

Grant Announcement and Request for Participation

What: The Public Safety Innovation Accelerator Program is a **grant program offering funding to study and improve mobile communication systems for Police, Fire, and EMS**. Funding is available to both research scientists and engineers and to public safety agencies.

When: Applications are due on **February 28, 2017**, and **letters of interest (described below) should be sent ASAP**.

Why (for us): Our mission is to help you do your job by improving technology for future generations of emergency communication systems. We want first responders to have the best of both worlds from what your current radios provide and the Internet- and data-oriented features of cellular systems, in addition to entirely-new capabilities. **We need your on-the-ground expertise to ensure that the research we pay for is actually appropriate for your needs.**

Why (for you): We want to understand and solve the problems you face in the field. The specific role you will have will depend upon the project(s) you choose to participate in. However, **by participating you will have a role in developing future technology meant to better support your work**. (Please see the section “What technology is this grant for?” and “What can my public safety agency bring to the table?” for more information). **Costs associated with personnel, equipment and other aspects may be eligible to be included as part of an application for this grant program**. If successful, this grant program may lead to the increased availability and capability of technologies that will help you do your job better and more safely.

How: There is a very low-effort way to get involved: **Your organization can send an e-mail to pscr@nist.gov indicating that you are an “interested public safety organization”** and describing something about what you could bring to the table. If you do that, we’ll share your information with technical/engineering researchers who ask for it, and they may get in touch with about being a partner on a grant application they’re preparing. Depending on the technical area, we either require or strongly encourage applications to include a public safety organization, and most researchers and technology companies don’t already have existing relationships with public safety, so we anticipate that the odds of finding an interested partner are pretty good. Additionally, if you want to do something bigger and have primary responsibility for it, **you’re encouraged to apply for a grant directly**. The grant program is described on our [group’s grants page](https://www.nist.gov/ctl/pscr/funding-partnerships/grants) (<https://www.nist.gov/ctl/pscr/funding-partnerships/grants>) and in a [federal notice of funding opportunity](#).

What technology is this grant for? Official answers can be found in the [grant document](#), section I.A – I.F. In plain English, here’s what we’re working on:

- “Mission-critical voice:” The kind of voice communication your radios already give you, but with a lot of technical changes under the hood.
- “Location-based services:” Better technology for understanding where responders are and providing situational awareness. Most of all, this means being able to locate and rescue injured or endangered responders inside buildings.

- “Analytics:” The ability to collect, store, share, and use digital information to make decisions. This can mean anything from using run reports to optimize unit staging, automatically detecting weapons in surveillance video, or recommending evacuation routes in a major disaster.

This grant also covers several “supporting” areas:

- “Communications demand modeling:” Understanding who needs to talk to who, when and where, as well as how. We need to understand how you really use your current radios (and cell phones, and laptops, and other communication systems), and where it works and doesn’t work, so that future systems can be designed and evaluated around your needs. If you read the grant document this area sounds very technical, but it also really needs on-the-ground public safety expertise: Your records, your procedures, your knowledge of what happens.
- “Research and Prototyping Platforms:” Tools for researchers and engineers to use so that they can get their ideas built and tested better and faster. This is probably an area that’s mostly technical, but your insight into what kinds of equipment you could realistically carry around for testing and demonstration purposes is useful.
- “Resilient Systems:” This is all about making sure that whatever technology gets built keeps working when stuff goes wrong. That includes things like disasters that damage power and radio towers, emergencies in remote areas (e.g. wildfires), cell phone apps that keep working out of coverage, etc. Here again, a public safety perspective is invaluable for understanding what you need to do, what you need from your communication systems, and what’s practical or not in those situations.

What can my public safety agency bring to the table? Probably a lot of things we haven’t thought of, but here are things we know we need:

- Your knowledge of operational requirements: While there are some companies and researchers who already understand the needs of public safety agencies, most of the technology and research community does not. You can serve as a “sanity check” to ensure that proposed technology is both useful and compatible with real-world constraints. This applies across almost all of the grant areas.
- Opportunities to gather data and/or test systems in as-real-as-possible environments: What works with a camera on a tripod in a lab may not work with a helmet-worn camera in a fire, for example. If you can provide researchers with access to realistic environments (which could include training and exercises, as well as real calls) that will help them to develop technology which actually meets public safety needs.
- Your knowledge and records of how you do things now and what you’ve done in the past. This is especially true for the “Analytics” and “Communications demand modeling” areas: Other people may be able to bring technical skills, but they don’t bring the raw data. Half the battle is figuring out what information you have, what you might like to do with it, and what hoops you have to jump through to get access to it and share it.

Who are we? [NIST is the National Institute of Standards and Technology](#), a federal research and measurement lab. [PSCR is the Public Safety Communications Research Division](#) (formerly the Office of Law Enforcement Standards). Contact us at pscr@nist.gov.