

The Medical Cannabis Ecosystem In Israel



A SHORT GUIDE TO YOUR NEXT BEST INVESTMENT

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The Foreign Investments
and Industrial Cooperation Authority

[INVESTINISRAEL.GOV.IL](https://investinIsrael.gov.il)

A GLIMPSE INTO ISRAEL

AREA

22,072 km²

POPULATION

9,036,400

CAPITAL

Jerusalem

MAJOR CITIES

Jerusalem

Tel Aviv-Jaffa

Haifa

Be'er Sheva



TIME ZONE

GMT + 2 HOUR

OFFICIAL LANGUAGES

Hebrew | Arabic | English*

URBAN POPULATION

92.2%

CURRENCY

New Israeli Shekel (NIS)

GDP (PPP)

\$33,661

UNEMPLOYMENT RATE

4.1%

A STABLE ECONOMY

FITCH

RATING
A+

OUTLOOK
Stable

STANDARD & POOR'S

RATING
AA-

OUTLOOK
Stable

MOODY'S

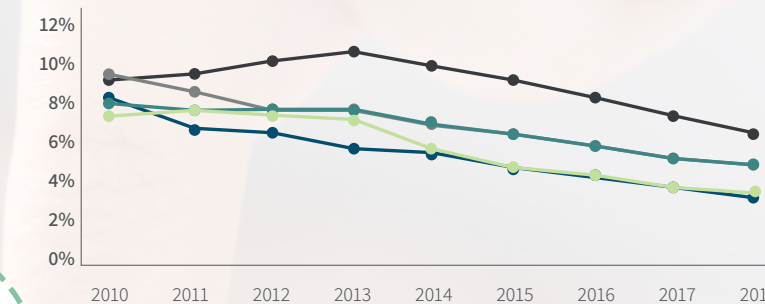
RATING
A1

OUTLOOK
Positive

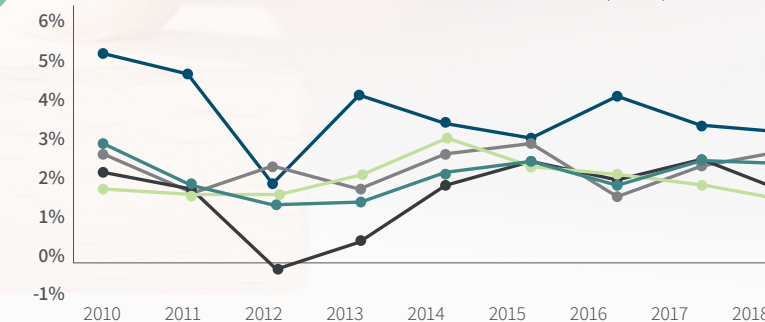
Israel has one of the strongest and most technologically-advanced economies in the world, with a resilient, diverse and open market.

The most recent global financial crisis in 2008-9, led to a brief period of recession in Israel, but the country's prudent fiscal policies and regulations, combined with a particularly robust banking sector, allowed the economy to recover quickly – faster than other advanced economies worldwide.

UNEMPLOYMENT RATES (%)



GDP GROWTH RATE (%)



GLOBAL MEDICAL CANNABIS MARKET OVERVIEW

A Growing Market

The global medical cannabis industry is currently at the market creation stage. It is highly affected by on-going regulative and commercial developments as well as groundbreaking research.

Since 2013, over 35 countries worldwide have permitted the use of medical cannabis, as have 33 states in the US.

The Canadian market is a leading example of a regulatory progress paving the way for massive economic activity, with Canada claiming 9 out of the 10 largest cannabis companies worldwide, while over 350,000 Canadian citizens consume medical cannabis.

Global Potential Market Value (USD)*

EUROPE

\$65B

by 2028

LATIN AMERICA

\$8.5B

by 2028

AUSTRALIA

\$1.3B

by 2028

U.S.

\$4.8B - \$8.9B

by 2021

Worldwide Regulatory Status

Regulatory Field



Consumption



Research approval



Cultivation



Imports



Exports

Total
Countries

32

31

22

27

18

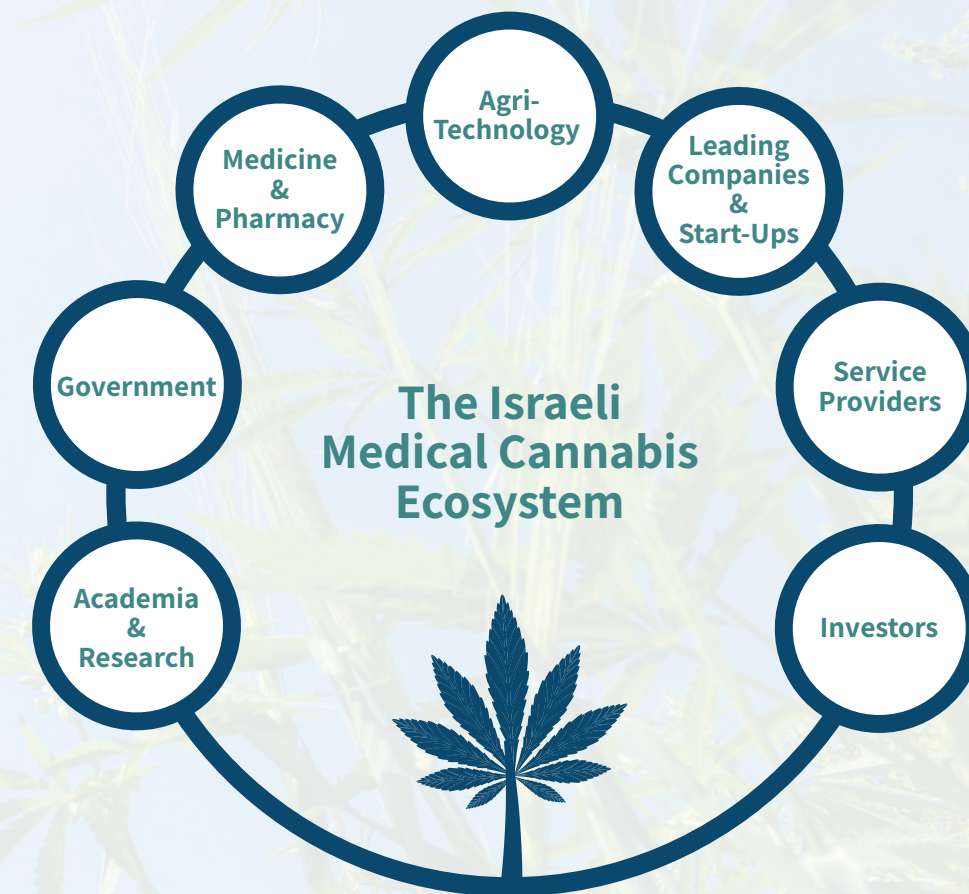
* Various resources

THE ISRAELI MEDICAL CANNABIS OPPORTUNITY

Israel has developed a comprehensive ecosystem, based on multidisciplinary specialties, surrounding the industry and enabling it to innovate, lead and shine in various sectors.

The unique ecosystem attracts the attention and activity of major global

companies, funds and professionals, as well as the interest of governments who wish to implement similar policies and create similar conditions for their local industries.



ACADEMIA AND RESEARCH

Heritage of Cannabis Research

The established cannabis research heritage in Israel started in the 1960s with Prof. Raphael Mechoulam's research and the detection of THC and CBD, the discovery of cannabis receptors in the human body, and of the endocannabinoid system.

A Wide Scope of Research

Israel has various entities conducting research in the medical cannabis field, from top universities to private companies and even governmental institutes. Teams are looking into the effects of cannabis

in a wide range of subjects. The medical aspects include studies on the effects of cannabis on cancer, PTSD, autism, epilepsy, Crohn's disease and schizophrenia. The agricultural research looks into improving the plant's properties and compatibility so as to develop the best cultivation methods unique to cannabis. Israel is ranked first in the world in the number of cannabis patents per capita. In 2008, the Hebrew University registered 33 patents in the field, topping the rankings of universities worldwide.

Some of Israel's notable researchers include: The Vulcani Center's Dr. Hinanit Koltai, who researches the medical effects of the cannabis

plant, and Dr. Nirit Bernstein, who specializes in the physiology of the plant. The Technion's Prof. Dedi Meiri, who manages one of the largest and most advanced cannabis research laboratories worldwide focusing on cancer biology and cannabinoid research.

A Global Hub for Clinical Trials

Israel is considered as an attractive geography for clinical trials in all medical fields, and medical cannabis is no exception for several reasons.

First and foremost, Israel is one of very few countries around the

world where the medical cannabis research and clinical trials are legal and allowed. In addition to that, the cost of conducting clinical trials in Israel is much lower than in the US or Western Europe. At the same time, the reputation and the quality of its hospitals are on par with institutions in other countries. As far as the FDA is concerned, Israel is one of seven countries which the clinical trials it conducts are of equal value to those conducted in the US, creating a clear competitive edge. Another reason is the openness of Israeli physicians to conduct clinical trials on cannabis, both by virtue of many years of research and by virtue of the innovation and spirit of entrepreneurship.

THE ISRAELI GOVERNMENT

The Israeli government adopted a pro-active approach by regulating the medical cannabis industry players and interactions in order to provide new, safe treatments to more patients and create a vibrant economy surrounding it at an early stage.

The Israeli government's activity is pioneering in many ways. Israel started issuing licenses for medical cannabis consumption in the early 90's and it is the first country to develop and implement the medicalization regulatory concept. It was also the first country to host a government conference on medical cannabis. In January 2019, the government of Israel approved the

export of medical grade cannabis, which fully complies with the IMC-GMP (Israel Medical Cannabis - Good Manufacturing Practice) standards. Administrative preparations for implementing the resolution are currently underway. In this way, and by maintaining the regulation up to date with medical and agricultural innovation, the government hopes to boost the power of the Israeli market, encourage a fertile local ecosystem and provide it with a global competitive advantage.

Recent Main Governmental Resolutions regarding Medical Cannabis

The first government resolution on source supervision and regulation "in the field for medical and research objectives"

August 2011

The Israel Medical Cannabis Agency - government agency for medical cannabis is established

April 2013

First government resolution to regulate the license regime for all sectors

December 2013

Government resolution (1587) on the regulatory structure proposed by the Medical Cannabis Agency

June 2016

Publication of the Green Book, a milestone in medical certification and medical cannabis use

December 2017

Government resolution (4490) to adopt the Medical Cannabis Agency's recommendations for medical cannabis exports

January 2019

THE ISRAELI GOVERNMENT - THE REGULATORY FRAMEWORK

The Israel Medical Cannabis Agency (IMCA - "YAKAR")

Following the first government resolution in 2011 to regulate the cannabis sector, the IMCA was established in 2013. IMCA's objective is to provide patients with an appropriate source of supply of cannabis for medical purposes, while protecting the health, wellbeing and security of the public. For this purpose, it operates according to four policy lines: medicalization of the cannabis plant, indications for provision of cannabis, standardization of cannabis products and training physicians in cannabis treatment.

Medicalization

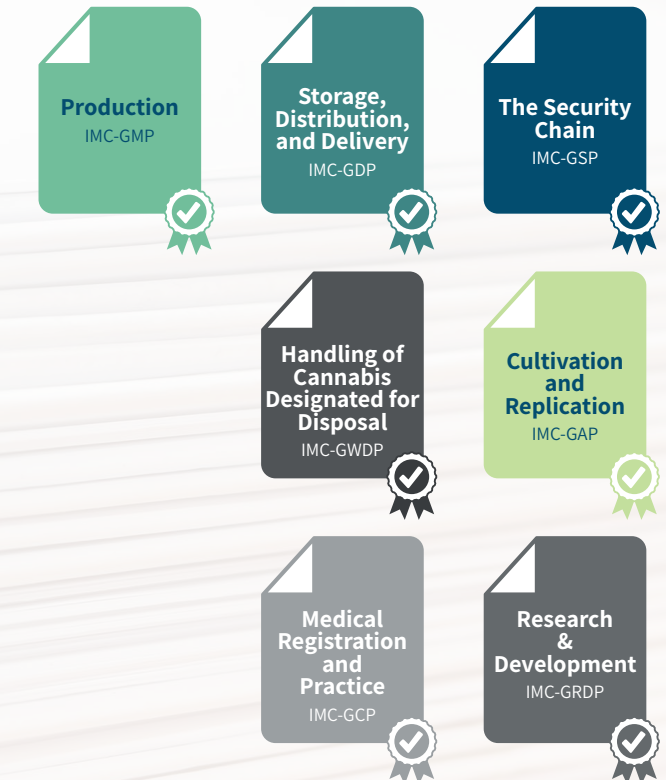
The objective of medicalization is to define proper usage and to create an Israeli pharmacopeia for medical cannabis – “Cannacopeia”. This is in order to ensure medical-grade products that are professionally adapted and patient-oriented, by means of a clear clinical method.

This regulative concept is unique to Israel and different from legalization or decriminalization that other governments have put into action.

The Framework

All those producing medical cannabis in Israel are required to possess a license issued by the IMCA. The purpose is to create a clear and meticulous regulatory framework alongside ascertainment of standards for all links in the chain, in

order to provide patients with a high-quality product and prevent the illegal distribution of the drug in the black market.



MEDICINE AND PHARMA



A medical community with rich knowhow and experience in treating patients with cannabis has emerged in Israel. From a few cases in the 1990s, the number of patients now being treated with medical cannabis has grown to 40,000-50,000 patients. This legacy has created an experienced and knowledgeable medical community that is open to try cannabis and participate in the dialogue and development of products, treatments and regulatory processes.

The participation and support of the medical and pharmaceutical sectors are a prerequisite for the successful implementation of the medicalization reform and is crucial for the development of a medical cannabis ecosystem. There

is great merit in having trained physicians and pharmacists actively participate in the regulation committees, in the research and development processes of the companies, and in educating the public and training more professionals about the cannabis properties and benefits.

The IMCA, for example, is led by Mr. Yuval Landschaft, who is an experienced pharmacist. The involvement of senior physicians in the development of products can also be widely found, such as Dr. Moshe Yeshurun and Dr. Sari Prutchi Sagiv's GVHD treatment developed at Talent Biotech, or Dr. Adi Aran's treatment of autism symptoms currently being developed at BOL Pharma.

AGRI-TECHNOLOGY



Israel has developed agricultural technology and knowhow placing it at the forefront of global Agri-technology in fields like: Smart Farming, Biotech and Crop Protection, Post Harvest and Food-Safety, Supply Chain and Market Linkages and Improved Nutrition.

There are currently more than 460 Agri-technology companies in Israel, of which, more than 25% have been founded only in the past five years.

Growing cannabis poses unique challenges for the growers, derived from the multiple stages of growth and the special conditions required for successful growth. Israeli start-ups have developed products to help cope with these challenges and enable efficient and standardized growing of the cannabis plant. This is done by using data collection

and processing technologies, analyzing the plant strains by habitats, and providing the growers with capabilities for a uniform growth process.

A few main examples are: "Roots – Sustainable Agricultural Technologies" that enables temperature control of the cannabis plant roots to provide it with the optimal conditions in every stage of the cultivation. "DryGair" that enables the optimal growth of cannabis in greenhouses through humidity control in the growth environment. The system removes water through energy-saving controlled cooling and evaporation to provide optimal growing conditions. "LightCann 420" that develops efficient lighting for optimal cannabis cultivation in enclosed habitats. "EdenShield" that has developed safe pesticides for use with medical cannabis.

COMPANIES AND START-UPS

SOME OF
THE LEADING
PLAYERS AMONG
THE COMPANIES
AND START-UPS
IN THE ISRAELI
ECOSYSTEM

CULTIVATION



PRODUCTION



DISTRIBUTION AND CONSUMPTION



RESEARCH AND DEVELOPMENT



TECHNOLOGY



SERVICE PROVIDERS



The cannabis industry generates professional, legal, regulatory, and economic complexities for the different players engaged in the field. Service providers have emerged to contend with this complexity and support the ecosystem. The Israeli market has professional services mainly in the fields of legal guidance, accounting, security (which is necessary in many points along the way to comply with the licenses and is a known Israeli specialty), and consultancy in the fields of agriculture.

As mentioned, security services is a sector in which Israel has substantial expertise and experience. In particular, the strict Israeli cannabis regulation

requires IMC-GSP compliant security specifications. Over and above the high financial value, security is important to prevent leakage of the drug to illegal trade and to deter criminal entities. A number of Israeli security companies are operating in the cannabis industry, of which Security Circles Ltd. stands out, as well as Magal Security Systems Ltd., listed on Nasdaq at a company value of \$100 million. The company protects installations in Israel and Canada. Moked Emun Ltd. and Ben Security 1989 Ltd. are also engaged in the sector.

INVESTORS



Israel has a long tradition of technology leadership and numerous and successful start-Ups. They rely on an extensive investment system of Israeli and foreign investment funds, private investors and government funds. Israel has long stood out favorably in global indices for entrepreneurship and investment, such as the World Economic Forum's¹ Global Competitiveness Rankings, in which Israel was ranked second after the US in 2018, the OECD R&D Expenditure Index, and the Global Talent Competitive Index (GTCI), which ranks Israel in sixth place.²

Major investors include big players, which launched mutual funds to invest in medical cannabis in 2018, such as Ayalon Investments (a \$15 million fund for investing in the field of cannabis in

Israel and worldwide), Sela Investments (some \$12 million), and IBI (some \$41 million in several funds designed for investment in Israel and North America). Other prominent companies are Israel's OurCrowd, which, in January 2019, jointly launched a \$30 million fund exclusively designated for medical cannabis, based on crowd-funding, with 7thirty Opportunity Fund of the US; Israel's Everest Investment Banking and PipelBiz, which jointly launched an \$8.5 million fund; and Shavit Capital, which invested \$40 million in Syqe.

Investments also grow through several designated medical cannabis accelerators operating in Israel such as the iCann and Cann10.

¹ <http://reports.weforum.org/global-competitiveness-report-2018/competitiveness-rankings/#series=GCI4.D.11.02>

² <https://gtcistudy.com/the-gtci-index/#gtci-rankings-table>

ISRAEL IS PRO-BUSINESS. YOUR BUSINESS.

The Ministry of Economy and Industry offers countless programs and services designed to simplify the investment process. The wide range of governmental incentives and grants makes Israel the perfect place for foreign investors to shine.

THE GOVERNMENT OF ISRAEL OFFERS AN ASSORTED
RANGE OF INCENTIVES IN THREE MAIN CATEGORIES

INVESTMENTS AND MANUFACTURING

Investment grants
& tax benefits for
investors

INDUSTRIAL R&D

Various programs
that support
Industrial R&D

EMPLOYMENT

Employment subsidies
& vocational training
programs

WHAT WE CAN DO FOR YOU

Israel
Investment
Center

Population &
Immigration
Authority

Fuel Choices
Initiative

Administration
of Industrial
Zones

Foreign Trade
Administration

Israel Tax
Authority

Israel Innovation
Authority

Israel Land
Authority

Municipal
Authorities

The Israel
Export &
International
Cooperation
Institute

MAKING THE DECISION TO INVEST IN A NEW LOCATION CAN OFTEN BE DIFFICULT, CONFUSING AND FRUSTRATING. THERE ARE SO MANY THINGS TO TAKE INTO ACCOUNT, AND SO MANY DIFFERENT OPTIONS TO CONSIDER. AT INVEST IN ISRAEL, WE OFFER A WIDE RANGE OF SERVICES TO SUPPORT AND OPTIMIZE YOUR BUSINESS IN ISRAEL. IN FACT, WE'LL WALK THROUGH EVERY STEP OF YOUR INVESTMENT, TOGETHER.

FROM PROPERTY TO WAGES TO TAXES, WE'LL PROVIDE YOU WITH ALL THE INFORMATION YOU NEED.

Starting a new operation in a new location requires a myriad of information, and you know as much as we do that every detail counts. We'll help you understand every aspect of your journey here in Israel, from the smallest issue to the biggest problem. Laws, regulations, locations, taxes, incentives and costs — we have it all figured out.

FEEL AT HOME, FROM DAY 1.

No need to feel like the new guy. We can introduce you to peer companies and key figures in your industry, so you can easily facilitate your network of connections. Join the best companies in the world, in the most innovative ecosystem on earth.

LET'S CONNECT

A VISIT IS WORTH A THOUSAND WORDS. COME SEE FOR YOURSELF.

There's nothing like an actual tour to help make a decision, and Israel has so much to offer for potential investors. We invite you to come to Israel and see why so many companies have made Israel their innovation center. Meet the people, see the locations, hear the stories.

Visit Israel. It's your first step towards your best investment.

LET'S TALK, LET'S MEET.

You can schedule a meeting, give us a call or leave your details at our website, and we'll get back to you. You can also meet our global experts in your region. We are here to make it your easiest investment yet.

THE FOREIGN INVESTMENTS & INDUSTRIAL COOPERATION AUTHORITY

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The information included in this guide is relevant for August 2019. The content included is intended to provide only a general outline of the subjects covered and it is necessary that specific professional advice be sought before any action is taken.

