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Ukraine is getting Switchblade. It should be just the first wave of loitering munitions for Kyiv.

Two experts from the Foundation for Defense of Democracies argue that loitering munitions are the right weapon for Ukraine, and call on its supporters to open their arsenals.

By RYAN BROBST and BRADLEY BOWMAN on March 18, 2022 at 11:53 AM



A US Marine launches a Switchblade Drone during a training exercise at Camp Lejeune, N.C., July 7, 2021. (U.S. Marine Corps/Sarah Pysher)

Loitering munitions — essentially small suicide drones capable of tracking a target and then striking it — have been around for years, but the technology emerged as a key weapons in the 2021 conflict between Armenia and Azerbaijan. In the kind of urban warfare occurring in Ukraine, the system may be even more valuable. In a new

op-ed, two Foundation for Defense of Democracies experts lay out why loitering munitions are the perfect tool for Ukraine's resistance and what systems could be sent to Kyiv.

Hours after Ukrainian President Volodymyr Zelenskyy delivered an impassioned plea for help to the U.S. Congress on March 16, President Joe Biden announced that Washington will provide \$800 million in additional security assistance to Ukraine, including 100 Switchblade loitering munitions (LMs), commonly referred to as "suicide drones." While members of Congress have pushed for the potential transfer to Ukraine of Polish MiG-29s, the White House is wise to prioritize weapon systems that can quickly bolster Ukrainian combat capability while minimizing logistical burdens and vulnerability to Russian attack.

The problem, however, is Ukraine will likely expend those 100 Switchblades in mere days, and the variant of the Switchblade Washington is most likely sending is of no serious use against Russian armor. Accordingly, Washington should work with NATO allies to urgently provide Ukraine with additional shipments consisting of greater quantities and varieties of loitering munitions, or LMs.

LMs are a combination of missiles and aerial surveillance drones. They blend the ability to maneuver, conduct surveillance, and strike targets into a single platform, reducing the time between detection and engagement of a target. That could prove decisive for Ukrainian defenders who may encounter more close-quarters urban combat in the coming days.

For more coverage of Russia's invasion of Ukraine, click here.

LMs vary in size and capability. Loiter time above potential targets can range from minutes to hours, while their munition can be sized to target troops, equipment (with and without armor), or military infrastructure. The systems carry cameras to identify targets and transmit images back to the operator. LMs can be difficult for adversaries to detect and destroy because of their low radar, visual, and thermal signatures.

Some LMs can be mounted on and launched from ground vehicles. Smaller versions, such as the Switchblade, can be carried even in backpacks and employed by individual soldiers. This will provide Ukrainian infantry squads with increased combat power that can be easily transported, concealed, and operated. And unlike manned aircraft

and larger drones, LMs don't depend on airfields for employment. That will create real problems for Russian forces, which will have to assume that any Ukrainian infantry may have this capability.

Ukraine has already employed some types of drones during the conflict. The Ukrainians have used their Turkish TB-2 armed drones, which are not loitering munitions, to devastating effect, as demonstrated in numerous videos on social media. Turkey provided Ukraine with a much-needed resupply of these drones during the conflict's first week. TB-2s, however, are quite large, with a wingspan of approximately 12 meters, and must operate from fixed airbases that can and have been targeted by Russia.



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To help address urgent military requirements for smaller drones, Ukraine has recruited drone hobbyists operating commercial drones to conduct reconnaissance, and Ukrainians have sometimes resorted to jerry-rigging explosives to the bottom of commercial drones. Ukraine has even created a basic LM system by pairing the Punisher drone with a smaller reconnaissance drone called Spectre, which together have reportedly conducted strikes.

The United States and likeminded allies should immediately send more inexpensive commercial systems instead of forcing Ukraine to rely on Chinese DJI drones, which might compromise the operator's information or be restricted from flying in certain areas via geofencing. But LMs can fill an important gap between the TB-2s (which rely on airfields and incur a significant logistical burden) and makeshift commercial drones that take time to prepare and are less effective than LMs in targeting ground forces.

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Accordingly, the United States and likeminded allies should systematically equip the Ukrainian military with a large arsenal of purpose-built LMs. This is especially important because Russia may be starting to jam the command and control of TB-2 drones. Moscow has also begun to better integrate its own reconnaissance and combat drones, including the ZALA KYB loitering munition.



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“The committee urges focus on the most rapid possible development, testing, and fielding of a more capable SHORAD system and would favorably consider an appropriate reprogramming request to get this started,” wrote HASC Chairman Adam Smith and Rep. Mike Rogers, its top Republican.

By VALERIE INSINNA

There are several different LMs that countries willing to provide lethal aid to Ukraine have in their arsenal. The aforementioned U.S. Switchblade has seen service in Afghanistan. But while it is effective in short-range urban combat and ambushes on unarmored convoys, the Switchblade has limited range compared to some other LMs. And contrary to some current reporting, the Switchblade 300 variant Washington appears to be sending Ukraine (as opposed to the Switchblade 600 variant) cannot destroy most armored vehicles, due to its small munition. Plus, the 100 Switchblades announced this week are only a fraction of the quantity of LMs that Ukraine needs.

So, while Congress should press the administration to send Ukraine more American-made LMs, the United States should solicit help from other countries as well. Turkey operates the Kargu-2, which has seen combat in Libya, and Australia manufactures the Drone-40, both of which can be useful in an urban environment.

Poland's Warmate-series of LMs can strike targets out to roughly 9 km. The Warmate's portability and range make it suitable for disrupting Russian supply convoys from a safe distance.

If these LMs are not already being sent to Ukraine en masse, they should be.

Notably, Israel operates some of the most advanced LM capabilities but thus far has not provided Ukraine with lethal aid, needing to tread carefully with Moscow given that Russia could hamper Israeli operations in Syria against their arch-enemy, Iran. Not providing military capabilities to Ukraine may also enable Jerusalem to help mediate an end to the war. However, if Israel decides to permit third-party transfers of Israeli-made weapons to Ukraine, the Harop and Orbiter LMs should be at the top of the list.

LMs can provide Ukraine with a robust additional capability to strike Russian forces from the air, especially as those forces linger on roads, consolidate around Ukrainian cities, or move into urban areas. LMs can deliver this capability in large quantities at a fraction of the cost and logistical footprint associated with operating and maintaining fighter jets or large drones.

The U.S. arms shipment announced Wednesday is a positive step, but it should not be the last. Working with allies, Washington should urgently send another tranche of weapons to Ukraine, and that shipment should include a greater quantity and variety of loitering munitions.

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