



Netherlands Enterprise Agency

Innovation Opportunities in Israel Space Sector

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Innovation Network in Israel

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RVO IA Special –Innovation Opportunities in Israel Space Sector

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Executive Summary

In light of the annual Ilan Ramon International Space Conference on 31 January 2024, hosted by the Israel Space Agency (ISA), this article reflects on Israel's thriving space industry, including their notable achievements, technological capabilities and promising goals for future sector development and international cooperation. As a leading startup nation and a growing space tech industry, Israel has made notable strides promoting research and private industry to develop advanced space instrumentation. Besides Israel's focus on private sector development, this article also outlines Israel's continued multilateral cooperation efforts with the European Space Agency (ESA) and other European national agencies to boost R&D. With Dutch top-sector know-how, there are an array of innovation services that can be provided by the Netherlands Embassy in Israel, including innovation cooperation, the scaling up of IL startups in NL and trade opportunities for NL companies in IL.

Space is a Thriving Industry in Israel

On January 31st, 2024, the Israel Space Agency (ISA), within the Ministry of Innovation, Science & Technology, will be hosting the 19th [Ilan Ramon International Space Conference](#) as part of the Israel Space Week events. The conference functions as an annual platform to strengthen the local space industry, bringing together agencies, leading industries, entrepreneurs, investors, and professionals in the field. Topics such as remote sensing, dual use and satellite communication in the context of public and government needs will be discussed under the overarching theme of "Standing Together, Building the Future". Additionally, the inclusion of key speakers, panels and an exhibition will allow participants to engage in B2B meetings with promising leading companies in the space industry.

Israel's achievements in space are notable¹. It was the fourth nation to reach the Moon (and the first to do so with a private spacecraft, SpaceX's Beresheet mission). Israel was the eighth country to realize domestic end-to-end satellite capabilities, from planning and building to launch and operation. And in 2022, retired Israeli Air Force Col. Eytan Stibbe (who once flew an F-16 under the command of Ilan Ramon) joined the first all-private crewed mission to the International Space Station (ISS).

ISA identifies i) observations from space towards Earth; ii) development of instrumentation, components, subsystems and assemblies for spacecraft platforms and space-supporting ground segments; iii) planetary sciences and observations from space to the depths of the universe; iv) the impact of space conditions on the development of systems and products for both space and terrestrial applications as [key Israel's objectives for space research](#).

Israel's aerospace sector is a leading industry in homeland security, aviation and space fields for civil, commercial and military aviation, driven by innovation. According to the Israel Export & International Cooperation Institute ([Export Institute](#)), Israel focuses on technologies such as electro-optics, detection and monitoring systems and unmanned vehicles, as well as information management and analysis software and security and training systems. The Export Institute promotes business development for Israeli companies by creating business opportunities in global markets through B2B meetings, exhibitions, delegations and conferences.

At the same time, ISA focuses on international cooperation, academic research and industry to address the aforementioned goals within the sector. In 2019, ISA brought forth a [5-year plan](#) to invest \$180

¹ <https://spacenews.com/the-startup-nation-in-space-israels-equation-for-the-space-ecosystem/>

million on boosting private sector development of the civilian space industry, by supporting more start-ups, investors and entrepreneurs in developing advanced space technologies.

In the same year, [Beresheet](#), Israel's first lunar lander mission, was launched by the private company SpaceIL and Israel Aerospace Industries. Unfortunately, it crash-landed on the Moon on 11 April 2019 after experiencing apparent engine trouble moments before it was scheduled to touch down. The mishap ended the mission's goal of becoming the first privately funded craft to make a controlled landing on the Moon.

In 2022, ISA together with the Israel Innovation Authority and the Ministry of Innovation, Science & Technology, awarded nearly [\\$6 million to 11 IL startups](#) for R&D. These start-ups only make up a small portion of the continuously expanding startup nation in IL, which includes over 50 [SpaceTech companies](#) contributing to Israel's standing in the top 5 countries in the space industry. With the global space tech economy valuing at \$400 billion in 2020 and predicted to value near [\\$10 trillion by 2030](#), the IL space industry is expected to grow simultaneously.

International Cooperation

ISA engages in multiple [international projects](#), often supported by the European Space Agency (ESA), and in collaboration with different national agencies such as France's Centre National d'Etudes Spatiales (CNES). Within these projects, Israeli contributions to the scientific payload varies. Often, technologies that are needed range from cameras and meters to atomic clocks and highly-specialised satellite technologies such as [electric propulsion systems](#), a green technology that uses xenon, a non-polluting gas. For example, the Micro Electric Propulsion System (MEPS) was a joint venture by the ESA and ISA installed on microsatellites orbiting Earth in 2013.

In the Netherlands, the national Netherlands Space Agency ([NSO](#)) focuses on the development of space technologies and services based on satellite data. According to NWO's KIAs 2024-2027, the Key Enabling Technologies ([KETs](#)) that are relevant for the space industry are **nanotechnologies**, including nanoelectromechanical oscillators and quantum materials, and **photonics**, including optical technologies such as space optics, and information technologies, such as data analytics and spaces.

There are close working relations between the ISA, ESA and other national European space agencies. Therefore, several collaboration opportunities between the Netherlands and Israel in the space sector are available. Innovation opportunities can be developed in multiple KETs fields such as nanotechnologies, photonics, and digital and information technologies for data analytics. The Netherlands can contribute by leading trade and innovation initiatives with Dutch top sector know-how in the KETs.

Bilateral Trade & Innovation Opportunities

The focus of the innovation initiatives at the Netherlands Embassy in Israel are to enhance bilateral knowledge sharing, to develop innovation cooperation, primarily via Horizon Europe projects, to organize delegations of the public and private sector, and more.

At the Netherlands Embassy in Israel, the Netherlands Foreign Investment Agency (NFIA) assists IL companies to scaleup in the Netherlands. In addition, Israel can offer trade opportunities for NL companies that are interested in exploring IL's space industry.

In summary, the NL embassy in IL offers an array of services to NL companies which span innovation cooperation, scaling up of IL startups in NL, and trade opportunities for NL companies.

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