



Autonomous Weapons

Often misleadingly referred to as “killer robots,” autonomous systems can interact with their environments by gathering information, determining a course of action and undertaking actions to achieve a goal, all with limited or no human interaction. In the realm of weaponry, autonomous technologies have most prominently been deployed in unmanned aerial and submersible drones. Such systems use sensors to monitor their environment and detect objects of interest, algorithms to discern targets from non-combatives, and onboard weapons to engage targets.

There are [varying levels](#) of system autonomy depending on human involvement, but the full measure of an autonomous weapon system is its ability to conduct this process without the need for human decision-making. Autonomous systems are attractive because of their relatively low cost and the way in which they can minimize danger to human operators.

Proliferation Concerns

Autonomous weaponry has already proliferated to a significant degree and is likely to spread further. [Autonomous weapon systems](#) are generally cheaper and easier to produce than other highly technical and intensive means of delivery, and do not require extensive training or dedicated personnel to operate. They represent a low-cost and expendable asset that can be procured and deployed in large numbers and are capable of neutralizing far more costly and advanced weapon systems. Ukrainian forces, for example, have [successfully used drones](#) to drop Soviet-era RKG-3 anti-tank grenades retrofitted with 3-D printed tail fins atop Russian tanks. This asymmetric advantage exemplifies why drone technologies will continue to proliferate. As the rapid commercialization of autonomous technologies expands access to these platforms, autonomous systems will likely increase the ability of terrorist and non-state groups as well as lone wolf actors to inflict attacks. Use of chemical or biological agents also becomes an acute concern given how much better [suited for delivery](#) drones are as opposed to missiles.