Israel Space Sector Mapping Report

Innovation Centre Denmark Tel Aviv

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INNOVATION CENTRE DENMARK

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Introduction

The global space industry is rapidly changing, driven by new technologies, private investment, and shifting strategic priorities. Israel has become a leading example of how a small nation can achieve major results through innovation and focus. Since launching its first satellite in 1988, Israel has built a complete space ecosystem covering satellite design, manufacturing, launch, and data applications. What began as a defense-driven effort has evolved into a diverse mix of commercial, scientific, and dual-use technologies. Supported by strong research institutions, active government programs, and a growing number of private companies, Israel's space sector now plays a visible role in the global NewSpace economy. This report maps that ecosystem, highlighting key players, investments, and collaboration opportunities relevant to international partners such as Denmark.

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Key Findings

Scale and Growth

Over 100 Israeli companies are active in space technology; the sector attracted DKK 2B in 2023, a record year for investment.

Core Strengths

Expertise in small-satellite design, AI-powered Earth observation, and secure satellite communications.

Launch Capability

Israel remains the smallest nation with independent launch vehicles (Shavit) and a national space agency.

Dual-Use Innovation

Over 60% of new technologies developed for defense also serve commercial or civilian purposes.

International Collaboration

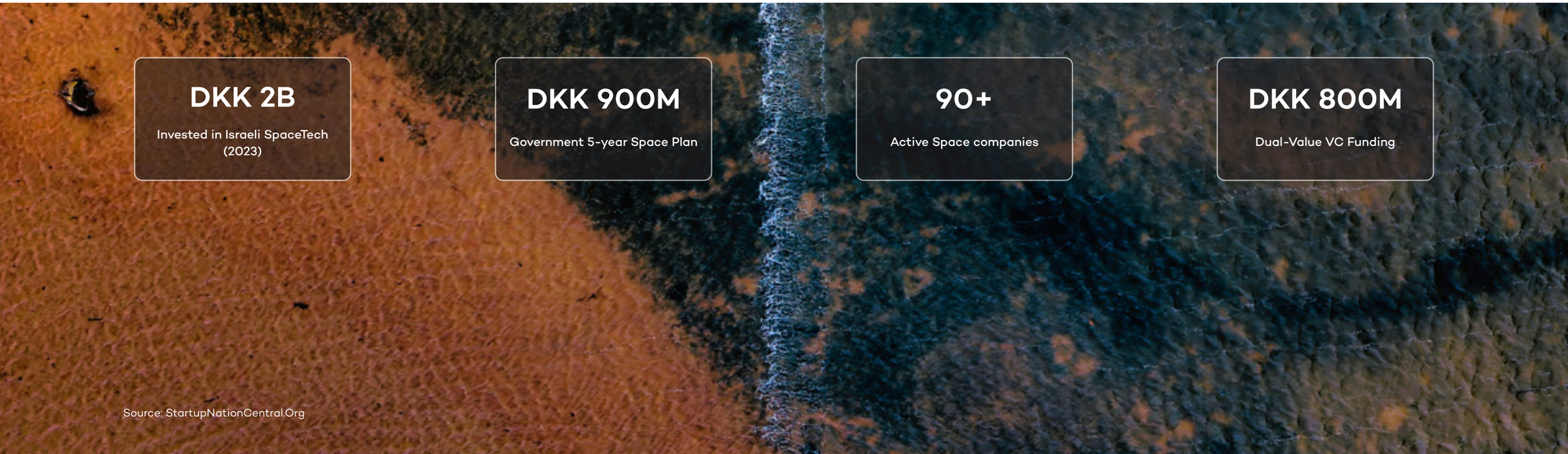
Ongoing partnerships with NASA, ESA, and European programs like Venμs and Shalom; growing interest in joint AI and data-sharing projects.

Academic Base

Major hubs include the Technion, Ben-Gurion University, and Tel Aviv University, which anchor R&D and talent pipelines.

Future Outlook

Priorities for 2025–2030 include miniaturized satellites, AI-driven operations, and green propulsion systems, aligned with the global NewSpace trend.



DKK 2B

Invested in Israeli SpaceTech (2023)

DKK 900M

Government 5-year Space Plan

90+

Active Space companies

DKK 800M

Dual-Value VC Funding

Source: StartupNationCentral.Org

1 The strategic context: why space, why now, why israel?

When we began writing this report, we asked ourselves three simple questions: Why Space? Why now? And why Israel? These questions guided our effort to understand where Denmark can create the most value in a rapidly changing global space landscape. Space today is no longer just about exploration, it's about solving challenges on Earth, from climate monitoring to connectivity and security. The timing is right: new technologies, lower launch costs, and a growing private sector are making space more accessible than ever. And Israel stands out as a natural partner, with a strong record in satellite innovation, data applications, and agile entrepreneurship that complements Denmark's goals for sustainable and secure space development.

Why Space?

Space is no longer the final frontier - it's the next frontier of innovation, sustainability, and security for Denmark. At the edge of a new era in space exploration and utilization, the Danish government's 2024 Strategy for Space Research and Innovation recognizes the critical importance of space technology for the nation's security, green ambitions, and economic growth.

Imagine a future where Danish satellites monitor our coastlines in real-time, protecting against rising sea levels. Or, Danish-made instruments aboard missions to distant moons, unlocking the secrets of our solar system. Envision a thriving ecosystem of startups leveraging space data to revolutionize agriculture, transportation, and green energy solutions. This is not a far fetched reality- it's the potential future outlined in Denmark's ambitious 2024 Strategy for Space Research and Innovation.

Why Now?

The global space industry is undergoing a transformative shift, making it more accessible and cost-effective than ever before. Deloitte indicates Six key drivers responsible for propelling this change:

- **Reduction in Payload Sizes** Smaller, lower orbit satellites, enhancing cost-effectiveness and accessibility of space.
- **Decrease in Launch Costs** Major cost reductions led by companies like SpaceX are transforming economics and lowering financial barriers to space exploration and utilization.
- **Shift from Public to Private Sector** From a government led industry to one increasingly driven by private enterprises, which expands the customer base and partners' network.
- **Focus on Everyday Applications** Shift in space technology development beyond traditional space exploration towards practical applications for solving global earth challenges and daily life improvement.
- **Tech Giants' Involvement** Expanding the domain beyond traditional aerospace firms, to new space innovators like Blue Origin and SpaceX, to the participation of mainstream tech giants such as AWS
- **Increase in Satellite Data** Gathered With more satellites launched to orbit every year, and with the rapid development of AI and predictive analytics, satellite data will play a crucial role in helping solve problems on earth.

Why Israel?

Israel is showcasing full-spectrum capabilities that span satellite design, manufacturing, and launch. Since the groundbreaking launch of Ofeq-1 in 1988, the country has continuously expanded its space infrastructure, maintaining indigenous launch systems like the Shavit rocket and developing some of the world's most advanced small satellites. Today, Israel operates a robust portfolio of military and commercial satellites, including AMOS communications satellites, TecSAR and Ofeq reconnaissance satellites, and VENμS, a hyperspectral imaging satellite co-developed with France (orbited Earth from 2017 to 2022).

The Israeli space-tech ecosystem is experiencing rapid growth, driven by global demand for AI-powered analytics, remote sensing, and secure satellite communications. Over 100 companies are now engaged in space technology development, supported by a strong foundation of innovation and government investment. In 2023 alone, the sector attracted DKK 2B in funding. Notable startups like Ramon.Space, Tomorrow.io, and EdgyBees are securing international partnerships and advancing technologies in miniaturization, AI-enhanced Earth observation, and space-resilient computing.

Israel's strategic focus on dual-application technologies, serving both terrestrial and orbital applications, has unlocked new market opportunities. Companies are leveraging satellite data for climate monitoring, disaster response, agricultural intelligence, and other critical applications. Initiatives like the Creation-Space accelerator program are further fostering innovation by supporting startups with funding and resources to develop solutions for deep-space exploration and Earth-based challenges.

International collaboration remains a cornerstone of Israel's space strategy. Agreements with NASA and other global agencies have positioned Israel as a key partner in lunar missions like Beresheet and broader initiatives under NASA's Artemis program. The recent selection process for Israel's first female astronaut underscores the country's commitment to expanding its role in human spaceflight.

However, challenges persist. Scaling commercial ventures and securing sustainable government funding for non-defense-related projects remain key hurdle. As the global space economy is projected to reach DKK 6.5 Trillion by 2040, Israel will continue leveraging its unique strengths - agility, innovation culture, and interdisciplinary expertise - to solidify its position as a leader in a rapidly evolving industry.

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2 Government, research and Ecosystem Backbone

Israel's space ecosystem is built on a strong institutional foundation that integrates government policy, academic research, and acceleration frameworks to drive innovation. Government agencies such as the Israel Space Agency (ISA), the Ministry of Innovation, Science and Technology (MOST), and the Ministry of Defense play a crucial role in setting strategic priorities, funding research and development, and fostering international collaborations. These agencies work alongside the Israel Innovation Authority (IIA), which provides financial and structural support for space-tech startups, ensuring a pipeline of innovation from early-stage research to commercialization.

Additionally, a number of Israel's academic institutions, including the Technion, Tel Aviv University, Ben-Gurion University, and Hebrew University of Jerusalem, strategically serve as hubs for space-related research and education, developing cutting-edge technologies and training the next generation of space professionals. This interplay between policy, research, and investment creates an environment that supports both established space programs and emerging NewSpace initiatives, positioning Israel as a global player in space technology.

Israel Space Agency (ISA) - The ISA was created in 1983 to coordinate the country's civilian space activities. Operating under the Ministry of Innovation, Science and Technology, the agency was established under the leadership of physicist Yuval Ne'eman to turn Israel's emerging capabilities into a structured national programme.

The agency's responsibility includes scientific research, technology development, support for industrial projects, and the management of international cooperation. Despite an annual budget of around DKK 92 million, the ISA has maintained a high level of impact by concentrating on niche technologies with commercial and research value. This means prioritising areas such as Earth observation, miniaturised satellite systems, and advanced communications, alongside funding academic research and early-stage companies in the space field.

The agency also puts considerable emphasis on education and outreach, backing initiatives that encourage young people to pursue science and engineering. These programmes are designed to secure a skilled workforce for the sector in the years ahead.

International cooperation is a cornerstone of ISA policy. Israel has agreements with agencies including NASA (USA), ESA (Europe), DLR (Germany), ASI (Italy), and CNES (France), enabling joint missions, technology exchange, and shared scientific work. In 2022, Israel joined the Artemis Accords and contributed a domestically developed radiation protection vest to NASA's Artemis-1 lunar mission. Regional cooperation is also emerging, for example, Israel and the UAE discussed partnering on the Beresheet-2 Moon mission, that was since paused.

By acting as a bridge between government, academia, and industry, and by fostering links abroad, the ISA plays a central role in turning Israel's space ambitions into tangible projects with both national and international value.

Government Ministries

Ministry of Innovation, Science and Technology (MOST) – Israel's science ministry oversees the ISA and sets national space policy. It commissioned the 2022 national space strategy and provides political and budgetary support. The ministry (formerly Ministry of Science & Technology) issues space-related tenders and educational initiatives. For instance, MOST funded the "Tevel" student satellite program in collaboration with academia and local authorities. The Minister of Innovation, Science and Technology also represents Israel in international agreements (e.g. signing a space cooperation MOU with the UAE during Expo 2020) . The ministry's policies emphasize harnessing space for economic growth, scientific excellence, and expanding Israel's global partnerships in space.

Ministry of Defense (Space Administration) The defense sector has long driven Israeli space capabilities. The Ministry of Defense's Directorate of Defense R&D (DDR&D) includes a Space and Satellite Administration, which for ~40 years has led the development of Israel's reconnaissance satellites and launchers. This MoD Space Administration spearheaded programs like the Ofek spy satellites in partnership with Israel Aerospace Industries. It focuses on dual-use technologies that serve national security but can spin off to civilian use (e.g. imaging, communications, etc.). The MoD increasingly supports "NewSpace" entrepreneurship by funding startups with dual-use applications. In 2019, DDR&D launched the Innofense innovation hub to accelerate startups, in partnership with venture investors. This reflects a policy shift to leverage private innovation for defense needs and vice versa. The Israel Air Force, too, created its own Space Administration in 2023 to explore new military space applications, indicating growing military-civil synergy in space R&D.

Ministry of Communication oversees satellite communications licensing (e.g. for commercial satellites like AMOS), and export control authorities regulate space technology exports. Israel is also party to the core UN space treaties and in 2022 became a signatory of the U.S.-led Artemis Accords, reflecting its commitment to international norms in space.

The National Council for R&D (NCCRD) an advisory body under MOST, helps set strategic R&D priorities (space being an area of national importance). The Israel Academy of Sciences and Humanities historically kick-started Israel's space efforts by establishing the first space research committee in the 1960s. Today, academia and government coordination continues through bodies like the Academy and NCCRD.

Overall, government agencies provide an enabling policy framework, funding, and strategic direction that guide the ecosystem's growth.

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רשות החדשנות
Israel Innovation Authority

Israel Innovation Authority (IIA) The Israel Innovation Authority (IIA) is Israel's statutory body for industrial R&D, operating under the Israel Innovation Law with an annual budget of roughly DKK 4.5billion. Its mandate is to strengthen the competitiveness of Israeli industry by supporting research, development, and commercialization of advanced technologies. In the space sector, the IIA's role is distinct from that of the Israel Space Agency (ISA). While the ISA defines national space policy, manages international relations, and oversees scientific and educational missions such as Beresheet or VENμS, the IIA focuses on the industrial dimension: enabling companies and research institutions to bring space-related technologies to market. It is the primary channel for non-dilutive grants, infrastructure funding, and pilot programs that help startups and corporations move from early development to demonstration and commercialization.

In June 2025, the IIA and ISA jointly presented a techno-economic study, which led to approval of new infrastructure for "access to space". Following the study, the IIA launched a call to create an R&D lab for space technologies under its Pilot Sites for Industry program. The lab will receive up to DKK 80 million in funding and offer full services, from design and integration to launch and in-orbit testing. At least 15 space demonstrations are planned over three years. Israeli companies and research institutions will get a 35% discount on services, making access to space more affordable.

Beyond this recent flagship program, the IIA has been active in several other space-related initiatives. Through its international division MATIMOP, it has facilitated Israeli participation in Horizon Europe and EUREKA projects in areas such as satellite data exploitation, with total Israeli contributions exceeding EUR 30 million over recent cycles. It has also coordinated with bi-national funds like BIRD to support joint Israeli-U.S. developments, including remote sensing payloads and communication technologies. In the private sector, the IIA has allocated grants through its generic R&D tracks to dual-use aerospace firms such as Ramon.Space and Helios. These companies have received IIA support alongside their venture capital rounds, bridging the gap between laboratory prototypes and international market entry.

Academic and Research Institutions

Most Israeli universities engage in aerospace research or have centers for satellite communications, contributing niche expertise and training. Overall, Israel's academic sector provides the research breakthroughs, highly skilled engineers, and even startup companies (via tech transfer and spin-offs) that drive the ecosystem. The close linkage between academia and industry is evident in the flow of knowledge and talent – for instance, university labs often partner with defense companies on contracts, and student-built satellites evolve into commercial or government-funded endeavors.

Ben-Gurion University of the Negev (BGU) – BGU specializes in satellite remote sensing, Earth observation and space-related engineering in the context of desert research. Its Earth and Planetary Image Facility conducts remote sensing research on climate and desertification, and BGU scientists are involved in Israel's environmental satellite missions. BGU partnered with industry to develop Israel's first academic CubeSat: BGUSAT was a 3U CubeSat built jointly by BGU and Israel Aerospace Industries as a research satellite for Earth imaging. Initiated as a student project, BGUSAT launched in 2017 and carried experimental cameras for atmospheric research. The project received funding from ISA and demonstrated the synergy between university research and Israel's aerospace industry. BGU's collaborations also extend globally – for example, it hosts a UN-SPIDER regional support office for space-based disaster management support. With strengths in both high-tech and geosciences, BGU produces graduates who feed into Israel's satellite and remote-sensing companies.

Hebrew University of Jerusalem – HUJI's astronomy, physics, and engineering departments have participated in projects like space-biology experiments and satellite payload development. The university also runs a Space Science Center for youth, encouraging students toward space fields. The university Faculty of Agriculture in Rehovot uses satellite data and remote sensing to study plants, soil, and climate effects on farming. The physics, astronomy, and engineering departments take part in space biology and satellite payload projects.

Technion – Israel Institute of Technology (Haifa) – The Technion houses the Norman & Helen Asher Space Research Institute (ASRI), Israel's first dedicated academic space R&D center. Established in 1984, ASRI is a leading hub for multidisciplinary space science and engineering, drawing faculty from aerospace, physics, mechanical, electrical, and computer science departments. It has been instrumental in satellite projects and training Israel's aerospace engineers. Technion's Aerospace Engineering faculty (founded 1948) educated the experts who built Israel's early rockets and satellites. ASRI is noted for developing innovative small satellites and subsystems, and many of Israel's space-tech entrepreneurs and experts are Technion alumni, underscoring academia-industry linkages.

Tel Aviv University (TAU) – TAU has become a national leader in NewSpace and nanosatellite research. Its Faculty of Engineering launched the TAU Center for Nanosatellites and New Space and, in 2020–2023, built and orbited three student-developed nanosatellites (TAU-SAT series). TAU-SAT3, for example, was the first Israeli academic satellite for quantum communication experiments. TAU actively involves students (and even high-schoolers) in satellite building, reflecting a hands-on educational approach. TAU's program also partners with companies and government (TAU won a science ministry tender to build a fleet of educational satellites). Such university-led projects not only push research frontiers (e.g. in quantum communication) but also produce spin-offs and train the workforce for Israel's space startups and agencies.

The **Weizmann Institute of Science** (Rehovot), Israel's premier research institute, is leading an ambitious space astronomy mission: ULTRASAT, the country's first space telescope, is a joint project of Weizmann and ISA. Planned for launch in 2026, ULTRASAT will observe ultraviolet phenomena in space and is praised as a potential game-changer for transient astronomy. Notably, NASA has agreed to launch ULTRASAT and partner in its science program, a testament to Weizmann's scientific leadership. This international collaboration is led by Weizmann professors (e.g. Eli Waxman, Avishay Gal-Yam) and supported by DESY in Germany, showcasing Israeli academia's ability to attract global projects.

Non Profit Organizations

Ramon Foundation – Named in honor of Israel's first astronaut Ilan Ramon and his son Assaf, the Ramon Foundation is a leading non-governmental organization promoting space and aviation education. The foundation runs a nationwide network of space-themed educational programs, working "from the Upper Galilee to the Southern Negev" through a cadre of trained educators. Key Ramon programs include:

- SpaceLab (an annual competition where students propose and send experiments to the International Space Station).
- Space Startups Program (a two-year entrepreneurship curriculum for 5th–6th graders modeled on NASA astronaut training principles).
- Space Kids (introducing preschoolers to space through fun activities).

The foundation, in collaboration with ISA and the Ministry of Education, also delivers online space lectures and an annual leadership award for outstanding STEM students. Through these efforts, the Ramon Foundation has integrated space exploration into mainstream education and helped inspire countless Israeli youths – a direct contribution to expanding the talent pipeline for the space sector. Notably, the foundation also partners on high-profile events like the Ilan Ramon International Space Conference and supported the recent Rakia Mission which sent former pilot Eytan Stibbe to the ISS in 2022 (Stibbe's mission included educational outreach to Israeli classrooms).

The Rakia Mission, spearheaded by Israeli astronaut Eytan Stibbe, transcended a mere spaceflight to become a profound educational catalyst, designed to ignite scientific curiosity and foster a deep connection to space exploration among Israeli youth. Through an extensive program of live educational broadcasts from the International Space Station (ISS), interactive experiments, and curriculum-aligned lesson plans, the mission brought the awe-inspiring reality of space directly into classrooms and homes across Israel. Students were invited to participate in hands-on activities, replicating experiments conducted on the ISS, and engage with Stibbe in real-time Q&A sessions, fostering a sense of shared discovery. This unique approach not only demystified complex scientific concepts but also showcased the practical applications of STEM fields, inspiring a new generation of scientists, engineers, and innovators.

SpaceIL is a unique player: a non-profit organization that built and launched the Beresheet lunar lander in 2019 – the world's first privately-funded Moon probe. Although the Beresheet lander narrowly failed its landing, SpaceIL succeeded in its core mission of inspiring a generation. The project, started by three young engineers in the Google Lunar XPrize, captured the public imagination and became a national cause célèbre. SpaceIL worked closely with schools and media to promote STEM excitement, and following Beresheet's journey, enrollment in space-related programs surged. SpaceIL's model demonstrates the power of a non-commercial entity in galvanizing interest in space: funded by donors and philanthropists, it functions not for profit but for inspiration and scientific progress.

Based on the latest reports from April 2025, the follow up Beresheet 2 lunar mission project has been suspended by SpaceIL. The decision to suspend the project was made after the organization failed to secure the necessary funding by the final deadline in March 2025. This funding shortfall led to the temporary freezing of engineering development and the laying off of about 25 employees and consultants. Although the mission's development is on hold, SpaceIL officials have stated that the mission has not been permanently abandoned. They are committed to continuing their educational initiatives and finding a path to restart the project, potentially allowing for a launch within three years if sufficient funding is secured.

Education Space Programs

Beyond formal agencies and universities, Israel's space-tech landscape is supported by non-profit foundations and programs devoted to STEM education and public engagement in space. These stakeholders cultivate the next-generation workforce and broaden the ecosystem's base by inspiring students and young professionals.

Government bodies like ISA and MOST sponsor programs to boost space literacy. For example, the ISA runs an annual "Space Olympics" competition that has reached thousands of students, and in 2020 the Ministry of Education introduced a high-school physics curriculum with a space studies emphasis. One flagship initiative is the Tevel project, in which high school students from across Israel design, build, and operate microsatellites. In 2021–2023, under the Tevel (meaning "Universe") program, students in eight towns built a constellation of 9 CubeSats with guidance from engineers. In March 2025, these teen-built satellites were launched to orbit via a SpaceX rocket. The project – led by the Ministry of Innovation, Science and Technology in partnership with Tel Aviv University and local municipalities – included setting up ground stations so students could communicate with their satellites. ISA Director General Uri Oron described Tevel as "a winning combination of scientific excellence, technological education, and societal integration," using real space missions to inspire youth. Such programs not only spark excitement, they also integrate diverse communities (one of the Tevel satellites was built by Druze students, a first for that community) and develop practical skills in teamwork, engineering, and research at a young age.

Additionally, local science centers and youth clubs across Israel contribute at the grassroots level. For instance, the Herzliya Science Center mentored high-school teams that built the Duchifat series of satellites (launched in 2014–2017) to involve students in space engineering. Various astronomy clubs, planetariums, and non-profits (like Galileo and MADATECH) further promote space education and public outreach. Together, these foundations and programs ensure a broad base of support for Israel's space ecosystem by educating and enthusing the public, which in turn sustains the country's high levels of human capital in science and technology.

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The Science Accelerator for Space Entrepreneurship is an online international program for high school students, currently running in the United States, Israel, Luxembourg, United Arab Emirates, Singapore, and other participating countries. Students work virtually throughout the year on space-related science and entrepreneurship projects, guided by experts and mentors, with the program endorsed by NASA. The finals are held in a different host country each cycle, bringing together the top teams for presentations and competitions. This structure allows broad international participation while ensuring a culminating in-person event that connects students directly with global space industry leaders.

Global Partnerships

International cooperation is a cornerstone of Israel's space strategy, recognizing that in the NewSpace era partnerships can greatly expand opportunities. Israel has actively sought alliances that bring funding, technology sharing, and market access. A prime example is Israel's entry into NASA's Artemis program: in January 2022, Israel became the 15th signatory of the Artemis Accords, pledging to collaborate on the U.S.-led effort to return humans to the Moon. This diplomatic step paves the way for Israeli industry and researchers to participate in lunar missions and deep-space projects (indeed, an Israeli radiation-protection vest was flown on Artemis I, and talks are ongoing about Israeli astronauts on future missions). Bilaterally, Israel has forged new space agreements, especially after the Abraham Accords. In October 2021, ISA signed a historic cooperation MOU with the UAE Space Agency, agreeing to joint work on missions, research, and even educational initiatives. Under this pact, the UAE will contribute instruments and expertise to Israel's Beresheet-2 lunar mission, marking an unprecedented Arab-Israeli space collaboration. Such partnerships not only share costs but also enhance the scientific and diplomatic impact of missions. Israel's long-standing ties with the United States and Europe continue to bear fruit: ISA works with NASA (e.g. on ULTRASAT's launch and on astronaut training programs), with France's CNES (the joint VENμS environmental satellite operated 2017–2023 was a French-Israeli project), with Italy's ASI (which agreed to cooperate on Beresheet-2 as well), and with other agencies through multilateral forums. Israel is a member of ESA's partner programs and a participant in EU Space Surveillance and Tracking (SST) efforts. These linkages often translate into funding and research opportunities: Israeli labs join EU Horizon space projects, and Israeli startups have access to European Space Agency business incubators. Additionally, collaborations like the Israel–India–US–UAE (I2U2) initiative announced in 2022 propose joint space projects for societal challenges, reflecting Israel's willingness to engage in multi-nation endeavors.

Israel's international space activity supports its national goals by bringing in resources, avoiding overlap, and giving local players global exposure. The country follows the Artemis Accords and takes part in UN COPUOS discussions on topics like space debris and small satellite rules, keeping its regulations in line with global standards, important for future joint missions. Israeli startups and researchers also join EU Horizon projects and global events such as NASA's Space Apps Challenge. Each year, Israel hosts the Ilan Ramon International Space Conference, which brings together space leaders from around the world.

The Ilan Ramon International Space Conference functions as a critical platform for international cooperation, regularly hosting heads of global space agencies, including those from NASA and the Italian Space Agency (ASI). The event fosters bilateral partnerships, exemplified by the signing of a framework agreement for mutual cooperation between Israel and Hungary in the space sector. High-profile international guests, such as the Ax-1 commercial astronaut crew and the Director General of the International Astronautics Federation (IAF), participate in panels focused on global challenges and collaboration. This continuous international engagement reinforces partnerships like the Israeli-NASA ULTRASAT telescope project and formal commitments such as Israel's signing of the Artemis Accords. The next conference is planned to take place in Tel Aviv (around Q1 2026).

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Core Collaboration Partnerships

United States: The US-Israel space partnership is long-standing and multifaceted. NASA and the Israel Space Agency cooperate on space science – a landmark recent example is NASA's agreement to launch Israel's ULTRASAT telescope and share its data. NASA also included an Israeli-developed radiation protection vest (AstroRad) in the Orion spacecraft test flight, underscoring Israeli contributions to human spaceflight. In the commercial realm, Israeli companies benefit from U.S. launch services (SpaceX launched SpaceIL's Beresheet and many Israeli satellites) and often collaborate with American firms. The Rakia mission in 2022 (where Israeli astronaut Eytan Stibbe flew to the ISS) was conducted with Axiom Space in the U.S., and involved coordination between ISA, NASA, and private players. Additionally, the U.S.-Israel Binational Industrial R&D (BIRD) Foundation has funded joint projects in satellite communications and robotics. This deep U.S. connection gives Denmark a strong overlap – any Israeli technology validated through NASA or U.S. partnerships is likely compatible with Western standards, easing trilateral cooperation.

Europe (EU & ESA members): Israel works with several European countries on a bilateral basis. A flagship collaboration is with France (CNES) on the VENμS environmental satellite – launched in 2017, built by Israel (IAI) with a French camera, it monitors vegetation and water quality for climate research. Data from VENμS is shared openly, and Israel and France have analysed it jointly for precision agriculture and desertification studies, until VENμS deorbited in 2022.

With Italy, Israel is co-developing the SHALOM hyperspectral satellite for Earth observation of land and ocean resources. This mission will provide rich spectral imaging for environmental monitoring and is a true 50-50 partnership (both nations contributing hardware and expertise).

Beyond these dedicated bilateral satellite missions, the relationship is programmatically cemented by Israel's status as an Associated Country to the European Union's major research and innovation initiatives, such as Horizon Europe. This allows Israeli entities to fully participate in, and often lead, European consortia focused on advancing next-generation satellite technology, Earth Observation (EO), and satellite communication (SatCom) research. The Israeli industry is also heavily involved in the downstream commercial use of European space infrastructure, acting as a key developer of applications that utilize data from the EU's Copernicus Earth Observation program and specialized receiver technology for the Galileo navigation system.

Israel is not an ESA member, but it has a cooperation agreement with ESA – Israeli researchers take part in some ESA science teams, and Israeli companies have supplied components for ESA missions (especially in optics and electronics). At IAC 2024, ISA signed new cooperation MOUs with countries like Hungary and Poland, indicating growing ties with European space programs for things like astronaut training and payload exchanges. Separately, Israel maintains structured bilateral cooperation with other major space players like Germany (DLR), focusing on joint scientific R&D, and the United Kingdom (UKSA), emphasizing commercial R&D links and market development.

Abraham Accords and Regional Partners: Since the 2020 Abraham Accords normalized relations, Israel and the United Arab Emirates have moved swiftly to collaborate in space. In October 2021, the UAE Space Agency and ISA signed a historic agreement to cooperate on space research. Israel and France have also shared VENμS satellite data with the UAE to tackle mutual climate challenges (water scarcity, precision farming) . This three-way Israel-France-UAE collaboration on VENμS was a model of how diverse partners can use space assets for common environmental goals. Beyond the UAE, Israel has engaged with Bahrain on satellite technology training and with Morocco, which in 2023 bought two Israeli-built optical spy satellites – a commercial sale illustrating Israel's growing role as a space exporter. Regionally, Israel participates in MEDSPIRE (a Mediterranean space cooperation initiative) and is exploring partnerships in Asia (it has discussed projects with Japan and signed an agreement with the Indian Space Research Organisation in the past).

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3 Satellite programs

The Israeli satellite industry is defined by its strong commercial influence and high-performance technology exports. Private investment in this sector reached approximately DKK 4.5B in the five years leading up to 2025 and international sales in 2024 reached a record high. Exports of satellite and space systems accounted for 8% of Israel's record DKK 94B in defense exports. Sales are primarily driven by three profitable product lines: superior cost-to-performance Low Earth Orbit (LEO) imaging, advanced SatCom networks valued at over DKK 3B annually, and Earth Observation applications.

The industry's competitive advantage stems from its ability to commercialize extremely compact and powerful satellite systems. This focus on extreme miniaturization allows Israeli companies to deliver high-resolution capabilities in platforms with significantly reduced size, weight, and power consumption. This efficiency ensures that Israeli LEO systems consistently offer a superior cost-to-performance ratio in the global market, making them highly desirable exports. The successful commercial platforms, such as the high-resolution EROS observation satellites, are key examples of this exportable, performance-driven approach, securing the industry's role as a key partner in the global satellite supply chain.

Civilian and Commercial Satellites

Israel's non-military space work is anchored by communications and Earth observation satellites that serve both public and private needs. The AMOS series – short for Affordable Modular Optimised Satellite – has been the backbone of the nation's geostationary communications capability since the mid-1990s. AMOS-1, launched in 1996, was the country's first commercial telecom satellite, paving the way for later generations that provide direct-to-home television, broadband internet, and secure data links across Europe, the Middle East, Africa, and parts of Asia.

The fleet is operated by Spacecom, with most of the satellites built by Israel Aerospace Industries (IAI). Some, however, have been sourced internationally – for example, AMOS-5 from Russia and AMOS-17 from Boeing in the United States. AMOS-17, launched in 2019, is a modern high-throughput satellite that expanded coverage, particularly over Africa. While primarily commercial, the AMOS network can also support secure governmental and military communications, highlighting the dual-use nature of much of Israel's space infrastructure.

In the Earth observation domain, Israel has partnered internationally to deliver civilian imaging services. A leading example is VENμS (Vegetation and Environment Monitoring on a New Satellite), launched in 2017 with France's CNES. This micro-satellite, roughly the size of a mini-fridge (about 265 kg), carried a high-frequency imaging camera to monitor vegetation, desertification, water quality, and other environmental indicators. Built mainly in Israel by IAI and fitted with a French optical payload, VENμS operated in a sun-synchronous orbit until 2022. Another joint initiative underway is SHALOM (Spaceborne Hyperspectral Applicative Land and Ocean Mission), developed with the Italian Space Agency, which will carry a hyperspectral imager for detailed monitoring of land and sea environments. Such projects give Israel access to valuable datasets while sharing costs and scientific outcomes with partner nations.

Military Reconnaissance Satellites – The Ofek Series

Israel's strategic surveillance capability rests on the Ofek (or Ofeq, meaning "Horizon") line of reconnaissance satellites. Conceived after the late-1970s, when overflight reconnaissance of neighbouring states became impractical, the programme's goal was to deliver independent, space-based intelligence.

The breakthrough came on 19 September 1988 with the launch of Ofek-1, making Israel the eighth country to orbit a domestically built satellite. Every Ofek satellite since has been launched aboard the indigenous Shavit rocket, westward over the Mediterranean to avoid flying over neighbouring states. This retrograde orbit limits payload capacity, so engineers developed lightweight satellites – typically in the 300 kg class – that still pack advanced electro-optical or radar sensors.

Early Ofeks were experimental, but Ofek-3 (1995) was the first fully operational reconnaissance platform. Successive generations have steadily improved, with electro-optical units now achieving resolutions of around 0.5 metres or better, and radar variants offering all-weather, day-and-night coverage. The series includes highlights such as Ofek-5 (2002) and Ofek-7 (2007), which delivered Israel's first high-quality spy imagery, and radar-equipped models like Ofek-10 (2014), a second-generation SAR platform sometimes referred to as TecSAR-2.

In July 2020, Israel launched Ofek-16, carrying the "Jupiter" telescopic camera from Elbit Systems' Elop division – the most advanced optical payload Israel had deployed, capable of spotting objects smaller than half a metre from orbit. The most recent, Ofek-13, lifted off in March 2023. This advanced radar satellite added upgraded SAR performance, further strengthening Israel's ability to observe developments across the region, from strategic sites to military movements.

All but one Ofek satellite have launched from Palmachim Airbase on Shavit rockets, the sole exception, TecSAR-1 (essentially Ofek-8), was launched aboard an Indian PSLV in 2008 to expedite deployment of a radar satellite. The programme is run by the Ministry of Defence, with IAI as prime contractor, and imagery is processed by Unit 9900 of the IDF's Intelligence Directorate. This gives Israel a sovereign, real-time reconnaissance capability - an asset held by only a few countries – and reduces dependence on allied intelligence sources.

Scientific and Exploratory Missions

Israel's ambition to widen its reach in space is reflected in a series of scientific, research, and exploration projects. The best-known example is Beresheet, the lunar lander developed by the non-profit SpaceIL together with Israel Aerospace Industries (IAI). Launched in February 2019 as a secondary payload aboard a SpaceX Falcon 9, Beresheet undertook a carefully planned sequence of orbital manoeuvres over two months to reach lunar orbit.

On 11 April 2019, Israel was supposed to become only the fourth nation to achieve a Moon landing. However, a late-stage engine malfunction caused the spacecraft to impact the lunar surface rather than land intact. Despite this, the mission was celebrated as a breakthrough: Beresheet transmitted imagery from just hundreds of metres above the Moon and proved that a privately funded probe, with a budget of around DKK 680 million, could come within reach of such a milestone. The mission inspired strong public interest and laid the groundwork for Beresheet-2, that started development with international partners, but was later suspended due to insufficient funding.

In Earth orbit, Israel has also pursued a range of scientific satellites. Beyond VENμS (covered earlier), a major upcoming project is ULTRASAT, an ultraviolet space telescope led by the Weizmann Institute of Science and the Israel Space Agency. Weighing about 100–160 kg, ULTRASAT will monitor transient ultraviolet emissions from astronomical events such as neutron star mergers. Targeted for launch around 2026, the mission will ride to orbit on a NASA-provided launch vehicle, with US scientists joining the observation programme.

Previous scientific missions include the TechSat Gurwin-II, a 48 kg microsatellite launched in 1998 by Technion – Israel Institute of Technology. It carried experiments in ionospheric physics and radio communications, showcasing early academic engineering capabilities. In 2005, Israel joined the Netherlands-led Sloshsat-FLEVO mission, a 129 kg microgravity satellite designed to study how fluids behave in space – research valuable for improving spacecraft fuel tank design. While modest compared with the flagship projects of larger space powers, such missions have enabled Israeli teams to contribute to global science and refine satellite engineering skills within a limited budget.

Israel's role in space science also extends to human spaceflight. In the 1990s and early 2000s, Israeli experiments flew on multiple NASA Space Shuttle missions, covering subjects from insect biology to atmospheric dust transport. In 2003, astronaut Ilan Ramon became the first Israeli to travel to space, flying aboard the Shuttle Columbia on STS-107. He conducted the MEIDEX atmospheric experiment before tragically perishing with the rest of the crew when Columbia disintegrated during re-entry.

More recently, in 2022, entrepreneur Eytan Stibbe spent time aboard the International Space Station as part of the privately organised "Rakia" mission, conducting a series of Israeli microgravity experiments. That same year, Israel's AstroRad radiation protection vest – developed by Tel Aviv-based StemRad with Lockheed Martin – was tested on NASA's Artemis-1 Orion spacecraft to assess its effectiveness against deep-space radiation.

Nano- and Microsatellite Initiatives

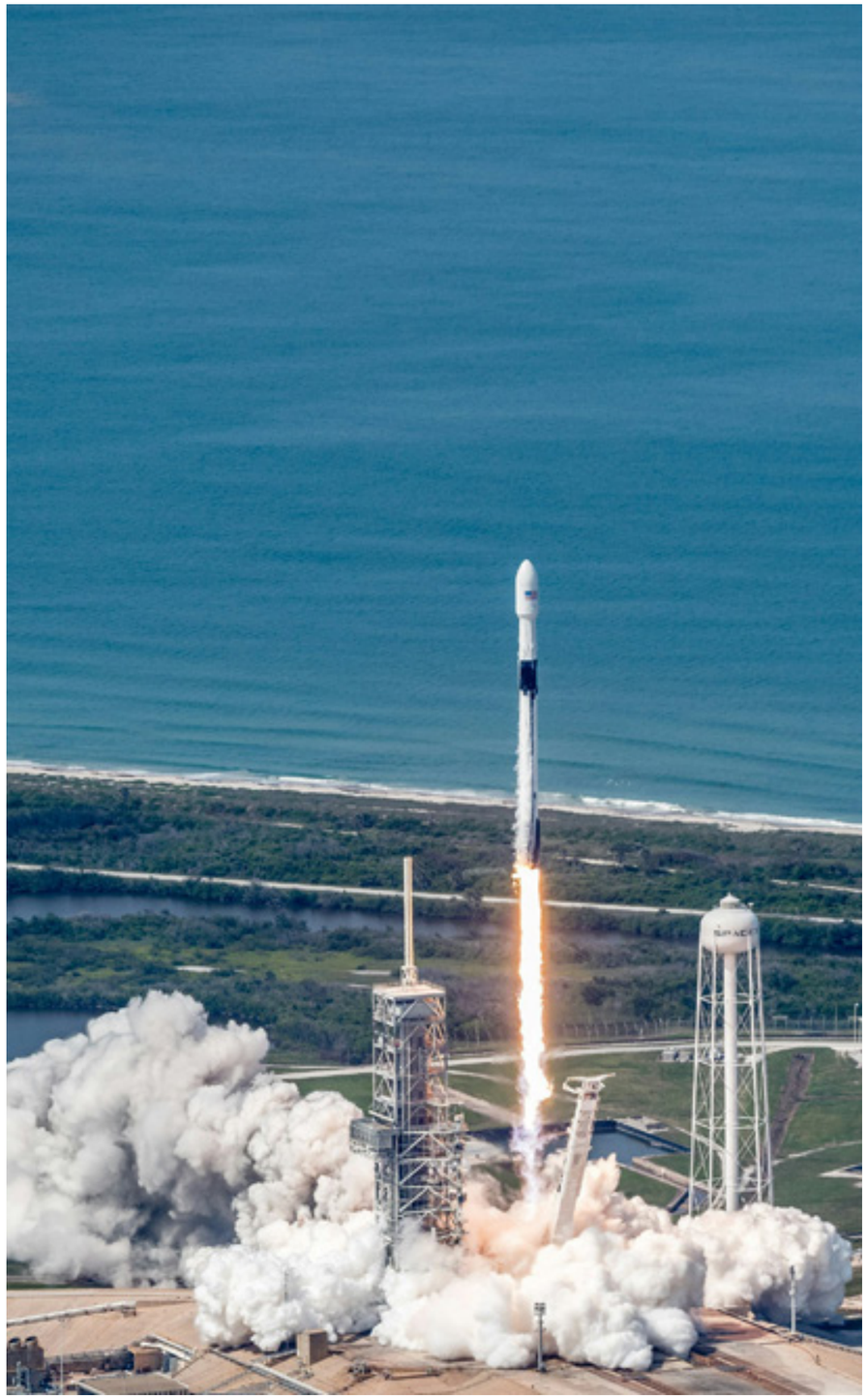
A defining feature of Israel's space activity is its concentration on nano- and microsatellite platforms, matching the nation's wider strengths in miniaturised high-tech engineering. Over the past decade, dozens of small Israeli satellites – many conceived and built by universities or even secondary schools – have reached orbit. These projects have served both as technology demonstrators and as practical training for the next generation of space engineers.

The Duchifat series stands out as a flagship example. Duchifat-1 ("Hoopoe" in Hebrew, Israel's national bird) was the country's first pico-satellite, designed and assembled by high school students before its launch in June 2014. This compact 1U CubeSat (10 × 10 × 10 cm, about 1 kg) was created for amateur radio use and as an educational platform to engage young people in space science. Remarkably, it remains in orbit years after launch.

Building on that success, pupils from the Herzliya Science Center developed Duchifat-2, a 2U CubeSat weighing roughly 1.8 kg. It was delivered to the International Space Station in April 2017 and later deployed into orbit. The satellite formed part of the European QB50 mission studying the thermosphere and carried a sensor for atmospheric density measurements – making it the only high school–built satellite to participate in this multinational research constellation.

In 2019, Duchifat-3 – a 3U CubeSat – flew aboard an Indian PSLV rocket. Equipped with an imaging system for ecological monitoring, it was developed with students from Herzliya and Sha'ar HaNegev. All three Duchifat missions were supported by the Israel Space Agency (ISA) and academic partners, combining real scientific objectives with a strong educational goal of "bringing space closer to youth and preparing tomorrow's generation."

Israeli universities have also become prolific small-satellite developers. In 2017, Ben-Gurion University partnered with the ISA to launch BGUSAT, a 3U CubeSat carrying a novel multispectral camera for environmental monitoring. The Technion – Israel Institute of Technology has been particularly active: in March 2021, its Asher Space Research Institute deployed Adelis-SAMSON, a pioneering three-satellite mission. Each 6U nanosatellite (around 8 kg) operated in formation to track ground-based radio signals for search-and-rescue and geo-location research. The mission demonstrated autonomous formation-flying algorithms and inter-satellite communications, proving that multiple small satellites can work together to perform tasks normally assigned to a single, larger spacecraft.



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Tel Aviv University entered the field the same year with TAU-SAT1, its first nanosatellite – a 0.25U CubeSat launched from the ISS to measure cosmic radiation in low Earth orbit. Smaller institutions have also contributed: students at Ariel University built SATLLA-1, a nanosatellite designed for educational and technology-testing purposes. Looking ahead, Israel's first space greenhouse experiment, developed for microgravity research, is planned to fly on the Beresheet-2 orbiter in the coming years.

These diverse initiatives show how Israel is using small satellite programmes not only as cost-effective research tools, but also as a platform to inspire, train, and equip its future space workforce.

Upgraded Reconnaissance Capabilities

The March 2023 launch of Ofek-13 added a new chapter to Israel's intelligence satellite programme. This spacecraft carries Israel's most advanced synthetic aperture radar (SAR) to date, offering sharper resolution and higher data throughput for strategic surveillance. Its deployment also extended the unbroken success streak of Shavit-2 launches. Defence officials have hinted at follow-on systems – including new electro-optical satellites with sub-0.3 metre resolution and persistent coverage, as well as a next-generation TecSAR. These advances shorten revisit times over key areas and improve overall monitoring capacity.

Israel has also begun to export high-end reconnaissance technology. In 2020, it sold a TecSAR-class satellite (OPSAT-3000) to Italy, and in 2024 reports emerged that Morocco would acquire an advanced Israeli observation satellite. Such sales bring revenue that can be channelled into further research and development while strengthening diplomatic ties.

Next-Generation Communication Satellite

After the setbacks of the AMOS-6 loss in 2016 and the cancellation of a foreign-built AMOS-8, Israel committed to building a new indigenous communications satellite. In January 2020, Israel Aerospace Industries (IAI) was tasked with delivering Dror-1, a national-level comsat designed to serve strategic needs for at least 15 years. Dror-1 series will rely primarily on Israeli technologies, reviving domestic expertise in large satellite production. IAI has also revealed concepts for smaller, software-defined communications satellites that can be reconfigured in orbit using digital beam-forming – similar to "smartphones in space." Dror-1 was successfully launched in July2025, ensuring Israel's independent satcom capability for both defence and civilian use, and potentially opening an export line of advanced comsats.

Launch Capabilities

Israel is part of a very small club of nations able to place satellites into orbit entirely with their own launch systems. Since the late 1980s, the solid-fuelled Shavit rocket has been the backbone of these missions. The country's "spaceport" is located at Palmachim Airbase, just south of Tel Aviv. From here, launches are directed westward to avoid overflying neighbouring states, all of which lie to Israel's east. This retrograde trajectory – going against the Earth's rotation – removes the natural velocity boost enjoyed by eastward launches, reducing payload capacity.

The current Shavit-2 configuration, a three-stage solid-propellant vehicle, can carry around 380 kg into low Earth orbit under these conditions. Israel's reconnaissance satellites are deliberately engineered to fall within the 250–300 kg range to match this lift capability.

The first Shavit launch, on 19 September 1988, placed Ofek-1 into orbit and instantly established Israel as a spacefaring nation. The rocket's heritage lies in the country's Jericho ballistic missile programme, adapted for satellite delivery. While early versions were two-stage vehicles (with an optional third), the modern Shavit-2 employs three main stages and can be fitted with a liquid kick motor for precision orbit insertion. Standing about 20 metres tall, it is compact by global launcher standards. The first two stages (ATSM-13) are built by Elbit Systems – previously Israel Military Industries – while Rafael produces the third stage (AUS-51).

Launches are relatively infrequent, averaging one every two to three years. After two failures in 1998 and 2004, upgrades led to the Shavit-2 variant, which has maintained an unbroken success streak since 2007. The most recent missions – Ofek-16 in 2020 and Ofek-13 in 2023 – both performed flawlessly, underscoring the system's maturity.

Use of International Launch Services

While Shavit ensures sovereign access to low Earth orbit, its limited payload mass and inclination options mean Israel frequently turns to foreign rockets for heavier or higher-altitude missions. The AMOS communications satellites, for example, have flown on a variety of international boosters:

- AMOS-1 (1996) – Ariane 4
- AMOS-2 (2003) – Soyuz
- AMOS-3 (2008) – Zenit-3SL
- AMOS-5 (2011) – Proton
- AMOS-17 (2019) – Falcon 9

In 2016, AMOS-6 was destroyed during a Falcon 9 static-fire accident in Florida, prompting Spacecom to lease AMOS-7 as a temporary replacement. Other missions have also launched abroad: TecSAR radar satellite (Ofek-8) on India's PSLV in 2008, the VENμS environmental satellite on an Arianespace Vega in 2017, and the Beresheet lunar lander as a secondary payload on a Falcon 9 in 2019. In December 2022, a Falcon 9 from Vandenberg carried the EROS-C3 imaging satellite into orbit, with the booster returning to a land-based pad – highlighting the cost benefits of modern reusable rockets.

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Ecosystem Mapping: Upstream Players in Israel

Israel's upstream space ecosystem spans from large integrators like IAI to niche suppliers, and can be categorized into 3 segments:

- **System Integrators**: IAI leads in satellite manufacturing, covering defense, telecom, and scientific missions. The Ministry of Defense partners with IAI on military projects; ISA supports civilian efforts using IAI's infrastructure. This creates strong civil-defense tech spillover.
- **Flight Hardware**: Companies like Elbit (space cameras), Aitech (space computers), and Cielo, Rokar, Arazim (navigation systems) supply key subsystems. Many operate in both defense and civilian markets, reflecting Israel's dual-use innovation model.
- **Launch & Propulsion**: Israel is among 12 nations with launch capability. Shavit-2, powered by Tomer and Rafael, supports small satellites but is limited by westward launch constraints. Tomer and Rafael also produce propulsion systems now offered internationally.

Player	Upstream Role	Civilian Activities	Defense/Dual-Use Activities	Collaboration Potential
Israel Aerospace Industries (IAI) (Government owned corporation)	Prime contractor for satellites and launchers; operates integration & test facilities.	Builds commercial satellites (e.g. communications satellites like AMOS/ Dror-1) and scientific spacecraft . Co-developed the civilian Beresheet lunar lander with SpaceIL.	Main contractor for Israel's military spy satellites (Ofeq series) . Its MLM Division develops the Shavit small launch vehicle for national security payloads.	Danish firms could supply sub-systems (electronics, optics) for IAI satellites, or partner on joint satellite missions. IAI's smallsat platforms complement Denmark's niche in microsatellite design.
Israel Ministry of Defense – Space Administration	Government entity overseeing defense space programs.	Oversees R&D that sometimes spins off to civil tech (e.g. advanced imaging, encryption). Partners with ISA on dual-use tech development.	Leads development of military satellites and launchers (reconnaissance, communications for IDF). Funds classified projects via MAFAT (R&D directorate).	Collaboration mainly via government agreements; could include data-sharing or co-development of dual-use technologies (e.g. secure satellite communications).
Israel Space Agency (ISA)	National civilian space agency (policy, funding, coordination).	Funds civilian R&D programs, academic cubesats, and international missions (e.g. VENμS environmental satellite with CNES, ULTRASAT space telescope). Runs tech incubators and grants (e.g. NIS 600M program to boost space tech).	Minimal direct defense role (focuses on civilian sector), though coordinates with defense for national space strategy.	Has cooperation agreements with NASA, ESA, and others – potential for ESA BIC Denmark and ISA to jointly support projects (Denmark and Israel are both ESA contributors via agreements).
Rafael Advanced Defense Systems (Government owned corporation)	Defense prime specializing in missiles & space propulsion.	Develops satellite propulsion systems (thrusters, propellant tanks, valves) for commercial spacecraft. Rafael propulsion is used on civilian satellites (e.g. electric propulsion or apogee engines for communications satellites).	Provides rocket engines and thrusters for military programs. Notably developed stages for the Shavit launcher and missile defense interceptors. Its space-grade cameras (via Rafael's electro-optics unit) were used in early Ofeq satellites.	Rafael's satellite thruster technology could integrate into Danish smallsat missions, enhancing maneuvering capability. Collaboration on "green" propulsion or sharing test facilities are other synergy areas.

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Player	Upstream Role	Civilian Activities	Defense/Dual-Use Activities	Collaboration Potential
Tomer  (Government owned corporation)	Rocket propulsion center of excellence (spun off from IMI).	Exploring commercial sales of rocket motors to foreign launch ventures . Aims to support civilian launches in the future (currently mainly defense).	Manufactures solid rocket motors for the Shavit launcher (first two stages) and for Israel's Arrow missile defense system. Holds classified propellant expertise; upgrading Shavit to lift heavier payloads.	Potential supplier of solid propulsion to international launcher programs. Danish rocket startups or ESA small launch projects could source motors from Tomer as Israel–Japan and Israel–US discussions have indicated.
Elbit Systems (Elop Division)	Major defense electronics company; provides space optical payloads.	Builds high-resolution space cameras and hyperspectral imagers for Earth observation. Supplied the telescope for the ULTRASAT science mission (civil astronomy). Also develops satellite communication transceivers and laser terminals for commercial use.	Primary supplier of electro-optical imaging payloads for IDF spy satellites (the "Jupiter" camera on Ofeq and export models). Also provides surveillance payloads and electronic warfare tech for defense satellites.	Danish firms (with strengths in optics and sensors) could partner with Elbit on next-gen imaging systems. For example, integrating Danish optics or software into Elbit's camera platforms could open new markets.
IAI – MLM/Space Division (Systems Integrator)	(Included under IAI above) Develops complete spacecraft and launch systems.	(See IAI civilian activities above.) Notably, IAI is building Dror-1, a national comm satellite with mostly local tech, for civil telecom needs.	(See IAI defense activities above.) Notably built Ofeq-16 and Ofek-13, and co-developed the Shavit-2 launcher with MoD. Exports military satellite systems (e.g. OPTSAT-3000 to Italy, Morocco) with Elbit and Rafael components.	(See IAI above.) Collaboration can range from joint satellite missions to contracting IAI for building Danish-designed satellite buses, leveraging IAI's facilities and experience.
BAE Systems Rokar	Subsidiary of BAE; produces navigation systems in Israel.	Supplies GPS receivers and inertial navigation units for civilian satellites and launchers (leveraging dual-use tech). Has worked on sat-nav simulators and components for commercial aerospace.	Provided navigation and orientation systems for defense satellites (e.g. inertial measurement units for Ofek program) . Focuses on robust, military-grade GNSS receivers resistant to jamming.	Rokar's precise navigation tech could complement Danish satellite control systems. Possible cooperation in GNSS augmentation or integrating Danish-developed algorithms into Rokar hardware.
Cielo Inertial Solutions	Private company specializing in fiber-optic gyros (FOG) and inertial units.	Offers high-accuracy inertial measurement units (IMUs) for commercial spacecraft attitude control. Their closed-loop FOG technology targets both NewSpace smallsats and civil aviation.	Provides navigation systems for defense (missiles, UAVs) and has supplied space-grade IMUs for military satellites(ensuring autonomous orientation if GPS is denied).	Inertial navigation is an area where Danish space research (e.g. DTU's sensors) and Cielo could collaborate to improve nano-satellite attitude control.
Semiconductor Devices (SCD)	Joint venture (partly owned by Elbit); makes infrared detectors.	Develops infrared sensor arrays for space applications, used in civil Earth observation and science (e.g. climate monitoring satellites). Also sells to astronomy instruments and commercial thermal imaging satellites.	Supplies advanced IR detectors for defense satellites' payloads (e.g. thermal imaging for reconnaissance or early-warning satellites). Its detectors are designed for radiation hardness and long-term reliability in orbit	Collaboration could involve integrating SCD's detectors in Danish-led science missions (e.g. climate satellites), or joint R&D on next-gen IR sensors (combining Danish optics expertise with SCD technology).
Aitech Systems	Israeli-founded company (with global presence) making space-rated computers.	Manufactures radiation-tolerant computer boards and avionics for satellites and deep-space probes. Their rugged processors and memory systems are used in many civilian missions worldwide (including on ISS experiments and commercial satellites).	Provides onboard computers for military satellites, missiles, and spacecraft requiring high reliability. Long history of supplying COTS solutions adapted for defense space needs.	Aitech's hardware can support Danish smallsat missions (replacing the need to develop custom onboard computers). Danish and Israeli engineers might co-develop AI-on-satellite solutions using Aitech platforms to process data in orbit.

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Player	Upstream Role	Civilian Activities	Defense/Dual-Use Activities	Collaboration Potential
AccuBeat	Specialized manufacturer of atomic clocks and timing systems.	Produces space-qualified atomic clocks for satellite timing and navigation systems. Pursues civilian markets like telecommunications satellites (for precision timing) and future GNSS constellations.	Supplies ultra-stable clocks to defense programs (for secure communications and navigation). An Israeli atomic clock was reportedly offered for Europe's Galileo or other GNSS backup systems.	Precise timing is critical to satellite navigation and telecom. Collaboration might see AccuBeat clocks integrated into Danish satellites or ground stations, or joint work on next-gen timing tech for space (quantum clocks, etc.).
SatixFy	Fabless semiconductor company developing satellite communication systems.	Designs advanced satellite modems, digital payloads, and beam-forming antennas. Its chips enable high-throughput communication payloads for broadband satellites and also user terminals. Focus is largely commercial (e.g. serving in-flight connectivity, 5G via satellite).	Technology has dual-use potential (secure waveforms for military satcom). It has likely participated in defense satcom projects given Israel's focus on secure communications, though the company's portfolio is largely commercial.	Danish satcom companies or research groups could partner with SatixFy to develop next-gen phased-array antennas or IoT satellite links, marrying SatixFy's electronics with Danish RF engineering.
Spacecom	Israel's primary satellite operator (commercial).	Operates the AMOS series of geostationary communications satellites, providing TV broadcast and broadband services internationally. All its satellites to date were built by IAI or abroad, but it drives demand for Israeli upstream industry. Its services are civilian (broadcast, telecom for consumers and enterprises).	While a commercial entity, Spacecom's satellites often serve strategic needs; the Israeli government can lease capacity for military communications on AMOS satellites. However, Spacecom itself is not a defense contractor.	Collaboration could involve Danish telecom providers using AMOS satellite capacity or partnering on future satellite procurements. (As a service-focused company, Spacecom might appear in downstream chapters; we note it here as an upstream stakeholder commissioning satellites.)
Launch Infrastructure (Palmachim Airbase) (Government owned corporation)	Launch site in Israel, operated by the government (IDF).	Supports civil launches on occasion (e.g. experimental small satellites), but primarily used for Israel's own programs. Due to geographic constraints, launches go westward over the Mediterranean, making this site less used for international civil launches.	Primarily a military launch site for Ofek reconnaissance satellites using the Shavit-2 rocket. Strict security and unique retrograde launch trajectory.	Not a commercial spaceport open to foreign launches currently. However, Israeli launch know-how (range safety, etc.) could be shared with Danish or European launch initiatives. (Denmark does not have a launch site.

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4 Newspace, dual application & market convergence

Israel's space-tech landscape is undergoing a paradigm shift as NewSpace startups drive a transition from government-led projects to commercially-driven innovations. Historically, Israel's space efforts were dominated by state agencies and defense contractors building satellites and launchers. Today, a new generation of private companies is broadening the ecosystem beyond traditional upstream players, focusing on downstream applications that leverage space technology for use on Earth and vice versa. These startups often pursue "dual application" innovations – solutions that address terrestrial industry needs while also tackling space-related challenges. This dual-application approach is expanding Israel's space sector into areas like agriculture, climate, mobility, and health, heralding a convergence of markets that were once separate. The result is a nascent but rapidly growing downstream industry characterized by cross-sector collaboration, venture capital investment, and an influx of non-traditional stakeholders.

Over 60 Israeli startups now operate in space-related applications, having raised about BKK 2B in 2023 alone. Unlike legacy aerospace firms, these ventures are typically "close to the customer" in the value chain – meaning they build on existing space infrastructure (satellites, launch vehicles, etc.) provided by global players, to offer data-driven services and products to end-users. By piggybacking on large infrastructure (rather than developing rockets or large satellites themselves), Israeli companies can focus on innovative applications: analyzing satellite imagery for business insights, developing miniaturized space hardware, or creating software to improve satellite operations . This aligns with global NewSpace trends of lower entry barriers – such as cheaper launches and standardized small satellites – which have democratized access to space technology. As a result, Israel's space-tech startups are finding "their own little niches" in a global market dominated by American, European, and Asian giants.

From Government-Led to Commercially-Driven: Israel's Newspace Shift

Israel's entry into space began with impressive upstream milestones – it was the 8th nation to orbit a satellite and one of the few to attempt a lunar landing. These early achievements were spearheaded by government and military programs, often in collaboration with defense contractors like Israel Aerospace Industries (IAI). Traditional Israeli space projects were characterized by customized satellites (e.g. the Ofek spy satellites, AMOS communication satellites) and launch systems developed for strategic purposes. While successful, this "Traditional Space" model involved heavy public-sector investment, long development cycles, and a narrow focus on national needs.

In recent years, Israel has begun mirroring the global transition from "Traditional Space" to "NewSpace" – a movement defined by private-sector leadership, agile development, and a broadening of use-cases. Several factors catalyzed this shift: significantly lower launch costs (thanks to services like SpaceX), proliferation of smallsat and CubeSat technology, and the spillover of Israel's thriving high-tech talent into the space arena. Notably, Israel does not host R&D centers of major space conglomerates (SpaceX, Blue Origin, etc.), so the growth is emerging indigenously. The current stage of Israeli spacetech is often similar to the country's auto-tech sector before 2017 – just as Mobileye's success drew global car makers to Israel, a breakout NewSpace success could attract major aerospace players in the future.

Crucially, Israeli startups are leveraging the country's deep-tech strengths (in electronics, software, and materials) to enter the space field in innovative ways. Venture capital and incubators have taken notice. In 2023, a dedicated space-focused fund called Earth & Beyond Ventures (EBV) launched with DKK 800M in backing from international industry players (NASA supplier Corning, Japan's Kyocera, satellite operator Spacecom, etc.) and the Israel Innovation Authority. EBV explicitly seeks out "deep technologies and ideas that can become powerful applications not just here on Earth, but in space as well" – a mandate underscoring the dual-application trend. The surge of private funding (over DKK1.9B in one year) is empowering startups to pursue opportunities beyond the scope of government programs. Moreover, public agencies have shifted strategy to support commercial space innovation (e.g. the Israeli Space Agency and Innovation Authority co-funding startup projects and international collaborations, rather than only proprietary missions).

As a result, focus is now shifting to downstream applications away from large, state-owned satellites toward data-centric services and enabling technologies. Israel's space startups predominantly develop components, software, and services that complement existing infrastructure. For example, rather than build a new Earth observation satellite, an Israeli startup might develop an AI platform to extract insights from others' satellite data and sell those insights to agriculture or insurance companies. This strategy lowers risk and cost, allowing Israeli NewSpace firms to integrate into global supply chains. In the foreseeable future, it's expected that Israeli companies will excel at developing "technologies and components based on traditional space infrastructures and not those that develop the infrastructures themselves." In other words, Israel is becoming a testbed for space-powered applications and ancillary technologies, expanding the country's role in space beyond the legacy of government satellites.

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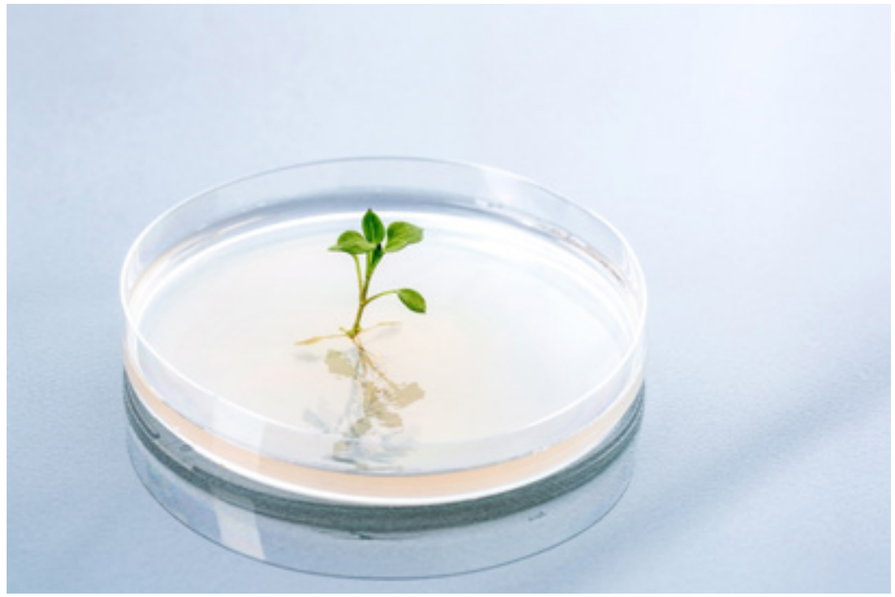
A core trait of Israel's NewSpace sector is dual-application technologies - solutions that serve both space and Earth markets. Startups are increasingly applying space-derived innovations to industries like agriculture, healthcare, and mobility, or adapting Earth-based tech for space. This approach broadens Israel's space ecosystem, blurs the line between "space-tech" and deep-tech, and enables startups to tap into global markets while solving urgent challenges on Earth.

Investors

Private investment in Israeli space technology has evolved from a niche interest into a structured market segment over the past decade. What began with a handful of angel investors backing early communication satellite ventures has developed into a network of specialized funds, family offices, and strategic investors who understand the sector's unique risk profile and extended development timelines. These investors operate in a market shaped by Israel's defense heritage and academic research base, where technical talent moves fluidly between military projects, universities, and commercial ventures. The capital requirements for space hardware remain substantial, and the investment thesis differs from software deals that dominate Israel's venture landscape, requiring patience with longer exits and comfort with regulatory complexity across multiple jurisdictions.

Earth & Beyond Ventures represents a turning point in how Israeli space ventures access capital. The fund raised DKK 800M in 2022 with backing from industrial partners like Corning and Kyocera alongside the Israel Innovation Authority, bringing sector-specific expertise to complement financial support. Its founding team drew from Spacecom's operational experience and established venture networks, addressing a gap that had forced earlier space startups to compete for attention in generalist portfolios. The



fund targets seed-stage companies with investments between DKK 4M and DKK 16M, focusing on satellite systems, propulsion, and Earth observation technologies that require patient capital through hardware development cycles.

Beyond Earth & Beyond, traditional Israeli venture firms have begun allocating portions of their funds to space-adjacent opportunities, particularly in data analytics and ground systems where the technology overlaps with their existing software investments. This layered funding environment has changed the calculus for technical teams considering whether to commercialize research or remain in academic or defense contexts. According to SpaceNews, Earth & Beyond Ventures aims to double the number of Israeli space startups in the coming years by making seed investments of DKK 3-13 million each.

Accelerators

Creation-Space runs an accelerator program for startups aiming at deep-space technologies (beyond Earth orbit). Backed by a US venture firm and Israeli philanthropic sponsors, Creation-Space recently secured DKK 16Mn to fund its second cohort of companies developing space habitation, exploration and related tech. Each selected startup receives up to DKK 1.6B and intensive mentoring, with the accelerator taking an equity stake. The program explicitly seeks dual-use solutions that can work in space and on Earth (for instance, life-support tech with climate crisis applications). Such incubators often partner with universities and research centers, leveraging local strengths (Creation-Space is situated in Mitzpe Ramon, near a Mars-like desert crater used for astronaut simulations.

Israeli accelerators operate under a fundamentally different model than their counterparts in countries like Denmark or elsewhere in Europe. While European programs typically provide lighter-touch support-offering workspace, mentorship, and networking without taking significant equity, Israeli accelerators function more like early-stage investors. They provide substantial capital in exchange for equity stakes, bridging the gap between initial concept and venture-ready company. This reflects Israel's investment culture, where accelerators emerged from the venture capital industry rather than from government innovation agencies or corporate outreach programs. The model assumes startups need meaningful funding to reach technical milestones, not just guidance and connections.

Creation-Space exemplifies this approach within the space sector, running an accelerator for deep-space technologies with $2.5 million in backing from US venture capital and Israeli philanthropic sources. The program invests up to $250,000 per company in exchange for equity, focusing on space habitation, exploration systems, and dual-use technologies that address both extraterrestrial and terrestrial challenges. Its location in Mitzpe Ramon places participating teams alongside a desert crater used for astronaut training simulations, providing access to analog environments and research partnerships. The accelerator's emphasis on dual-use applications, life support systems adaptable to climate response, for instance, reflects a pragmatic approach to market development, recognizing that deep-space revenues remain distant while Earth-based applications can generate nearer-term returns.

Government-Supported Incubators – The Israeli government, through the Innovation Authority and ISA, directly nurtures space startups via incubators and grants. The Israel

Innovation Authority's incubator program offers seed funding and mentorship to startups in various fields, including aerospace. In one notable joint effort, ISA, MOST, and IIA issued a call in 2022 that led to 11 space startups receiving grants covering a significant portion of their R&D costs. Several startup incubators now have a space focus. For example, the Tech7 venture incubator in Beer Sheva and the Starburst Accelerator (a global aerospace accelerator with an Israel presence) help connect Israeli founders to expertise and investors.

Defense and Dual-Use Accelerators – As mentioned, the Ministry of Defense has also become a player in startup incubation through its Innofense program mentioned earlier in the report, which, while not exclusively space-focused, has funded companies with space-applicable tech (such as miniaturized sensors, AI for satellite imagery, etc.). Innofense collaborates with private VCs to scout and accelerate dual-use startups. By the end of 2023 it had graduated over 40 companies in multiple cohorts. This model brings defense, civil government, and investors together – a recognition that NewSpace in Israel often lies at the intersection of commercial opportunity and strategic capability. Similarly, the government has shown willingness to co-invest alongside VCs in flagship companies: for example, when the Israeli imaging startup Tomorrow.io (which has space-based weather prediction plans) needed support, government funds were considered to anchor its growth (illustrating an ad-hoc but important role of the state as an "investor of last resort" in strategic tech).

Key Startup Clusters in Israel's Downstream Space-Tech

Israeli space-tech startups can be grouped into several clusters based on their core space application. The Deloitte–EBV mapping categorizes the ecosystem into eight key segments, each representing a distinct aspect of the space economy. Below we outline these clusters and examples of notable players.

Earth Observation (26% of startups) – This is the largest cluster, comprising ventures that use satellites to observe Earth for data analytics. These startups develop remote sensing technologies, imagery analysis software, and data services to monitor environmental conditions, climate, agriculture, infrastructure, and more. For example, companies process data from optical and radar satellites to detect crop diseases, map disaster damage, or track urban development. A notable Israeli EO startup is Asterra, which analyzes satellite synthetic-aperture radar (SAR) data with AI to find underground water leaks and even mineral deposits, originally leveraging algorithms from planetary science. Another is PlanetWatchers, using SAR imagery to help insurers assess crop damage remotely. While Israel does build some observation satellites (e.g. the VENμS environmental satellite in a France-Israel partnership), the innovation in this cluster is mostly downstream – turning raw satellite images into actionable insights for Earth industries.

Communications & Navigation (25%) – Nearly a quarter of the startups focus on satellite communications, connectivity, and navigation solutions. These include developers of advanced antennas, satellite networking systems, and location-based services. Israel's legacy in communications hardware gives it an edge here. For instance, SatixFy, founded in Israel, creates ASIC chips and phased-array antennas that enable high-throughput satellite broadband and IoT connectivity worldwide. Others are working on novel GPS augmentation and anti-jamming technologies (like Fuze or InfiniDome) to secure navigation signals – benefiting both drones/vehicles on Earth and satellite-dependent positioning in space. Some startups aim to integrate satellite links with 5G networks to provide seamless coverage. In this cluster, the dual-application nature is evident: technology that ensures a reliable signal from space can be sold to aviation, maritime, or telecom sectors on Earth to expand connectivity. With smart mobility being the top Earth industry served by Israeli space startups, many comms/nav ventures align with the needs of autonomous vehicles, airlines, and logistics (for example, enabling internet on airplanes or precise tracking of shipping containers via satellite).

Space Infrastructure – This category covers companies developing the hardware, components, and facilities that support space missions. Unlike launch vehicles (which Israel's startups largely avoid), these ventures build enabling infrastructure such as satellite sub-systems, sensors, or ground station tech. Examples include Ramon. Space, which provides space-hardened computing hardware and software-defined supercomputers that can operate in harsh radiation environments. Ramon.Space's tech is critical "infrastructure" for modern satellites, allowing on-board data processing and even software updates in orbit. Another example is AccuBeat, an Israeli company making ultra-precise atomic clocks for satellites and deep-space probes; their timing devices (accurate to 10^−14 seconds) are used in both space missions and terrestrial defense systems. SpacePlasmatics is developing tiny plasma thrusters (electric propulsion units) to equip the coming generation of nano-satellites with maneuvering capability – effectively providing a piece of spacecraft infrastructure that will be in high demand as thousands of small sats launch this decade. In summary, the space infrastructure cluster in Israel produces critical building blocks (from advanced materials to electronics) that can be integrated into satellites or used in space operations. These often have commercial spin-offs, for instance, radiation-hardened electronics can also find use in nuclear power plants or aviation, and precision oscillators improve GPS systems on the ground.

In-Space Operations – Startups in this niche specialize in activities that happen in orbit or beyond Earth, such as satellite servicing, on-orbit assembly, experimentation, and space tourism services. Israel has a few notable players here despite the small percentage. SpacePharma (mentioned earlier) falls into this category as it operates microgravity experiments as a service – essentially running R&D operations in space on behalf of clients. Another is Effective Space (acquired by Astroscale), which was developing small "space tugs" to extend the life of satellites by docking and servicing them – an in-orbit service that leverages Israel's robotics and propulsion know-how. CSpace, a newer startup, is building a constellation of nano-satellites with telescopes to create an "observation center" in orbit, essentially a platform for rent so that users (even hobbyists) can observe Earth or stars remotely. In-space operations ventures often collaborate with international missions, for example, Israeli firm Lulav Space provides autonomous navigation and landing sensors, and is partnering on the upcoming Beresheet-2 lunar mission. These companies broaden Israel's role from just building payloads to actively conducting and managing operations in the space environment. Their technologies (robotics, autonomous systems, remote operations software) also loop back to Earth applications like autonomous drones, industrial robotics, or lab automation.

source: StartupNationCentral.org

Computing & Software – A smaller but pivotal cluster, these startups develop software, algorithms, and computing platforms for space. They complement the hardware infrastructure by focusing on data processing, AI, and mission control solutions. AI and data analytics for space is a theme here: startups applying machine learning to optimize satellite constellations, or to compress and analyze the massive data streams coming from orbit. Some provide software for Earth observation analysis, effectively turning raw satellite data into insights (overlapping with the EO category). A prime example is again Ramon.Space's software side – enabling satellites to communicate directly and be reconfigured via software updates, which extends their functionality . Additionally, companies like SkyX (hypothetical example for illustration) might develop cloud platforms that integrate multiple satellite services (imagery, GPS, weather) into one API for enterprises, simplifying access to space-derived data. Israel's prowess in cybersecurity also manifests here: there are emerging firms focusing on cyber-defense for satellites and secure communication protocols (ensuring satellites and their ground networks are safe from hacking – a dual benefit for space and for critical infrastructure on Earth). Overall, this cluster reinforces that software is as crucial as hardware in the NewSpace era – and Israeli developers are applying their talent to make space systems smarter, more autonomous, and more user-friendly for non-space industries.

Space Services – This category includes commercial services in or for space that don't neatly fall into hardware/software buckets. It's a broad segment: examples might be companies offering satellite-as-a-service platforms, space education and training, or brokerage and consulting services to facilitate space projects. For Israel, one example is the ASTRA accelerator program (powered by Starburst) that was launched to incubate next-generation space-tech startups in the country – while not a startup itself, it represents service infrastructure to grow the sector. Another example is SpaceIL, the nonprofit that built the Beresheet lunar lander, which has spun out educational programs to inspire STEM students in Israel – effectively a service to create human capital for space. Some startups might offer ground station services or analytics-as-a-service to global customers (e.g. managing the downlink of data for satellite operators and delivering it in usable formats). Given Israel's lean toward applications, a few firms essentially package space capabilities into turnkey solutions for end-users. Maritime monitoring services like Windward – which uses satellites to track ship movements and predict maritime risks – can be seen as a space-powered service catering to global trade and security clients. This cluster remains small but is expected to grow as more startups find ways to sell outcomes (e.g. "connectivity everywhere" or "improved crop yield via satellite data") rather than just products.

In-Space Manufacturing – An emerging cluster where startups focus on manufacturing and production in microgravity or space environments. While only a few Israeli companies currently work in this area, it's a forward-looking field poised for growth. One notable company is Aleph Farms (in partnership with space agencies) experimenting with cultivating meat in space – essentially manufacturing protein food off-Earth. Another is Lambda (fictional) which could be developing 3D printing technology that works in orbit to produce satellite parts on-demand. Israel's strength in materials science is relevant: advanced materials for space (like radiation-resistant polymers by Nucleon – hypothetical) can be categorized here if the production or processing of those materials leverages space conditions. Also, SpacePharma might be considered part of this cluster as well, since drug crystallization in space is a form of manufacturing a better product (pharmaceutical compounds) using microgravity. As humanity moves toward industrializing Low Earth Orbit (for instance, to make superior fiber optics or biomedical products in zero-G), Israeli innovators are positioning to contribute niche capabilities. This cluster strongly embodies dual-use: any process perfected in space (whether it's biofabrication or new alloys) usually has unique advantages that can improve manufacturing on Earth as well.

Exploration & Resources – The final cluster involves startups developing technologies for space exploration, planetary science, and resource utilization. Despite its small share, this is a particularly visionary segment. Helios, for example, is an Israeli startup engineering a system to extract oxygen from lunar soil for use as rocket propellant and breathable air. By solving the problem of in-situ resource utilization on the Moon, Helios also contributes to Earth industries – its core technology (high-temperature electrolysis) could be applied to clean metallurgy or energy storage on Earth. Another company, WeSpace Technologies, is building small hopping robots to explore the Moon's surface and lava tubes. In doing so, it pushes the envelope in autonomous navigation, sensor fusion, and rugged robotics, which are valuable for Earth applications like underground mining or search-and-rescue. Israel's academic sector (e.g. Technion's space research) plays a big role in this cluster, translating space science into startups. While exploration startups often rely on international missions (collaborating with NASA/ESA or primes like IAI), their work ensures Israel remains at the cutting edge of space technology. These firms carry forward the inspirational aspect of space – they may be small, but they enable Israel to partake in humanity's push to the Moon, Mars, and beyond. And importantly, they bridge to Earth markets by transferring space-hardened innovations (materials, AI, power systems) back to terrestrial industries, ensuring the "resource loop" benefits our planet as well.

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5 Emerging trends shaping the next wave

AI and Edge Computing in Space: With the volume of data from satellites skyrocketing, there is a push to process data at the edge (in orbit) using AI to reduce bandwidth needs and enable real-time insights. Israeli companies like Ramon.Space are pioneering on-board computing platforms that can run complex algorithms on satellites. We anticipate Israeli AI startups (which are plentiful) partnering with spacetech firms to deploy machine learning models on satellites for applications like intelligent Earth observation (e.g., a satellite that only downlinks an alert when it detects a wildfire or an oil spill). This could extend to autonomous satellite operations – spacecraft using AI to navigate and avoid collisions (Space Domain Awareness, where Israel's cybersecurity and signal processing know-how can contribute). The convergence of AI and space plays to Israel's dual strengths and could make the nation a hub for space AI software. In the coming years, we expect to see more hybrid hardware-software products: smart sensors that preprocess data, cubesats with on-board analytics, and AI-driven mission control systems, many made by Israeli collaborations. This trend will shape services in climate monitoring, disaster response, and secure communications.

Quantum Technologies for Space: Quantum tech is another deep-tech field with growing space relevance (for ultra-secure communication, quantum sensors for navigation, etc.). Israel's burgeoning quantum computing scene (e.g., startups like Quantum Machines, though not space-focused yet) and investments by EBV in quantum ideas suggest a future intersection. One can envision Israeli quantum researchers developing space-based quantum key distribution systems for unhackable encryption – a dual- application tech vital for both satellite communications and financial networks on Earth. Similarly, quantum sensors (like ultra-precise gravimeters or magnetometers) could be deployed on satellites to search for mineral deposits or monitor environmental changes with unprecedented accuracy. An emerging company or research project might work on a quantum gyroscope for navigation that benefits both spacecraft and commercial aviation. By riding the global quantum revolution and focusing on space use-cases, Israel could carve a niche in quantum space-tech. We anticipate prototypes of quantum communication satellites or quantum-enhanced Earth observation sensors coming out of Israel's tech institutes within the decade, especially with support from international quantum programs.

Advanced Materials and Manufacturing for Extreme Environments: Building on its nanotechnology and materials science expertise, Israel is likely to advance new materials for space – such as radiation-shielding polymers, self-healing materials, or high-temperature alloys for propulsion. One current example is the work on AstroRad (StemRad's vest) which uses specialized polyethylene layers to protect astronauts from cosmic radiation; that technology might evolve into lighter, more flexible materials applicable in spacesuits and also in medical radiation protection on Earth. Similarly, startups like the one in EBV's portfolio developing high-performance 3D-printed polymers for extreme environments are laying groundwork for lighter satellite structures or components that can survive re-entry (and those materials can improve industrial machinery on Earth). In-space manufacturing will benefit from these materials – Israeli researchers are exploring 3D printing using lunar dust or manufacturing human tissue in microgravity. Over the next wave, we expect Israeli firms to demonstrate manufacturing of small high-value items in orbit (optical fibers, biomaterials) that cannot be made as well on Earth, aligning with the global trend of space factories. This could open entirely new markets and collaborations (e.g., biotech companies contracting Israeli microgravity labs to produce superior drug compounds). If Israeli startups can solve challenges like miniaturized manufacturing equipment or automated quality control in space, they will be key players in the off-Earth economy.

Space-Enabled Climate Action and Sustainability: Climate tech is a major focus in both Israel and Denmark (and worldwide), and space is an indispensable tool for planetary sustainability. We foresee Israeli space-tech playing a pivotal role in monitoring and mitigating climate change – an area already underway with Earth observation startups for climate analytics. The next wave will deepen this: constellations of small satellites for continuous climate data, perhaps developed in international partnerships, with Israeli firms providing the AI analytics or specific sensors (like hyper-spectral cameras to track greenhouse gas emissions). Israel's leadership in precision agriculture can combine with space by using satellites to optimize water usage and crop planning, directly contributing to climate adaptation. Moreover, Israeli startups focusing on space-based solar power (collecting solar energy in space and beaming it down) or on space debris cleanup (to ensure orbital sustainability) may emerge, aligning space endeavors with sustainable development goals. The Israeli government and investors are keen on "climate innovation", so we'll likely see funding and talent channel into space solutions for Earth's climate. International collaborations, including with Danish climate-tech players, could amplify this (for example, a joint Danish-Israeli project deploying Arctic monitoring smallsats to study ice melt – combining Danish polar expertise with Israeli microsatellite tech). Such collaborations leverage convergence to address a truly global challenge.

Cross-Border and Cross-Sector Collaboration (the New Normal): Finally, the coming wave will be characterized not just by what technology, but how it's developed. The convergence we discussed is set to intensify: expect more cross-sector consortia and international joint ventures that blur lines between industries and countries.

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6 Denmark-israel space collaboration potential

Final Remarks

The following list of Denmark–Israel collaboration opportunities is based on insights gathered from interviews, meetings, and ecosystem consultations conducted during this study. Across these discussions, several recurring themes emerged, especially within the upstream space industry, where existing commercial relationships already link Danish and Israeli players. These examples represent areas where cooperation is already visible or naturally aligned, rather than a complete list of all possible avenues. The intention is to highlight where synergies are most evident today, while recognizing that many other collaboration paths, in research, innovation, and policy, remain open for future exploration.

Research & Entrepreneurship

- Access to Israeli rapid prototyping for faster product development
- Joint AI development for Earth observation and Arctic monitoring
- Israeli expertise in radar imaging and optical systems complements Nordic needs
- Real-time ice detection and agricultural monitoring applications
- Flight testing opportunities on Israeli commercial satellites
- Co-development of tools for green transition and sustainability
- Israeli high-revisit imaging for Arctic research
- Partnerships for quantum sattelite communications experiments

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Government and Public Sector

- Danish testing and certification expertise helps Israeli firms access ESA and European markets
- Supports Denmark's Arctic research priorities
- Strengthens Denmark's role in European space programs
- Technology transfer in autonomous systems and AI
- Denmark as quality assurance hub for European contracts
- Collaboration in a lunar mission

Sattelite Industry

- Reliable sourcing of flight-proven Danish components:
  - Processors and onboard computers
  - Software-defined radios
  - Encryption modules
  - Power management systems
  - GNSS receivers
- Fast prototyping and production capabilities
- Ready-to-integrate components for European projects
- Danish precision engineering meets Israeli manufacturing scale
- Access to Israeli supply chain for satellite components = potential gateway to US markets
- Danish testing facilities support Israeli quality certification

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This report was prepared by Innovation Centre Denmark Tel Aviv to support Danish stakeholders in understanding Israel’s space sector and identifying collaboration opportunities. The analysis reflects the current state of Israel’s space ecosystem as of September 2025 and is based on extensive stakeholder interviews, technical documentation review, and market analysis.

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