



Image provided by the Louisville (KY) Fire Department

DRONE AS FIRST RESPONDER PROGRAMS

Strategic Scan #4
July 2026



CPSE
CENTER FOR
INNOVATION



Drone as First Responder (DFR) Program Overview



Image provided by the Louisville (KY) Fire Department

Survey Responses

Total Distributed: 259

Responses: 102

Response Rate: 39.4%

The survey was sent to Chiefs of non-governmental/non-military Accredited Departments based in the United States.

Fire departments across the United States (US) are developing drone as first responder (DFR) programs. For this report, DFR programs are defined as operations where the drone is first to arrive on scene and provide live video footage. These programs do not replace first responders or their expertise.

This report uses data from the CPSE Center for Innovation's fourth Strategic Scan survey. This survey was shorter than previous surveys due to the recent emergence of these programs. While this report does not include actionable takeaways, an implementation guide will follow.

The purpose of this shorter Strategic Scan is to provide a snapshot of the types of calls DFR programs dispatch to, how drone footage influences response, and the logistics of DFR program operations such as how the drones are piloted and where they are docked. Data for this Strategic Scan were gathered in May and June of 2026 from fire chiefs representing agencies accredited by the Center for Public Safety Excellence® (CPSE®) Commission on Fire Accreditation International® (CFAI®). As with prior Scans, the findings are not intended to be representative of the fire and emergency service as a whole, but instead offer insight from departments that are currently operating a DFR program.

Results indicate that over a third (38%) of responding fire chiefs currently operate or collaborate on a DFR program, with almost three fourths (72%) of programs operating in collaboration with other agencies such as the police department. Drones are responding to a variety of incidents and the majority of operators have their FAA part 107 pilot's license. The most common changes to response as a result of drone footage are adding, reducing, or repositioning apparatus or other resources.

CONTENTS



PAGE 4

Number of
agencies with
DFR programs

PAGE 5

Most common
call types for
drone
deployment

PAGE 6

Number of
departments
using
autonomous
flight paths

PAGE 7

Operators and
their licensing

PAGE 8

Response
modifications
based on
drone footage

PAGE 9

Choosing
drone dock
placement

PAGE 10

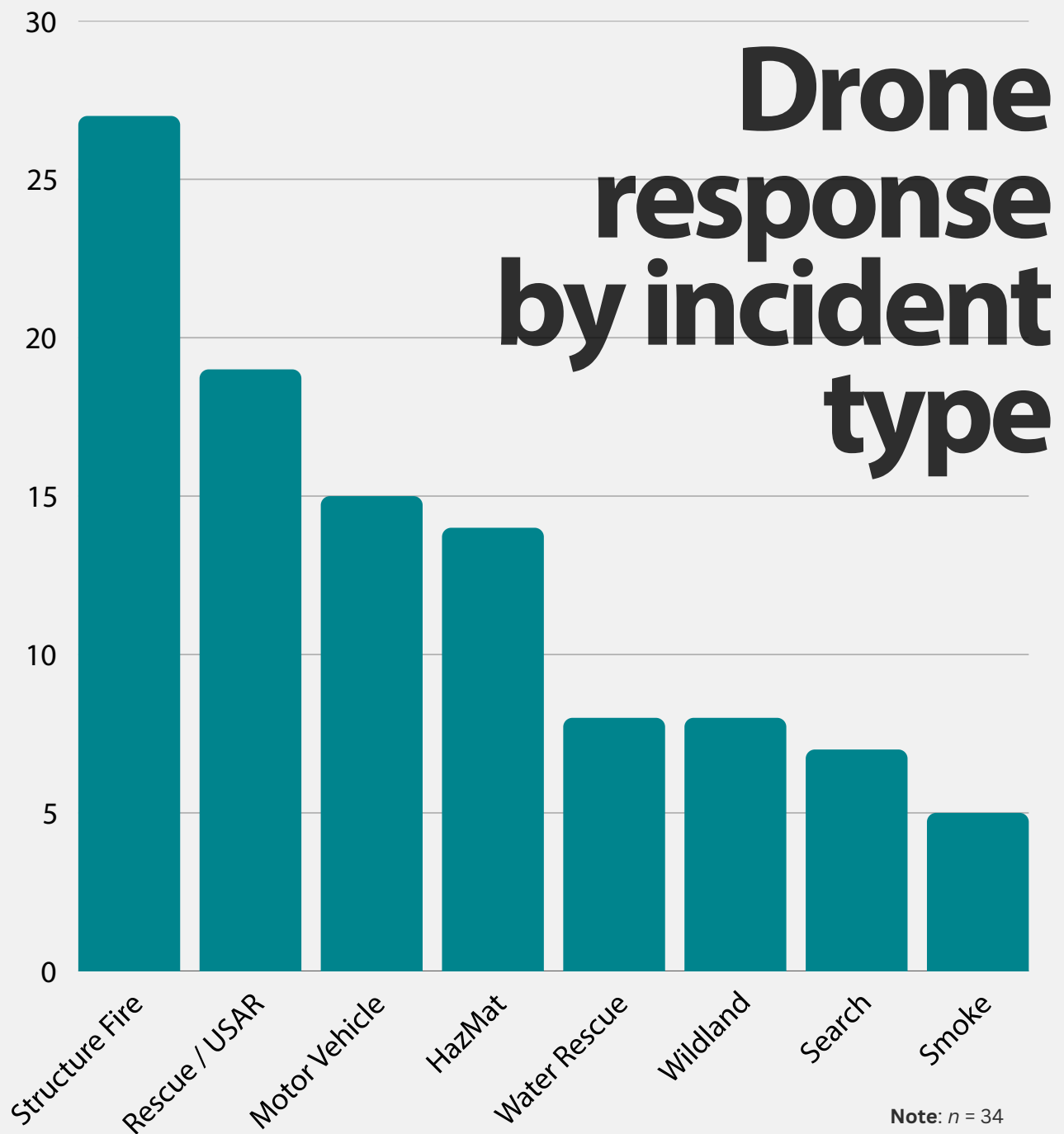
DFR Programs
in partnership
with other
agencies

38% of agencies are using drones as first responders



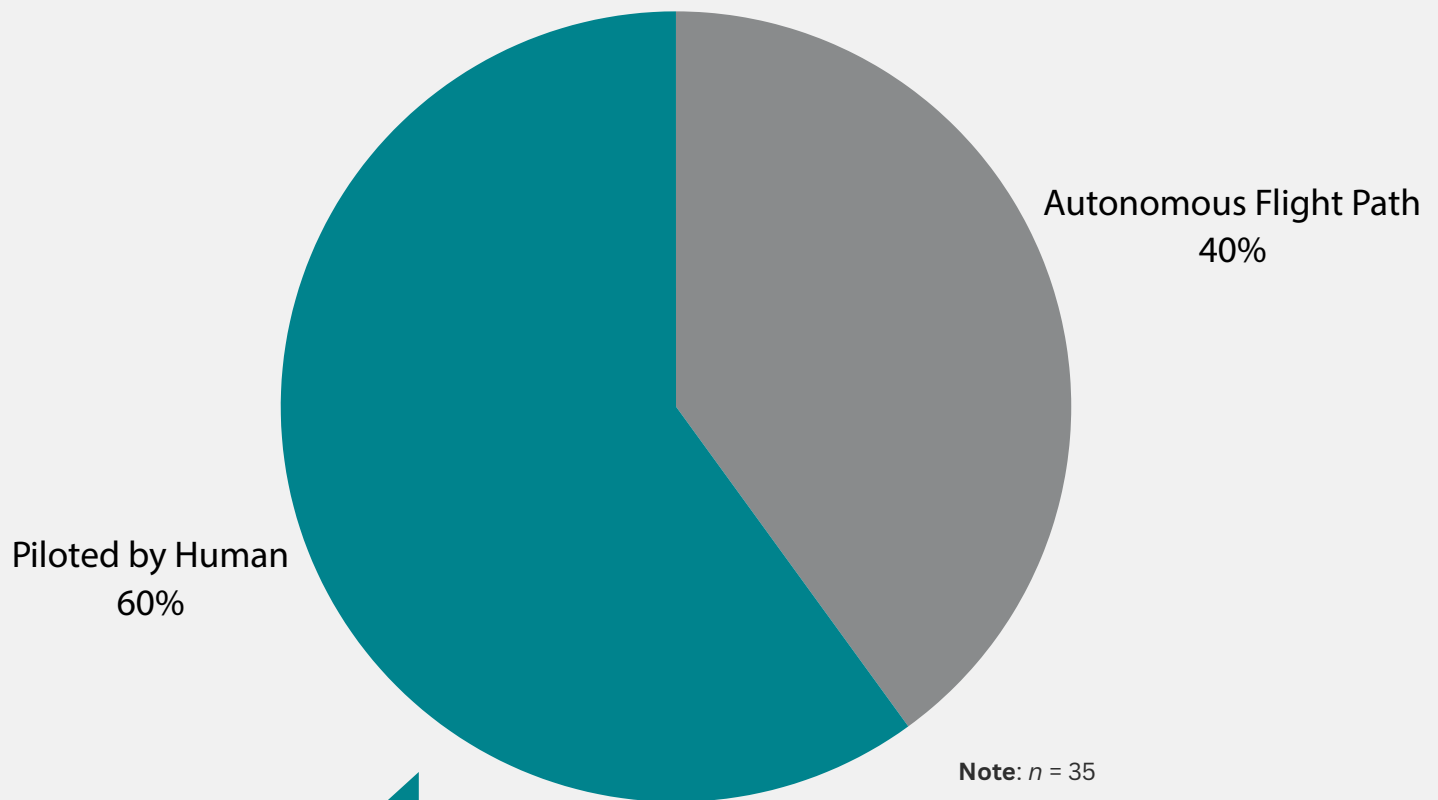
Image provided by the Louisville (KY) Fire Department

Of the 102 respondents, 39 fire chiefs indicated that their agency has a drone as first responder (DFR) program. For this report, a DFR Program is defined as one where the drone is first to arrive on scene and provide live video footage. These programs are not meant to replace actual first responders and their valuable expertise, but to provide additional context to the incident and improve situational awareness for responding crews.



A majority of respondents (27) indicated their drone is deployed to fire incidents and structure fires. Over half (19) deploy to rescues, including technical rescues and urban search and rescues (USAR) and 15 deploy to motor vehicle crashes and interstate accidents. Fourteen agencies' drones respond to hazardous materials calls, eight respond to water rescues, and eight respond to wildland, brush, or grass fires. Over a fifth of chiefs (7) responded that their drone helps with searches and missing persons and five mentioned deployment to investigate smoke. These responses depict the eight most common call types, and the options are not mutually exclusive, with single agencies deploying to multiple types.

Drone flight path determination



Of those that said the drone is piloted by a human, **62%** (13) have considered using autonomous flights paths

When asked how the drone's flight path is determined, 21 fire chiefs said it is piloted by a human, with the remaining 14 indicating that the drone follows an autonomous flight path using computer-aided dispatch (CAD) data. Of the 21 fire chiefs who use drones piloted by a human, 13 have considered using autonomous flight paths using CAD data while the remaining eight have not.

Pilots, operators, and pilot licensing

63% of agencies are using remote pilots

Note: $n = 32$

48% of agencies are using remote tactical flight operators (rTFOs)

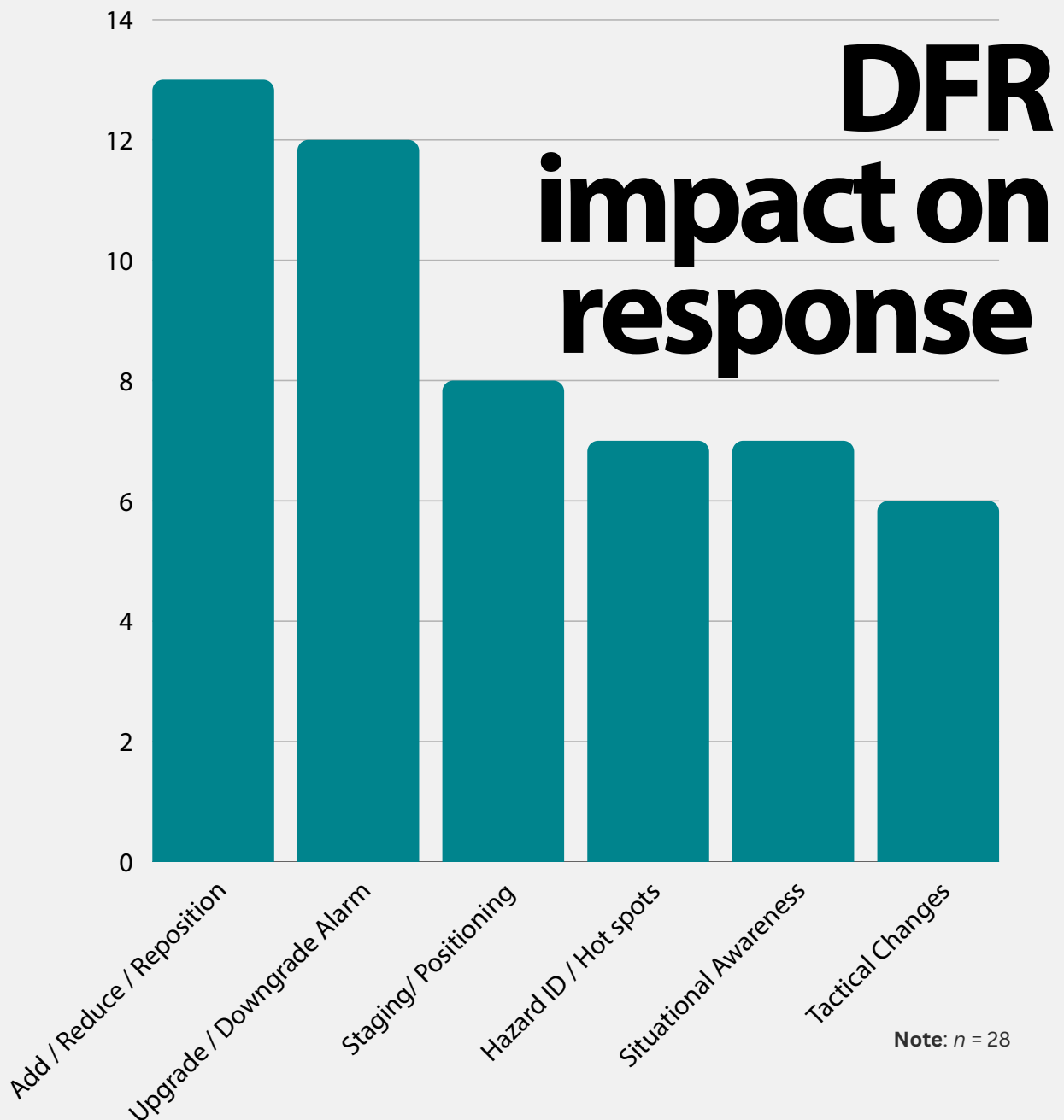
Note: $n = 31$

94% of operators have an FAA part 107 pilot's license

Note: $n = 32$

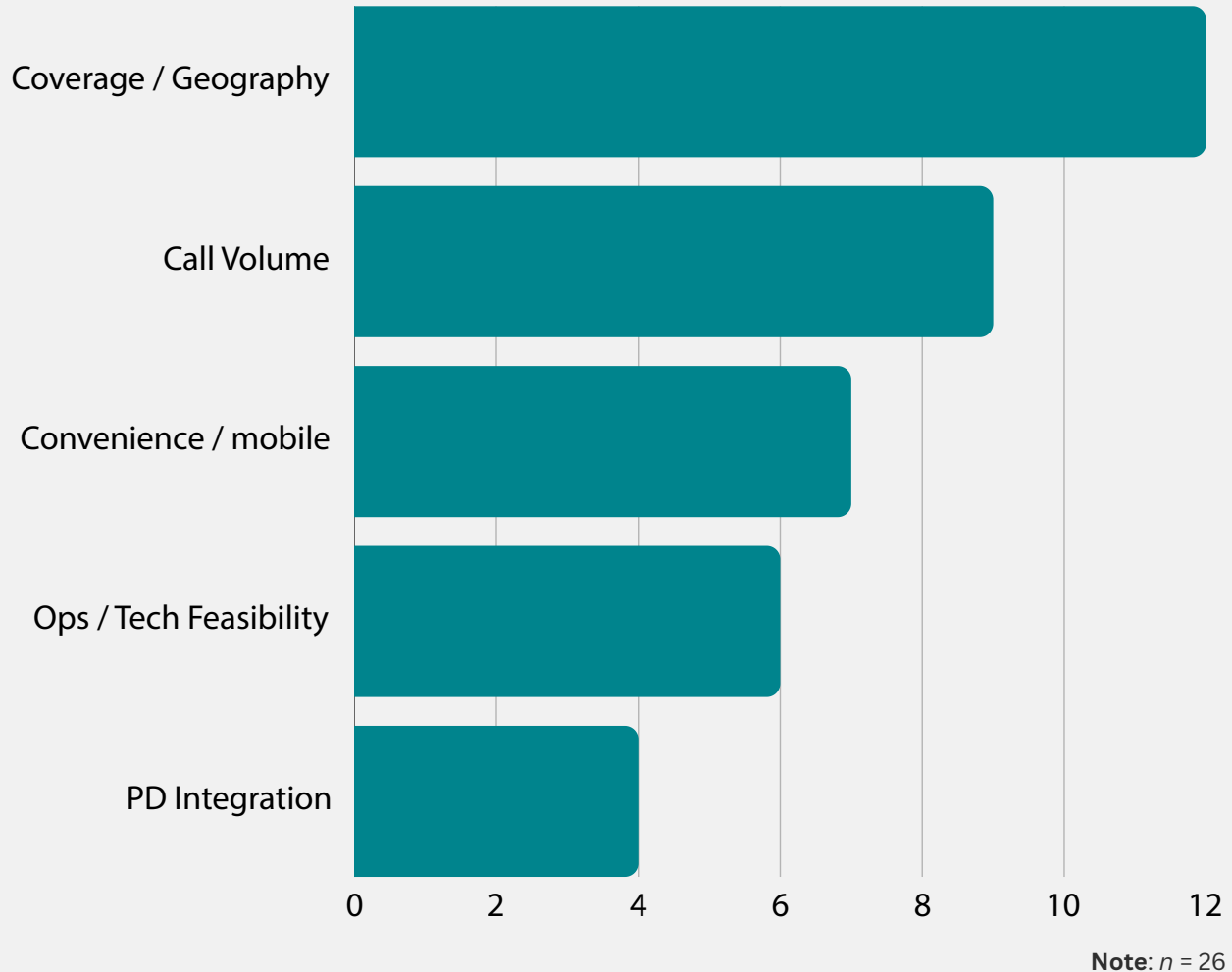
Almost two thirds of responding fire chiefs (20) indicated they use remote pilots and less than half (15) use remote Tactical Flight Operators (rTFOs). Remote pilots help with navigation and ensure the drone maintains airspace compliance, while rTFOs focus on processing the video feed, interpreting it, and relaying communications to command staff. Because the roles are different, agencies may have both. When asked if the pilots are self-certified by the agency or have their FAA part 107 pilot's license, 30 fire chiefs indicated that their pilots have their FAA license while two fire chiefs indicated self-certification through the agency.





Almost half of responding fire chiefs (13) indicated that they add, reduce, or reposition resources, apparatus, and/or specialty teams because of drone footage. A dozen agencies use the intel to upgrade or downgrade response levels. Over a quarter (8) of agencies use footage to assist with apparatus placement and staging or command post positioning and seven agencies are able to focus response by using the drone to identify hazards, fire extensions, and hot spots. A quarter (7) of the agencies use footage for general situational awareness and decision-making support and six change tactical modes based on footage. These responses depict the six most common changes, and the options are not mutually exclusive, with single agencies implementing multiple modifications.

Drone siting considerations



A little less than half (12) of responding fire chiefs selected dock locations that maximize geographic coverage or jurisdictional reach and minimize response times. A little more than a third (9) utilized demand-driven placement, which used data such as call volume, incident types and their risk, and population density. Seven departments prioritized convenience and placed at headquarters or maximized mobility with drones that remain with certain command personnel or vehicles, or otherwise indicated no permanent site. Almost a quarter of responding agencies (6) prioritized operational or technical feasibility such as flight time and range, airspace restrictions, or availability of trained staff. Four agencies mentioned that their program was integrated into the local police department and locations were determined by PD or located at police stations. These were the five most common responses and are not mutually exclusive, with single agencies often using multiple metrics to determine dock sites.

72% of programs are in partnership with another agency



Image provided by the Louisville (KY) Fire Department

When asked if their DFR Program is in partnership with another agency, such as the police department, nearly three quarters (73%) of respondents said yes, it is in partnership. The fire chiefs that collaborate with other agencies on their DFR program were then asked if they are able to contribute to decisions, policies, and protocols regarding the program and all fire chiefs answered in the affirmative.

Note: $n = 30$