

Unmanned Aircraft Systems Research for Law Enforcement



Unmanned aircraft systems offer significant benefits to the law enforcement community through the ability to quickly and accurately gather information about situations that affect public safety. There are many challenges to address, though, before unmanned aircraft systems transitions can safely, ethically, and effectively be used to support law enforcement missions, including aviation regulations, public perception, staffing and training, and safety and privacy concerns. RTI International partners with universities and public agencies around the world to better understand the social, cultural, and behavioral factors that will facilitate or impede this process.

Overview

Unmanned aircraft systems (UAS) are used to perform a variety of law enforcement functions, including crime scene investigations, crowd control, intelligence collection, transportation monitoring, search and rescue missions, and training. Other public safety-related uses include disaster evaluation support, hazardous materials investigation, and fire assessment.

RTI has conducted several research projects related to UAS, both independently and through partnerships with other research organizations. For example, we are working with North Carolina State University to conduct outreach and UAS training for law enforcement agencies and to develop new applications through test flights.

RTI is also part of the Institute for Homeland Security Solutions (IHHS) effort to study public opinion regarding UAS and identify innovative uses for unmanned aircraft. IHHS is administered by RTI in cooperation with Duke University, the University of North Carolina at Chapel Hill, and the North Carolina Military Foundation. The organization's overarching goal is to develop improved methods for law enforcement and other homeland security

personnel to collect, process, and analyze information on suspicious activity that is potentially related to terrorism and enhance response and recovery.

Our law enforcement-related experience also includes evaluating the impact of technology on policing strategies. Funded by the National Institute of Justice, the project examines how various technologies (1) support or inhibit the implementation of different policing strategies, (2) affect police outcomes, and (3) create efficiencies. The study will produce a research-based framework that agencies can use to facilitate the adoption, implementation, and use of technologies.

Areas of Expertise

RTI offers multidisciplinary expertise in survey design and implementation, agricultural studies, sensor development, policy research, scientific communication, public health research, environmental studies, research involving human subjects, and quality assurance/quality control processes. By combining our broad expertise with specific experience in UAS-related research, we are well positioned to navigate clients through this relatively new area of study.

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Project Highlights

The following is a sample of UAS-related research projects that RTI has conducted:

- Partnering with law enforcement organizations to develop innovative uses for UAS
- Examining the current and potential use of UAS by law enforcement and other public safety agencies to better understand operating skills requirements, use cases, and public reaction
- Commissioning research briefs on public perceptions and first responder-related issues for UAS
- Conducting general population surveys and social media analyses to examine public awareness and opinion about UAS in domestic airspace
- Collecting data on public opinion related to future UAS implementation into emerging markets and entering domestic airspace
- Working with stakeholders to gain insight into injuries that occur during operation of UAS
- Providing expertise in survey design, public health, and environmental health to organizations engaged in UAS testing and experimentation
- Studying research programs that use UAS to better understand technical and human factor requirements and developing guidelines for safe and appropriate use
- Coordinating industry groups to better understand the UAS transition process and identify areas in which policymakers, venture capitalists, industry leaders, and university experts can help facilitate the process
- Developing 3-D flight simulators and training tools for new aircraft, sensors, and applications in the United States and internationally

More Information

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