

Emerging Threats and Terrorist Malign Use of Commercial Technologies

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Agenda

- What Is the National Counterterrorism Innovation, Technology, and Education Center (NCITE)?
- Terrorist Tactical Innovation.
- Terrorist Use of Commercial Technology.
- Concluding Thoughts.



PART 1.

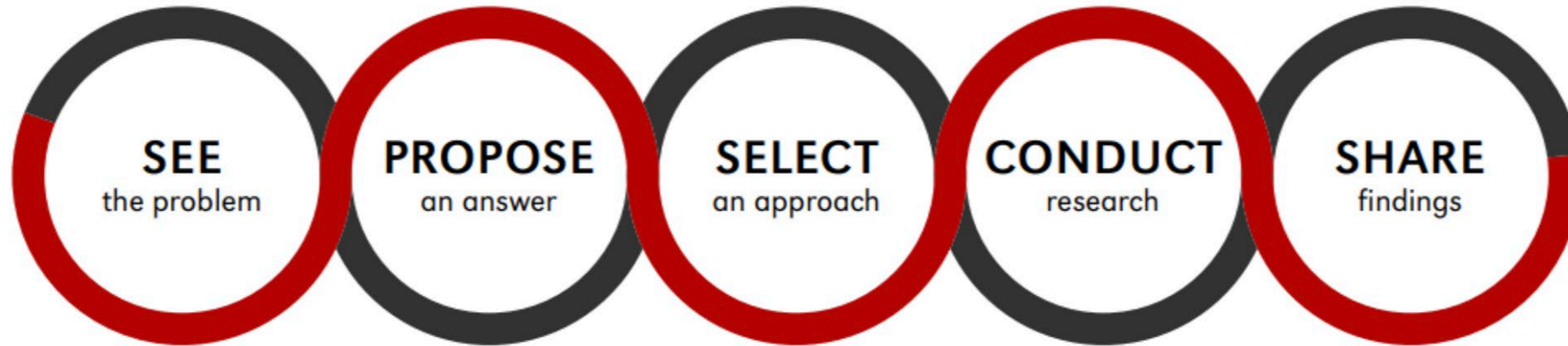
What Is NCITE?



NCITE Mission and Priority Areas



CUTTING-EDGE, USEFUL RESEARCH



NCITE is the Department of Homeland Security Center of Excellence for counterterrorism research. We are the nation's leading academic center for the **study of emerging and novel terrorism threats**.

Our **mission** is to produce actionable research through a user-inspired approach, which combines social science, business, and technology for the security of the homeland. We aim to build a community of the most innovative, curious, and security-minded students and researchers to be part of the call to keep our country safe.



- **TERRORISTS.** Characterization of Persistent and Emerging Threat Actors
- **TACTICS.** Malevolent Innovation and Use of Technology.
- **TARGETS.** Critical Infrastructure Security and Defense.



PART 2.

Terrorist Tactical Innovation.



Terrorist Tactical Innovation

- Historically, the odds of success—and even survival—are rarely in terrorists' favor.
- Terrorist organizations operate in environments often characterized by tight surveillance, time-tested security measures, and a lethal state apparatus.
- The dilemma: While remaining clandestine, terrorist commanders must maintain basic mechanisms of command and control as well as the capacity for lethality.
- Innovation offers the means to walk the tightrope.



Terrorist Tactical Innovation

- Innovation centers on **solving a problem or challenge** with the implementation of an idea that is both novel and useful.
- Terrorist attacks are innovative when they are **novel and generate effective surprise** in their beholder while remaining useful and relevant.
- But....there are risks to innovation!
 - Hezbollah use of pagers for command, control, and communications.
 - The 2001 Al-Qaeda "Shoe Bomber."
- Identifying patterns in terrorist innovation allows for a proactive and resource-efficient defense against terrorist threats.



PART 3.

Terrorist Use of Commercial Technology.



Terrorist Use of Commercial Technology

- Enabling factors
 - Democratization of sophisticated technology.
 - Increased affordability.
 - Rapid market growth.
- Value to terrorist leaders and operatives
 - Level the playing field.
 - Open access to new targets.
 - Exploit underdeveloped counter-methods.
 - Gain media attention.

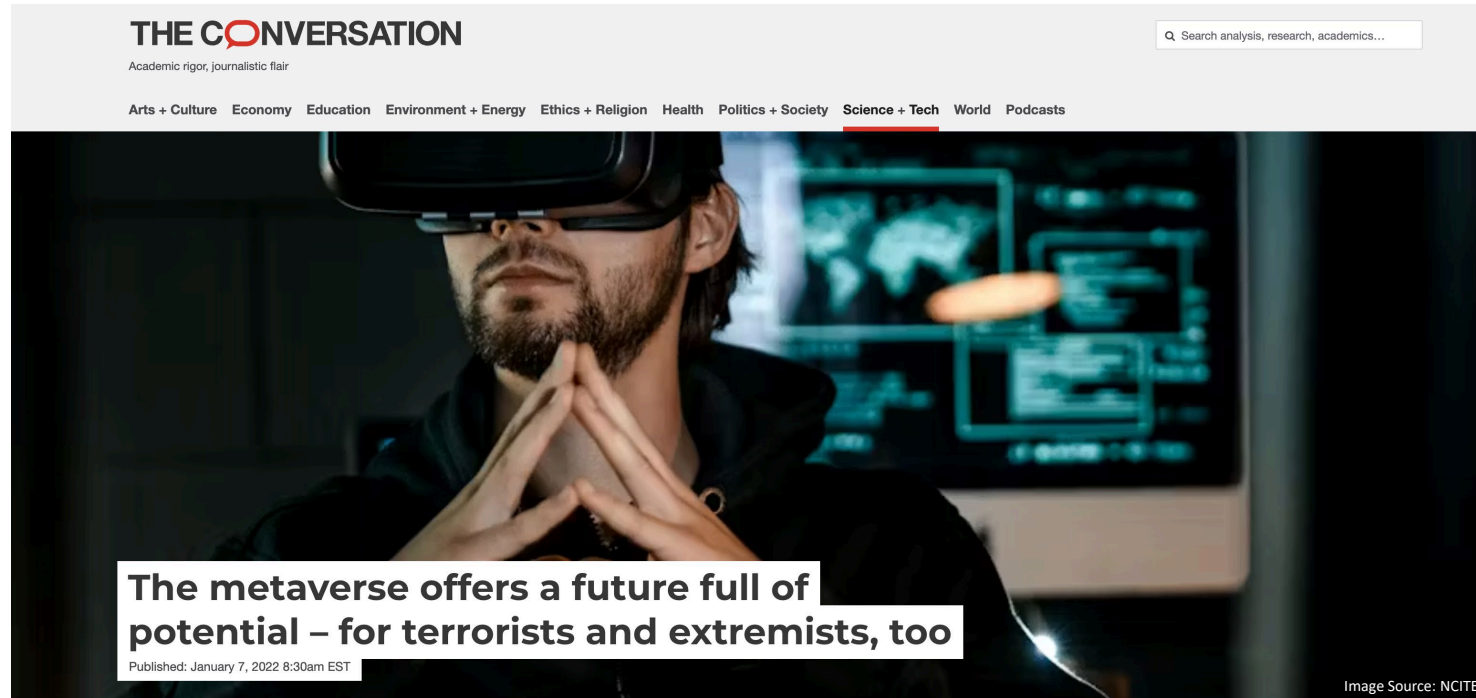


Terrorist Use of Commercial Technology

- Extended reality.
- Unmanned systems.



Extended Reality



Violent extremists could find the metaverse a useful recruiting and organizing tool – and a target-rich environment. D-Keine/E+ via Getty Images

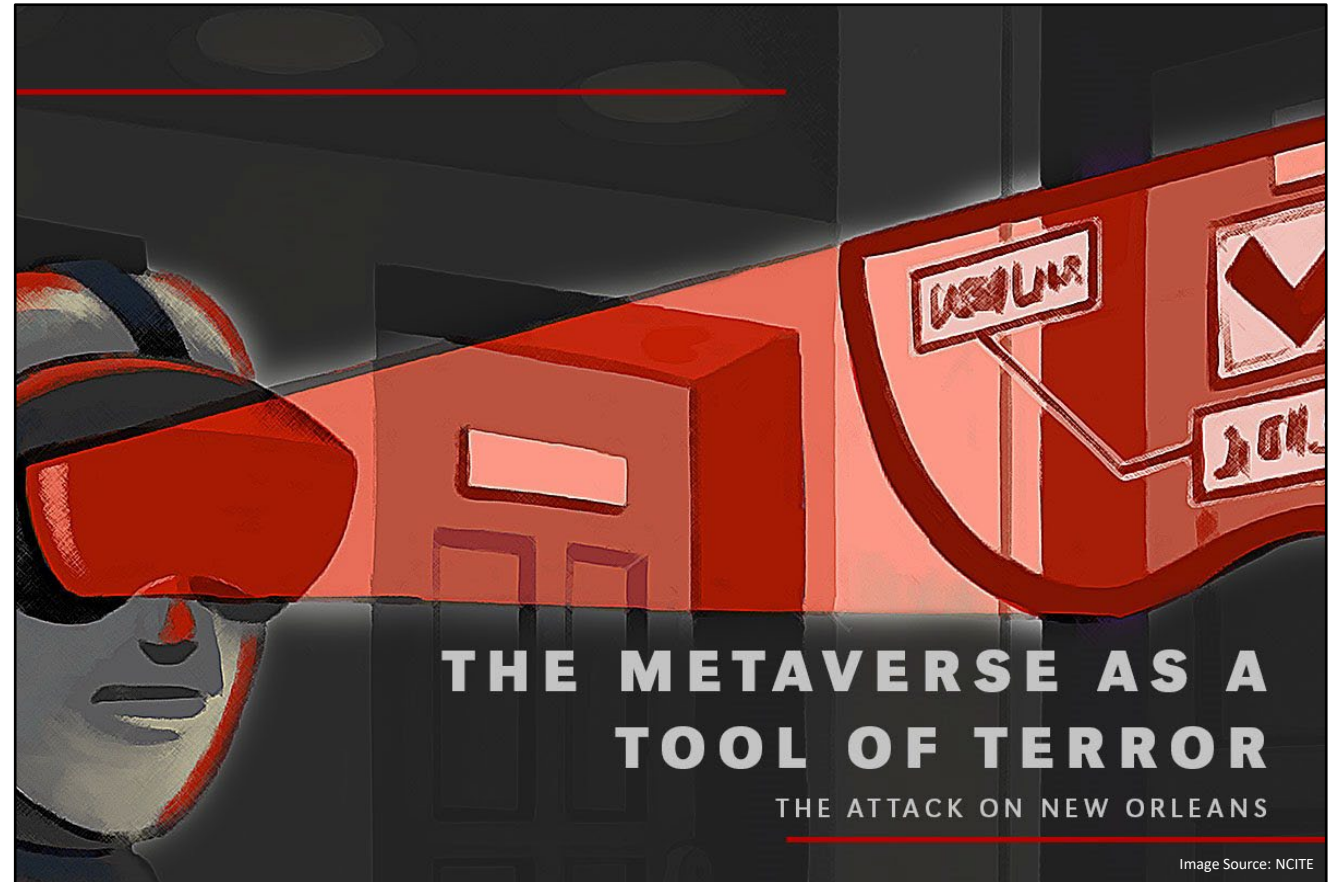


Extended Reality

- The "**metaverse**" is here.
 - An immersive, blended reality version of the internet.
 - Permits people to move more or less freely from one blended environment to another.
- New opportunities for terrorist recruitment, planning, and targeting.
- Interdisciplinary teams tackle complex challenges.



Extended Reality



Unmanned Systems

WAR ON THE ROCKS



THE MILITANT DRONE PLAYBOOK

AUSTIN C. DOCTOR AND JAMES IGOE WALSH
COMMENTARY

AUGUST 12, 2021



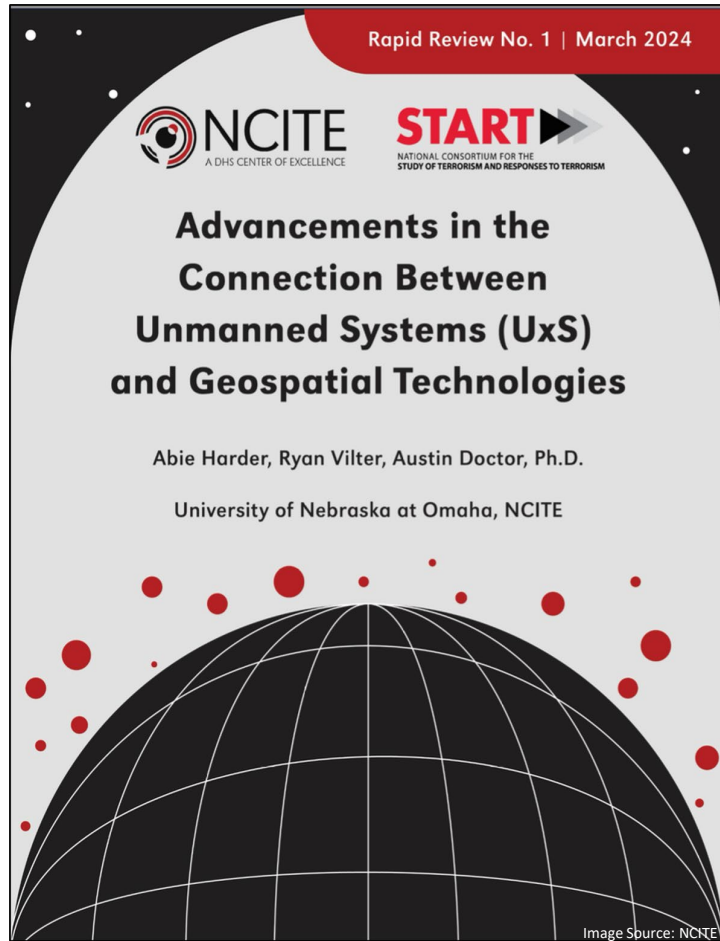
Image Source: U.S. Army

Malign Use of Drone Technology

- Commercial-off-the-shelf drones present credible threats to U.S. persons, critical infrastructure, military personnel, and elected officials.
- These can be used directly to cause harm and disruption, as well as to support operational planning.



Unmanned Systems



- As a tool, unmanned aerial systems (UASs) present a versatile threat, with appeal across the terrorist ecosystem.
- Terrorists see value in UASs beyond their lethal capacity.
- The net balance of barriers and enabling factors to terrorist use of UAS points sets the stage for a concerning uptrend.
- Malign use of unmanned systems will likely extend beyond the aerial domain.

PART 4.

Concluding Thoughts.



Concluding Thoughts

- Malign innovation can also work in the opposite direction – toward more rudimentary methods.
- NCITE work on terrorist use of commercial technology is rooted in this broader framework.
- The malign use of commercial technology is best understood when we can identify how and under what conditions it provides a unique value.



Concluding Thoughts

- Other technologies are shaping the threat landscape, e.g.:
 - Artificial intelligence.
 - Additive manufacturing.
 - Internet of Things (IoT).
- Emerging technologies also open new opportunities for counterterrorism professionals.
- Stay ahead of the innovation-adaptation cycle with a mandate.



Questions? Want to Follow Up?

You can contact us at ncite@unomaha.edu!



About the NCITE Award



**Homeland
Security**

Science and Technology



NCITE

NATIONAL COUNTERTERRORISM,
INNOVATION, TECHNOLOGY,
AND EDUCATION CENTER

A U.S. DEPARTMENT OF HOMELAND SECURITY CENTER OF EXCELLENCE

Grant Acknowledgment

- This material is based on work supported by the U.S. Department of Homeland Security under award number 20STTPC00001-05.

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