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ISRAEL'S TECHNO-MILITARY COMPLEX: A HISTORICAL AND POLITICAL-ECONOMY ANALYSIS

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Cover photo: Berlin, Germany, 14th Jun 2026. IAI defense exhibition displays unmanned aerial systems and advanced military technologies for surveillance and tactical missions. Modern aerospace showcase highlights drone innovation, autonomous capabilities, security solutions and future battlefield applications.

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Regional policymakers have long analyzed Israel primarily through the prisms of political ideology or colonial discourse, frequently overlooking its specific techno-military logic and the ways in which, in recent years, regional war zones have doubled as testing grounds and marketing platforms for weapons, surveillance, and dual-use systems. This report traces the historical formation and contemporary implications of this techno-military logic across six main sections. First, it examines the pre-state origins of Israel's technocratic vision and its links to British Mandate-era infrastructure. Second, it traces the post-1948 institutionalization of permanent military mobilization, emergency frameworks, and the military-academic-industrial nexus. Third, it analyzes the contemporary defense-technology ecosystem, focusing on AI-enabled warfare, operational validation, and elite talent pipelines. Fourth, it explores Israel's evolution from the "Start-Up Nation" brand into a global defense exporter. Fifth, it details post-normalization Arab procurement of Israeli cyber-surveillance, air-defense, and border-security systems. Finally, it considers the regional consequences of this model, highlighting how imported technologies generate structural dependence, path dependency, and constrained policy autonomy.

Introduction: Technology, Militarization, and Israeli State Power

The escalation of military operations across Gaza and Lebanon from 2023 through 2026 has brought a structural shift in the landscape of modern warfare to light. These conflicts are not merely extensions of long-standing territorial or political disputes; they represent the deployment of highly automated, artificial intelligence-driven military doctrines. The integration of real-time algorithmic targeting, mass data surveillance, and semi-autonomous combat platforms (drones) characterizes Israel's contemporary military strategy. However, evaluating these developments merely as the adoption of advanced tools misinterprets a vital aspect of Israeli state logic. Technology and militarization are not supplementary instruments utilized by the state in pursuit of its objective; they are core elements that shape its national identity, institutional framework, and strategic behavior.

For decades, regional strategic planners and Arab policymakers have primarily interpreted Israel through ideological frameworks, emphasizing settler-colonial dynamics, nationalism, religious-historical claims to the land, and post-Holocaust narratives of victimhood. While these approaches capture essential dimensions of Israeli state formation and regional policy, they can understate the institutional logic of Israel's techno-military

ecosystem and its role in sustaining national power. This analytical gap has tangible policy consequences. Israel's position as the world's seventh-largest arms exporter in the 2021-2025 period – accounting for 4.4% of global arms exports¹ – illustrates the scale at which military technology and defense exports have become connected to its economic and diplomatic reach. A regional analysis focused exclusively on ideological contestation may therefore overlook the technological dimension of the Israeli project. Recognizing Israel as an integrated techno-military system is necessary to assess not only its strategic doctrine, but also the economic incentives, institutional networks, and export relationships that shape its regional behavior.

This report describes Israel as a techno-military state: one in which technological superiority and permanent security mobilization are central to political identity, economic strategy, and foreign policy. Its contemporary power rests on a continuous feedback loop: the adjacent geographical region serves as a live testing ground for experimental weapons and surveillance systems, which are subsequently commodified, validated as "battle-

¹ Mathew George, Katarina Djokic, Zain Hussain, Pieter D. Wezeman and Siemon T. Wezeman, *Trends in International Arms Transfers*, 2025, SIPRI Fact Sheet, Stockholm International Peace Research Institute, March 2026, available at <https://doi.org/10.55163/OSMS3959>.

tested,”² and integrated into the global export economy.³ While the founding generations of Israeli leaders prioritized techno-military self-sufficiency in armaments and infrastructure, this logic has gradually evolved since the late twentieth century into a model where military innovation and defense exports form a central pillar of Israel’s “Start-Up Nation”⁴ brand and external strategic ties. In recent years, this dynamic has directly intersected with regional normalization trends, resulting in a situation where Arab states increasingly import the very surveillance and security architectures developed through these conflicts. This trajectory can be understood as a technological extension of Jabotinsky’s “Iron Wall” doctrine, whose logic became increasingly embedded in Israel’s military, scientific, and industrial institutions. The following sections trace this transformation from its pre-state origins to its contemporary techno-military form.

I. Historical Origins: Technocracy and Colonial Infrastructure 1921-1948

The formulation of technology as the cornerstone of the Israeli national project predates the formal establishment of the state in 1948. In Zionist literature, Theodor Herzl, the ideological founder of the movement, conceived the future state in

Palestine in fundamentally technological terms. Herzl did not envision the state-building enterprise as a purely philosophical or ideological movement, but rather as a highly structured technical blueprint.⁵ The individuals tasked with executing this project were not meant to be mere ideologues, but technical experts and engineers responsible for transforming physical space through modern methodology.⁶

Herzl’s blueprint relied on a central structure composed of three tiers of technological control.⁷ At the core sat the guiding segments of society, directing the deployment of technologies. Surrounding this core were corporate entities, which utilized and developed technology in alignment with state objectives. At the periphery were the masses, whose social and economic roles were largely organized to serve the technical means required to execute the national mission.

Herzl’s conceptualization increasingly framed the national project as a modern, rational solution to a political “problem,” using images of technological innovation to convey the kind of breakthrough he believed was required. In *The Jewish State*, he invokes Edison’s electric light as an example of an invention meant to illuminate “the dark problems of humanity,” and explicitly includes the “Jewish question” among those problems, implying that it too demands a deliberate, modern intervention rather than passive endurance.⁸

As Asaf Shamis argues, Herzl’s Zionist plan treated technical expertise and centralized technological systems as the primary driving force of the national project, rather than as neutral tools subject to

2 Antony Loewenstein, “‘The Palestine Laboratory’ | Antony Loewenstein”, Australian Institute of International Affairs, 2 August 2023, available at <https://youtu.be/0JZeHI9PerY?t=551> (Loewenstein, “The Palestine Laboratory”, AIIA).

3 George et al., *Trends in International Arms Transfers*, 2025.

4 Daphne Getz and Itzhak Goldberg, *Best Practices and Lessons Learned in ICT Sector Innovation: A Case Study of Israel*, World Development Report 2016 Background Paper, World Bank, 2016, available at <https://openknowledge.worldbank.org/entities/publication/7db594cf-0b16-51e8-8c35-166825f83fe2>.

5 Noah Efron, “Zionism and the Eros of Science and Technology”, *Zygon* 46, no. 2 (2011), pp. 413-428, available at <https://doi.org/10.1111/j.1467-9744.2010.01192.x>.

6 Fredrik Meiton, “The Radiance of the Jewish National Home: Technocapitalism, Electrification, and the Making of Modern Palestine”, *Comparative Studies in Society and History* 57, no. 4 (2015), pp. 975-1006, available at <https://doi.org/10.1017/S0010417515000419>.

7 Asaf J. Shamis, “Power and Technology in Theodor Herzl’s Zionist Plan”, *Israel Studies* 25, no. 2 (2020), pp. 1-24, available at <https://doi.org/10.2979/israelstudies.25.2.01> (Shamis, “Power and Technology in Theodor Herzl’s Zionist Plan”).

8 Theodor Herzl, *The Jewish State*, translated by Sylvie D’Avigdor, American Zionist Emergency Council, 1946, “Introduction”, available at <https://jewishvirtuallibrary.org/jsource/Zionism/herzl2a.html>

political control.⁹ In both *The Jewish State* and his later utopian novel *Old-New Land*, technology and large-scale infrastructure are imagined as the organizing framework through which labor, social hierarchies, and demographic patterns are managed, making technological control itself a core element of the envisioned state's social and political order.¹⁰ In this sense, technology does not simply intersect with national identity; it helps constitute it. Effectively, the reliance on technical and scientific mastery came to substitute for traditional or metaphysical concepts of historical destiny.

During the British Mandate, British imperial infrastructure and Zionist institution-building interacted in ways that expanded the Yishuv's technical and economic capacity. Colonial development schemes in Palestine – railways, electrification, mining, aviation, and public health campaigns – framed the territory as a land of progress and turned it into a laboratory for infrastructure-intensive modernization led by European and Zionist technocrats.¹¹ This laid the material and institutional foundations for a later Israeli state that understood its security and survival in terms of qualitative technological superiority over its surroundings.

Several concrete infrastructure projects during this era demonstrate how these early technical institutions laid the material foundations for the state:

Haganah weapons production: In the early 1930s,¹² the Haganah developed clandestine workshops to manufacture explosives, hand grenades, submachine guns, light mortars, and ammunition. These facilities helped transform the organization from a primarily defensive militia into a more technically equipped military force. The Haganah's

broader infrastructure also included training camps such as Camp Yona in Tel Aviv, which came under its control after the British withdrawal in late 1947 and later served as a site for recruitment, military training, and the establishment of new battalions during the 1948 war. Together, these workshops and facilities formed one of the foundational pillars of Israel's later domestic arms-production system.

The Rotenberg Electricity Project:¹³ In 1921, Pinhas Rotenberg secured an exclusive electricity concession from the British Mandate authorities, which led to the establishment of the Palestine Electric Corporation. The concession granted Rotenberg extensive rights over the generation, distribution, and commercial sale of electricity, including the use of the Jordan and Yarmouk river systems. Rotenberg inaugurated the Naharayim hydroelectric project at the confluence of the Jordan and Yarmouk Rivers in 1932, following the earlier electrification of Tel Aviv and Haifa. Palestinian Arab opposition to the concession was substantial: the Palestinian Arab Executive protested the award to British authorities, while political groups, municipalities, and local communities objected to a monopoly they viewed as strengthening Zionist control over vital economic resources and limiting Arab-led development. The Palestine Electric Corporation nevertheless became a central component of the Mandate-era electricity grid, particularly across Jewish settlements and towns along the coastal plain. Its development demonstrates how electrification was embedded in wider contests over colonial authority, economic sovereignty, water resources, and political power – not simply a neutral project of industrial modernization.

Palestine Potash Limited (PPL):¹⁴ Following the British Mandate government's grant of a Dead Sea mineral concession in 1930, Palestine Potash Limited began operations in 1932 under Moshe Novomeysky, a Russian Jewish mining engineer. The company developed industrial facilities at the Dead Sea to extract potash and bromine and relied

9 Shamis, "Power and Technology in Theodor Herzl's Zionist Plan".

10 Theodor Herzl, *Old New Land = Altneuland*, Filiquarian, 2007, available at https://archive.org/details/oldnewlandaltneu0000herz_h9i7/page/9/mode/1up.

11 Sebastian James Rose and Burçe Çelik, "Palestine as a Laboratory: Aerial Technologies, Colonial Violence and an Origin of Information-Weaponry Systems", *Communication, Culture and Critique* 19, no. 1 (2026), pp. 49-57, available at <https://doi.org/10.1093/ccc/tcaf037>.

12 The National Library of Israel, "Rare Pictures: When the Haganah Trained on the Beaches of Tel Aviv", The National Library of Israel Blog (2020), available at <https://blog.nli.org.il/en/hoi-haganah-yona/>.

13 Fredrik Meiton, "Electrifying Jaffa: Boundary-Work and the Origins of the Arab-Israeli Conflict", *Past & Present* 231, no. 1 (2016), pp. 201-236, available at <https://doi.org/10.1093/pastj/gtw002>.

14 Mona Bieling, "Palestine Potash Limited: Industrial Development in Mandatory Palestine and the Infrastructure of Zionism", TRAFQ – Blog for Transregional Research, 8 September 2021, available at <https://trafo.hypotheses.org/30714>.

on road and aerial-rope-way connections to Haifa, where minerals could be processed, stored, and exported through the port. PPL therefore illustrates the convergence of British colonial concessions, Zionist institutional and financial networks, resource extraction, and transport infrastructure in Mandate Palestine.

Aviation and logistics networks:¹⁵ British Mandate aviation infrastructure connected Palestine to wider imperial transport routes. Lydda Airport, developed during the 1930s, was promoted as a hub on Britain's air route to India and was used by Imperial Airways as a stop on services linking Britain with South Asia; Haifa likewise functioned as a significant regional aviation and port node. In December 1934, Pinhas Rotenberg established Palestine Airways in cooperation with the Histadrut and the Jewish Agency, with operational and technical support from Imperial Airways. The airline began commercial services between Haifa and Lydda in 1937 and later operated routes linking Haifa, Tel Aviv, Beirut, and Larnaca. These networks connected Zionist commercial initiatives to British imperial aviation and helped position Palestine's coastal cities within a wider regional transport system.

Scientific knowledge and public health:¹⁶ Malaria control became an important site for the production of scientific knowledge about the geography, hydrology, and settlement conditions of Mandate Palestine. Established in September 1922 under the British Mandate Department of Health and funded by the American Jewish Joint Distribution Committee, the Malaria Research Unit was based in Haifa and directed by the bacteriologist Israel Jacob Kligler. The unit combined epidemiological surveys, malaria mapping, anti-larval measures, public-health education, and drainage projects, particularly in and around Jewish settlements. Scholars have shown that these practices did more than address disease: they rendered territory legible through scientific mapping and helped link environmental intervention to Zionist development claims.

15 Dikla Rivlin Katz, "The Disappearance of 'Palestine Airways' from the Historical Narrative", *Israel Studies* 25, no. 2 (2020), pp. 49-71, available at <https://doi.org/10.2979/israelstudies.25.2.03>.

16 Sandra M. Sufian, *Healing the Land and the Nation: Malaria and the Zionist Project in Palestine, 1920-1947*, University of Chicago Press, 2007, available at <https://doi.org/10.7208/chicago/9780226779386.001.0001>.

II. Post-1948 Militarization: Emergency, Security, and Defense Industrialization

Following the Israeli state's establishment in 1948, this infrastructure of development transitioned smoothly into an infrastructure of permanent military mobilization. Israel's prolonged emergency framework, repeated wars, compulsory service and dense networks connecting security elites to civilian institutions gave the military an unusually extensive role in political, economic and social life.

The Provisional State Council – the temporary legislative authority of Israel from May 1948 until the first permanent elections in 1949 – declared a state of emergency in 1948 that has remained legally active and unrestricted to the present day.¹⁷ This legal framework locked the state into a perpetual posture of defense readiness, funneling institutional, economic, and social resources toward military objectives.

Sociologists like Baruch Kimmerling have noted that Israel developed into a distinct "military society," with roots tracing back to the pre-state Jewish political community (*the Yishuv*).¹⁸ The foundational assumption of the *Yishuv* was that institutional force was the primary mechanism available to resolve regional conflicts, a logic that elevated a security-focused elite to the apex of social and political power. Chief of Staff Moshe Dayan captured this existential

17 Suzie Navot, "Emergency as a State of Mind – The Case of Israel", in Pierre Auriel, Olivier Beaud and Carl Wellman, eds., *The Rule of Crisis: Terrorism, Emergency Legislation and the Rule of Law*, Springer, 2018, pp. 185-212, available at https://doi.org/10.1007/978-3-319-74473-5_9.

18 Michal Shamir and Asher Arian, "Collective Identity and Electoral Competition in Israel", *American Political Science Review* 93, no. 2 (1999), pp. 265-277, available at <https://doi.org/10.2307/2585395>.

posture in “the defining speech of Zionism”¹⁹ – his famous 1956 eulogy for Roy Rothberg:

*“A generation of settlement are we, and without the steel helmet and the maw of the cannon we shall not plant a tree, nor build a house. Our children shall not have lives to live if we do not dig shelters; and without the barbed wire fence and the machine gun, we shall not pave a path nor drill for water.”*²⁰

This permanent mobilization reshaped the domestic economy and prepared the environment for the next arms industry evolution. Following the 1967 French arms embargo, Israel pursued a highly ambitious strategy of defense-industrial self-sufficiency, committing what a U.S. congressional assessment described as a “massive investment of human and financial resources” to the defense sector.²¹ By the early 1970s, this effort had enabled domestic production of advanced systems, including the Merkava main battle tank, self-propelled howitzers, the Kfir jet fighter, missile patrol boats, remotely piloted vehicles, missiles, avionics, communications systems, and electronic-warfare systems.

As the financial and technological costs of sustaining a broad, nationally controlled defense-industrial base increased, Israel’s principal defense firms progressively moved away from a model centered on comprehensive domestic self-sufficiency toward an export-oriented strategy concentrated in areas of comparative advantage. This strategy emphasized specialized systems and subsystems – including missiles, unmanned aerial systems, military electronics, intelligence technologies, and command-and-control capabilities – where Israeli firms could compete in international markets. By

the 2020s, arms exports accounted for an estimated 75–80% of the revenues of Israel’s leading defense companies, demonstrating the sector’s structural reliance on foreign markets.²²

Alongside this techno-military trajectory, concerns about maintaining a Jewish majority and controlling key territories were gradually integrated into the same security and planning apparatus, with demographic and settlement policy increasingly managed through military and bureaucratic infrastructures rather than left to purely political debate.²³

This institutional militarism penetrates civilian society via mandatory conscription and reserve duties lasting until age 40, erasing clear boundaries between civilian and military spheres. Nowhere is this integration more evident than in the academic-military pipeline:

The Talpiot Program:²⁴ Launched in 1979 and managed by the Air Force and the Administration for the Development of Weapons and Technological Industries (Directorate of Defense Research and Development – DDR&D) – a joint administrative body of the Israel Ministry of Defense and the Israel Defense Forces (IDF) – this elite program recruits top science students. It embeds them within academic and combat units to translate theoretical physics, mathematics, and computer science directly into frontline military technologies. DDR&D acts as the central node coordinating research across defense contractors, academic labs, and intelligence agencies.

19 Mitch Ginsburg, “When Moshe Dayan Delivered the Defining Speech of Zionism”, *The Times of Israel*, 28 April 2016, available at <https://www.timesofisrael.com/when-moshe-dayan-delivered-the-defining-speech-of-zionism/> (Ginsburg, “When Moshe Dayan Delivered the Defining Speech of Zionism”).

20 Ginsburg, “When Moshe Dayan Delivered the Defining Speech of Zionism”.

21 U.S. Congress, Office of Technology Assessment, “Israel’s Defense Industry: Evolution and Prospects”, in *Global Arms Trade: Commerce in Advanced Military Technology and Weapons*, U.S. Government Printing Office, June 1991, pp. 85-103, available at <https://www.princeton.edu/~ota/disk1/1991/9122/912207.PDF>.

22 Yoram Evron, “Israel’s Defence Industry: Adaptation and Growth in a Changing Arms Market”, *Defence Studies* 25, no. 2 (2025), pp. 301-321, available at <https://doi.org/10.1080/14702436.2025.2472720>.

23 Oren Yiftachel, review of *Hollow Land: Israel’s Architecture of Occupation*, by Eyal Weizman, *Political Geography* 28, no. 2 (2009), pp. 145-146, available at <https://doi.org/10.1016/j.polgeo.2008.12.005>.

24 Dean Shmuel Elmas, “Study: IDF Talpiot Program Excels in Producing Entrepreneurs”, *The Jerusalem Post*, 24 April 2026, available at <https://www.jpost.com/defense-and-tech/article-894053>.

Havatzalot Program:²⁵ Serving as the flagship talent pipeline for the Military Intelligence Directorate (Aman), Havatzalot is a joint military–academic track that has been hosted at the Hebrew University of Jerusalem since 2019, where intelligence cadets complete a three-year BA while serving, combining officer training, leadership courses, basic combat training, and a double major in Islamic and Middle Eastern studies together with a second discipline – mathematics, economics, philosophy, or computer science – before moving directly into senior intelligence roles.

As sociologist Moshe Lissak observed, “there are truly no real boundaries between civil and military domains in Israel.”²⁶ By the mid-20th century, popular slogans like “Israel’s guardian neither sleeps nor slumbers”²⁷ reflected a societal shift where the military apparatus effectively assumed the role of guarantor of existence, relying on technical mastery and structural strength.

III. The Contemporary Techno-Military Complex

The historical structures described above have culminated in a contemporary defense-technology ecosystem in which artificial intelligence, automated surveillance, and cyber capabilities occupy an increasingly important place. This ecosystem

links the DDR&D, specialized IDF technology and intelligence units (including Unit 8200, the Military Intelligence Directorate’s signals-intelligence unit), private defense firms, start-ups, and universities.²⁸ Rather than treating commercial and military technology as wholly separate spheres, Israeli defense-innovation policy actively seeks to adapt civilian advances in fields such as data science and AI to defense requirements; DDR&D states that it collaborates with more than 300 start-ups for this purpose.²⁹

In the contemporary Israeli model, academic research is connected to national-defense priorities through formal funding channels, research consortia, and university–industry partnerships. DDR&D has funded quantum-science and technology research at Israeli universities, including the Hebrew University, Technion, Ben-Gurion University, and Bar-Ilan University; a national quantum-communications demonstrator at the Hebrew University has also received Ministry of Defense support. DDR&D and the Israel Innovation Authority have additionally supported quantum and integrated-photonics^{30, 31} initiatives involving universities, defense firms, and civilian companies. Technology-transfer companies provide an additional channel through which university research can enter defense-industrial networks. For example, Yisum, the technology-transfer company of the Hebrew University of Jerusalem, entered a long-term research-collaboration agreement with

25 Australian Friends of the Hebrew University, “Hebrew University Partners with IDF to Offer Prestigious Academic-Military Program for Intelligence Corps Officers”, 15 April 2019, available at <https://austfhu.org.au/hebrew-university-partners-with-idf-to-offer-prestigious-academic-military-program-for-intelligence-corps-officers/> (Australian Friends of the Hebrew University, “Hebrew University Partners with IDF”).

26 Moshe Lissak, “Paradoxes of Israeli Civil-Military Relations: An Introduction”, *Journal of Strategic Studies* 6, no. 3 (1983), pp. 1-12, available at <https://doi.org/10.1080/01402398308437155>.

27 Sally Abrams, “The Guardian of Israel Neither Slumbers Nor Sleeps”, *The Times of Israel* Blogs, 16 March 2015, available at <https://blogs.timesofisrael.com/the-guardian-of-israel-neither-slumbers-nor-sleeps/>.

28 Inbar Dolinko and Liran Antebi, *Embracing the Organized Mess: Defense AI in Israel*, DAIO Study 23/15, Defense AI Observatory, 2023, available at https://defenseai.eu/wp-content/uploads/2023/06/daio_study2315_embracing_the_organized_mess_dolinko_antebi.pdf.

29 Directorate of Defense Research and Development, “Mafat for Startups”, Israel Ministry of Defense, available at <https://ddrd-mafat.mod.gov.il/en/maf-at-for-startups>, accessed 7 September 2026.

30 Photonics – “the generation, manipulation, transmission, and detection of light” – has military applications in secure optical and quantum communications, sensing, navigation, imaging, laser systems, and interception technologies. Source for definition: Northern Ireland Photonics Innovation Cluster, “What Is Photonics?”, available at <https://niphotonics.com/>.

31 Planning and Budgeting Committee, Steering Advisory Committee on Quantum Science and Technology, *Final Report*, February 2018, available at <https://che.org.il/wp-content/uploads/2021/01/QST-Final-Report-English-2018-08-15.pdf>.

Lockheed Martin Israel covering basic and applied research, including quantum information science and materials science.³² The agreement gave Lockheed Martin the option to acquire exclusive licenses for inventions or products arising from the joint research.

Students trained under elite IDF programs such as Talpiot or serving in technological intelligence units like Unit 8200 frequently move into the private sector, where they found or staff defense-tech and dual-use start-ups listed in homeland security (HLS) and defense technology accelerators and directories.³³ Programs like the INNOFENSE³⁴ innovation center and SOSA (South of Salame) INNOFENSE accelerator provide selected start-ups with grants of roughly 200,000 NIS (or US\$50,000 in earlier pilots), technical mentorship from IDF design partners, and fast-track access to defense clients, with more than 30% of graduates reported to receive follow-up orders from DDR&D totaling over 18 million NIS and raising around half a billion dollars in external funding.³⁵ This ecosystem ensures that breakthroughs in civilian software such as machine learning, computer vision, and predictive analytics are systematically tested and integrated into military intelligence frameworks through dual-use accelerators and defense-tech consortia. As a result, the distinction between a commercial tech entrepreneur and a military intelligence officer is often blurred: engineers and data scientists cycle between academic labs, IDF units, defense-tech accelerators, and firms such as Rafael or Elbit, with universities themselves mapped as active partners

in Israel's military-technology complex.³⁶

A central driver of this techno-military complex is the operational validation of new technologies in real-world combat environments. Kinetic operations and surveillance duties in Gaza, the West Bank, and southern Lebanon function as live testing environments for experimental systems. Once operational efficacy is demonstrated under combat conditions, these systems are branded as “battle-tested”³⁷ – a designation that carries immense commercial value in the global arms market, highlighting a structural reliance on local conflict to sustain export viability.

A stark illustration of this paradigm occurred when the state-owned weapons manufacturer, Rafael Advanced Defense Systems, launched an international marketing campaign explicitly utilizing operational combat footage from Gaza to promote its Spike Firefly drone.³⁸ As documented by Middle East Eye,³⁹ the promotional material featured a clip of a miniature loitering munition tracking an individual in a devastated neighborhood in northern Gaza before detonating. Adorned with corporate tags such as “Identifies the target, tracks it, and neutralizes the threat” and the tagline “Tested. Trusted. Tactical,” the campaign underscores how ongoing military operations function directly as corporate showcases to demonstrate lethality and secure foreign procurement contracts.

³² Reuters, “Lockheed Martin in Research Deal with Israel Tech Company Yisum”, 6 October 2014, available at <https://www.reuters.com/article/technology/lockheed-martin-in-research-deal-with-israel-tech-company-yisum-idUSKCN0HV0T6/>.

³³ Hilal Ahmad Khan, “The Unit in the Machine: How Israel's Elite Cyber Spies Became the Stewards of Global Data”, Medium, 26 March 2026, available at <https://medium.com/@azha.khan.6/the-unit-in-the-machine-how-israels-elite-cyber-spies-became-the-stewards-of-global-data-d3aaf55f6cd5>.

³⁴ CTech, “SOSA Innofense: The Defense-Tech Accelerator Generating Business for Startups with Defense & HLS Clients”, 25 June 2025, available at <https://www.calcalistech.com/ctechnews/article/hjyf1111xxgl>.

³⁵ Directorate of Defense Research and Development, “INNOFENSE”, Israel Ministry of Defense, available at <https://ddrd-mafat.mod.gov.il/en/innofense>, accessed 7 September 2026.

³⁶ Dan Peled, *Defense R&D and Economic Growth in Israel: A Research Agenda*, Science, Technology and the Economy Program STE-WP-4, Samuel Neaman Institute, March 2001, available at <https://doi.org/10.82514/defense-rd-economic-growth-israel-research-agenda-ste-wp-4>.

³⁷ Loewenstein, “The Palestine Laboratory”, AIIA.

³⁸ TRT World, “Israeli arms company Rafael uses footage of a Palestinian being targeted and killed by a Spike FireFly drone in northern Gaza as promotional material...”, 13 July 2025, available at <https://www.instagram.com/reel/DMCgymVSIJB/>.

³⁹ Dania Hirsch, “Israeli Weapons Firm Rafael Uses Gaza Killing in Marketing Campaign”, Middle East Eye, 14 July 2025, available at <https://www.middleeasteye.net/news/israel-weapons-firm-rafael-uses-gaza-killing-marketing-campaign>.

IV. From “Start-Up Nation” to Global Defense Exporter

Israel's global branding as the “Start-Up Nation” is linked to its highly militarized tech sector. Military and technology exports represent a massive and growing share of the Israeli economy, providing a crucial structural buffer. Even as domestic sectors like tourism and retail face severe disruptions caused by war, defense sales have kept the broader economy resilient. According to data from the Stockholm International Peace Research Institute⁴⁰ (SIPRI), Israel has surged to become the world's seventh-largest arms exporter, bypassing countries like the UK. In recent years, Israeli defense exports have repeatedly shattered all-time records – surpassing US\$19 billion annually⁴¹ – driven heavily by global demand for its air defense, drone, and surveillance technologies.

Beyond their economic value, technology and defense cooperation have become important instruments of Israel's regional diplomacy. In the context of the Abraham Accords, cybersecurity, defense-industrial cooperation, and technology transfer have helped expand practical ties with the UAE, Bahrain, and Morocco, while providing Israel with commercial opportunities and channels for broader strategic engagement.⁴²

International media coverage also helped reinforce perceptions of Israeli technological and intelligence superiority. Reporting on the September 2024

pager attacks in Lebanon, for example, frequently characterized the operation as an unusually sophisticated intelligence and technical operation, while drawing attention to the alleged role of Unit 8200 and to the wider relationship between Israel's military-intelligence sector and its high-technology ecosystem.⁴³ These reputational and commercial advantages are most visible in the normalization-era security relationships through which Israeli defense, cyber, and surveillance technologies have moved from indirect or discreet channels into more formalized forms of cooperation with selected Arab states. Consequently, Zeev Jabotinsky's “Iron Wall”⁴⁴ is no longer merely a conceptual doctrine in Israeli political literature; it has been physically built, automated, and continuously upgraded into an all-encompassing Israeli technological wall.⁴⁵

V. Normalization, Arab Procurement, and Technological Dependence

The Abraham Accords did not inaugurate Arab-Israeli security cooperation. Egypt and Jordan had already established formal peace treaties with Israel in 1979 and 1994, respectively, and their relations included longstanding official coordination on intelligence, border security, and other shared security concerns, despite remaining politically and

⁴⁰ Stockholm International Peace Research Institute, “Global Arms Flows Jump Nearly 10 Per Cent as European Demand Soars”, press release, 9 March 2026, available at <https://www.sipri.org/media/press-release/2026/global-arms-flows-jump-nearly-10-cent-european-demand-soars>.

⁴¹ Nitin J Ticku, “Israel11l Beats Russia Flat Out in Arms Sales Despite All the Wars – \$19.2B Record as Moscow's Exports Fizzle”, *The EurAsian Times*, 4 June 2026, available at <https://www.eurasiantimes.com/israel-beats-russia-flat-out-in-arms-sales-despite-all-the-wars-hits-record-19-2b-as-moscows-exports-fizzle/>.

⁴² Sanam Vakil and Neil Quilliam, *The Abraham Accords and Israel-UAE Normalization: Shaping a New Middle East*, Chatham House, March 2023, available at <https://doi.org/10.55317/9781784135584>.

⁴³ Jonathan Saul, Steven Scheer and Ari Rabinovitch, “Hezbollah Pager Attack Puts Spotlight on Israel's Cyber Warfare Unit 8200”, Reuters, 20 September 2024, available at <https://www.reuters.com/world/middle-east/hezbollah-pager-attack-puts-spotlight-israels-cyber-warfare-unit-8200-2024-09-18/>.

⁴⁴ Zeev Jabotinsky, “The Iron Wall”, originally published in Russian in *Razsviet*, 4 November 1923, available at <https://en.jabotinsky.org/media/9747/the-iron-wall.pdf>

⁴⁵ خالد عودة الله، “إسرائيل كمغامرة تكنولوجية: رؤية هيدغرية”، دائرة سليمان الحلبي، 8 حزيران/يونيو 2024، 3:44، متاح على <https://www.youtube.com/watch?v=Y4RsWkU-sOQ&t=224s>

socially constrained “cold peace” relationships.⁴⁶ The Accords instead expanded Israel’s formal regional relationships beyond Egypt and Jordan, creating official diplomatic and commercial channels with the UAE and Bahrain in 2020 and Morocco later that year. Before these agreements, contacts between Israel and several Gulf and North African states were often reported to operate through discreet intelligence channels, third-country firms, and indirect arrangements. In the UAE, for example, Israeli-linked firms were reported to have supplied surveillance and border-security technologies as early as 2007.⁴⁷

The resulting shift is visible in post-Accords agreements and publicly reported projects. Bahrain and Israel signed a security-cooperation memorandum in February 2022 covering intelligence sharing, military-to-military cooperation, and defense-industrial collaboration.⁴⁸ In the UAE, Israeli authorities reportedly approved an Emirati request to acquire Rafael’s SPYDER mobile air-defense system,⁴⁹ while Israel Aerospace Industries and the UAE’s EDGE Group signed a memorandum of understanding to co-develop Counter-Unmanned Aircraft Systems (C-UAS).⁵⁰ In Morocco, cooperation extended beyond procurement toward local

manufacturing: BlueBird Aero Systems, partly owned by Israel Aerospace Industries, announced plans to establish a drone-production facility in Rabat.⁵¹ Together, these examples indicate that normalization has lowered the political and commercial barriers to direct defense trade, joint technology development, and, in selected cases, localized defense-industrial cooperation. The publicly reported relationships examined here fall primarily into two categories: cyber-surveillance and digital-intelligence tools, and air-defense, missile-defense, and counter-drone cooperation. Table 1 distinguishes confirmed or forensically documented cases from reported procurement, memoranda of understanding, and unconfirmed discussions.

The agreements and reported procurements outlined in Table 1 should therefore be assessed not only in terms of the immediate capabilities they provide, but also in terms of the longer-term institutional and strategic relationships they create between recipient states, foreign suppliers, and proprietary security infrastructures. The relevant strategic concern lies not only in the systems’ military or intelligence functions, but also in the lifecycle-support arrangements required to sustain them.⁵² Advanced surveillance platforms, air-defense systems, counter-drone technologies, and command-and-control networks are not static assets transferred once and operated independently thereafter. Their continued effectiveness often relies on the original supplier’s ability to update software, integrate new threat data, maintain sensors and radars, and provides specialized technical assistance.⁵³

46 Haisam Hassanein, “How to Warm the Cold Peace Between Egypt and Israel”, The Jerusalem Strategic Tribune, May 2025, available at <https://www.jstribune.com/hassanein-how-to-warm-the-cold-peace-between-egypt-and-israel/>.

47 Islam Alhalwany, “Israel Is Becoming a Cybersecurity Guarantor in the Middle East. Here’s How”, Atlantic Council, 18 November 2021, available at <https://www.atlanticcouncil.org/blogs/menasource/israel-is-becoming-a-cybersecurity-guarantor-in-the-middle-east-heres-how/>.

48 Middle East Monitor, “Israel Defence Minister Signs Security Agreement with Bahrain”, 3 February 2022, available at <https://www.middleeastmonitor.com/20220203-israel-defence-minister-signs-security-agreement-with-bahrain/>.

49 Reuters, “Israel to Supply Air Defence System to the UAE”, *Al Jazeera*, 23 September 2022, available at <https://www.aljazeera.com/news/2022/9/23/israel-to-supply-air-defence-system-to-the-uae> (Reuters, “Israel to Supply Air Defence System to the UAE”).

50 Shoshanna Solomon, “IAI and UAE-Based EDGE Join Forces to Develop Anti-Drone Tech”, *The Times of Israel*, 11 March 2021, available at <https://www.timesofisrael.com/iai-and-uae-based-edge-join-forces-to-develop-anti-drone-tech/> (Solomon, “IAI and UAE-Based EDGE Join Forces to Develop Anti-Drone Tech”).

51 Alexandre Aublanc, “Morocco to Become Rare Military Drone Manufacturer, Thanks to Cooperation with Israel”, *Le Monde*, 9 May 2024, available at https://www.lemonde.fr/en/le-monde-africa/article/2024/05/09/morocco-to-become-rare-military-drone-manufacturer-thanks-to-cooperation-with-israel_6670920_124.html (Aublanc, “Morocco to Become Rare Military Drone Manufacturer”).

52 Alexandra Paulus, *An Achilles Heel of Today’s Armed Forces: Managing Software Supply Chain Risk in the Military Sector*, SWP Research Paper 2025/RP 06, Stiftung Wissenschaft und Politik, November 2025, available at <https://doi.org/10.18449/2025RP06> (Paulus, *An Achilles Heel of Today’s Armed Forces*).

53 United States Government Accountability Office, *Weapon System Sustainment: DOD Needs to Better Capture and Report Software Sustainment Costs*, GAO-19-173, February 2019, available at <https://www.gao.gov/assets/gao-19-173.pdf>.

Table 1. Publicly Reported Israeli Security and Defense Cooperation with the UAE, Morocco, and Bahrain

Recipient state	Cyber and digital intelligence tools	Air defense, missile defense, and counter-drone cooperation
United Arab Emirates (UAE)	Reportedly maintain a joint intelligence platform, “Crystal Ball,” ^a focused on cyber-security threats.	<ul style="list-style-type: none"> Reported Israeli approval of a UAE request for Rafael’s SPYDER mobile air-defense system, intended to counter drone and low-altitude threats.^d Public reporting did not establish the quantity, delivery status, or operational deployment of the system. Israel Aerospace Industries and EDGE, through its SIGN4L subsidiary, signed an MoU to develop a Counter-UAS system for the UAE market.^e The planned system combines detection, identification, electronic-warfare, cyber, and kinetic-interception capabilities.
Morocco	Investigative reporting has alleged extensive use of Pegasus spyware by Morocco’s Directorate General for Territorial Surveillance, reportedly identified under the NSO end-user codename “Morgan,” against domestic dissidents and foreign officials. ^b	<ul style="list-style-type: none"> Reported US\$500 million contract between Morocco and Israel Aerospace Industries for the Barak-MX integrated air- and missile-defense system.^f Interest and discussions regarding Iron Dome and Green Pine radar systems; these should be distinguished from confirmed procurement or delivery.^g BlueBird Aero Systems (partly owned by Israel Aerospace Industries) announced plans to establish a drone-production facility in Rabat.^h
Bahrain	Forensic research found that Pegasus spyware was used to compromise the devices of Bahraini human-rights activists, lawyers, and political dissidents between 2019 and 2021, including during the period immediately before and after formal normalization. ^c	Reported interest and discussions concerning possible acquisition of Iron Dome and Green Pine radar systems. ⁱ Public reporting does not establish a finalized contract, delivery, or operational deployment.

^a Elizabeth Dent, “Israel-UAE Defense Cooperation Grows Under Abraham Accords”, PolicyWatch 4087, The Washington Institute for Near East Policy, 5 August 2025, available at <https://www.washingtoninstitute.org/policy-analysis/israel-uae-defense-cooperation-grows-under-abraham-accords>.

^b José Bautista, Eloïse Layan, Hicham Mansouri and Guillaume Vénétitay, “Codename ‘Morgan’: How Morocco Accessed Pegasus, Involving Israel and the United Arab Emirates”, Forbidden Stories, 16 July 2026, available at <https://forbiddenstories.org/codename-morgan-a-look-back-at-moroccos-acquisition-of-pegasus-involving-israel-and-the-united-arab-emirates/>.

^c Stephanie Kirchgaessner, “Phones of Nine Bahraini Activists Found to Have Been Hacked with NSO Spyware”, *The Guardian*, 24 August 2021, available at <https://www.theguardian.com/world/2021/aug/24/phones-of-nine-bahraini-activists-found-to-have-been-hacked-with-nso-spyware>.

^d Reuters, “Israel to Supply Air Defence System to the UAE”.

^e Solomon, “IAI and UAE-Based EDGE Join Forces to Develop Anti-Drone Tech”.

^f Danny Zaken, “IAI Agrees \$500m Missile Defense Systems Deal with Morocco”, *Globes*, 13 February 2022, available at <https://en.globes.co.il/en/article-iai-agrees-500m-missile-defense-systems-deal-with-morocco-1001402039>.

^g Danny Zaken, “UAE, Bahrain, Morocco Seek Israeli Missile Defense Systems”, *Globes*, 28 March 2022, available at <https://en.globes.co.il/en/article-uae-bahrain-and-morocco-seek-israeli-missile-defense-systems-1001407372> (Zaken, “UAE, Bahrain, Morocco Seek Israeli Missile Defense Systems”).

^h Aublanc, “Morocco to Become Rare Military Drone Manufacturer”.

ⁱ Zaken, “UAE, Bahrain, Morocco Seek Israeli Missile Defense Systems”.

This does not establish that an exporting state can automatically monitor, manipulate, or disable systems sold abroad. However, reliance on opaque and externally maintained technologies can create a structural vulnerability. This structural vulnerability can take the form of vendor lock-in, in which recipient states become reliant on original suppliers for sustainment and modernization because they lack adequate access to proprietary technical data, source code, spare parts, maintenance capabilities, or upgrade pathways.⁵⁴ In the event of a political dispute, supply-chain disruption, export-control restriction, or deterioration in bilateral relations, such reliance could complicate the maintenance, repair, adaptation, or independent operation of critical systems.⁵⁵

For the states mentioned above, the implication is that Israeli defense and surveillance technologies may provide important capabilities while also generating long-term dependence on Israeli firms, export licenses, technical personnel, software updates, and supply chains. The central policy question is therefore whether procurement arrangements preserve national control through data-governance rules, limits on remote access, independent cybersecurity audits, domestic maintenance capacity, diversified suppliers, and guaranteed access to spare parts and software support.

VI. Regional Dependence and Strategic Autonomy

The embedding of Israeli technology within Arab security structures may create a multi-layered strategic dilemma. First, it can complicate collective diplomatic leverage. When individual Arab states rely on bilateral technological partnerships for defense or internal-security functions, coordinated regional action can become more costly. For example, a decision to restrict cooperation during

a crisis could also disrupt access to maintenance, training, spare parts, software updates, or technical support. The resilience of formal relations amid the Gaza war illustrates the broader political context: Bahrain recalled its ambassador and announced the suspension of economic agreements in late 2023,^{56, 57} but it did not formally abrogate the Abraham Accords, while security and economic ties between Israel and several Accords partners largely continued, often with reduced public visibility.

Second, the more immediate concern is not simply dependence, but the gradual institutionalization of external security technologies within everyday state practice. Once surveillance platforms, biometric databases, algorithmic risk-scoring tools, border-management systems, and defense command networks are adopted, they shape what state agencies can see, measure, classify, and act upon. Procurement decisions therefore become governance decisions, influencing how security threats are defined, which populations are rendered visible or suspicious, and what forms of monitoring become administratively routine. The relevant problem is not that a government becomes incapable of replacing a system overnight, nor that an external supplier automatically controls it. Rather, replacement becomes politically, financially, and operationally costly because the technology has become embedded in institutional routines, data infrastructures, and security doctrine. This can make diversification difficult and reduce the ability of Arab states to develop regionally appropriate alternatives on their own terms.

Conclusion

Israel's defense-industrial base grew from pre-state clandestine arms-production facilities and was subsequently expanded through state institutions, research investment, and military demand. This was not merely a matter of possessing superior weapons; it was the creation of a system capable of producing, testing, adapting, and exporting military and digital technologies.

⁵⁴ Paulus, *An Achilles Heel of Today's Armed Forces*.

⁵⁵ Paulus, *An Achilles Heel of Today's Armed Forces*.

⁵⁶ Jeremy M. Sharp, *Bahrain: Issues for U.S. Policy*, Congressional Research Service, RS95-1013, version 186, March 2024, available at <https://www.congress.gov/crs-external-products/RS/PDF/95-1013/95-1013.186.pdf>.

⁵⁷ TRT World, "Bahrain Cuts Trade Ties with Israel, Recalls Envoy over Attacks on Gaza", 2 November 2023, available at <https://www.trtworld.com/article/15657024>.

From Haganah weapons production camps to malaria control projects and electricity grids to modern digital networks, every foundational layer of infrastructure was engineered as a pillar of technological superiority designed to secure Israel and maintain dominance over its environment. Arab strategic thinking often recognized Israel's military power and territorial ambitions, but insufficiently examined the institutions that generated its technological advantage. The result is a strategic paradox: rather than building comparable regional research, industrial, and technological capacity, some Arab governments have become direct customers of Israeli systems for cybersecurity, surveillance, drones, air defense, and border management. The Abraham Accords made this asymmetry overt, contractual, and more deeply embedded in regional security arrangements.

About the Arab Reform Initiative

The Arab Reform Initiative is an independent Arab think tank working with expert partners in the Middle East and North Africa and beyond to articulate a home-grown agenda for democratic change and social justice. It conducts research and policy analysis and provides a platform for inspirational voices based on the principles of diversity, impartiality, and gender equality.

About the Tech & Society Program

ARI's Tech & Society Program explores how the accelerating deployment of technologies is affecting political life, economic activities, and the environment in MENA. Grounded in ARI's approach which centers political participation and social justice, the program seeks to strengthen public scrutiny, democratic oversight, and civic participation in the deployment of these technologies. For us, the whole tech ecosystem – not just the end-user interfaces – needs to be scrutinized and debated in order to push for safer and more just societies as we move towards an ever-more digitized future.



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