### Welcome to the Public Safety Survey on Communication Technology

Help us get requirements for public safety technology right! This is your chance to tell us what works, what doesn't, and what technology you think would be useful for incident response communications.

NIST, the National Institute of Standards and Technology, is conducting this survey. Our goals are to identify:

- 1. technology currently used for communication in public safety today;
- 2. problems experienced with this technology;
- 3. other kinds of technology that may be helpful for communication in public safety in the future.

The survey will take about 20 minutes to complete.

Please share the survey link with others you know in public safety, the more folks we hear from the better. www.XXXX.nist.gov

We appreciate your time and input!

#### Your Participation is Confidential and Voluntary

All data are de-identified. No personally identifiable information (PII) is collected or associated in any way with your survey responses. Your participation is voluntary and you may choose to quit the survey at any time.

This collection of information contains Paperwork Reduction Act (PRA) requirements approved by the Office of Management and Budget (OMB). Notwithstanding any other provisions of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the PRA unless that collection of information displays a currently valid OMB control number. Public reporting burden for this collection is estimated to be 20 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any aspect of this collection of information, including suggestions for reducing this burden, to the National Institute of Standards and Technology, Attn: Mary Theofanos, maryt@nist.gov, (301) 975-5889. OMB Control No. 0693-0043, Expiration Date: 12-31-2018.

I. How many yea	rs have you been	working in pul	olic safety?	? (Total yea	rs of servi
	anging positions o			_	
2. Do you consid	er the area you cu	rrently work i	n as <b>MAINI</b>	<b>.</b> Y:	
Rural					
Suburban					
Tribal					
Urban					
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7. Do you MAINLY we	ork in:	
911/Dispatch		
○ EMS		
Fire Fighting		
Law Enforcement		
8. Is your agency:		
Private		
Public Public		
9. What is your title?	?	
10. What is your juris	sdictional level?	
Local		
County		
State		
<b>Federal</b>		
Tribal		

### Use of technology in your DAY-TO-DAY work

We know there is no such thing as a "typical" day in public safety. However, for this set of questions, focus on the kinds of things you use in your day-to-day work.

11. Think about your **DAY-TO-DAY** work and your use of the following **devices**. (We know medical equipment is vital to EMS work, however this list focuses specifically on communication technology and not on things like blood pressure cuffs, CPR masks, tourniquets, etc.)

	Use a lot	Use occasionally	Have but do not use	Do not have
Computer: desktop				
Computer: laptop				
Flip phone: work issued				
MDT/MDC (mobile data terminal/computer)				
Mic: wireless			0	
Mic: with cord				
Pager				
Radio: in-vehicle				
Radio: portable				
Smartphone: personal		$\bigcirc$		
Smartphone: work issued				
Tablet				
Other (please specify)				

12.	Of the following devices, RANK the 5 that <b>are most useful</b> in your <b>DAY-TO</b> -
DA	work, with 1 being the most useful.

**	Computer: desktop
**	Computer: laptop
**	<b>♦</b> Flip phone: work issued
**	DT/MDC (mobile data terminal/computer)
** ** **	<b>♦</b> Pager
* * * * * * * * * * * * * * * * * * *	Radio (with or without mic)
**	<b>♦</b> Smartphone
::	<b>♦</b> Tablet

Public Safety Survey on Communication Technology: EMS

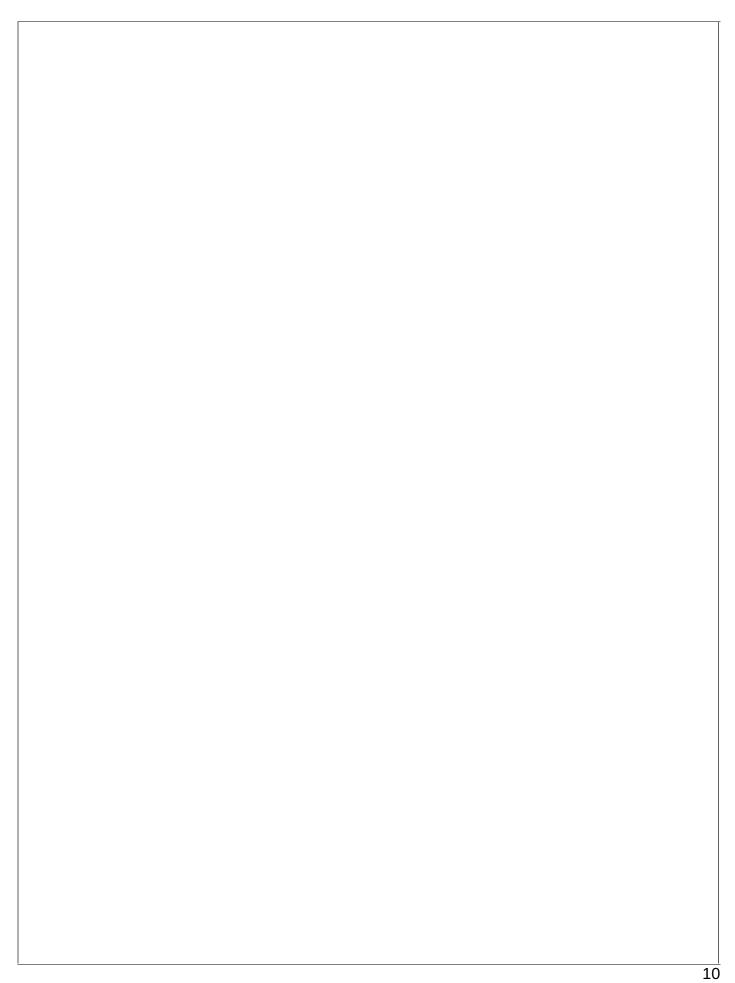
# 13. Think about your **DAY-TO-DAY** work and your use of the following **applications/software**.

	Always use	Use a lot	Use occasionally	Have but do not use	Do not have
AED (automatic external defibrillator) locator	0				0
CAD (computer- aided dispatch)			$\bigcirc$		
Email					
EPCR (electronic patient care reporting)	$\bigcirc$				$\bigcirc$
ERG (emergency response guide)			0		
First responder vehicle tracking					
Mapping/driving directions					
Medication/drug identification or interaction	$\circ$	$\circ$	$\bigcirc$		$\circ$
RMS (records management system)	0		0	•	0
Report writing software (other than patient care reports)	0				
Traffic			0		
Weather					
Other (please specify)					

14. C	Of the followin	g applications/softwar	e, rank the 5	that <b>are</b> r	<mark>nost useful</mark> in
your	DAY-TO-DAY	work, with 1 being the	nost useful.		

**	AED (automatic external defibrillator) location
0 0 0 0 0 0	CAD (computer-aided dispatch)
0 0 0 0 0 0	<b>♦</b> Email
** ** **	DEPCR (electronic patient care reporting)
0-0 0-0 0-0	<b>♦</b> ERG (emergency response guide)
9 9 9 9 9 9	<b>♦</b> First responder vehicle tracking
* * * * * * * * * * * * * * * * * * *	<b>♦</b> Language translation
**	<b>♦</b> Mapping/driving directions
* * * * * * * * * * * * * * * * * * *	<b>♦</b> Medication/drug identification or interaction
0 0 0 0 0 0	RMS (records management system)
0 0 0 0 0 0	Report writing software (other than patient care reports)
9 9 9 9 9 9	<b>♦</b> Traffic
0 0 0 0 0 0	<b>♦</b> Weather

15	. Which of the items below would also be useful for your DAY-TO-DAY work. Check
al	l that apply
	AR (augmented reality)
	Automatic transmission of patient vitals and information to hospital
	AVL (automatic vehicle location)
	Drones
	Earpiece: wired
	Earpiece: wireless
	Health/vitals monitoring of first responders
	Health/vitals monitoring of patients
	HUDs (heads-up displays)
	Indoor mapping
	One login (instead of many different usernames and passwords)
	Real-time on-scene video
	Robots
	Self driving vehicles
	Smart buildings
	Smart glasses
	Smart watch
	Voice controls for hands-free input
	Voice recognition for identification
	VR (virtual reality)
	None of the above
	Other (please specify)



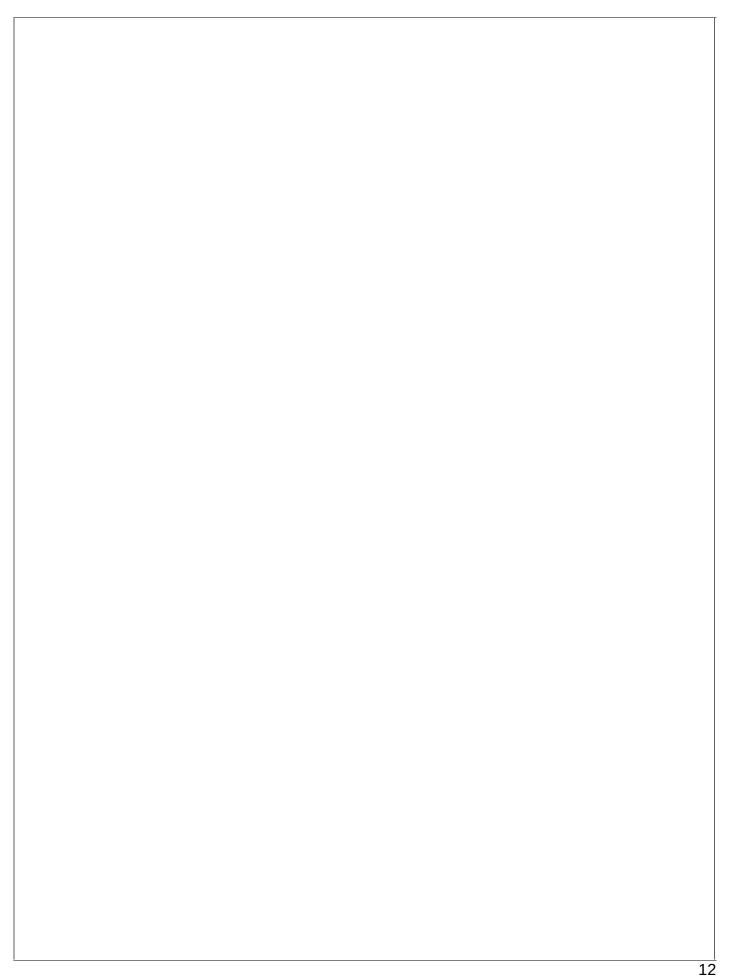
### **Problems with your Day-TO-DAY devices**

For the next set of questions, think about problems you have experienced with 3 of the devices you previously selected.

#### 16. With your RADIO, have you experienced problems with:

	Always	Most of the time	Sometimes	Rarely	Never	Does not apply
Audio quality						
Battery life						
Channel switching						
Cord						
Coverage/dead zones						
Durability						
Interoperability						
Outdated/old						
Price: too expensive						
Radio discipline/etiquette				$\bigcirc$		
Size/bulkiness			0		0	

17.	Have you experienced other problems with your RADIO?
	No
	Yes
18.	Please list.



### 19. With your MIC, have you experienced problems with:

	Always	Most of the time	Sometimes	Rarely	Never	Does not apply
Audio quality						
Cord						
Durability						
Falling off						
Outdated/old						
Placement on body						
Price: too expensive						
Talk button location						
Talk button size						

20. Have you experienced	other problems wi	th your MIC?
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20.	Have you experienced other problems with your <b>MIC</b> ?
	No
_ Y	/es
21. F	Please list.

### 22. With your **PAGER**, have you ever experienced problems with:

	Always	Most of the time	Sometimes	Rarely	Never	Does not apply
Battery life						
Durability						
Falls off easily						
Outdated/old						
Price: too expensive	0		0			
Size/bulkiness						

23.	Have	vou ex	perienced	other	problems	with	vour	<b>PAGER?</b>
		,					,	

)	No

O Yes

#### 24. Please list.

# 25. With your MDT/MDC (mobile data terminal/computer), have you experienced problems with:

	Always	Most of the time	Sometimes	Rarely	Never	Does not apply
CAD (computer- aided dispatch)						
Durability						
Glare						
Interoperability						
Lack of portability						
Mapping/navigation						
Logins/passwords						
Outdated/old						
Price: too expensive						
Size/bulkiness						
Using while driving						

26	Have you experienced other problems with your MDT/MDC?
	No
	Yes
27.	Please list.

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# 28. With your **SMARTPHONE** (work-issued or personal), have you experienced problems with:

	Always	Most of the time	Sometimes	Rarely	Never	Does not apply
Battery life						
Coverage/dead zones						
Data plans/data limits						
Dropped calls						
Durability						
Glare						
Interoperability	0	0				
Logging in (PINS, passwords, usernames, etc.)						
Outdated/old						
Permission/access to apps						
Policies about usage						
Price: too expensive				$\bigcirc$		
Subpoena possibility for personal smartphone						0
Subsidy for personal smartphone (insufficient or no subsidy)						

29. Have you exp	perienced other	problems with	n your <b>SMARTP</b>	PHONE (work-issue	ed
or personal)?					
No					
Yes					
30. Please list.					

#### 31. With your **LAPTOP**, have you ever experienced problems with:

	Always	Most of the time	Sometimes	Rarely	Never	Does not apply
Battery life						
Durability						
Glare						
Internet connection			$\bigcirc$			
Interoperability						
Logins/passwords						
Outdated/old						
Power source/recharging issues						
Price: too expensive						
Size/bulkiness						
Software crashes						
Software updates/upgrades						
Weight						

### 32. Have you experienced other problems with your **LAPTOP?**

$\bigcirc$	NO
	Yes

33. Please list.		

### 34. With your **TABLET**, have you experienced problems with:

	Always	Most of the time	Sometimes	Rarely	Never	Does not apply
Battery life						
Durability						
Glare						
Internet connection				$\bigcirc$		
Interoperability						
Logins/passwords						
Report writing						
Size/bulkiness						
Touchscreen						
Weight						

	No		
$\bigcirc$	Yes		
36	. Please list.		

### 37. With your **DESKTOP COMPUTER**, have you ever experienced problems with:

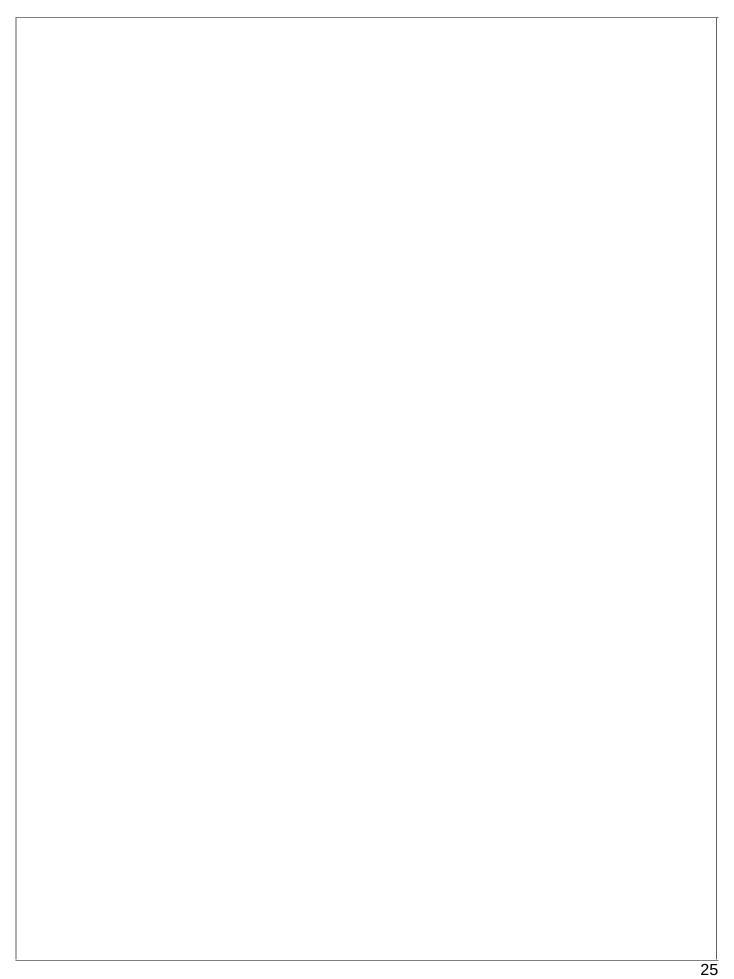
	Always	Most of the time	Sometimes	Rarely	Never	Does not apply
Internet connection						
Interoperability						
Logins/passwords						
Outdated/old						
Price: too expensive						0
Software crashes						
Software updates/upgrades						

38.	Have you exper	ienced other	<sup>,</sup> problems v	with your	DESKTOP	COMPUTER?

(		No			
(		Yes			
•	39.	Please list.			

Use of technology in a MAJOR DISASTER.
The next set of questions focus on your use of technology during major disasters, natural or man-made.
40. Have you ever worked in public safety during a MAJOR DISASTER, something that disrupts your day-to-day operations? For example, an MCI (mass casualty incident).
<ul><li>○ No</li><li>○ Yes</li></ul>
41. Have you ever worked in public safety during a LARGE, PLANNED EVENT? For example, a concert, football game, or parade.
○ No ○ Yes

# **Public Safety Survey on Communication Technology: EMS** 42. Think about the technology you use during a MAJOR DISASTER. How similar or different is it than the technology you use during your day-to-day work? I use mostly the same technology. I use some of the same technology, with some specialized technology. I use very different technology. 43. Please list the **specialized** technology you use during a **MAJOR DISASTER**. 44. Please list the most important technology you use during a MAJOR DISASTER. 45. In addition to the technology you use day-to-day, which of the following do you think would be helpful during a MAJOR DISASTER? Check all that apply. Deployable communication technology (such as cell towers on wheels) **Drones** Helicopters Mobile command centers Remote sensing (by aircraft or satellite) **Robots** Other (please specify)



### Use of technology in a LARGE, PLANNED EVENT.

The next set of questions focus on your use of technology during a LARGE, PLANNED EVENT. 46. Think about the technology you use during a LARGE, PLANNED EVENT. How similar or different is it to the technology you use during your day-to-day work? I use mostly the same technology. I use some of the same technology, with some specialized technology. I use different technology. 47. Please list the specialized technology you use during a LARGE, PLANNED **EVENT.** 48. Please list the most important technology you use during a LARGE, PLANNED EVENT.

4	19. In addition to the technology you use day-to-day, which of the following do you
1	hink would be helpful during a LARGE, PLANNED EVENT?
	Deployable communication technology (such as cell towers on wheels)
	Drones
	Helicopters
	Mobile command centers
	Remote sensing (by aircraft or satellite)
	Robots
	Other (please specify)

VR (Virtual Reality)
These questions ask you to think about the use of VR (virtual reality) in your work.
50. Do you think VR (virtual reality) would be useful for training in your work?
○ No
Yes
O Not sure
51. Do you see <b>VR</b> as useful in other ways for your work?
○ No
Yes
O Not sure
52. Please explain.

53. While this survey is focused on communication technology, we are also nterested in your views on medical technology. Please list the medical devices applications/software that you think are most important for your work.						
54. Is there any technology in y		ou would lik	ce to tell us	about your e	experience with	

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Thonk you for taking the auryoul						
Thank you for taking the survey!						