USING UNMANNED SYSTEMS FOR SAFETY AND SECURITY

PROTECTING CRITICAL INFRASTRUCTURE

The rapid proliferation of unmanned systems designed for air, land, and water (represented by the term "UxS") ranges from low-end commercial platforms suitable for hobbyists to high-end platforms appropriate for jurisdictional and organizational use. Public safety and security professionals can leverage these diverse and powerful systems for meeting their public safety and security objectives – and are already doing so in missions such as firefighting, special event security, law enforcement, and patrol via air, land, and water. However, CNA believes that long before an organization begins to explore specific systems, it should begin with analysis and generation of requirements.
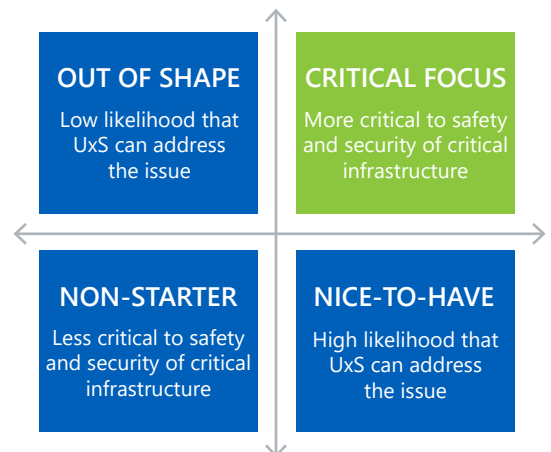
ANALYSES

CNA has a long history of conducting capability, readiness, and cost-benefit analyses for local, state, regional, and federal organizations (including the military). From assessing the readiness of specialized teams (such as Bomb Squads, Special Weapons and Tactics (SWAT) Teams, and Chemical, Biological, Radiological, Nuclear (CBRN) Teams) to evaluating the costs and benefits of employing UxS to support installation security at US Navy installations', CNA tailors analyses to meet the need of its sponsors. CNA can use elements of scenario-based planning, gaming, and design thinking to identify opportunities to improve the operational uses and efficiency of safety and security activities around critical infrastructure.

PRIORITIZATION

Not all gaps and opportunities are created equal. CNA can help organizations examine their needs in day-to-day and incident response public safety activities that lend themselves to unmanned technologies. Using simple but effective methods, such as walking stakeholders through the matrix at right, CNA can help jurisdictions prioritize the missions that are most critical to safety and security, and most able to be accomplished using UxS.

OUT OF SHAPE Low likelihood that UxS can address the issue	**CRITICAL FOCUS** More critical to safety and security of critical infrastructure
NON-STARTER Less critical to safety and security of critical infrastructure	**NICE-TO-HAVE** High likelihood that UxS can address the issue

GENERATING REQUIREMENTS

Using wargaming and other techniques, CNA can help stakeholders better understand what they need to fill their gaps or take advantage of strategic opportunities. This process identifies specific requirements and capabilities that public safety and security practitioners would need in any UxS system to increase their effectiveness and efficiency. CNA designs these techniques to ensure that stakeholders produce tangible results about the following:

- The characteristics any UxS solution must include
- How potential solutions can be integrated into current response frameworks and practices
- Cost limitations, including initial, maintenance and logistical support, and training requirements
- Constraints around system complexity, including learning curve variables and requirements around the ability to update systems based on need

CNA can help organizations complete a thorough analysis and prioritization process, generating specific, targeted requirements for current and future UxS needs.

To learn more, contact:

Dawn Thomas, Director | thomasdh@cna.org

Addam Jordan, Chief Scientist | jordana@cna.org

Dedicated to the Safety and Security of the Nation

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