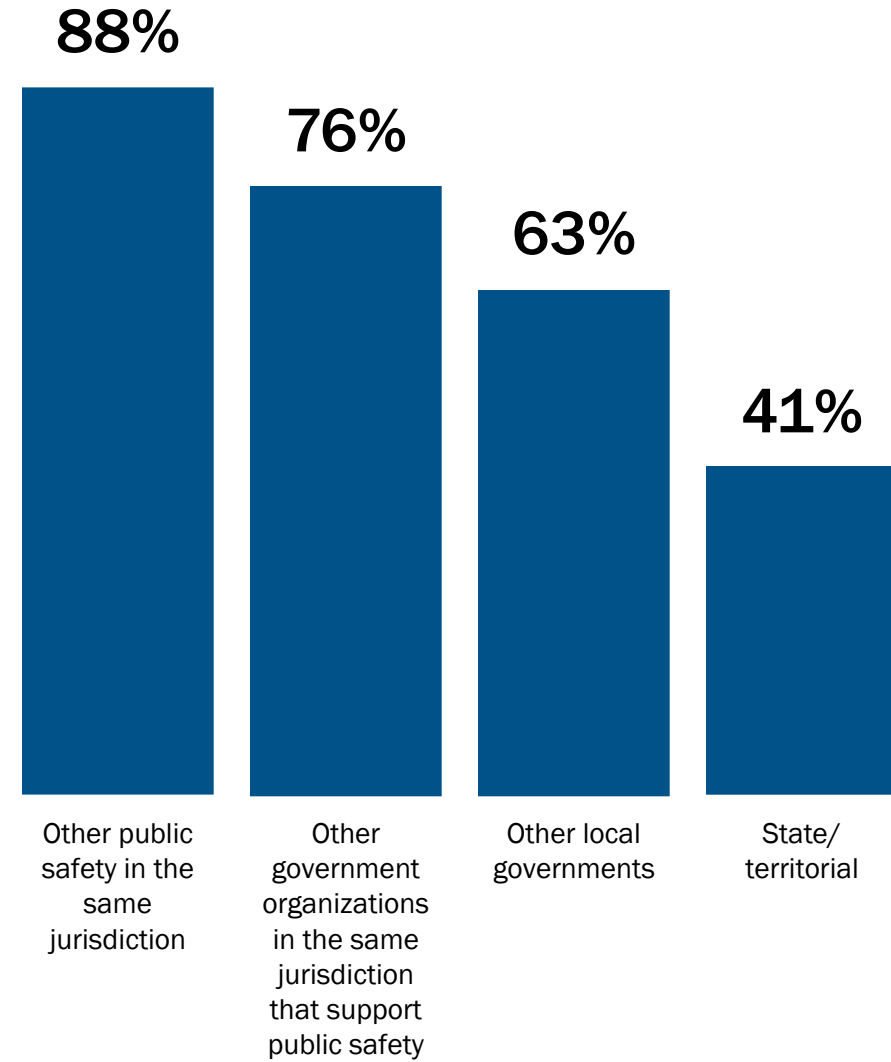
**25%**
No planning process or plan in place

**16%**
An operationalized plan is reviewed annually and after system upgrades/ major events

**30%**
A plan is operationalized by participating organizations

**29%**
A planning process is in place and a plan is under development
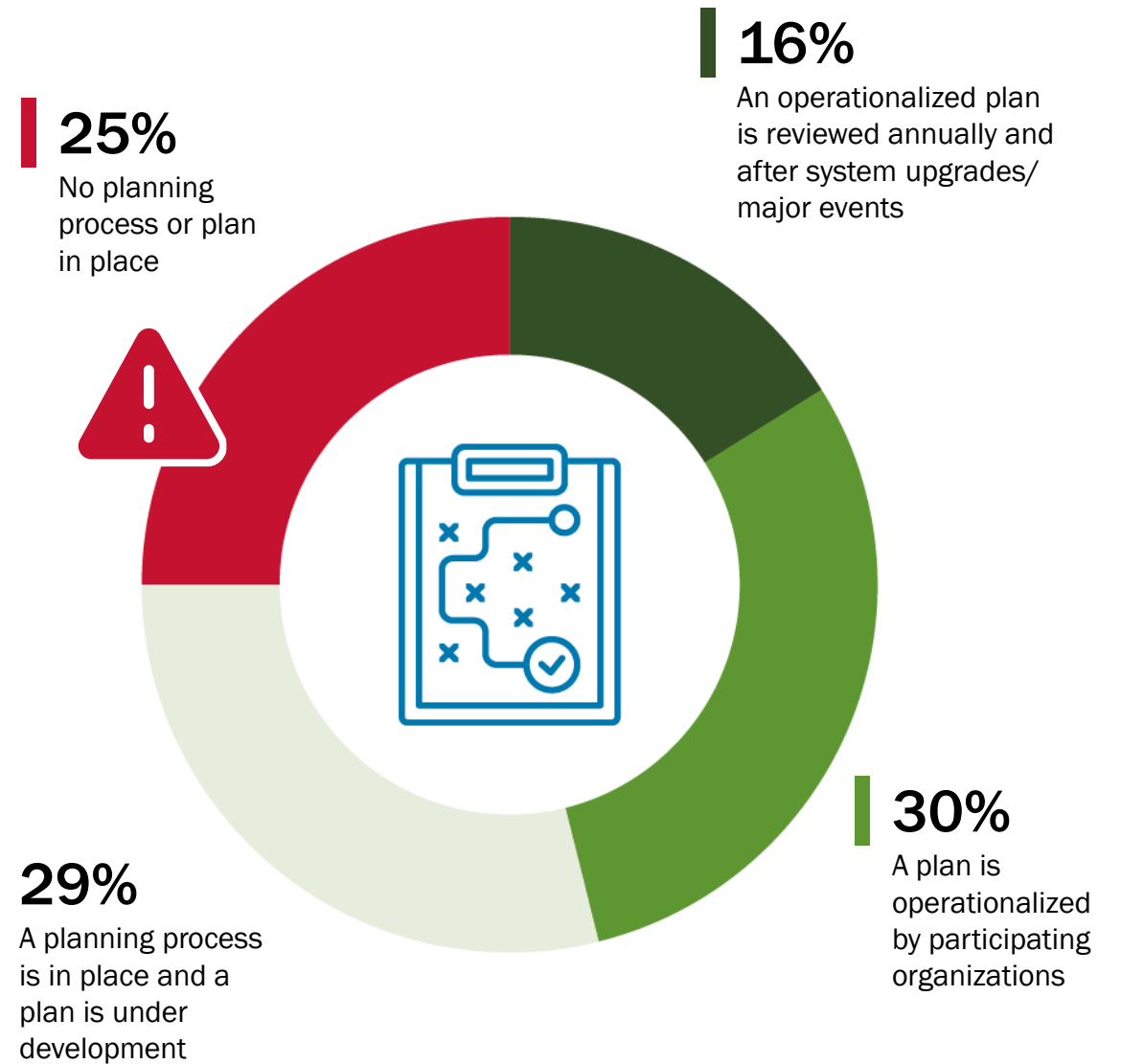
# Strategic Planning Partnerships

Local public safety organizations identify the other entities included in their emergency communications strategic planning. Values are proportions of local respondents with a strategic plan or planning process in place.

BOTTOM LINE: Most public safety organizations participate in strategic planning with other public safety partners in their jurisdictions.

WHY IT MATTERS: Robust strategic planning partnerships among organizations in the same and neighboring jurisdictions is a critical element of achieving communications interoperability and effective coordinated incident response.



88% Other public safety in the same jurisdiction

76% Other government organizations in the same jurisdiction that support public safety

63% Other local governments

41% State/ territorial

# STANDARD OPERATING PROCEDURES(SOPs)/ STANDARD OPERATING GUIDELINES (SOGs)
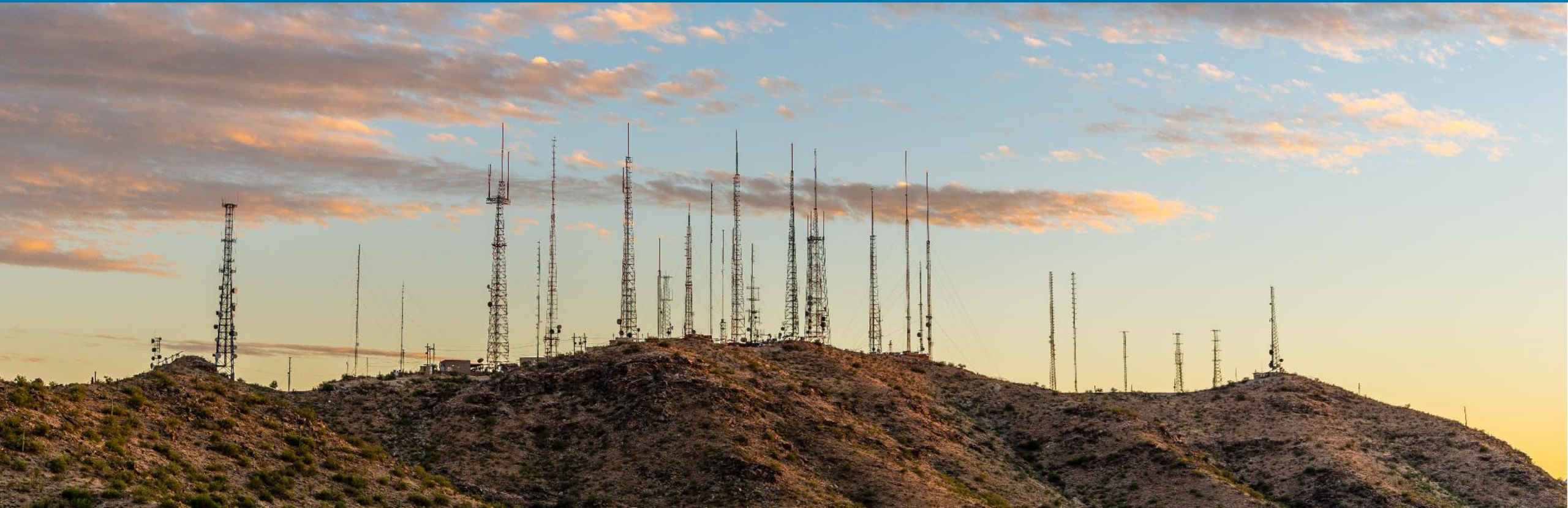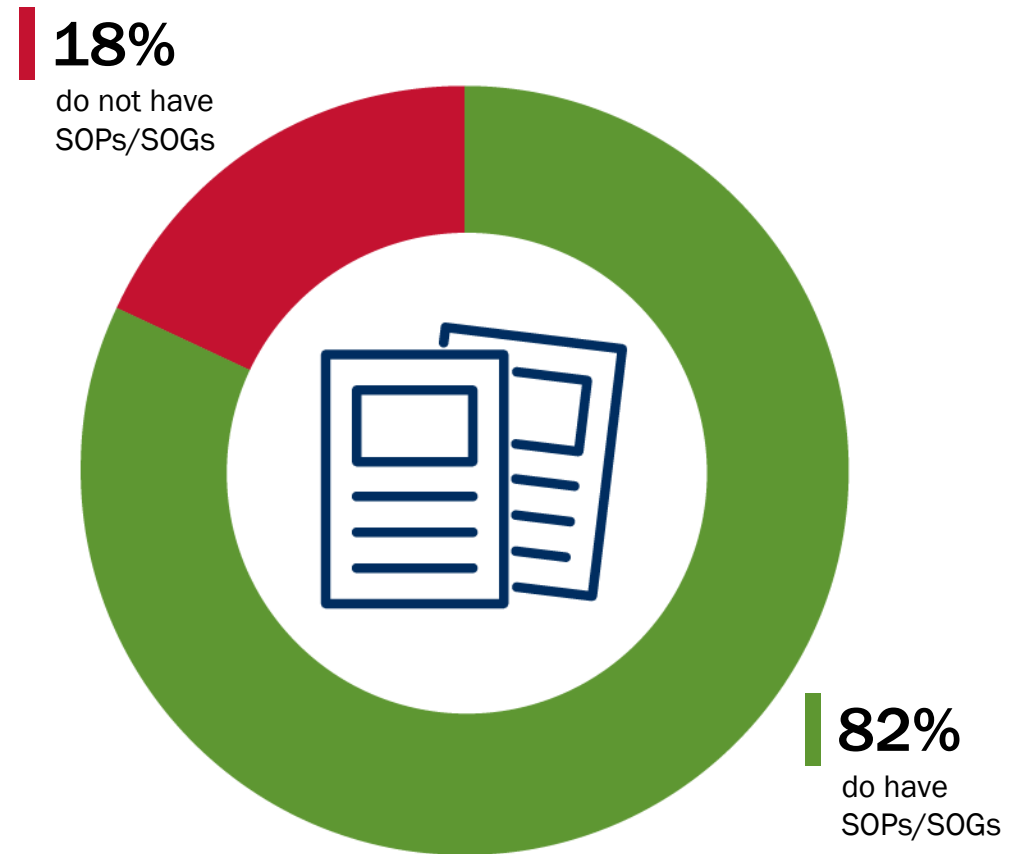
# Utilization of SOPs/SOGs

Local public safety organizations characterized their Standard Operating Procedures (SOPs)/Standard Operating Guidelines (SOGs). Values are proportions of all local respondents.

**WHY IT MATTERS:** Standardized procedures and guidelines ensure that personnel use communications capabilities effectively, consistently, and as authorized.

**18%**
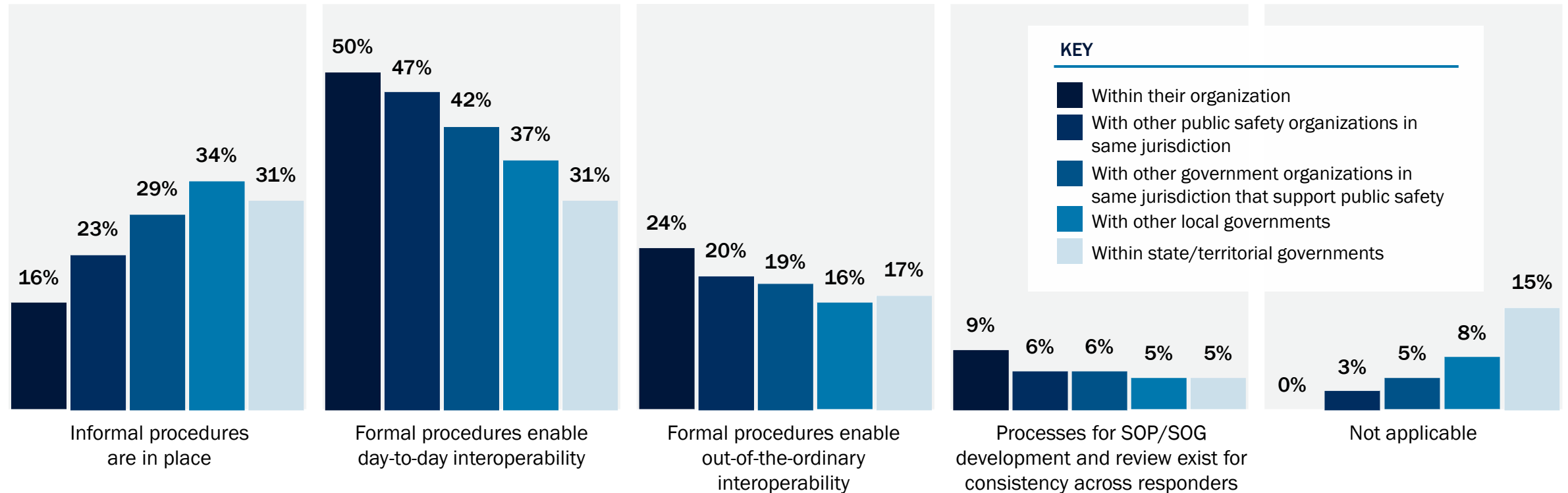do not have
SOPs/SOGs

**82%**
do have
SOPs/SOGs

**46%** of organizations update their SOPs/SOGs on a regular basis

# SOP/SOG Partnerships

Local public safety organizations characterize the formality of their Standard Operating Procedures (SOPs)/Standard Operating Guidelines (SOGs) with other partner organizations in and around their jurisdictions. Values are proportions of local respondents with SOPs/SOGs in place.
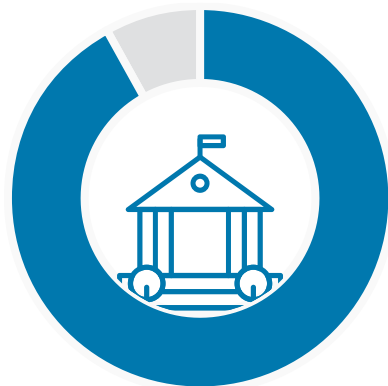
WHY IT MATTERS: Standardized procedures support interoperability by ensuring personnel use communications capabilities consistently and as agreed upon when communicating within their organization and with personnel from other agencies.

**KEY**
- Within their organization
- With other public safety organizations in same jurisdiction
- With other government organizations in same jurisdiction that support public safety
- With other local governments
- Within state/territorial governments

| Category | Within their organization | With other public safety organizations in same jurisdiction | With other government organizations in same jurisdiction that support public safety | With other local governments | Within state/territorial governments |
|---|---|---|---|---|---|
| Informal procedures are in place | 16% | 23% | 29% | 34% | 31% |
| Formal procedures enable day-to-day interoperability | 50% | 47% | 42% | 37% | 31% |
| Formal procedures enable out-of-the-ordinary interoperability | 24% | 20% | 19% | 16% | 17% |
| Processes for SOP/SOG development and review exist for consistency across responders | 9% | 6% | 6% | 5% | 5% |
| Not applicable | 0% | 3% | 5% | 8% | 15% |

# Guidance Influencing SOPs/SOGs

Local public safety organizations identify the guidance influencing their organization's Standard Operating Procedures (SOPs)/Standard Operating Guidelines (SOGs). Values are proportions of local respondents with SOPs/SOGs in place.

BOTTOM LINE: Nearly all local public safety organizations align their SOPs/SOGs with guidance specific to their county or municipality.
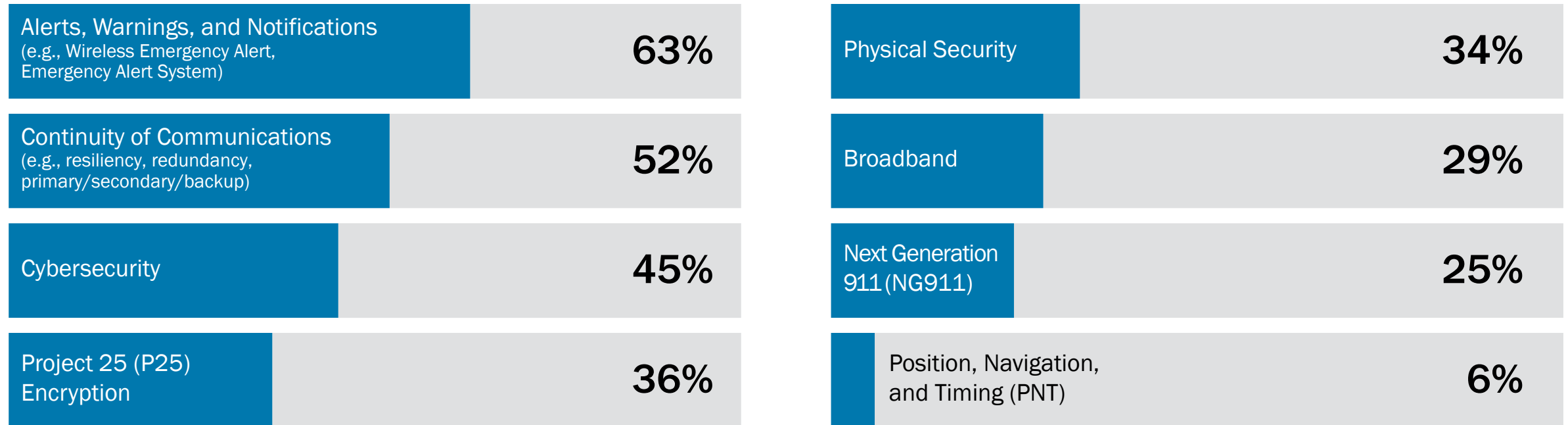
**92%**
Local

**79%**
State

**50%**
National/
Federal

**29%**
Industry
(e.g., vendor, provider,
trade organization)

# Topics Included in SOPs/SOGs

Local public safety organizations identify the topics covered in their agencies' Standard Operating Procedures (SOPs)/Standard Operating Guidelines (SOGs). Values are proportions of local respondents with SOPs/SOGs in place.

WHY IT MATTERS: Standardized procedures support interoperability by ensuring that personnel use communications capabilities consistently and as agreed when communicating within their organization and with personnel from other agencies.
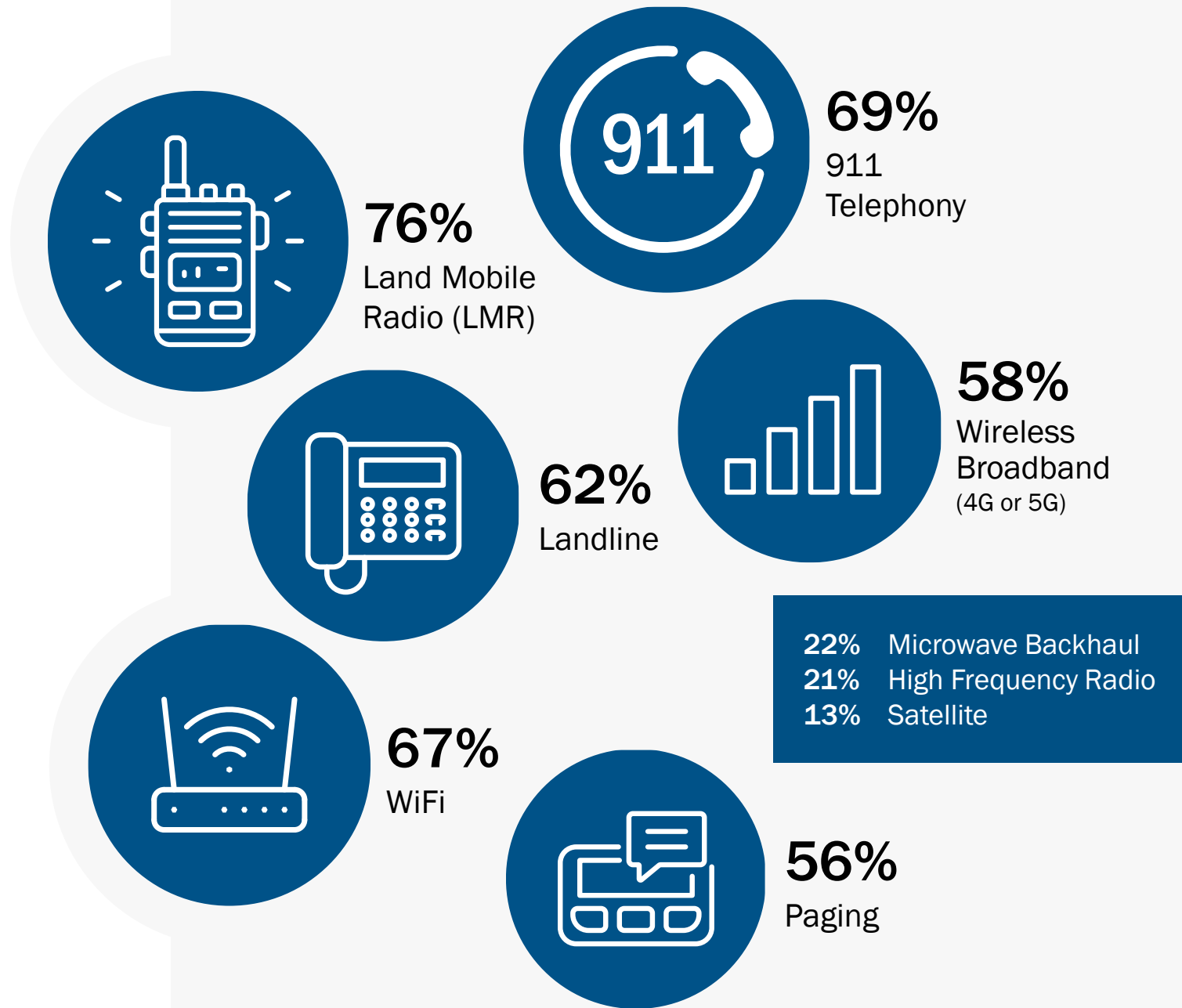
| Topic | % |
|---|---|
| Alerts, Warnings, and Notifications (e.g., Wireless Emergency Alert, Emergency Alert System) | 63% |
| Continuity of Communications (e.g., resiliency, redundancy, primary/secondary/backup) | 52% |
| Cybersecurity | 45% |
| Project 25 (P25) Encryption | 36% |
| Physical Security | 34% |
| Broadband | 29% |
| Next Generation 911 (NG911) | 25% |
| Position, Navigation, and Timing (PNT) | 6% |

# TECHNOLOGY & EQUIPMENT

# Systems in Use by Public Safety

Local public safety organizations identify the types of systems used for emergency communications at their organization. Values are proportions of all local respondents. Survey results represent the nationwide system usage trends among public safety organizations during 2023.

BOTTOM LINE: Public safety organizations utilize a wide array of equipment systems to communicate.

WHY IT MATTERS: The United States is a large, complex nation. No single type of equipment system can meet all public safety mission requirements in all operational environments. Understanding how these systems operate and interoperate is a key challenge for enabling interoperable emergency communications.

**76%** Land Mobile Radio (LMR)

**69%** 911 Telephony

**58%** Wireless Broadband (4G or 5G)

**62%** Landline

**22%** Microwave Backhaul
**21%** High Frequency Radio
**13%** Satellite

**67%** WiFi

**56%** Paging

# LMR System Use

Local public safety organizations characterize the types of information carried by the primary land mobile radio (LMR) system used at their agency. Values are proportions of local respondents that use LMR.

 BOTTOM LINE:  Only about half of primary LMR systems in use by public safety organizations are used for voice interoperability.

 WHY IT MATTERS:  Three-quarters of public safety organizations rely on LMR for primary voice communications, more than any other type of communications system.
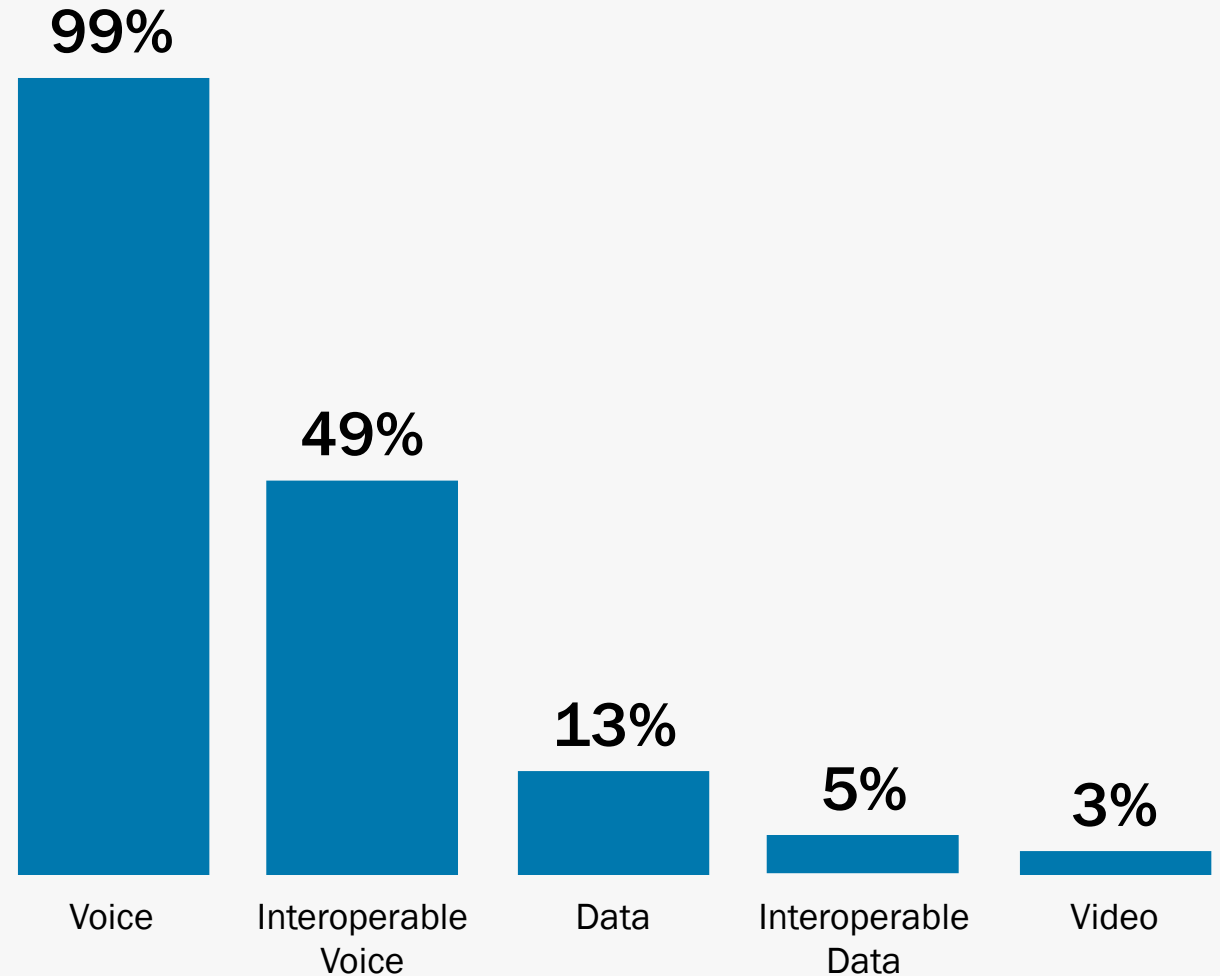
# LMR System Ownership

Local public safety organizations characterize the ownership of the primary land mobile radio (LMR) system used at their agency. Values are proportions of local respondents that use LMR.

**BOTTOM LINE:** Most LMR systems in use by public safety organizations are shared among multiple agencies.

**WHY IT MATTERS:** Communications system resource sharing allows public safety organizations to pool resources for mission-critical system upgrades and maintenance. Resource sharing also provides seamlessly interoperable communications for organizations using the shared system.

**1%**
A commercial, subscription-based service

**18%**
Part of a multi-jurisdictional shared system

**18%**
Independently owned and operated (e.g., single jurisdiction system) and used exclusively by our organization

**19%**
Part of a statewide shared system

**44%**
Part of a communications system that serves multiple public safety and/or public service organizations in our jurisdiction
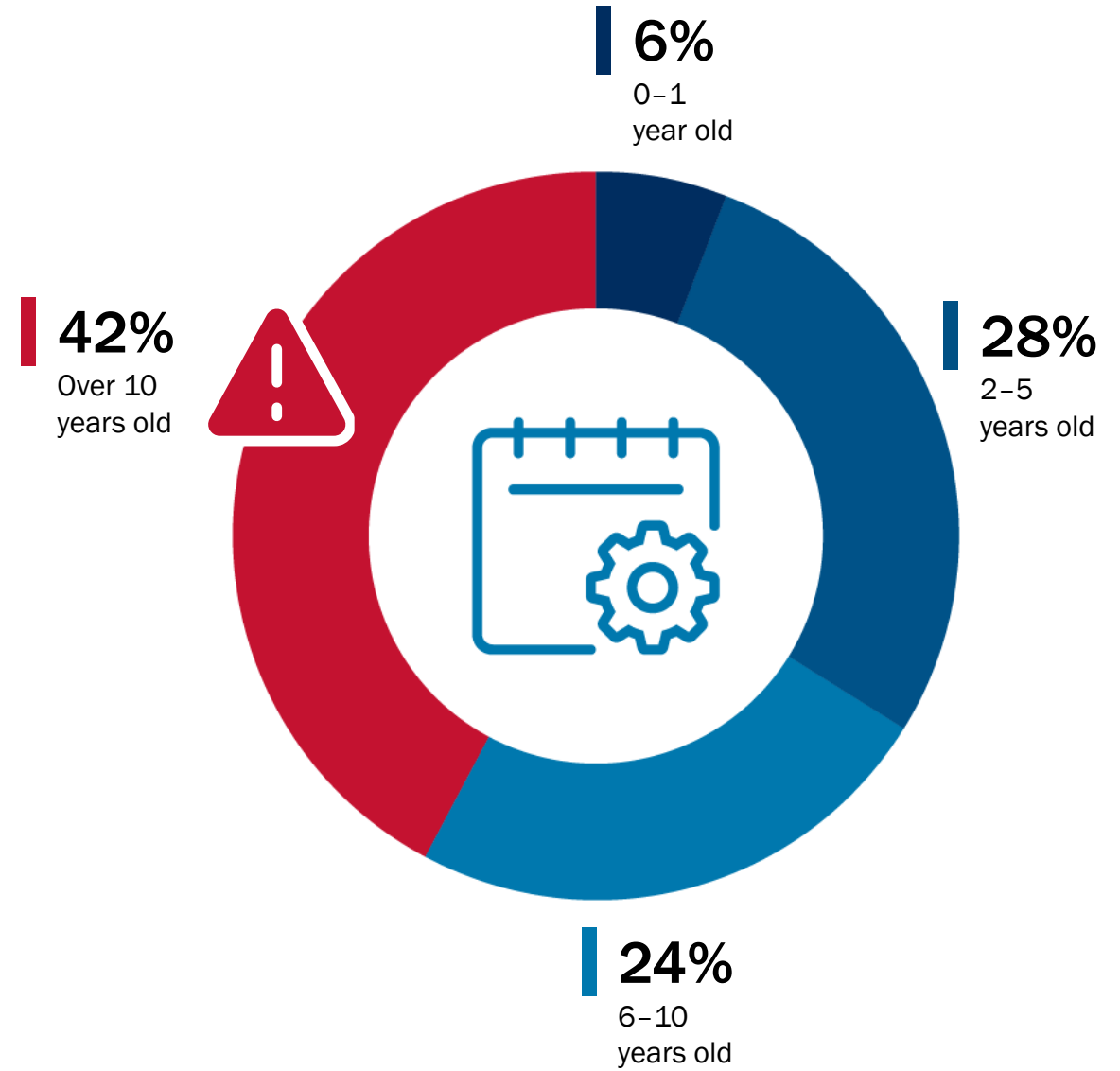
# LMR System Age

Local public safety organizations characterize the age of the primary land mobile radio (LMR) system used at their agency. Values are proportions of local respondents that use LMR.

BOTTOM LINE: Almost half of LMR systems in use by public safety organizations are more than ten years old.

WHY IT MATTERS: Procuring a new LMR system is a complex and costly endeavor that will affect an organization's ability to communicate for years. Selecting new systems that comply with key standards like Project 25 (P25) ensure that these systems provide secure, resilient, and interoperable communications throughout their long service lives.

**6%**
0–1 year old

**28%**
2–5 years old

**42%**
Over 10 years old

**24%**
6–10 years old

# LMR P25 Compliance

Local public safety organizations describe the Project 25 (P25) standards compliance of their primary land mobile radio (LMR) system. Values are proportions of all respondents that use LMR.

BOTTOM LINE: Almost all LMR systems in use by public safety are compliant with some or all Project 25 standards.

WHY IT MATTERS: Many public safety organizations rely on grant funding from the Department of Homeland Security (DHS) to procure new LMR systems. LMR systems that do not comply with P25 standards are not eligible to purchase with DHS grant funding.



**10%**
Not compliant

**53%**
Both Phase 1 and Phase 2 Compliant (FDMA and TDMA)

**28%**
Phase 1 compliant (frequency division multiple access [FDMA] only) system

**9%**
Phase 2 compliant (time division multiple access [TDMA] only) system
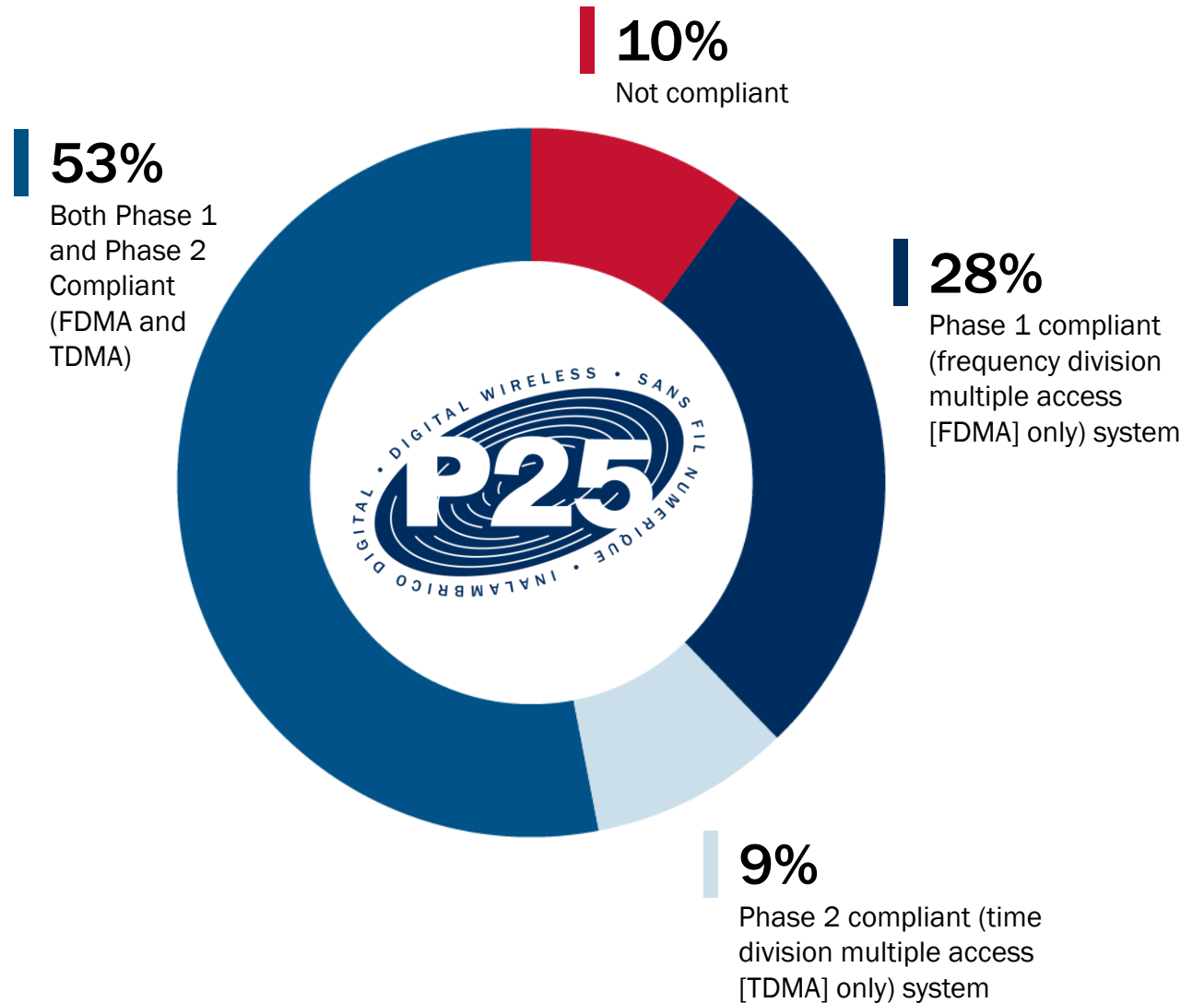
# LMR Encryption

Local public safety organizations characterize the encryption methods used to secure voice communication on land mobile radio (LMR) systems used by their agency. Values are proportions of local respondents whose organization uses an LMR system.

**BOTTOM LINE:** Fewer than one-third of public safety organizations using LMR employ Advanced Encryption Standard (AES) encryption as recommended by the National Institute of Standards and Technology.

**WHY IT MATTERS:** Encryption protects all responders, citizens, and sensitive shared information. Adopting standards-based, currently-approved AES encryption capabilities is pivotal for protecting information from unauthorized access without undercutting communications interoperability.

None — **36%**
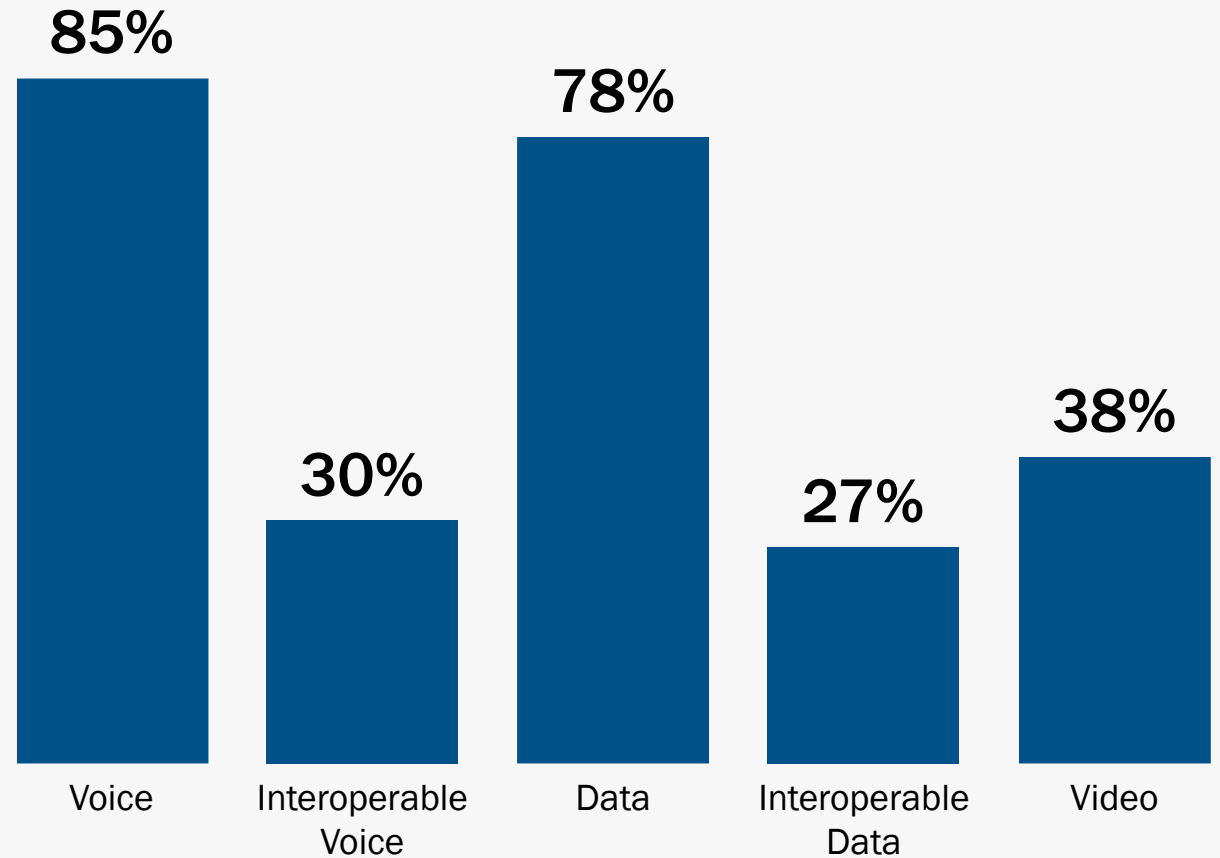
Proprietary — **29%**

DES — **16%**

AES — **29%**
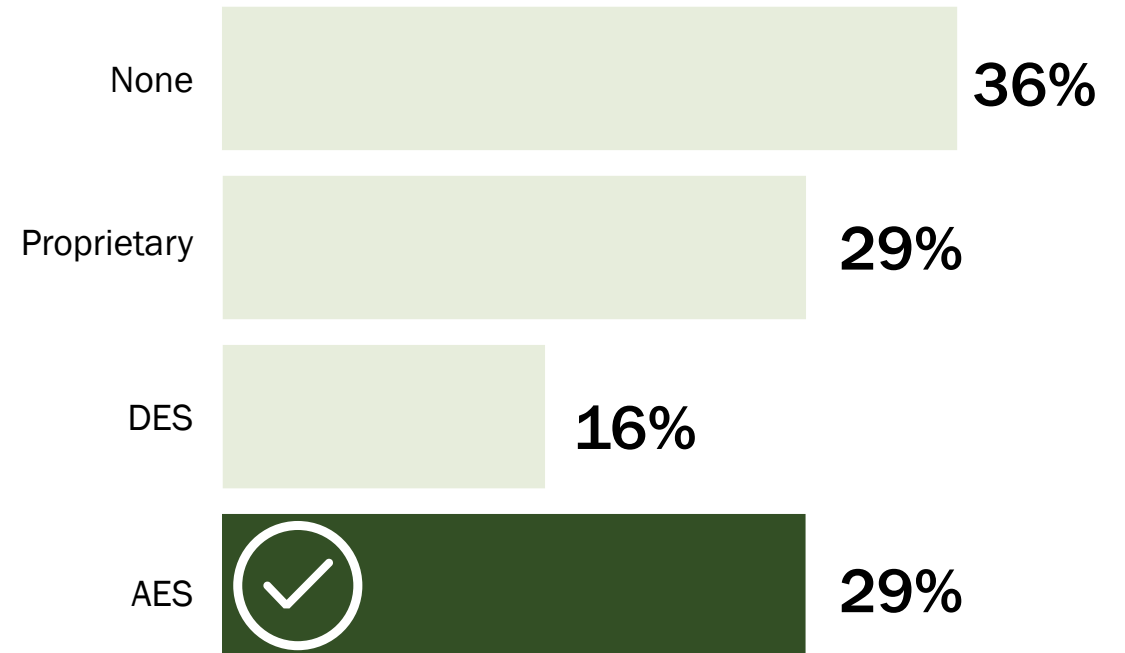
# 4G/LTE System Use

Local public safety organizations characterize the types of communication carried by the primary 4G/LTE system used at their agency. Values are proportions of local respondents that use 4G/LTE.

BOTTOM LINE: Most public safety organizations that use 4G/LTE use these systems for both voice and data communications.

WHY IT MATTERS: Although wireless broadband systems (including both 4G/LTE and 5G) are less widely used for voice communications by public safety organizations than land mobile radio, these systems are the most widely used for mobile/portable data communications.

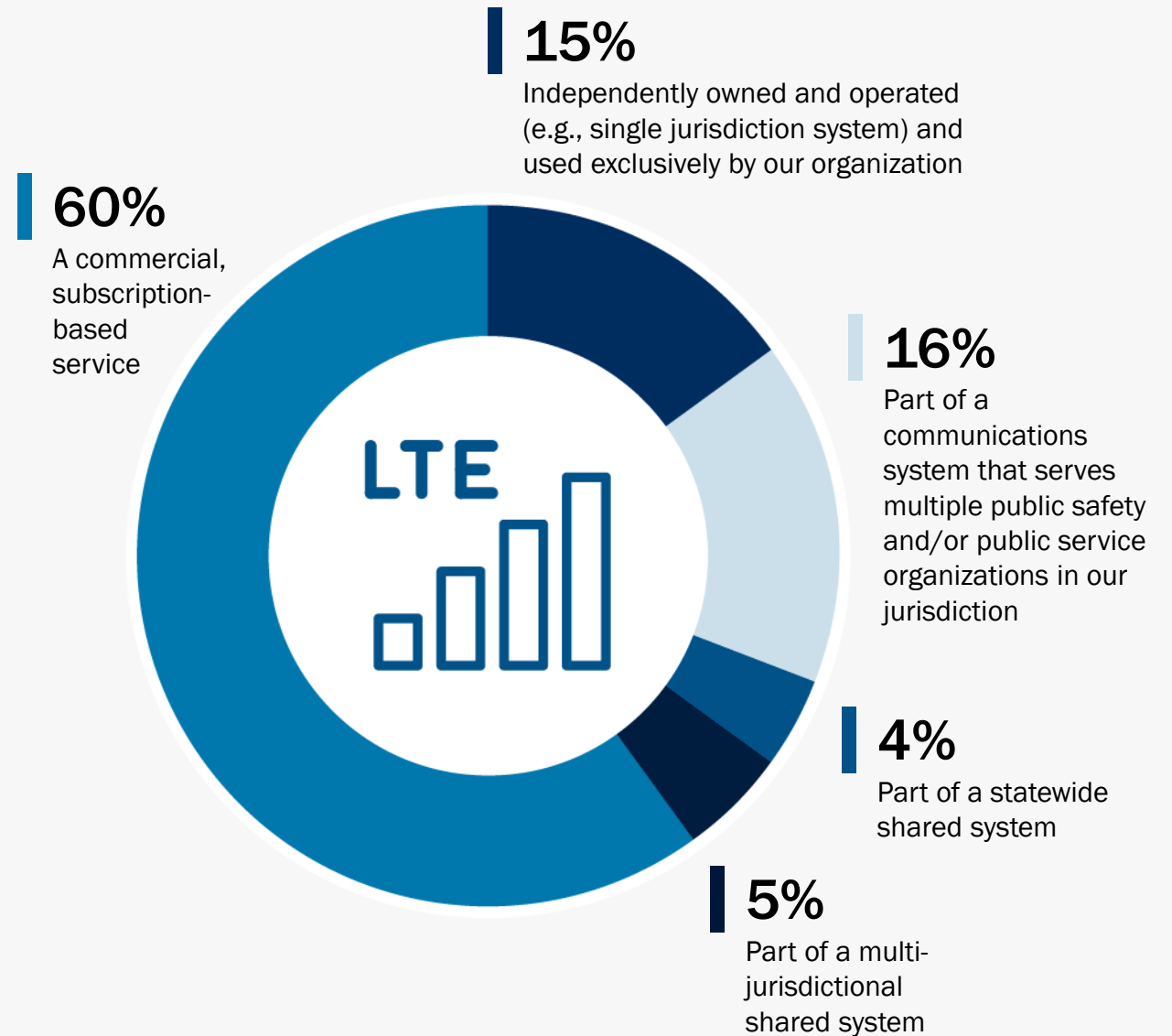| Category | Value |
| --- | --- |
| Voice | 85% |
| Interoperable Voice | 30% |
| Data | 78% |
| Interoperable Data | 27% |
| Video | 38% |

# 4G/LTE Ownership

Local public safety organizations characterize the ownership of the primary 4G/LTE system used at their agency. Values are proportions of local respondents that use 4G/LTE.

BOTTOM LINE: Most 4G/LTE systems in use by public safety agencies are commercial, subscription-based services.

WHY IT MATTERS: Use of commercial wireless broadband networks for public safety communications can provide organizations with good coverage, enhanced access to deployable capabilities, and rapid system restoration, thanks to commercial providers' substantial purchasing power and continual infrastructure enhancement.

**60%**
A commercial, subscription-based service

**15%**
Independently owned and operated (e.g., single jurisdiction system) and used exclusively by our organization

**16%**
Part of a communications system that serves multiple public safety and/or public service organizations in our jurisdiction

**4%**
Part of a statewide shared system

**5%**
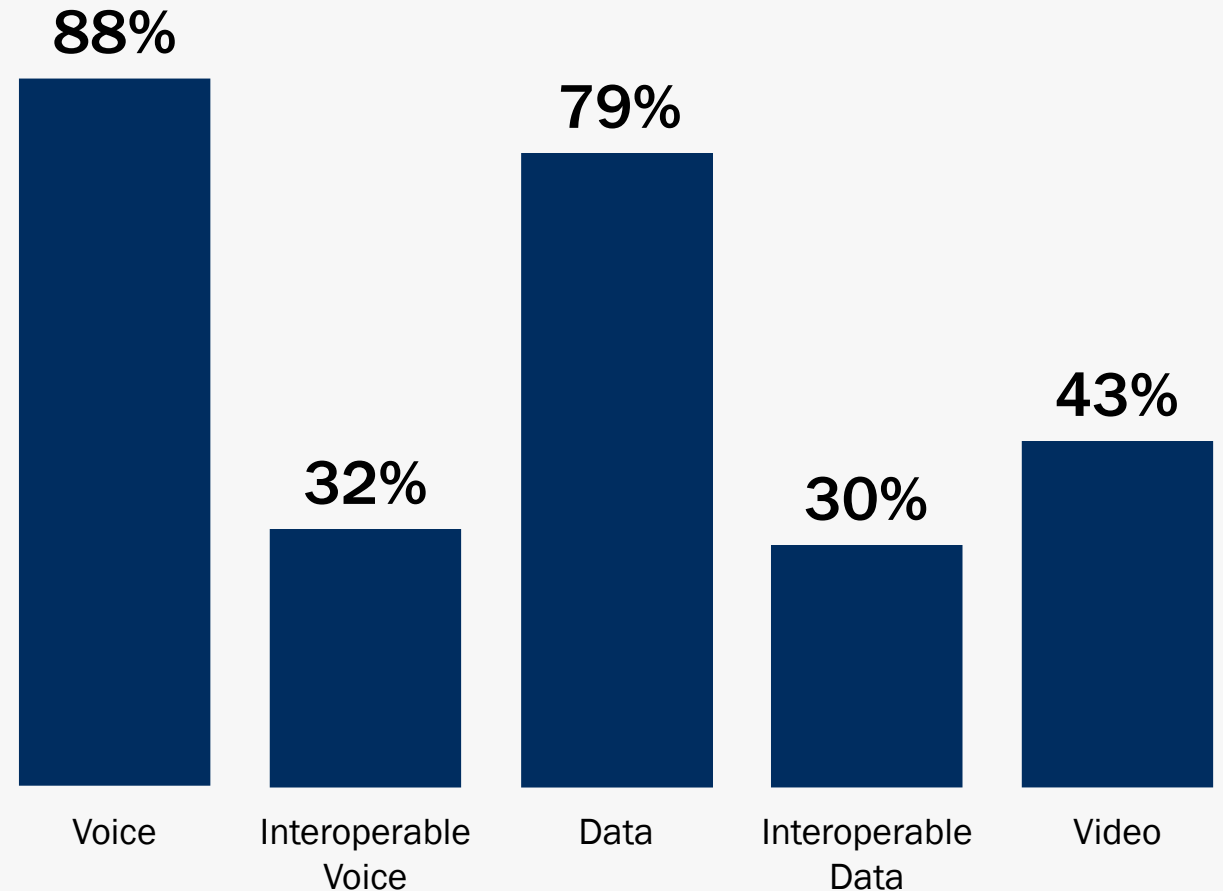Part of a multi-jurisdictional shared system

# 5G System Use

Local public safety organizations characterize the types of communication carried by the primary 5G system used at their agency. Values are proportions of local respondents that use 5G.

BOTTOM LINE: Most public safety organizations that use 5G use these systems for both voice and data communications.

WHY IT MATTERS: Although wireless broadband systems (including both 4G/LTE and 5G) are less widely used for voice communications by public safety organizations than land mobile radio, these systems are the most widely used for mobile/portable data communications.



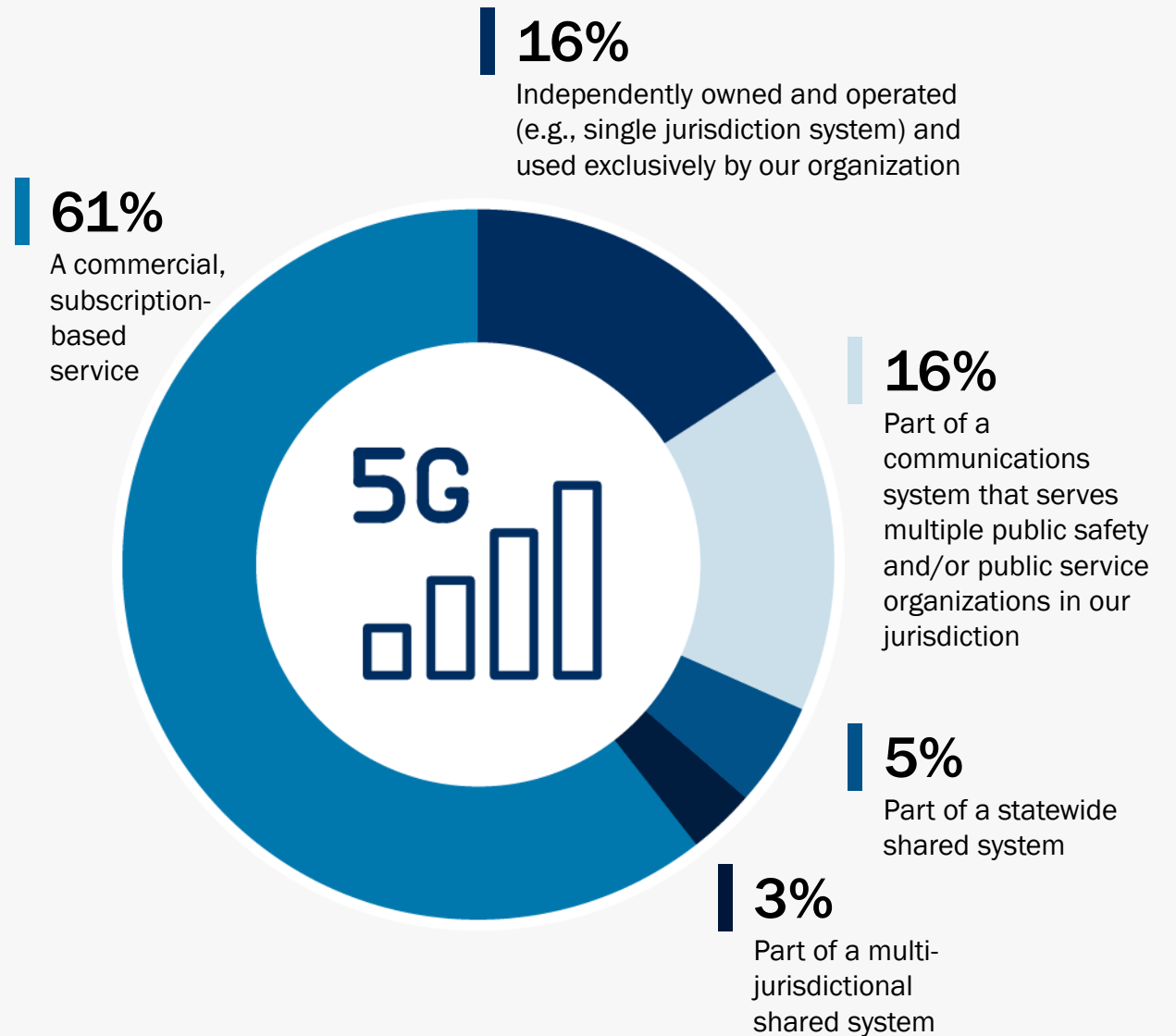| | |
|---|---|
| **88%** Voice | **32%** Interoperable Voice | **79%** Data | **30%** Interoperable Data | **43%** Video |

# 5G System Ownership

Local public safety organizations characterize the ownership of the primary 5G system used at their agency. Values are proportions of local respondents that use 5G.

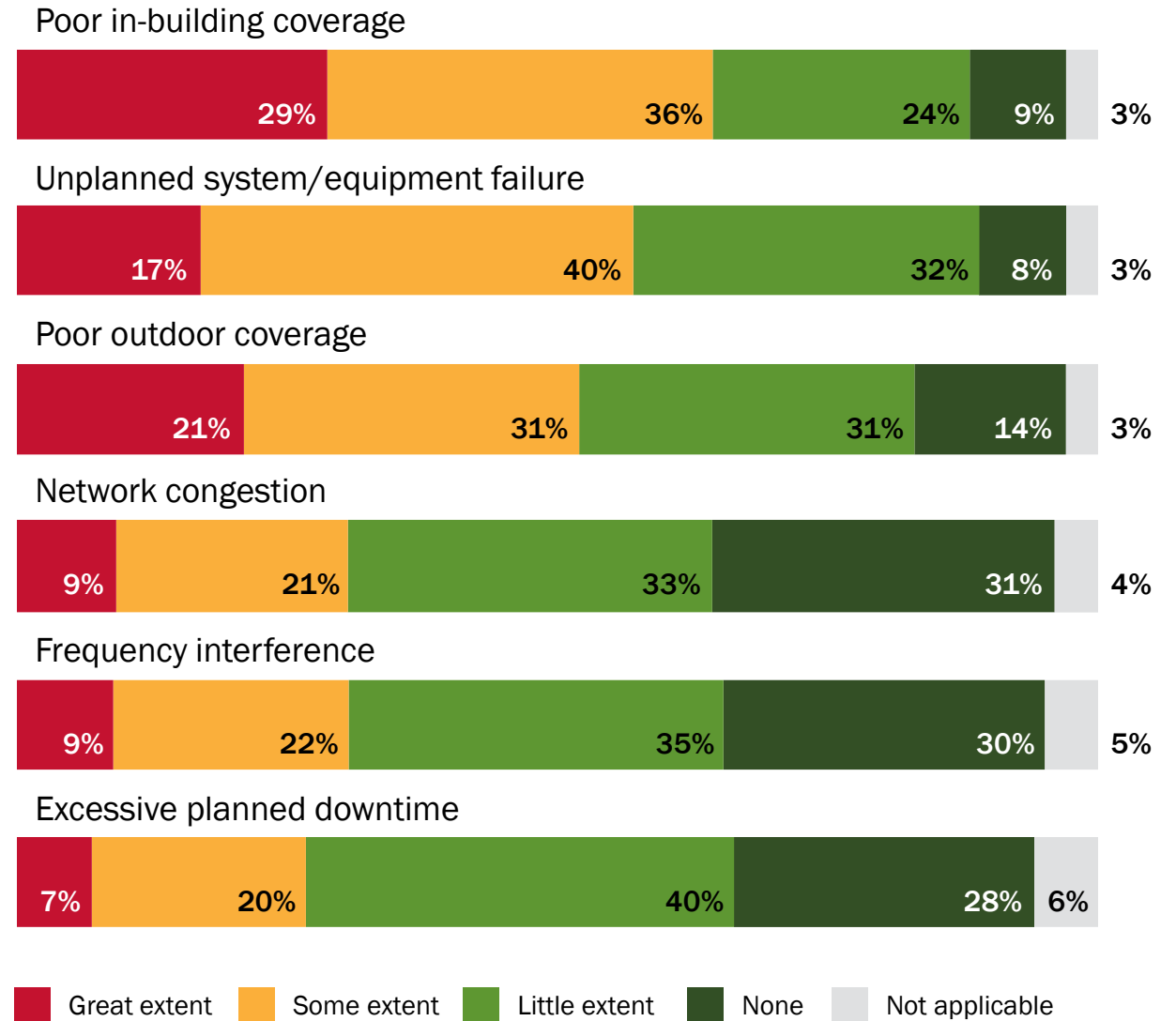**BOTTOM LINE:** Most 5G systems in use by public safety agencies are commercial, subscription-based services.

**WHY IT MATTERS:** Use of commercial wireless broadband networks for public safety communications can provide organizations with good coverage, enhanced access to deployable capabilities, and rapid system restoration, thanks to commercial providers' substantial purchasing power and continual infrastructure enhancement.

**16%**
Independently owned and operated (e.g., single jurisdiction system) and used exclusively by our organization

**61%**
A commercial, subscription-based service

**16%**
Part of a communications system that serves multiple public safety and/or public service organizations in our jurisdiction

**5%**
Part of a statewide shared system

**3%**
Part of a multi-jurisdictional shared system

# Factors Affecting Communication

Local public safety organizations characterize the extent to which various factors affect their organization's ability to communicate. Values are proportions of all local respondents. All bar totals sum to 100 percent (minor variation possible due to rounding).

**BOTTOM LINE:** Poor coverage and unplanned system or equipment failures are the most common factors affecting the ability to communicate, disrupting more than half of public safety organizations' communications to more than a "little extent."

**Poor in-building coverage**

| Great extent | Some extent | Little extent | None | Not applicable |
|---|---|---|---|---|
| 29% | 36% | 24% | 9% | 3% |

**Unplanned system/equipment failure**

| Great extent | Some extent | Little extent | None | Not applicable |
|---|---|---|---|---|
| 17% | 40% | 32% | 8% | 3% |

**Poor outdoor coverage**

| Great extent | Some extent | Little extent | None | Not applicable |
|---|---|---|---|---|
| 21% | 31% | 31% | 14% | 3% |

**Network congestion**

| Great extent | Some extent | Little extent | None | Not applicable |
|---|---|---|---|---|
| 9% | 21% | 33% | 31% | 4% |

**Frequency interference**

| Great extent | Some extent | Little extent | None | Not applicable |
|---|---|---|---|---|
| 9% | 22% | 35% | 30% | 5% |

**Excessive planned downtime**

| Great extent | Some extent | Little extent | None | Not applicable |
|---|---|---|---|---|
| 7% | 20% | 40% | 28% | 6% |

Legend: ■ Great extent  ■ Some extent  ■ Little extent  ■ None  ■ Not applicable

# System Sufficiency

Local public safety organizations qualify how well their communications systems meet their organization's mission requirements in day-to-day and out-of-the-ordinary situations. Values are proportions of all respondents.

 BOTTOM LINE:  More than one-quarter of public safety organizations feel that their communications systems are inadequate even for day-to-day situations.
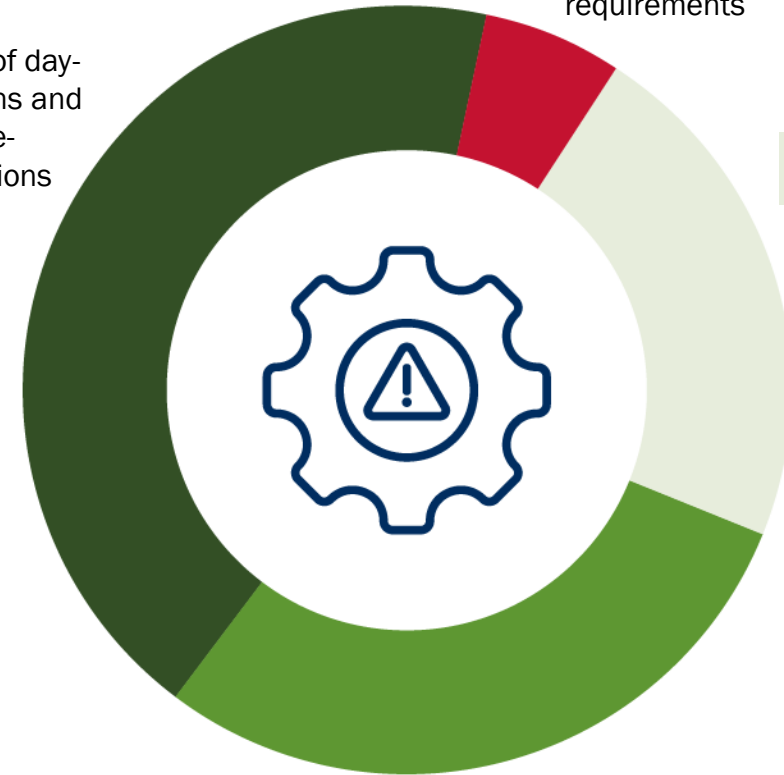
**6%**
Systems do not currently meet mission requirements

**43%**
Systems meet all mission requirements of day-to-day situations and most out-of-the-ordinary situations

**22%**
Systems meet only basic mission requirements

**29%**
Systems meet mission requirements of day-to-day situations, but not out-of-the-ordinary situations

# Interoperability Solutions

Local public safety organizations identify the solutions their agency uses to establish interoperable communications. Values are proportions of all local respondents.

BOTTOM LINE: Resource sharing, whether in the form of networks/systems, spectrum resources, or end-user equipment, is the most common method utilized by public safety organizations to achieve interoperable communications.

**76%** Mutual aid channels/ talkgroups

**67%** Shared system
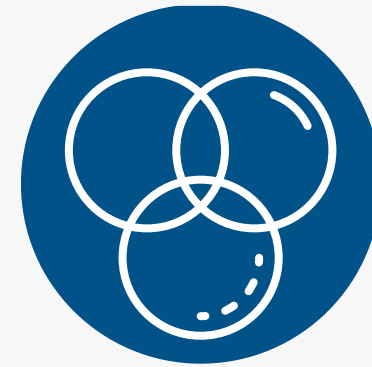
**61%** Channel/console cross-patching

**46%** Radio reprogramming

**48%** Mobile communications center

**39%** Standards-based shared systems (e.g., Project 25)

**35%** Radio cache/radio exchange

**35%** Commercial wireless equipment (e.g., government furnished equipment, bring-your-own-device)

**34%** Established channel sharing agreements

# Information Exchanged

Local public safety organizations identify the types of information they exchange with other agencies. Values are proportions of all local respondents.

**BOTTOM LINE:** The exchange of mission-critical data, including dispatch, geographic, records management, and resource information, is a key element of public safety communications.

**WHY IT MATTERS:** As data management and information exchange systems in use by public safety grow increasingly sophisticated and interconnected, so does the need to assure the availability, integrity, and privacy of the sensitive data stored on these systems.
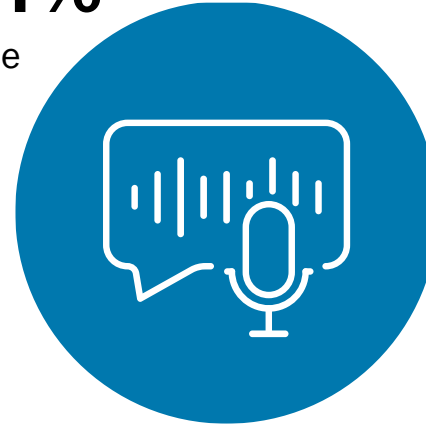
**65%**
Computer-Aided Dispatch (CAD) data

**94%**
Voice
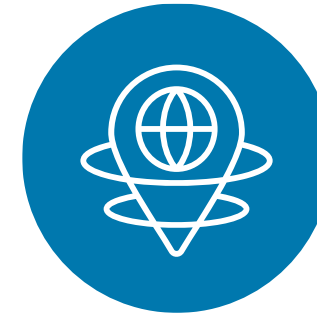
**51%**
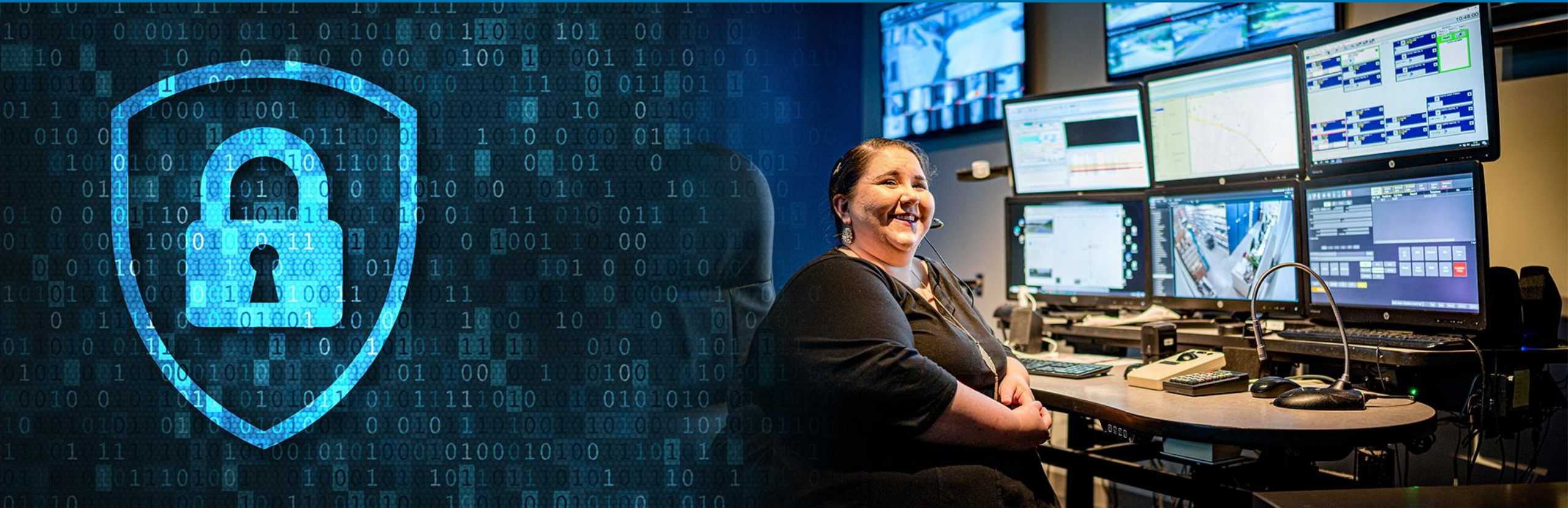Geographic Information System (GIS) data

**41%**
Records Management System (RMS)

**30%** Automatic Vehicle Location (AVL) data
**30%** Resource data
(e.g., available equipment, teams, shelter/hospital beds)
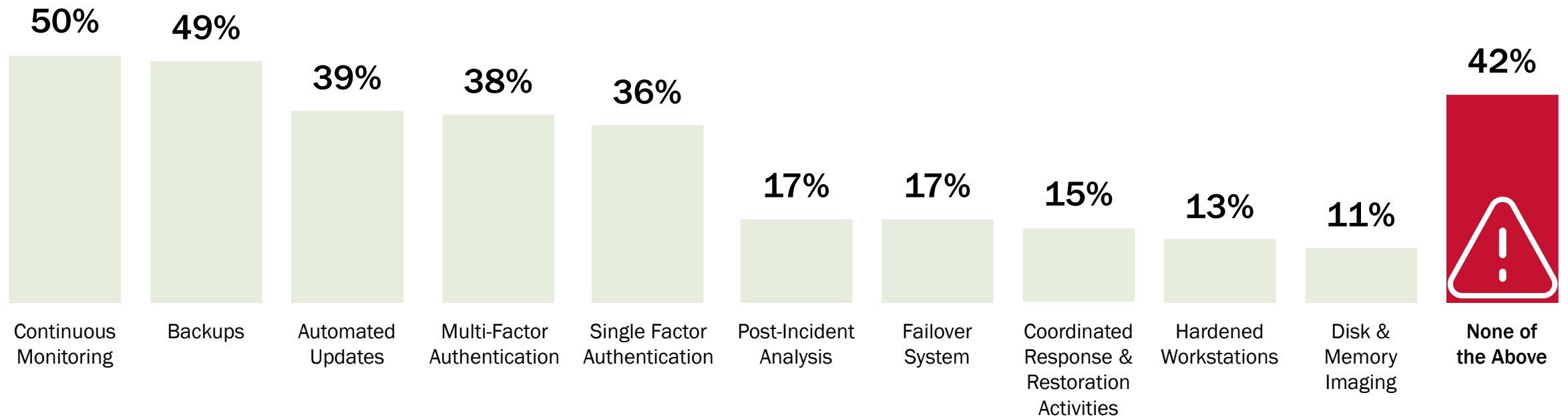**22%** Accident/crash (telematics) data
**22%** Video

# CYBERSECURITY

# Cybersecurity Implementation

Local public safety organizations identify the cybersecurity measures implemented at their agency. Values are proportions of all local respondents.
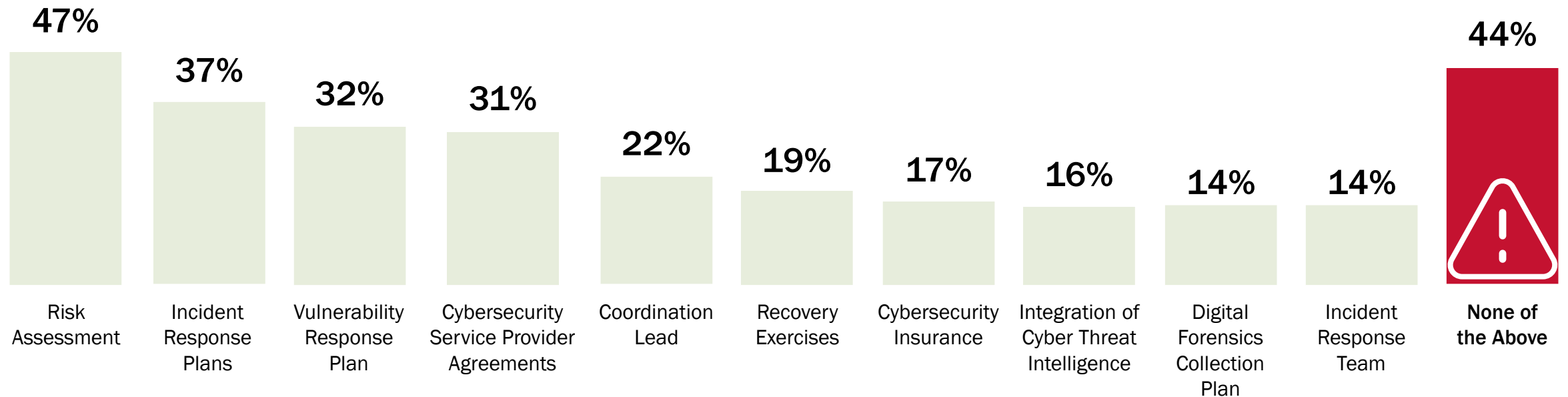
BOTTOM LINE: Cybersecurity preparedness remains a critical gap for public safety, with almost half of organizations indicating that their agency has not implemented even rudimentary cybersecurity measures, including automatic backups, automatic updates, or passwords.



| 50% | 49% | 39% | 38% | 36% | 17% | 17% | 15% | 13% | 11% | 42% |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Continuous Monitoring | Backups | Automated Updates | Multi-Factor Authentication | Single Factor Authentication | Post-Incident Analysis | Failover System | Coordinated Response & Restoration Activities | Hardened Workstations | Disk & Memory Imaging | None of the Above |

# Cybersecurity Planning

Local public safety organizations identify cybersecurity plans and policies in use at their agency. Values are proportions of all local respondents.

BOTTOM LINE: Cybersecurity preparedness remains a critical gap for public safety, with almost half of organizations indicating that their agency has not completed cybersecurity planning and assessments, including risk assessments, incident response plans, or vulnerability response plans.



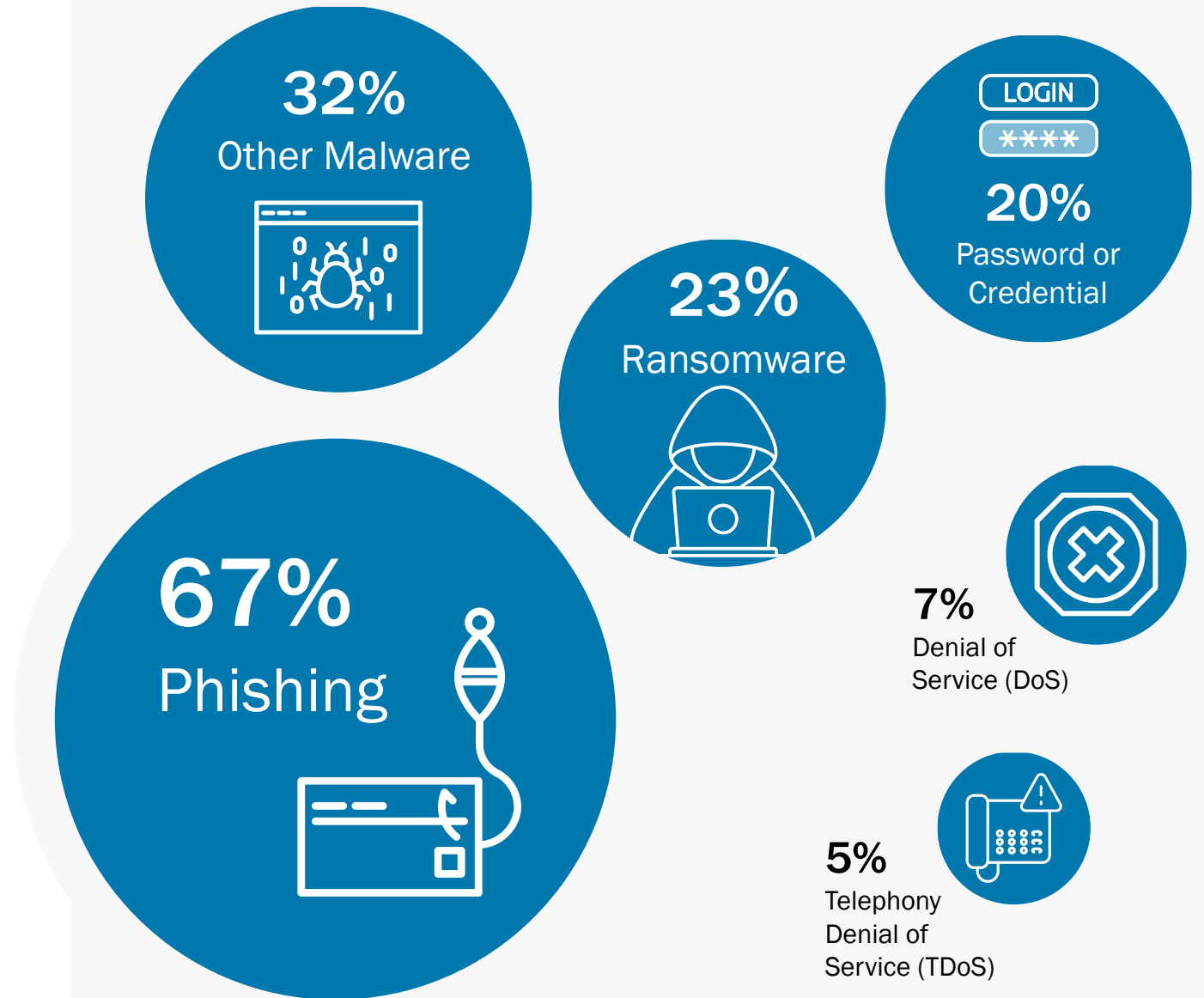| 47% | 37% | 32% | 31% | 22% | 19% | 17% | 16% | 14% | 14% | 44% |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Risk Assessment | Incident Response Plans | Vulnerability Response Plan | Cybersecurity Service Provider Agreements | Coordination Lead | Recovery Exercises | Cybersecurity Insurance | Integration of Cyber Threat Intelligence | Digital Forensics Collection Plan | Incident Response Team | None of the Above |

# Cyber Attacks Experienced

Local public safety organizations identify the most common types of cyberattacks their organization has experienced. Values are proportions of all local respondents.

**BOTTOM LINE:** Phishing is the most common type of cyberattack experienced by public safety organizations, affecting two-thirds of agencies nationwide.

**WHY IT MATTERS:** The prominence of social engineering, including phishing, as a method for stealing information and resources emphasizes the need for enhanced cybersecurity awareness training for emergency communications personnel.

**32%**
Other Malware

**20%**
Password or Credential

**23%**
Ransomware

**67%**
Phishing

**7%**
Denial of Service (DoS)

**5%**
Telephony Denial of Service (TDoS)

# Cybersecurity Incident Reporting

Local public safety organizations identify the other entities engaged or alerted by their organization in the event of a cybersecurity incident. Values are proportions of all local respondents.

BOTTOM LINE: Most public safety organizations internally report cybersecurity incidents, but few report cybersecurity incidents to other agencies, including organizations with whom they share interconnected networks.

WHY IT MATTERS: Cybersecurity attacks are often perpetrated against multiple targets at once, and communications networks and systems are often interconnected. Cyber incident reporting is critical for preventing the spread of malicious software.



| | | | | | |
|---|---|---|---|---|---|
| 66% | 29% | 18% | 17% | 11% | 14% |
| Agency's own IT resources | Organizations with inter-connected networks | State-based support | Federal Bureau of Investigation | Cybersecurity and Infrastructure Security Agency | None |
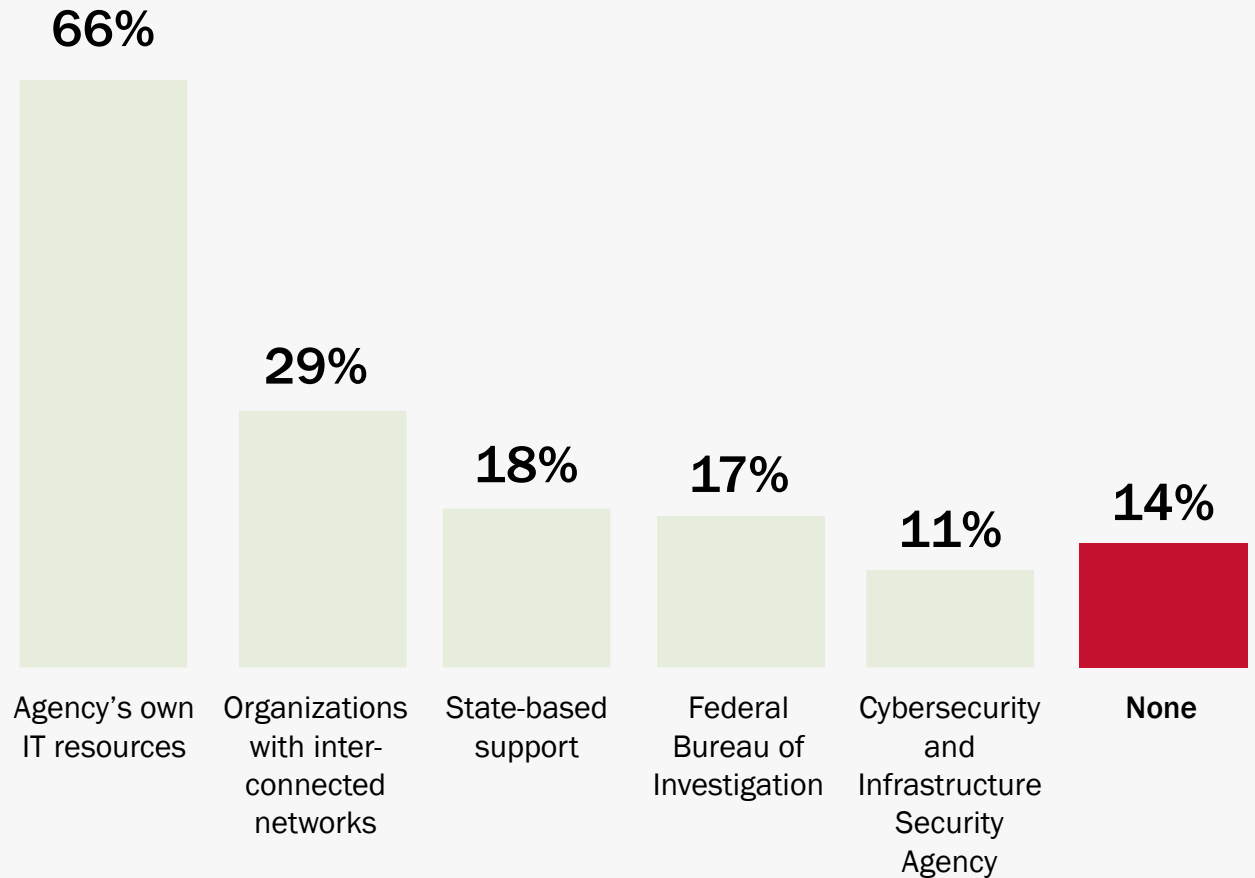
# Cybersecurity Confidence

Local public safety organizations qualify their confidence in their ability to detect and respond to cybersecurity threats and vulnerabilities. Values are proportions of all local respondents.

**BOTTOM LINE:** Only five percent of public safety organizations indicate the highest level of confidence in their organization's cybersecurity capabilities.
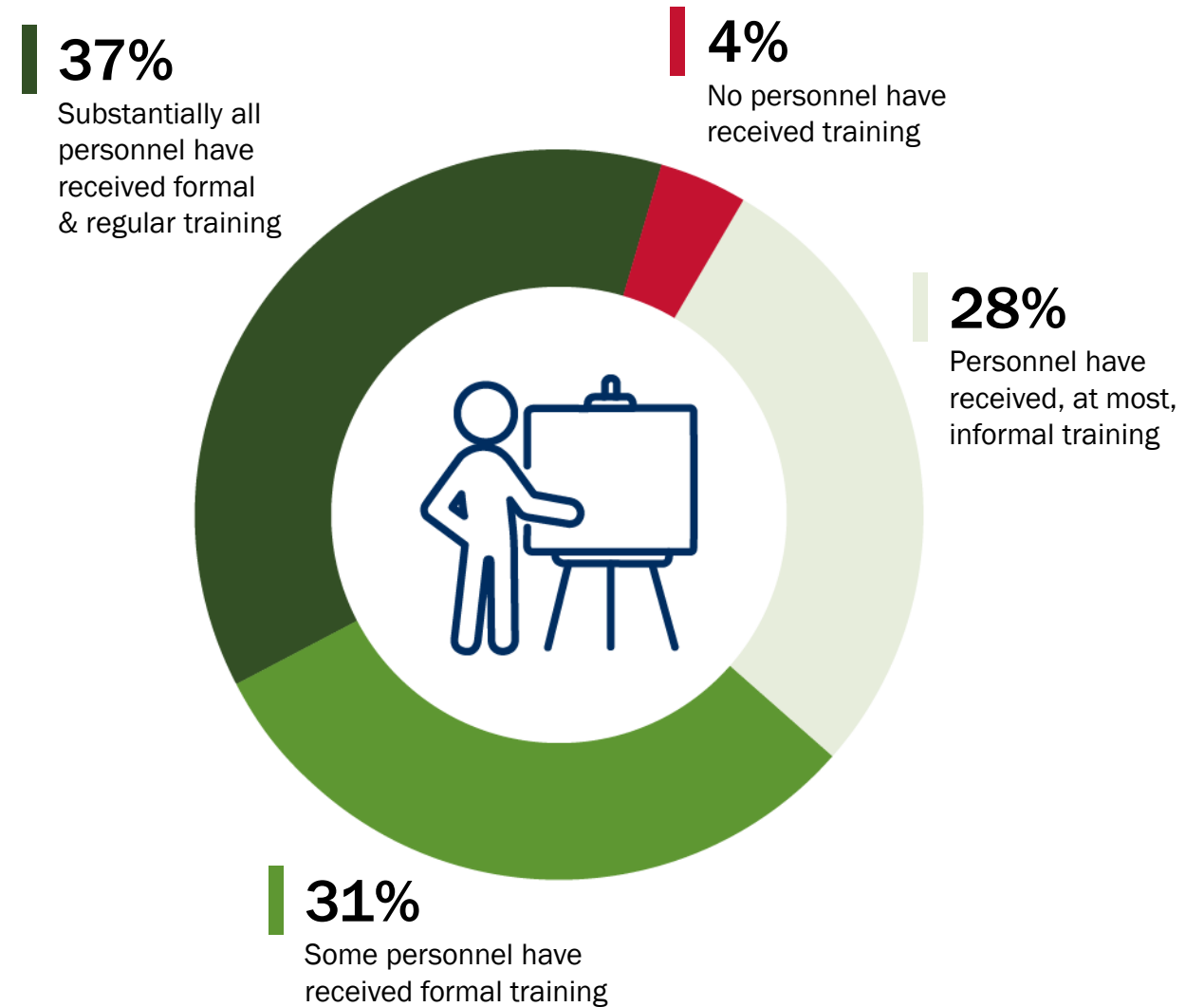


5%
Very confident

25%
Not confident

30%
Confident

40%
Somewhat confident
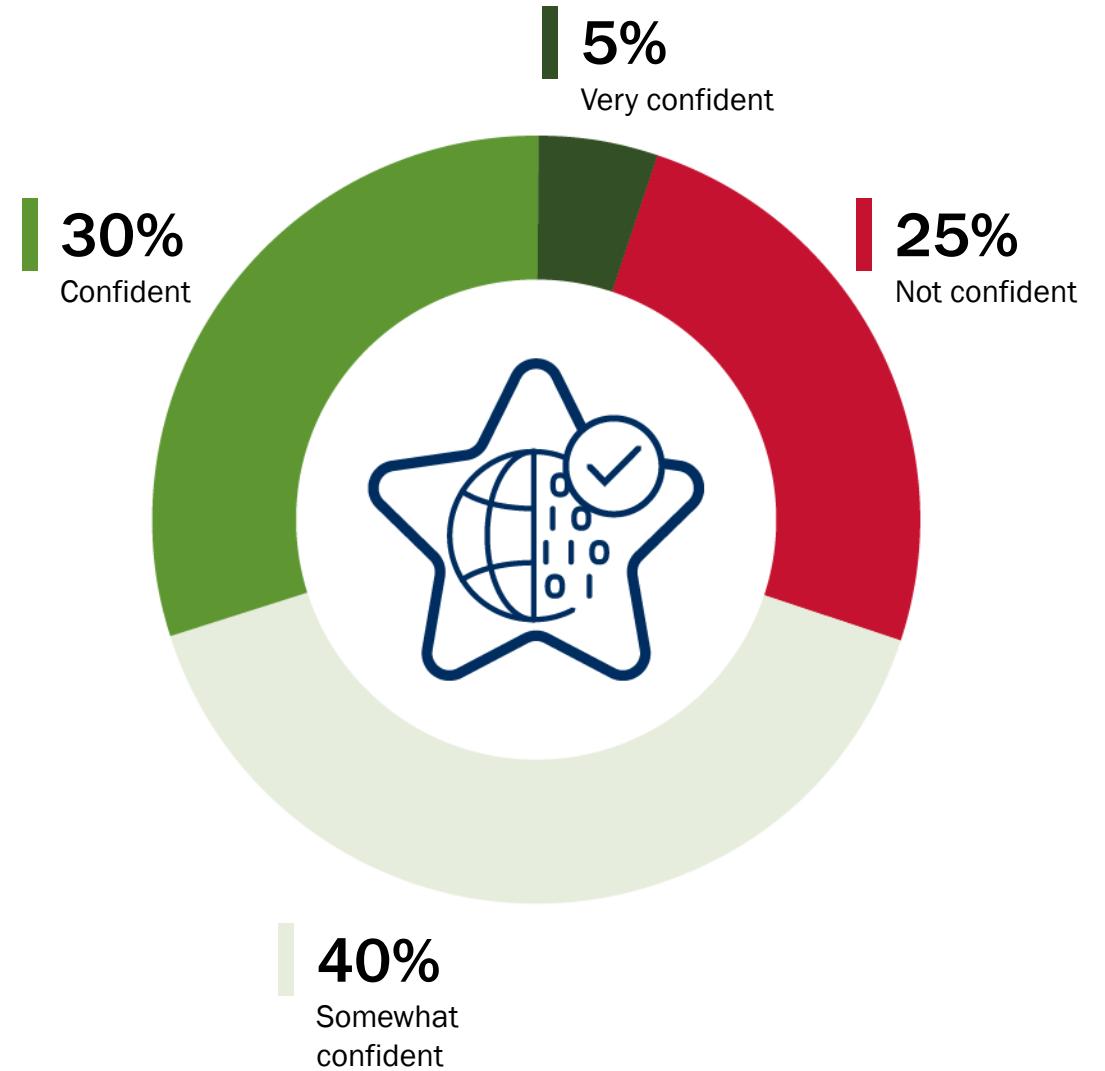
# TRAINING & EXERCISES

# Training

Local public safety organizations characterize the extent and formality of their emergency communications training. Values are proportions of all local respondents.

BOTTOM LINE: Almost all public safety organizations provide training to their personnel, but more than a quarter only provide informal, on-the-job training.

WHY IT MATTERS: Formal and regular training ensures that emergency communications personnel build and maintain knowledge of communications equipment functionality and resource usage requirements at their agency.

**37%**
Substantially all personnel have received formal & regular training

**4%**
No personnel have received training

**28%**
Personnel have received, at most, informal training

**31%**
Some personnel have received formal training

# Training Evaluation

Local public safety organizations report whether emergency communications training is evaluated at their organization. Values are proportions of local respondents that provide emergency communications training.

BOTTOM LINE: Only slightly more than half of public safety organizations evaluate the effectiveness of their personnel training.

WHY IT MATTERS: Regular evaluation of the effectiveness of personnel training is crucial for identifying and filling gaps in personnel proficiency with emergency communications systems and procedures.
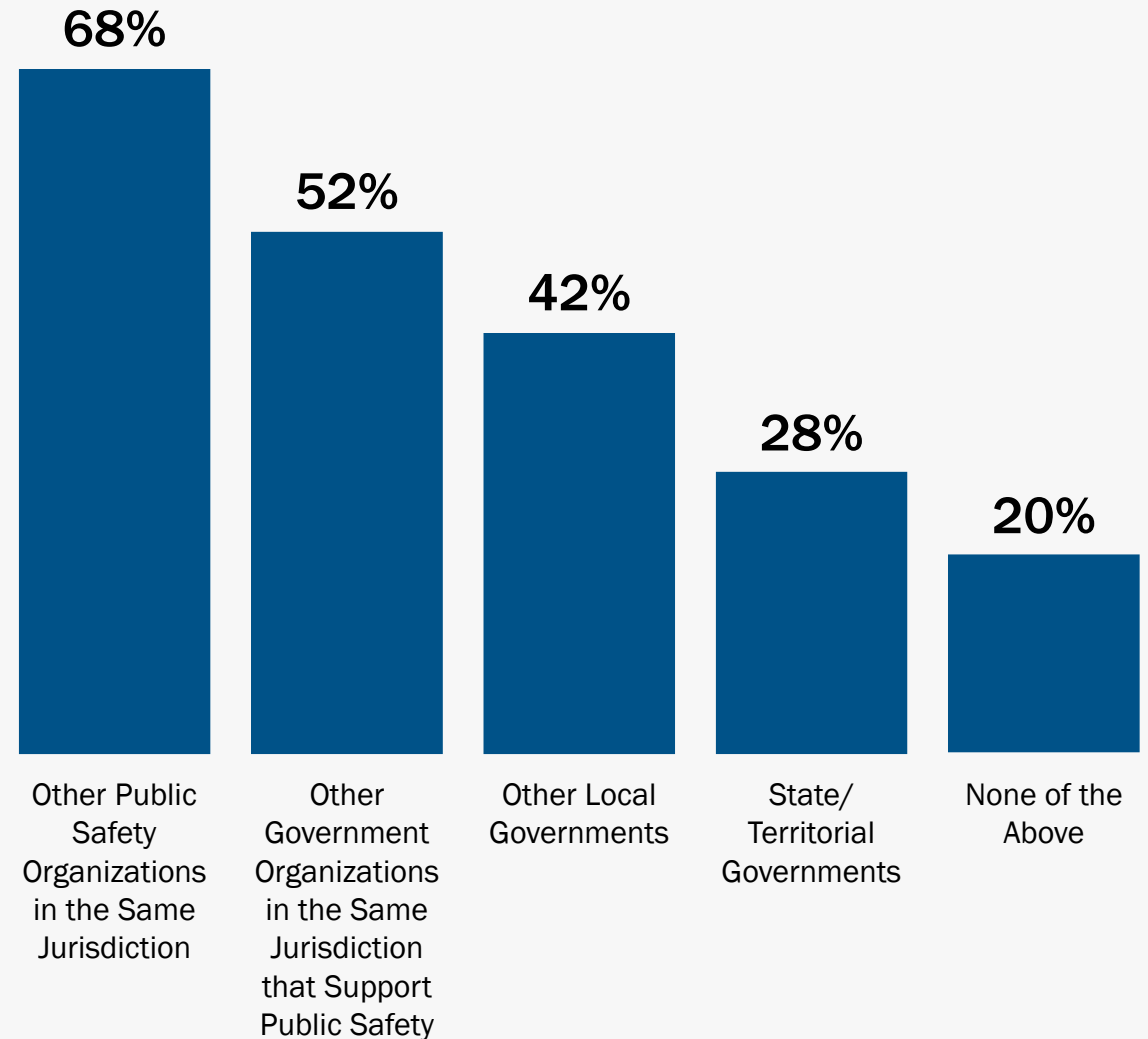
42%
No

58%
Yes
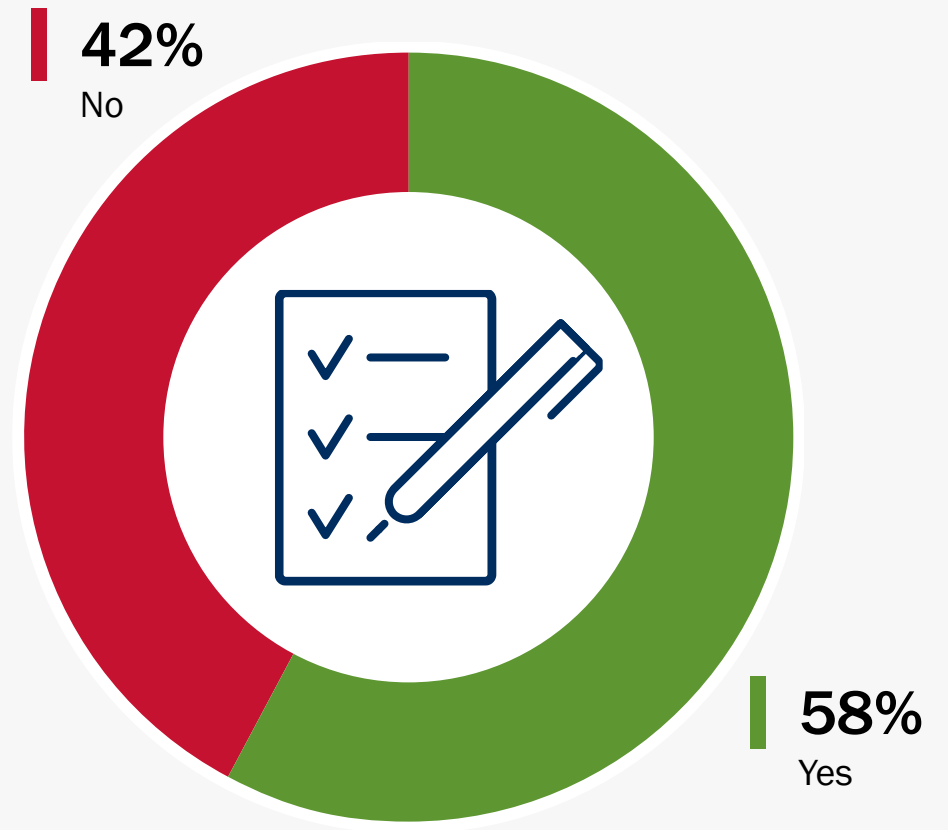
# Training Participants

Local public safety organizations identify the other entities that are included in their emergency communications training. Values are proportions of local respondents that provide emergency communications training.

BOTTOM LINE: Among public safety organizations that provide training, more than three-quarters include outside personnel in their emergency communications training.
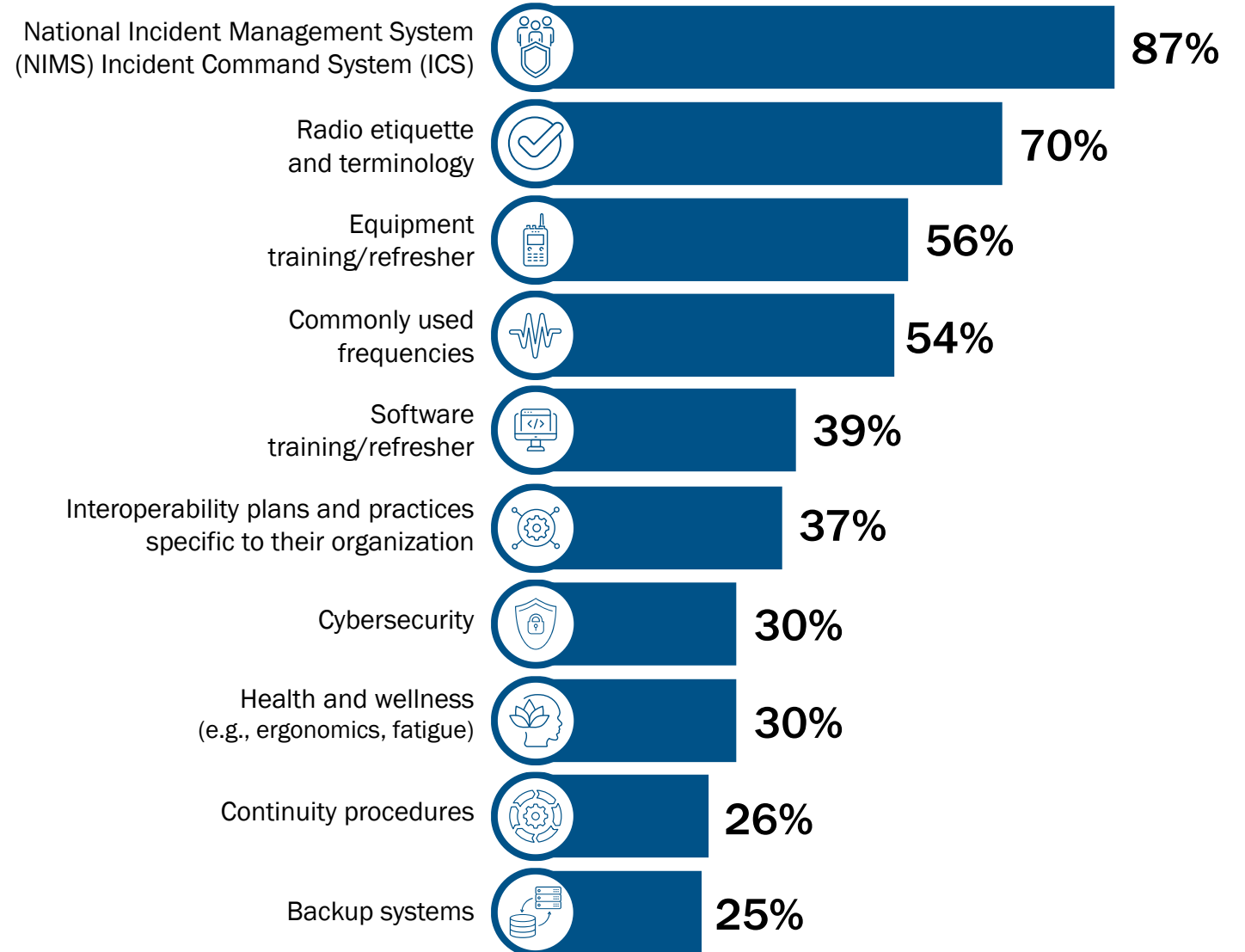
WHY IT MATTERS: Including outside agencies in emergency communications training ensures that public safety personnel are familiar with response partners and how to communicate with them when needed and authorized.



| 68% | 52% | 42% | 28% | 20% |
|-----|-----|-----|-----|-----|
| Other Public Safety Organizations in the Same Jurisdiction | Other Government Organizations in the Same Jurisdiction that Support Public Safety | Other Local Governments | State/ Territorial Governments | None of the Above |

# Training Topics

Local public safety organizations identify the topics included in their personnel training. Values are proportions of local respondents that provide emergency communications training.

BOTTOM LINE: Opportunities exist for public safety organizations nationwide to expand personnel training on resilience topics, including cybersecurity, continuity procedures, backup systems, and employee health and wellness.

National Incident Management System (NIMS) Incident Command System (ICS) — 87%

Radio etiquette and terminology — 70%

Equipment training/refresher — 56%

Commonly used frequencies — 54%

Software training/refresher — 39%

Interoperability plans and practices specific to their organization — 37%

Cybersecurity — 30%

Health and wellness (e.g., ergonomics, fatigue) — 30%

Continuity procedures — 26%

Backup systems — 25%

# Training Adequacy

Local public safety organizations state whether their personnel are adequately trained to achieve communications operability, interoperability, and continuity in day-to-day and out-of-the-ordinary situations. Values are proportions of all local respondents.
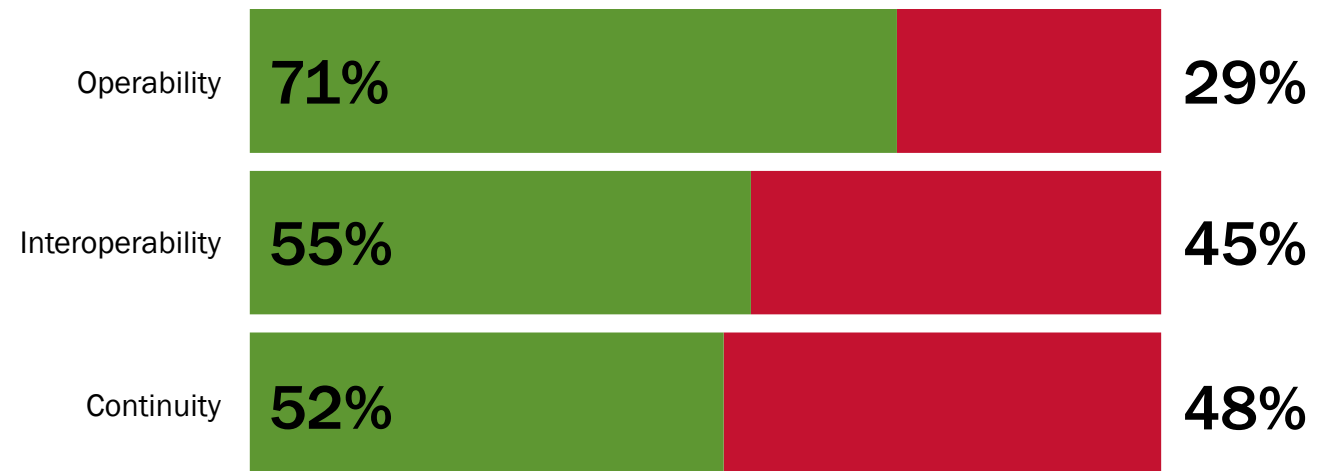
**WHY IT MATTERS:** It is difficult to design training for out-of-the-ordinary situations that are by nature unpredictable and unusual. Incorporating lessons learned from these events with regular evaluations of personnel training can help better prepare emergency communicators for the unexpected.

## Day-to-Day Situations

| | Adequately Prepared | Not Adequately Prepared |
|---|---|---|
| Operability | 92% | 8% |
| Interoperability | 79% | 21% |
| Continuity | 75% | 25% |

## Out-of-the-Ordinary Situations

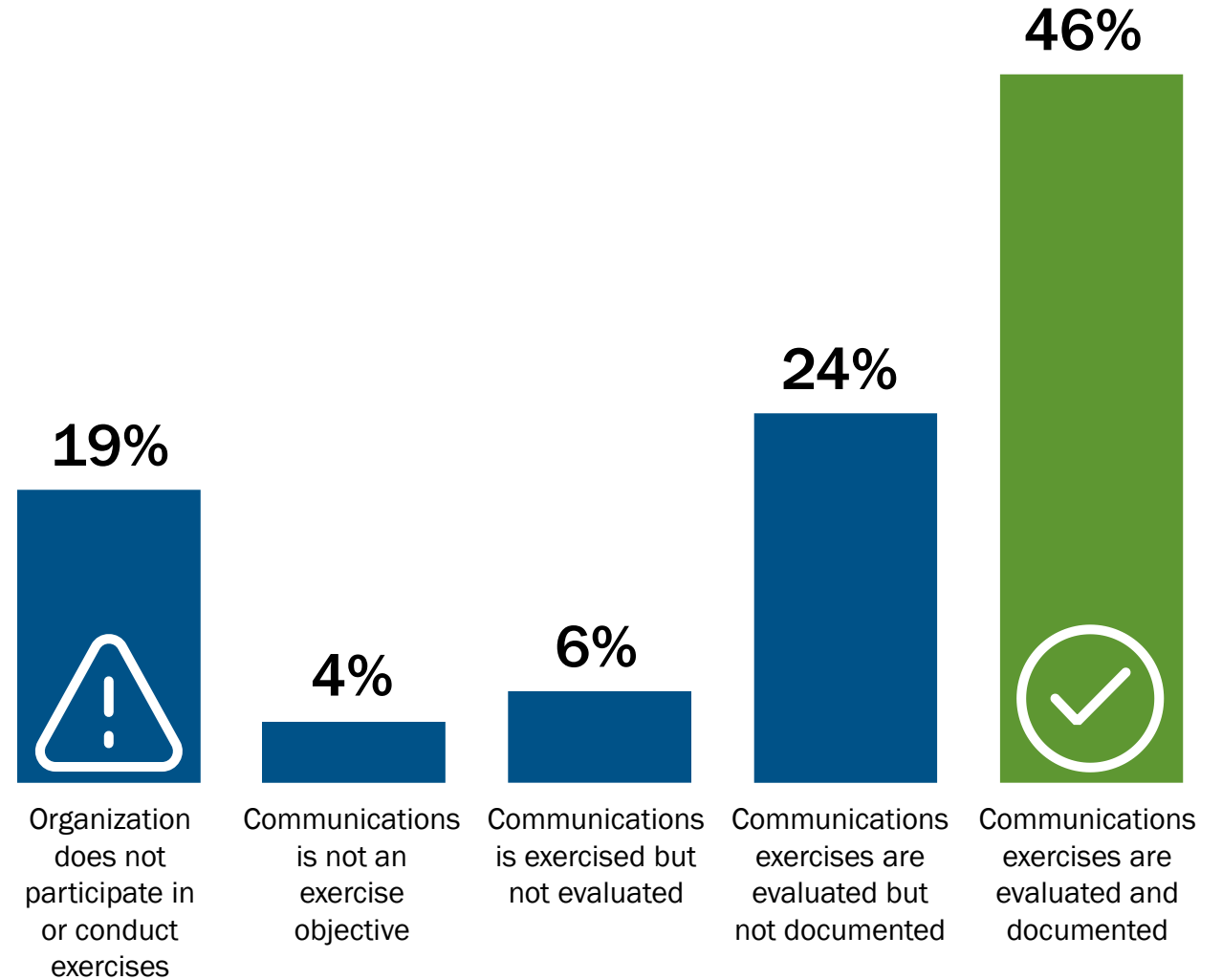| | Adequately Prepared | Not Adequately Prepared |
|---|---|---|
| Operability | 71% | 29% |
| Interoperability | 55% | 45% |
| Continuity | 52% | 48% |

■ Adequately Prepared     ■ Not Adequately Prepared

# Communications Exercises

Local public safety organizations characterize their agency's communications exercise posture. Values are proportions of all local respondents.

BOTTOM LINE: Only about one-half of public safety organizations evaluate and document communications exercise outcomes.

WHY IT MATTERS: Lessons learned from exercises can only be leveraged for policy and program improvements if communications outcomes are objectively evaluated and documented.

**19%** — Organization does not participate in or conduct exercises

**4%** — Communications is not an exercise objective

**6%** — Communications is exercised but not evaluated

**24%** — Communications exercises are evaluated but not documented

**46%** — Communications exercises are evaluated and documented

# Capabilities Included in Exercises

Local public safety organizations identify the capabilities included in their communications exercises. Values are proportions of local respondents whose organization participates in or conducts exercises.

**BOTTOM LINE:** Only about one-quarter of public safety organizations exercise their data and encryption interoperability capabilities, and less than one-half exercise voice or data continuity.
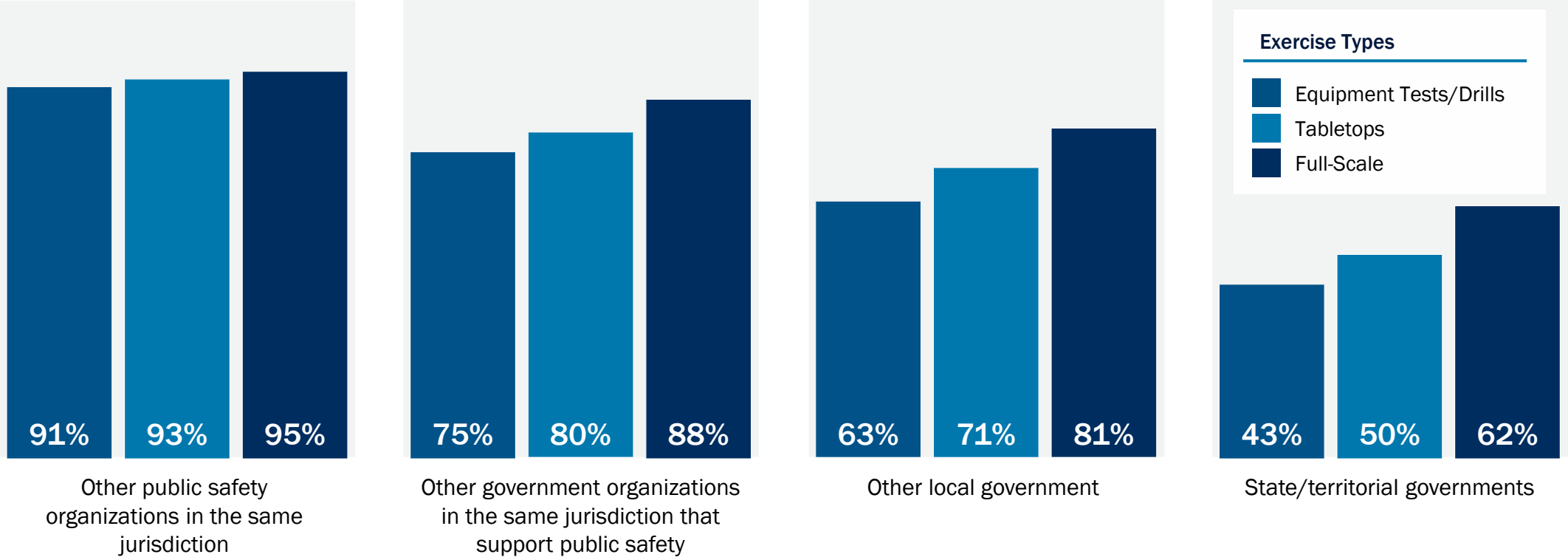
**WHY IT MATTERS:** Exercises allow organizations to identify and correct communications failures in a safe, controlled environment. Exercises are especially important for alternate and backup capabilities that are not regularly used.



Voice Interoperability — 65%

Voice Continuity — 44%

Data Continuity — 28%

Data Interoperability — 26%

Encryption Interoperability — 24%
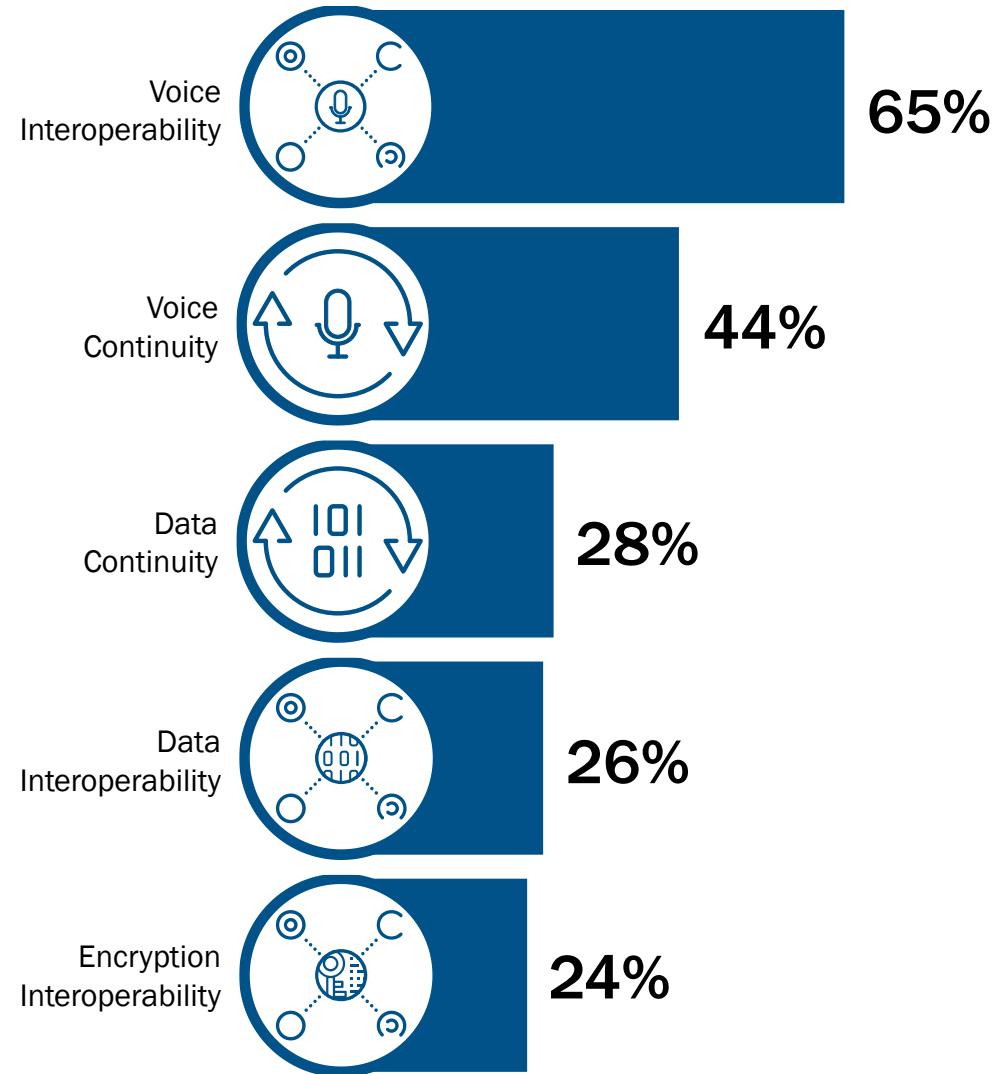
# Exercise Partnerships

Local public safety organizations identify the other entities with which they participate in emergency communications focused exercises. Values are proportions of local respondents whose organization participates in or conducts each type of exercise.

BOTTOM LINE: Public safety organizations almost always exercise with other public safety agencies in their jurisdictions. Other local governments and state agencies more often participate in ambitious full-scale exercises.
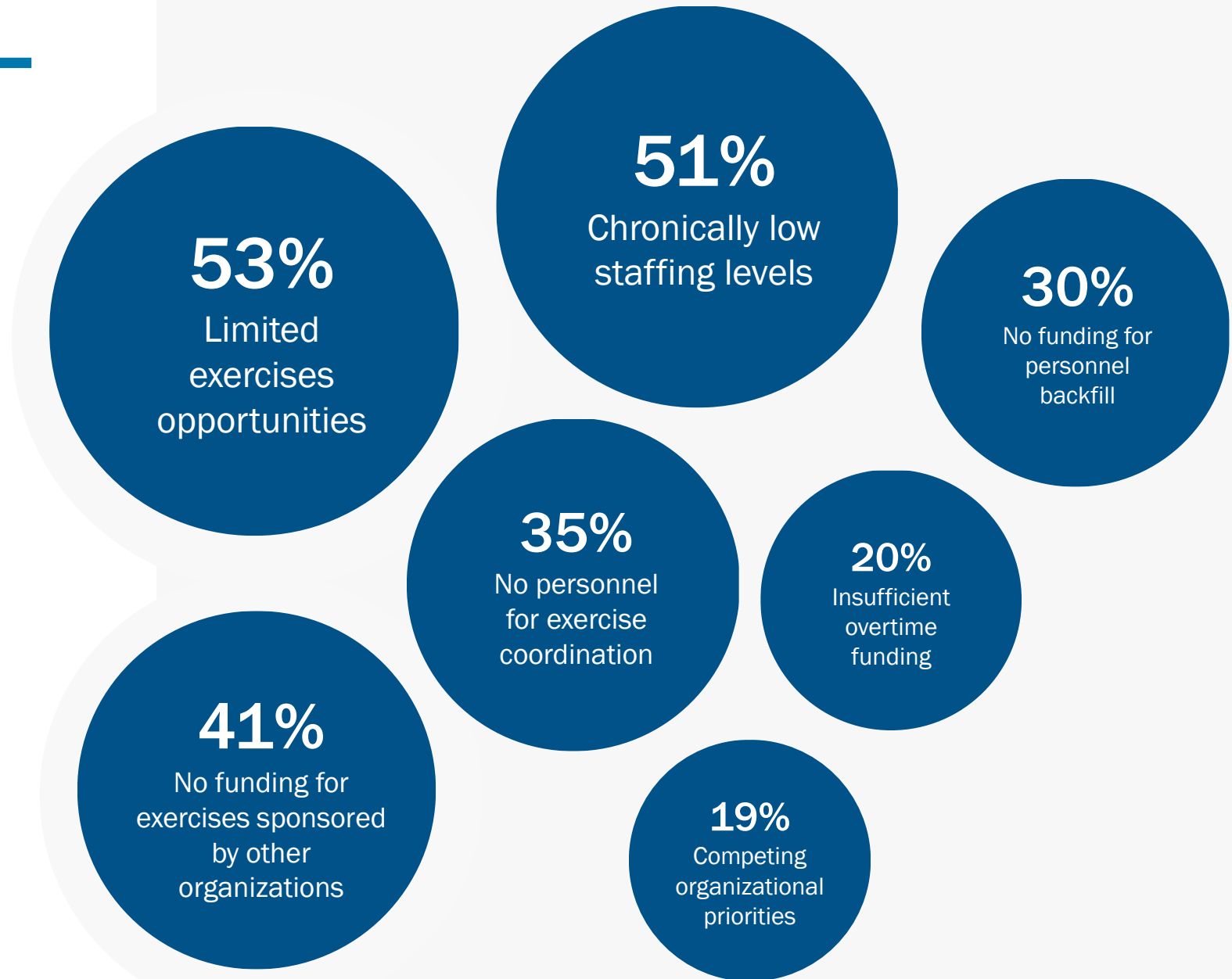


**Exercise Types**
- Equipment Tests/Drills
- Tabletops
- Full-Scale

| | Equipment Tests/Drills | Tabletops | Full-Scale |
|---|---|---|---|
| Other public safety organizations in the same jurisdiction | 91% | 93% | 95% |
| Other government organizations in the same jurisdiction that support public safety | 75% | 80% | 88% |
| Other local government | 63% | 71% | 81% |
| State/territorial governments | 43% | 50% | 62% |

# Exercise Barriers

Local public safety organizations characterize the challenges that prevent their organization from participating in or conducting exercises. Values are proportions of local respondents whose organization neither participates in nor conducts exercises.

BOTTOM LINE: Insufficient funding and personnel shortages prevent many public safety organizations from participating in exercises.

WHY IT MATTERS: Exercises allow organizations to identify and correct communications failures in a safe, controlled environment. Exercises are especially important for alternate and backup capabilities that are not regularly used.

**53%** Limited exercises opportunities

**51%** Chronically low staffing levels

**30%** No funding for personnel backfill

**35%** No personnel for exercise coordination

**20%** Insufficient overtime funding

**41%** No funding for exercises sponsored by other organizations

**19%** Competing organizational priorities

# Exercise Adequacy

Local public safety organizations state whether exercises have adequately prepared their personnel to achieve communications operability, interoperability, and continuity in day-to-day and out-of-the-ordinary situations. Values are proportions of all local respondents.

WHY IT MATTERS: In order to improve communications outcomes during actual incidents or planned events, exercises should be objectively assessed and documented. Documenting gaps revealed by exercises and assigning responsibility for addressing identified gaps can help better prepare emergency communicators for the unexpected.

## Day-to-Day Situations

| | Adequately Prepared | Not Adequately Prepared |
|---|---|---|
| Operability | 80% | 20% |
| Interoperability | 72% | 28% |
| Continuity | 67% | 33% |

## Out-of-the-Ordinary Situations

| | Adequately Prepared | Not Adequately Prepared |
|---|---|---|
| Operability | 65% | 35% |
| Interoperability | 54% | 46% |
| Continuity | 50% | 50% |
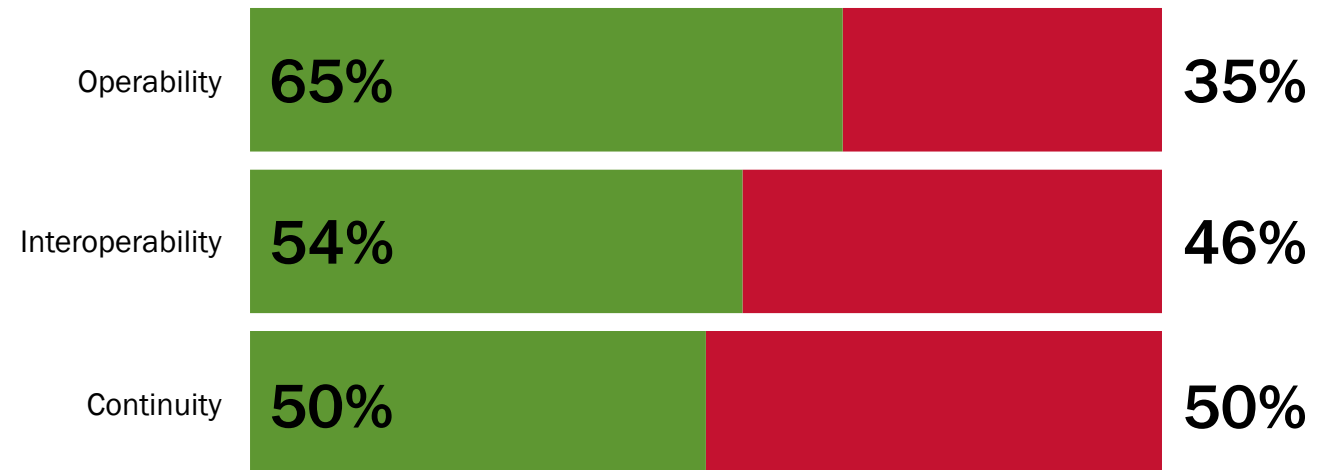
Adequately Prepared
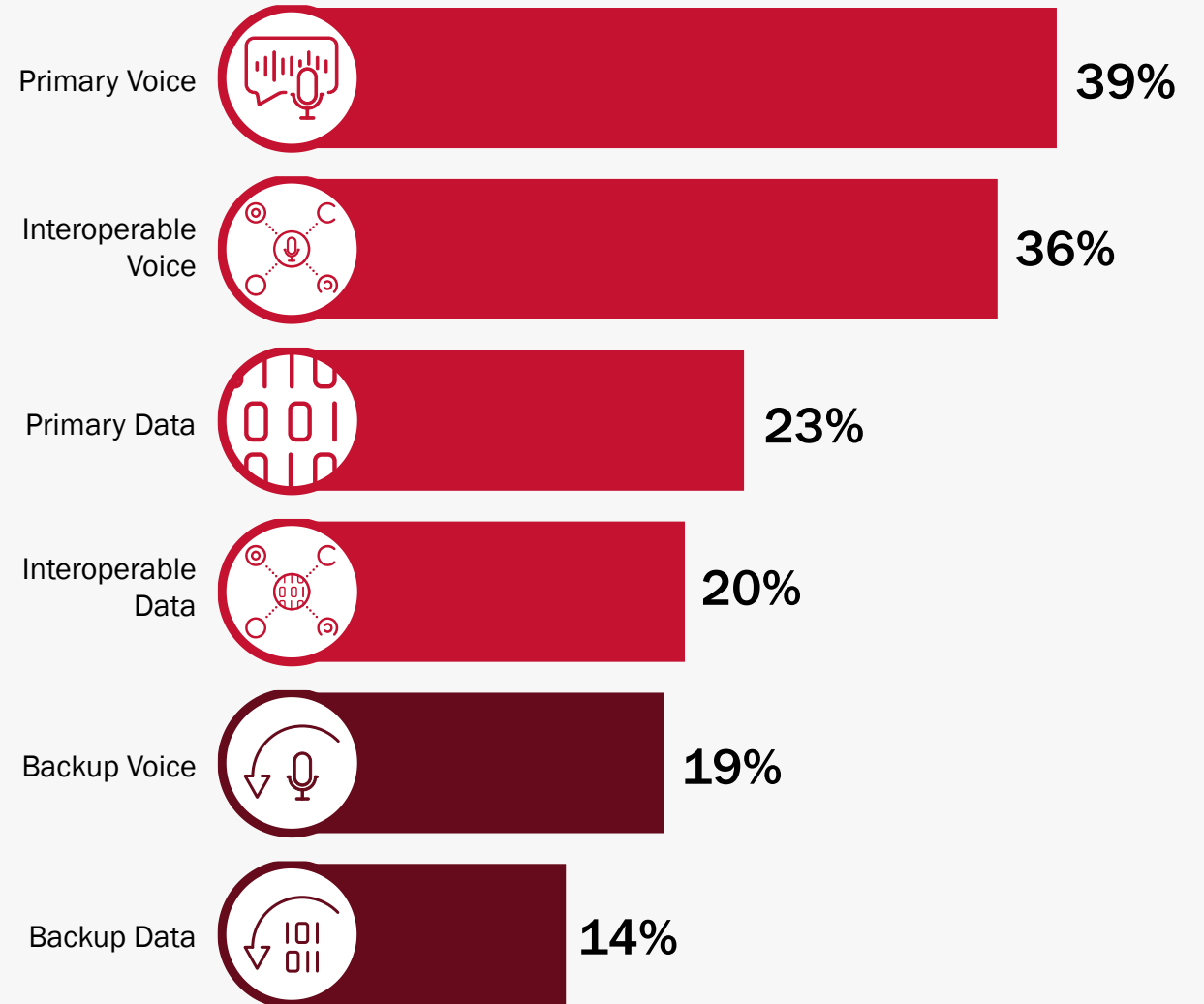
Not Adequately Prepared

# USAGE
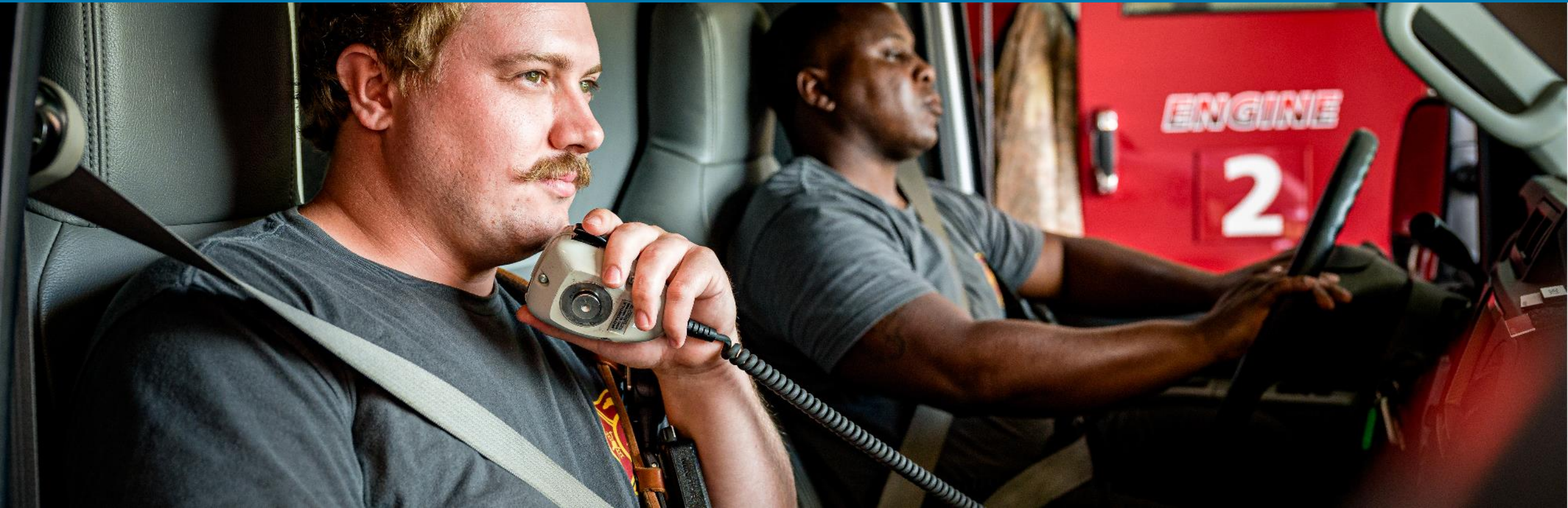
# Regular Communication with Other Organizations

Local public safety organizations characterize the extent to which they regularly use their communications capabilities to communicate with personnel outside their organization. Values are proportions of all local respondents.

**BOTTOM LINE:** Most public safety organizations do not regularly use their interoperable voice or data capabilities to communicate with personnel outside their organization.
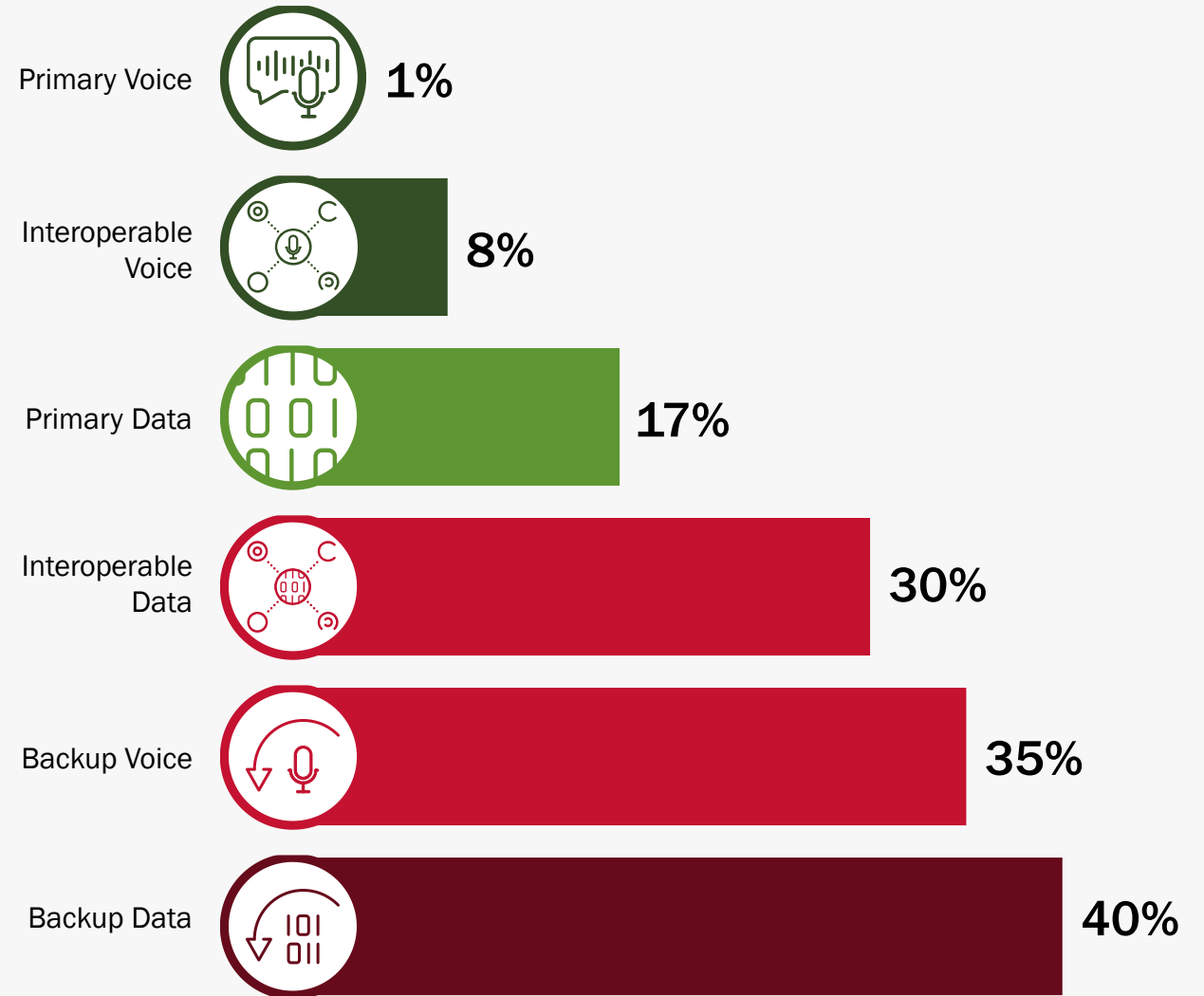
**WHY IT MATTERS:** Developing muscle memory by regularly using interoperable capabilities to communicate with other agencies is critical for ensuring that personnel can establish communications during high-stress incident response situations.

| Category | Value |
|---|---|
| Primary Voice | 39% |
| Interoperable Voice | 36% |
| Primary Data | 23% |
| Interoperable Data | 20% |
| Backup Voice | 19% |
| Backup Data | 14% |

# Capability Gaps

Local public safety organizations identify the communications capabilities their agency does not use. Values are proportions of all local respondents.
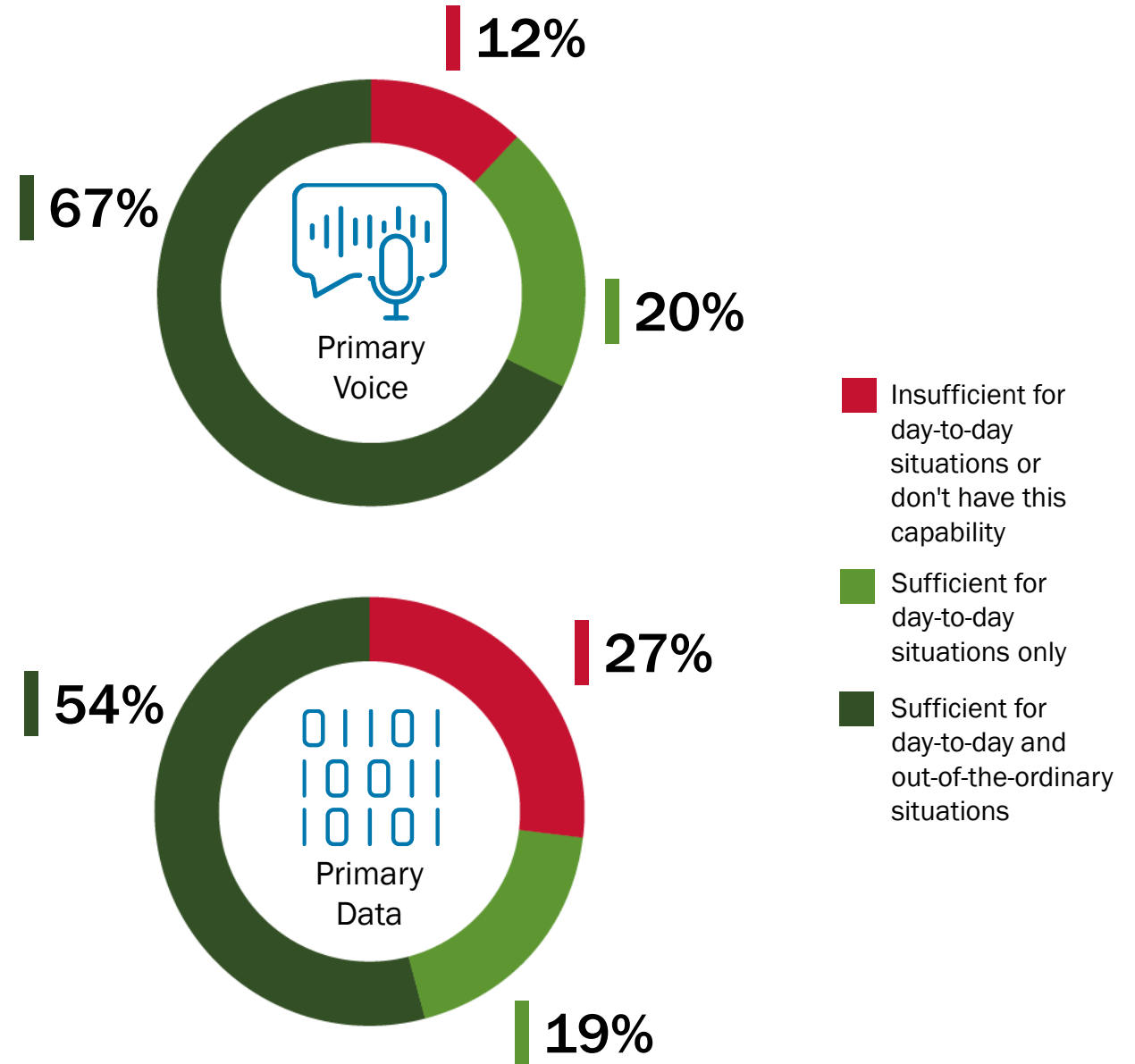
**BOTTOM LINE:** More than one-third of public safety organizations lack backup voice and/or data capabilities, making them vulnerable to communications disruptions in the event of a primary system failure.

Primary Voice **1%**

Interoperable Voice **8%**

Primary Data **17%**

Interoperable Data **30%**

Backup Voice **35%**

Backup Data **40%**

# Primary Voice and Data Resource Capacity

Local public safety organizations characterize the resource capacity of their organization's primary voice and data communications capabilities. Values are proportions of all local respondents.
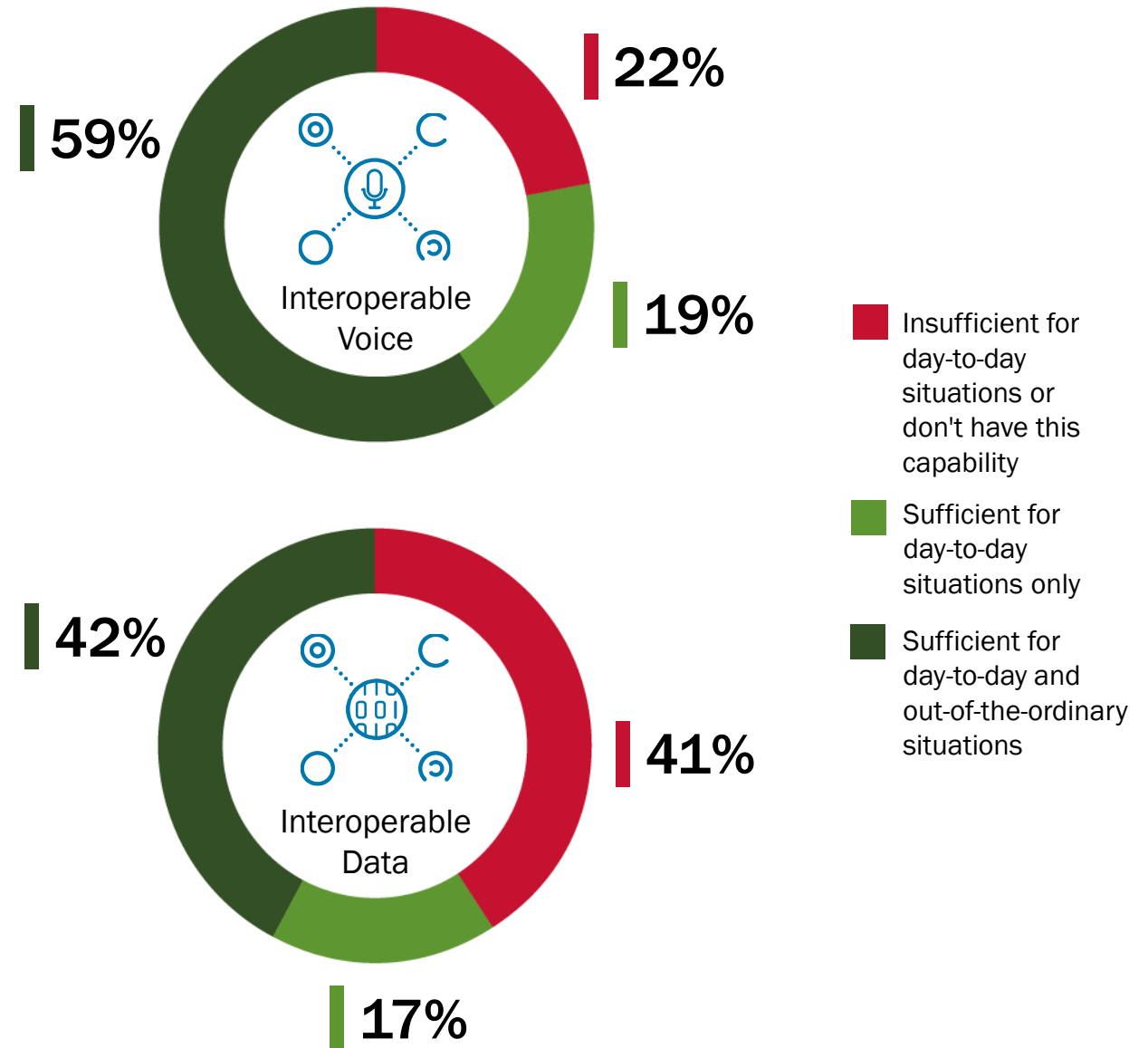
**BOTTOM LINE:** More than one-quarter of public safety organizations either lack primary data capabilities or have insufficient primary data capacity to support day-to-day operations.

12%

67%

20%

Primary Voice

27%

54%

19%

Primary Data

- Insufficient for day-to-day situations or don't have this capability
- Sufficient for day-to-day situations only
- Sufficient for day-to-day and out-of-the-ordinary situations

# Interoperable Voice and Data Resource Capacity

Local public safety organizations characterize the resource capacity of their organization's interoperable voice and data communications capabilities. Values are proportions of all local respondents.

**BOTTOM LINE:** Almost half of public safety organizations either lack interoperable data capabilities or have insufficient interoperable data capacity to support day-to-day operations.



**Interoperable Voice**

59%  22%  19%

**Interoperable Data**

42%  41%  17%

Insufficient for day-to-day situations or don't have this capability

Sufficient for day-to-day situations only

Sufficient for day-to-day and out-of-the-ordinary situations

# Backup Voice and Data Resource Capacity

Local public safety organizations characterize the resource capacity of their organization's backup voice and data communications capabilities. Values are proportions of all local respondents.

BOTTOM LINE: More than one-half of public safety organizations have insufficient backup voice and data capacities to support communications needs during out-of-the-ordinary situations.
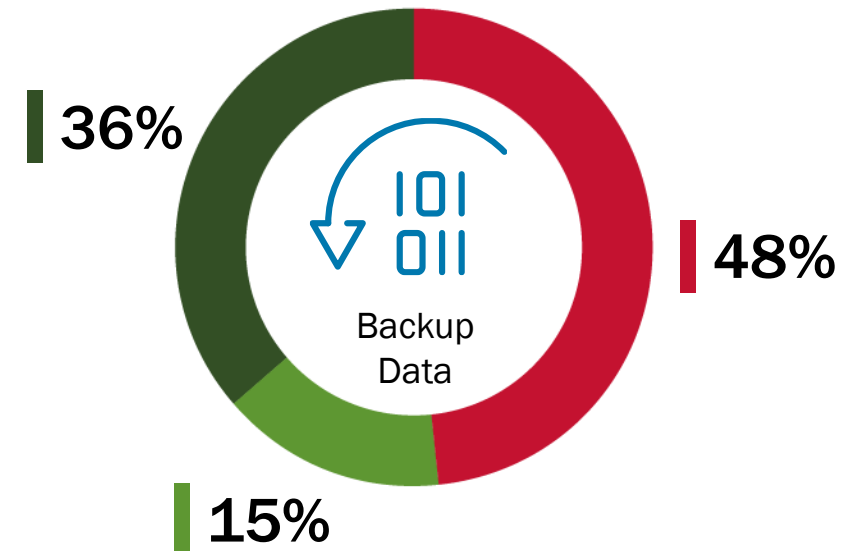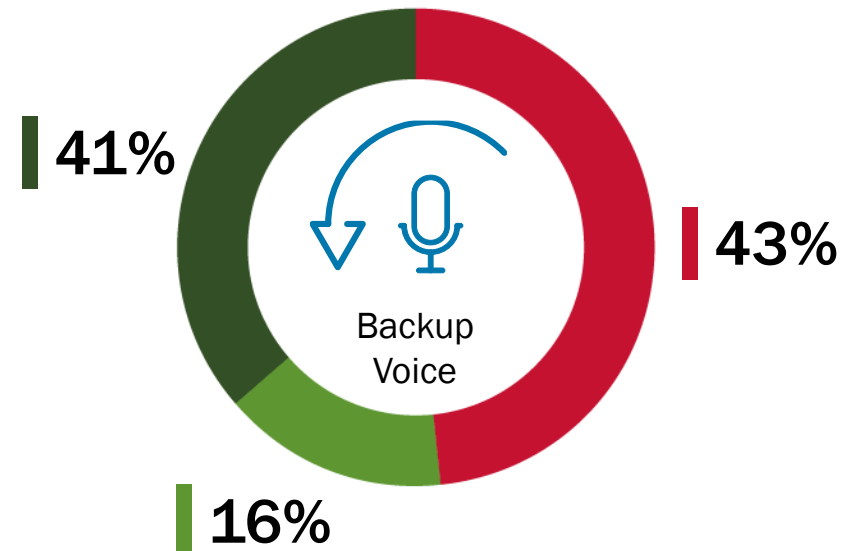


Backup Voice

- 41%
- 43%
- 16%

Backup Data

- 36%
- 48%
- 15%

- Insufficient for day-to-day situations or don't have this capability
- Sufficient for day-to-day situations only
- Sufficient for day-to-day and out-of-the-ordinary situations

# Personnel Proficiency

Local public safety organizations describe their personnel's proficiency at achieving communications operability, interoperability, and continuity in day-to-day and out-of-the-ordinary situations. Values are proportions of all local respondents.

**BOTTOM LINE:** Most public safety organizations report that their personnel are proficient at establishing and maintaining interoperable communications during day-to-day situations.
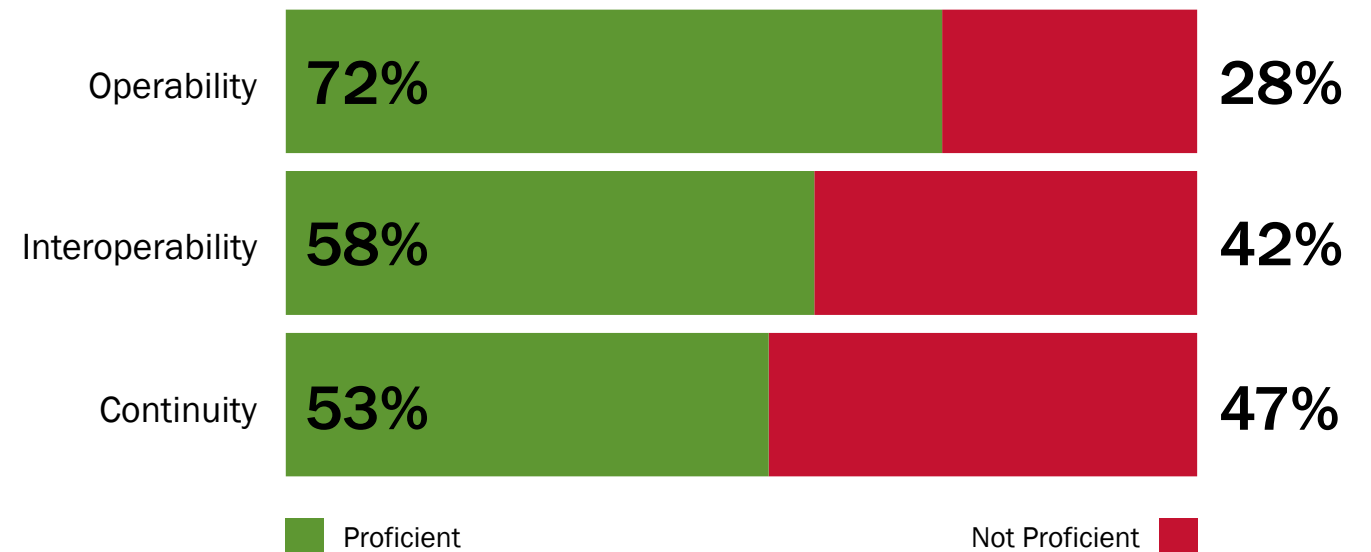
**WHY IT MATTERS:** Personnel proficiency is developed and maintained through training, exercises, and regular use of equipment. It is challenging to become proficient for out-of-the-ordinary situations, which are unpredictable, unusual, and difficult to simulate.

## Day-to-Day Situations

| | | |
|---|---|---|
| Operability | 91% | 9% |
| Interoperability | 79% | 21% |
| Continuity | 72% | 28% |

## Out-of-the-Ordinary Situations

| | | |
|---|---|---|
| Operability | 72% | 28% |
| Interoperability | 58% | 42% |
| Continuity | 53% | 47% |

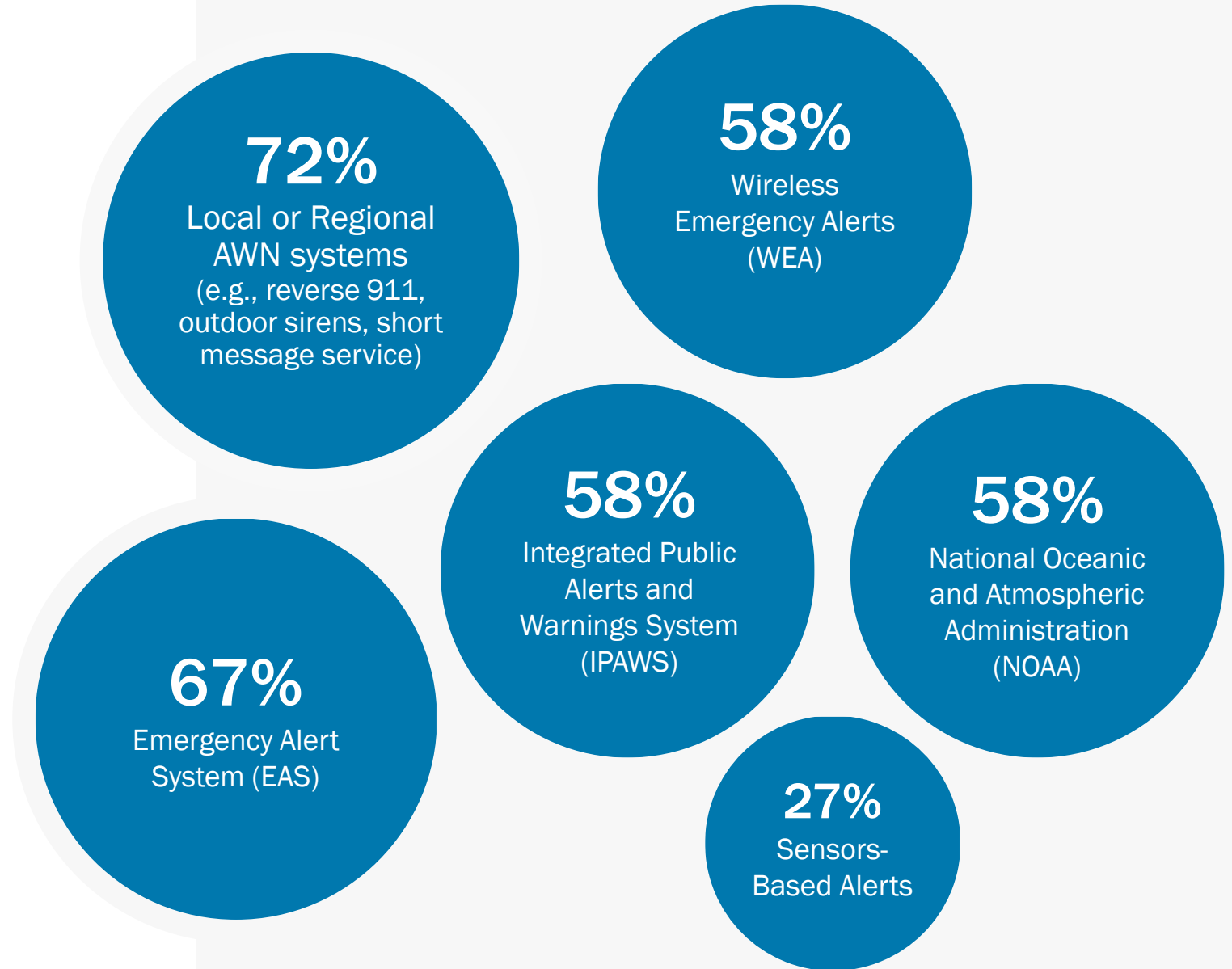Proficient ■   Not Proficient ■

# Alerts & Warnings

Local public safety organizations identify the Alerts, Warnings, and Notifications (AWN) systems with which they either originate or respond to messages. Values are proportions of all local respondents.

BOTTOM LINE: Almost three-quarters of public safety organizations utilize some type of public alert, warning, or notification system to either originate or respond to messages.

WHY IT MATTERS: AWN systems are a primary means by which public safety organizations can rapidly share crucial emergency information with the public.

**72%**
Local or Regional AWN systems (e.g., reverse 911, outdoor sirens, short message service)

**58%**
Wireless Emergency Alerts (WEA)

**58%**
Integrated Public Alerts and Warnings System (IPAWS)

**58%**
National Oceanic and Atmospheric Administration (NOAA)

**67%**
Emergency Alert System (EAS)

**27%**
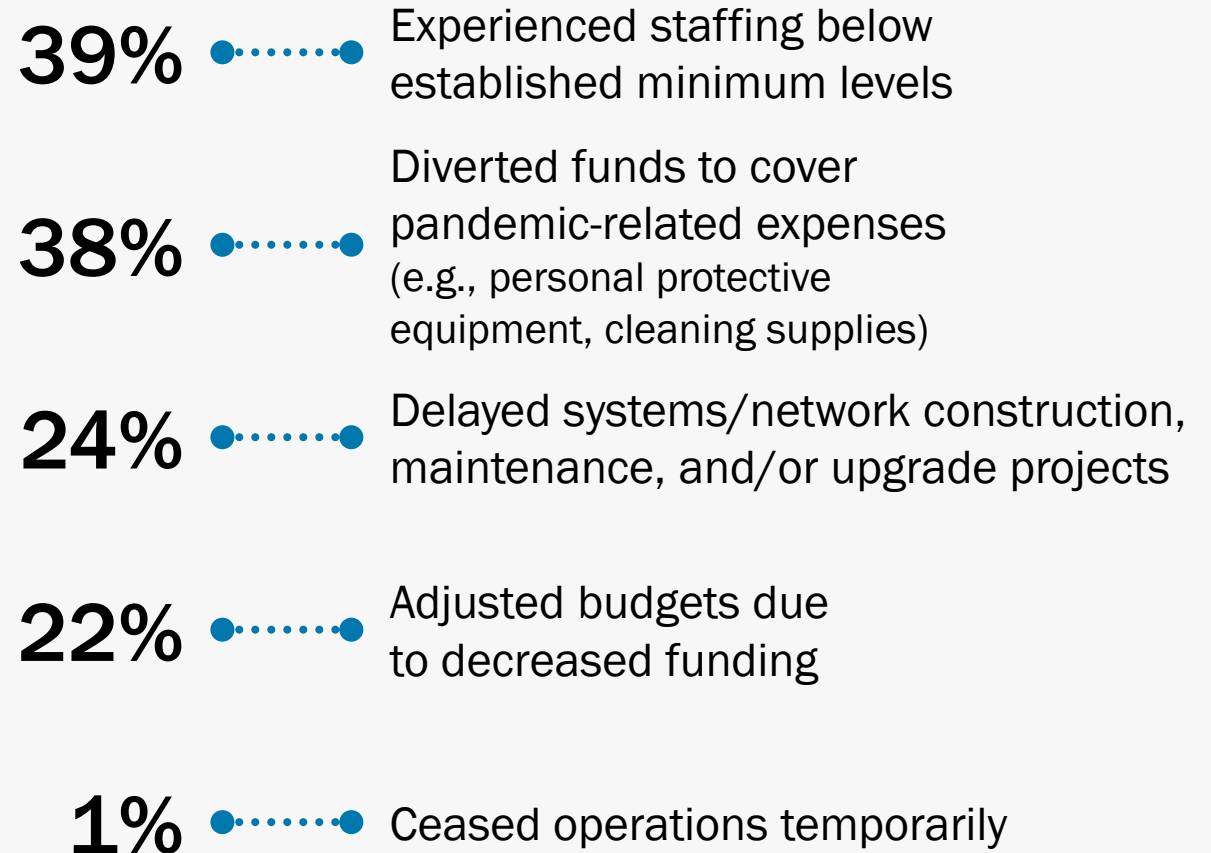Sensors-Based Alerts

# COVID-19 IMPACT

# Impacts of COVID-19 on Emergency Communications

Local public safety organizations characterize the impacts on their organization's communications capabilities resulting from the COVID-19 pandemic. Values are proportions of all local respondents.

BOTTOM LINE: Many public safety organizations across the nation experienced reduced or reprioritized funding and severe personnel shortages during the COVID-19 pandemic (c. 2020-2023).

WHY IT MATTERS: Survey results underestimate the true impacts of COVID-19 because organizations that permanently closed during the pandemic were not available to participate in the survey. This systematic underestimation is called "survivorship bias."

**39%** Experienced staffing below established minimum levels

**38%** Diverted funds to cover pandemic-related expenses (e.g., personal protective equipment, cleaning supplies)

**24%** Delayed systems/network construction, maintenance, and/or upgrade projects

**22%** Adjusted budgets due to decreased funding

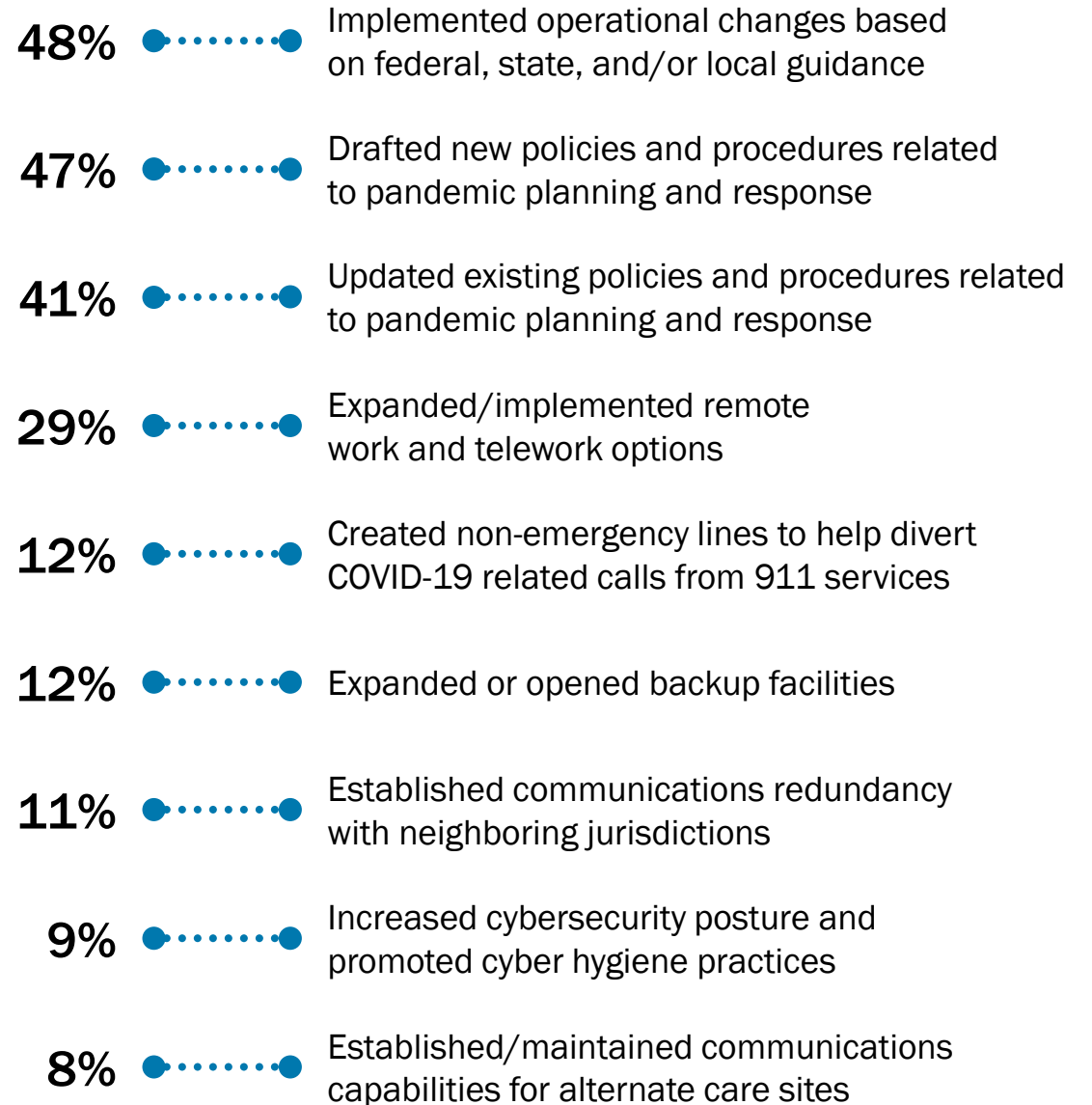**1%** Ceased operations temporarily

# Emergency Communications Responses to COVID-19

Local public safety organizations identify the operational changes their organization adopted in response to COVID-19. Values are proportions of all local respondents.

**BOTTOM LINE:** Public safety organizations used many innovative strategies to respond to the COVID-19 pandemic (c. 2020-2023) and prevent interruptions to the critical services they provide.

**WHY IT MATTERS:** Almost all public safety organizations continued operating throughout the COVID-19 pandemic. Emergency communicators demonstrated remarkable resilience in the face of increased demands for their critical services, despite funding and personnel impacts from COVID-19.

**48%** ●·······● Implemented operational changes based on federal, state, and/or local guidance

**47%** ●·······● Drafted new policies and procedures related to pandemic planning and response

**41%** ●·······● Updated existing policies and procedures related to pandemic planning and response

**29%** ●·······● Expanded/implemented remote work and telework options

**12%** ●·······● Created non-emergency lines to help divert COVID-19 related calls from 911 services

**12%** ●·······● Expanded or opened backup facilities

**11%** ●·······● Established communications redundancy with neighboring jurisdictions

**9%** ●·······● Increased cybersecurity posture and promoted cyber hygiene practices

**8%** ●·······● Established/maintained communications capabilities for alternate care sites

# LEVEL OF IMPROVEMENT

# Strengthening Emergency Communications, 2018-2023

Local public safety organizations describe their level of improvement in strengthening emergency communications from 2018 to 2023. Values reflect trends from all local respondents across communications operability, interoperability, and continuity.

**BOTTOM LINE:** In 2023, almost all public safety organizations reported that their emergency communications were as strong or stronger than they were in 2018.

**WHY IT MATTERS:** Emergency communicators demonstrated incredible resilience in the face of increased demands for their critical services from 2018 to 2023, despite persistent nationwide funding and personnel shortages.

| Category | Percentage |
|---|---|
| Significant Improvement since 2018 | 15% |
| Some Improvement since 2018 | 45% |
| Maintained since 2018 | 35% |
| Regressed since 2018 | 5% |

# LOCAL-TRIBAL PARTNERSHIP
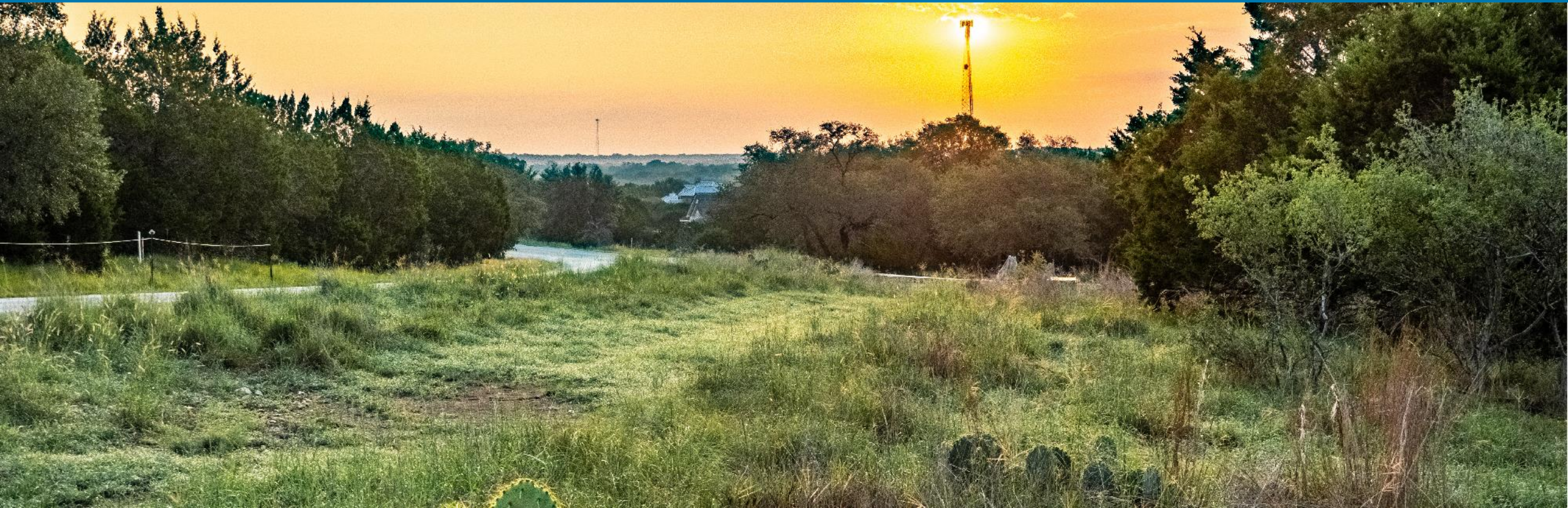
# Local-Tribal Partnership

- **Tribal nations are critical partners** for county and municipal public safety agencies across the nation.

- **National-level results understate partnerships** between tribal nations and local public safety organizations, as not all survey respondents are located in states or regions adjacent to tribal jurisdictions.

- This analysis presents a **more accurate depiction of local public safety agencies' partnerships with tribes** by focusing only on respondents with opportunities to partner with a tribal government or organization.

- SAFECOM Nationwide Survey (SNS) results indicate a **need for more proactive engagement by local public safety organizations** with their tribal partners.

# Partnership with Tribes: Governance

Local public safety organizations describe their collaborative governance efforts with tribal partners. Values are proportions of local respondents that indicated an opportunity to partner with tribal governments or organizations in their locality or region.

BOTTOM LINE: Only one-quarter of public safety organizations with nearby tribal partners have governance agreements in place with those partners.

WHY IT MATTERS: Governance agreements define and support jurisdictional authority, mutual aid, resource sharing, and other means by which local public safety organizations and their tribal counterparts can support one another and the people they serve.

ONLY 26% **have governance agreements** in place with tribal organizations/governments

12% rely on informal, undocumented agreements

11% utilize formal, documented agreements

3% regularly review their formal agreements

ONLY 5-7% **include tribal representatives** in their decision-making groups
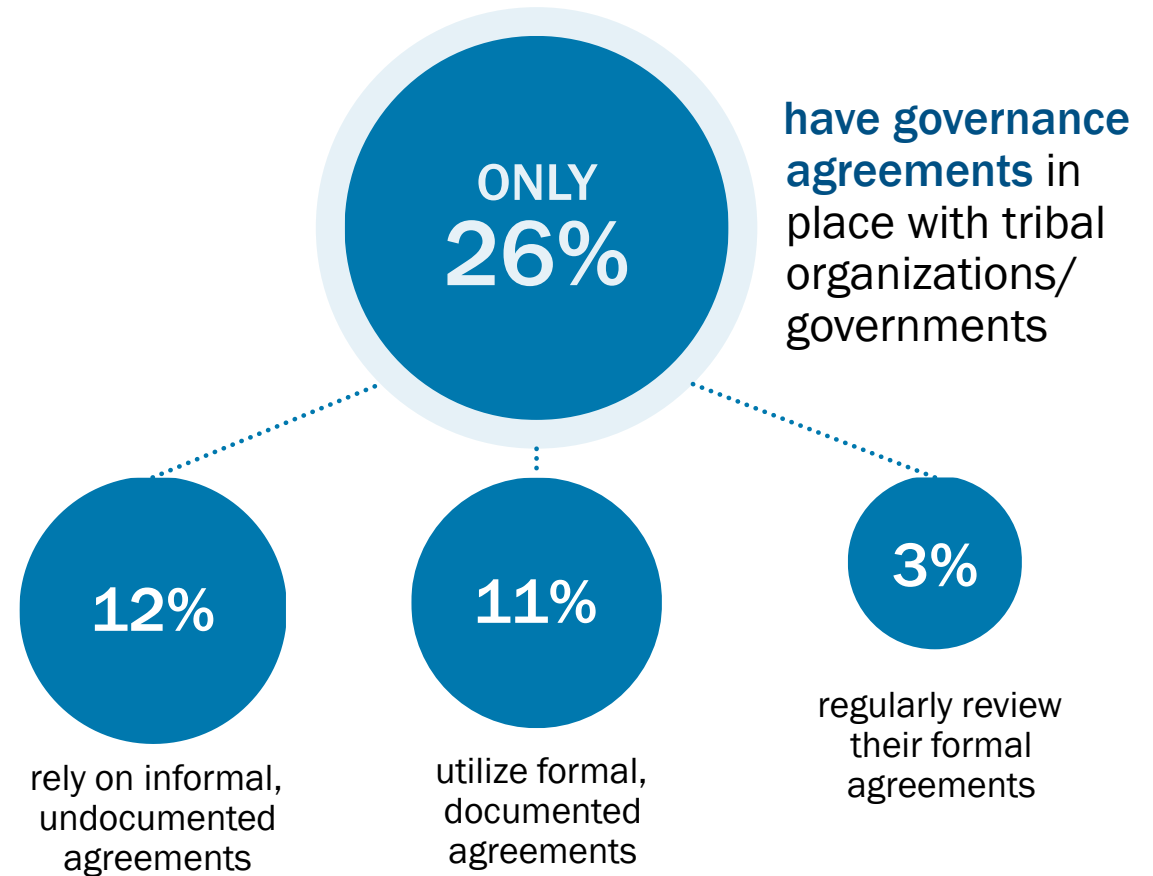
# Partnership with Tribes: Strategic Planning

Local public safety organizations characterize their strategic planning practices with tribal partners. Values are proportions of local respondents that indicated an opportunity to partner with tribal governments or organizations in their locality or region.

**BOTTOM LINE:** Few public safety organizations engage tribal partners in their strategic planning.

**WHY IT MATTERS:** Robust strategic planning partnerships ensure that organizational decisions effectively support secure, resilient, and interoperable communication between local public safety organizations and their tribal counterparts.
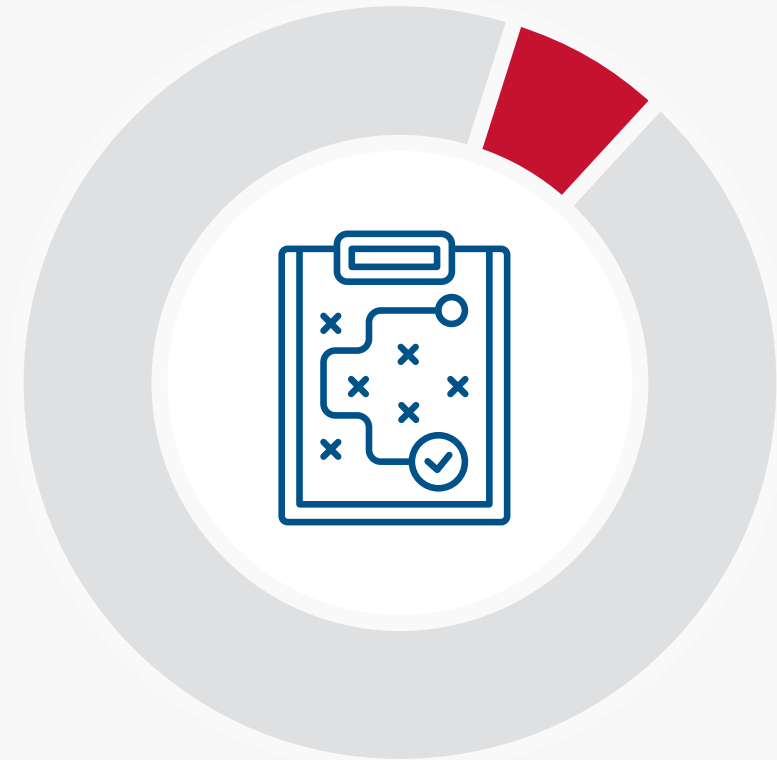
**Only 7%** of local public safety organizations engage in **strategic planning with tribal partners**

# Partnership with Tribes: Standardized Procedures

Local public safety organizations describe the Standard Operating Procedures (SOPs)/Standard Operating Guidelines (SOGs) they have with tribal partners. Values are proportions of local respondents that indicated an opportunity to partner with tribal governments or organizations in their locality or region.

BOTTOM LINE: Almost all public safety organizations with nearby tribes have formal or informal policies and procedures in place to support communications with tribal partners.

WHY IT MATTERS: Standardizing practices with tribal partners can help local public safety personnel consistently and uniformly engage their tribal counterparts in a way that respects and supports tribal sovereignty.
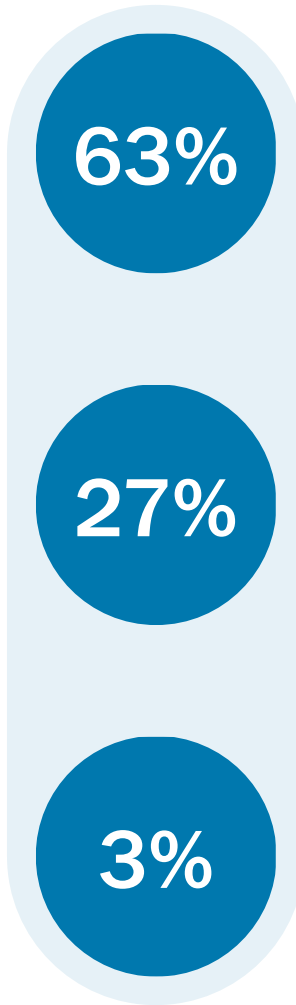
**63%** of local public safety organizations with SOPs/SOGs **have informal policies/procedures** in place with tribes

**27%** have formal policies/procedures in place to **enable interoperable communication** with tribes

**3%** have processes in place for SOP/SOG development that **ensure consistency** with tribal responders

# Partnership with Tribes: Training & Exercises

Local public safety organizations describe their agency's training and exercise participation with tribal partners. Values are proportions of local respondents that indicated an opportunity to partner with tribal governments or organizations in their locality or region.

BOTTOM LINE: Few public safety organizations with nearby tribes include their tribal partners in communications training and exercises.

WHY IT MATTERS: Public safety organizations are missing precious opportunities to use training and exercises to improve their ability to establish communications with tribal partners during planned events and incidents.

ONLY
4%
of local public safety organizations **train with tribal partners**
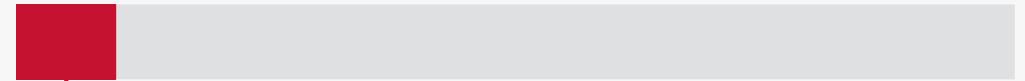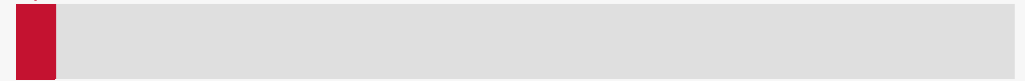
ONLY
10%
of local public safety organizations **exercise with tribal partners**
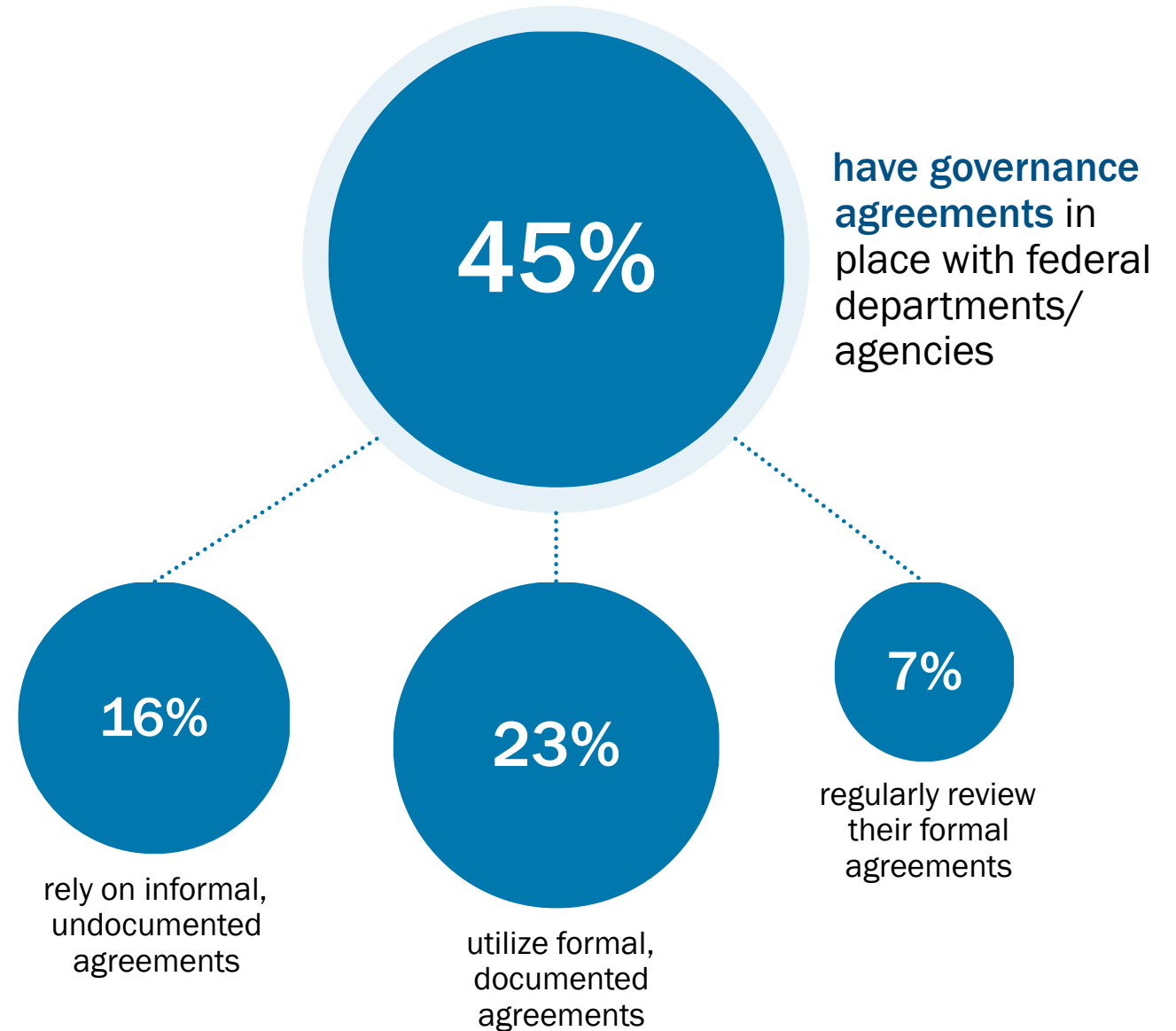
# LOCAL-FEDERAL PARTNERSHIP

# Federal Partnership: Governance

Local public safety organizations describe their collaborative governance efforts with federal partners. Values are proportions of all local respondents.

**BOTTOM LINE:** Almost half of local public safety organizations have governance agreements in place with federal partners. Most of these agreements are formal and documented.

**WHY IT MATTERS:** Governance agreements define and support jurisdictional authority, mutual aid, resource sharing, and other means by which federal departments and agencies can support local public safety organizations and their incident communications capabilities.

**45%** have governance agreements in place with federal departments/ agencies

**16%** rely on informal, undocumented agreements

**23%** utilize formal, documented agreements

**7%** regularly review their formal agreements

# Federal Partnership: Strategic Planning

Local public safety organizations characterize their strategic planning practices with federal departments and agencies. Values are proportions of all local respondents.

WHY IT MATTERS: Strategic planning partnerships ensure that organizational decisions effectively support secure, resilient, and interoperable communication between local public safety organizations and their federal incident response partners.

**Only 11% of local public safety organizations engage in strategic planning with federal partners**

# Federal Partnership: Standardized Procedures

Local public safety organizations describe the Standard Operating Procedures (SOPs)/Standard Operating Guidelines (SOGs) they have with federal departments and agencies. Values are proportions of all local respondents.

**WHY IT MATTERS:** Standardized policies and procedures can help local public safety organizations establish and maintain communications with federal incident response partners as needed and authorized.

**Only one in four** local public safety organizations leverage formal policies to **enable interoperable communication** with federal partners

# Federal Partnership: Communications Exercises

Local public safety organizations describe their agency's exercise participation with federal departments and agencies. Values are proportions of all local respondents.

BOTTOM LINE: Only about one in four public safety organizations participate in emergency communications exercises with federal partners.

WHY IT MATTERS: Local public safety organizations and their federal partners are missing opportunities to identify and correct communications failures in a safe, controlled environment. Exercises that include local, state, and federal participants are especially important for evaluating and strengthening communications interoperability.

**ONLY 15-30%** of local public safety organizations **exercise with federal partners**

Federal departments/ agencies are most often included in comprehensive **full-scale exercises (30%)** and least often included in **equipment tests/drills (15%)**

# For more information visit: cisa.gov/sns