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# Has Artificial Intelligence Triumphed over Terrorism?

## Lessons learned from the IDF's use of advanced technology in Operation Guardian of the Walls

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### Introduction

Operation Guardian of the Walls (GW) took place during May 2021 as another ongoing round of the armed conflict between the Israel Defense Forces (IDF) and the Hamas terrorist organization in the Gaza Strip.[2] The operation was characterized by Hamas' heavy fire on Israeli civilians and territory. Nevertheless, the IDF's air defense system was able to defend Israel during the operation, intercepting 90% of the rockets launched at its populated areas. The IDF also succeeded in foiling further attempts by Hamas to strike Israel, including the use of explosive unmanned aerial vehicles (UAVs) and strikes from both the land and sea.

During the operation, Israel took action to inflict considerable damage on Hamas and to restore peace to the country. The IDF attacked more than 1,500 targets in the Gaza Strip and achieved exceptional results by hitting complex targets, including Hamas' offensive tunnels, all while maintaining a low rate of

**1.** Dr. Antebi would like to thank Miss Yuval Knafo, a student in the Diplomacy and Security Studies M.A. program, at Tel Aviv University and an intern at INSS, for her great assistance in producing this article.

**2.** Other organizations that took part in the operation are the Palestinian Islamic Jihad, the Popular Front for the Liberation of Palestine, as well as other terrorist organizations in Judea and Samaria, Gaza and Lebanon.

harm to civilians in Gaza. This operation – which mostly combined advanced technology in the fields of air defense systems, standoff weapons, and many other intelligence systems – earned itself the nickname of "the first artificial intelligence war". In light of the high-intensity use of such a large number of innovative technology, the question arises as to what their impact was on the IDF's success during the operation.

This article will thus define the operation from a technological perspective. It will open with a general description on the course of the operation and its outcomes, including a comparison with the IDF's previous operations in the Gaza Strip. It will then outline how advanced technology was incorporated into the operation by both the terrorist organizations involved and the IDF. Among them notably are artificial intelligence (AI), air defense systems, UAVs, and various digital technology put into service by ground forces. Finally, prominent cases of success and failure will be examined in an effort to decipher their impact on the level of success achieved by the IDF against Hamas.

## General Background on the Operation

Operation GW lasted twelve days (from May 10 to May 21) and was extremely powerful in the indices of rocket fire towards Israel and the IDF's operational response.[3] In contrast to previous operations, this one began without any security escalation in Gaza and was initiated and planned by Hamas. Increasing tensions in the preceding weeks, centered on Jerusalem between the city's Arab and Jewish population, was what led to this operation.[4] Following ongoing clashes, Hamas announced that "Jerusalem Day" was an important milestone in the history of Israel and Hamas' confrontation. With that, it launched the first rocket attack on Israel the same evening on May 10, 2021.[5]

During the entire operation, Hamas fired more than 4,360 rockets and mortar shells at Israel. The highest firing intensity was measured on the second day of the operation, with 480 rockets directed to Israeli territory. The missile range was extensive reaching as far as Jerusalem.[6] The "Iron Dome" air defense system successfully intercepted 90% of launches towards populated areas. Despite its relative success, 11 people were killed by rocket fire with hundreds wounded, an IDF soldier killed by anti-tank fire, as well as much property in various cities destroyed.

Besides heavy rocket fire, the Palestinians also fired anti-tank missiles. Additionally, at least one attempt was made to penetrate Israeli territory via un-

**3.** U. Rubin, "Israel's Air Defense in Test During Operation Guardian of the Walls," *The Jerusalem Institute for Strategy and Security*, 8 July 2021.
**4.** M. Milstein, "The Guardian of the Walls: A Strategic Balance, A Look to the Future and Policy Recommendations," *Reichman University Institute for Policy and Strategy*, 27 May 2021.
**5.** *Ibidem.*
**6.** U. Rubin, *art. cit.*