

# Israel Defence Industry



# Israel Defence Industry - Outlook

## Contribution to Israel Economy

- Annual output of the Israeli defence industry is \$8 billion, with added value to the entire economy of 35 % to 40 % to that amount.
- The defence industry contributed 3% of Israel's gross domestic product. (2015)
- It is responsible for 15 % of all national exports.
- The aerospace and defence industry includes 600 firms — mostly small and medium businesses. It directly employs 50,000 and indirectly supports another 50,000 suppliers.
- Compared to profit margins traditionally associated with leading global defence firms, Israeli firms on average show 4.5 % to 5.5 % profitability.

## Global Position

Israel is one of the top defence exporters in the world. Israel stands at 7<sup>th</sup> position globally in export of defence as of 2016 .

## Industry Outlook

Israel defence industry is robust and contributes majorly to exports of Israel. Israel is one of the top defence exporters in the world. Most of Israel's arms exports are of ammunition, drones and other upgrades to existing aircraft. For 2015, the country's overall defence export stood at \$5.7bn

The largest portion of the military exports was upgrading aircraft and aerospace systems, comprising 14 % of all new contracts, with radar and electronic systems coming in second with 12% and UAVs at 11%. Majority of the exports were to Asia and the Pacific, comprising nearly 50% of the total earnings, \$2.3 billion; with Europe coming in second at \$1.6 billion.



# Israel Defence Industry - Outlook

## Trade Data

Israel's defence companies signed export deals valued at USD5.7 billion (2015).

Much of the exports are sold to the United States and Europe. Other major regions that purchase Israeli defence equipment include Southeast Asia and Latin America. India is also major country for Israeli arms exports and has remained Israel's largest arms market in the world.

## MNCs operating in Israel

Major defence companies in Israel are:

- Elbit Systems
- Israel Aerospace Industries
- Rafael Advanced Defence Systems
- Israel Military Industries



## Key Growth Drivers of the Industry

### Domestic and International demand

- Israel aspires to be self sufficient in its defence matters to achieve less dependence on suppliers. Israel's innovative technology in defence has created global demands for its defence manufacturing. Israeli firms purchase production rights and enter into joint ventures with foreign companies to manufacture both end products and components.

### Strong workforce

- Israel makes its R&D strong to develop innovative technologies. Israel has the highest concentration of engineers in the world.
- In the Global Talent Competitiveness Index Israel achieved 4<sup>th</sup> rank in high- skilled employment with 49.7%.



# Israel Defence Industry - Incentives

## Incentives for developing technology

### ➤ The Technological Incubators

The primary goal of the program is to transform innovative technological ideas, that are too risky and in a too early stage for private investments, into viable start-up companies that after the incubation term are capable of raising money from the private sector and operating on their own.

For a period of 2-3 years, the program provides entrepreneurs, whose projects were approved by the Incubators Committee, with full financial support (USD 550,000 – USD 800,000, out of which 85% is granted by the government and 15% is invested by the incubator), infrastructure, technological & business mentoring, legal & regulatory advice, and administrative assistance. The program is subject to the R&D law with regards to manufacturing, royalties and IP rights.

### ➤ The MAGNETON and NOFAR programs

These programs are designed to support applied academic research in all areas and especially in biotechnology and nanotechnology in order to promote the transfer of the technology to the industry via mutual cooperation between an individual company and a specific academic research group. Grants are up to 66% and 90% of the approved expenses respectively. No royalty payments are mandated.

### ➤ The MAGNET Program

This program supports the formation of consortia comprised of individual firms and academic institutions, in order to jointly develop generic, pre-competitive technologies. The duration of a MAGNET Consortium is 3-5 years. Grants are up to 66% of the approved budget for industry and up to 80% for the academic institution.

➤ Israel is participating in the EUREKA funding platform, which is the world's largest program promoting industrial innovation, aiding and supporting industrial R&D projects aimed at developing new products and bringing them to the market. Binational funds and bilateral agreements for competitive R&D enable joint R&D programs with foreign counterparts worldwide.

➤ Israel is the only non-European country fully participating in the European Union's Framework Program (FP) – Europe's prime vehicle for research and technological development. The FP provides funding for the following areas: health, food, agriculture and biotechnology, information and communication technologies, nanosciences and nano-technologies, energy, environment and climate change; transport and aeronautics, socio-economic sciences and the humanities, space and security



# Israel Defence Industry – Value Chain

## Output of Israel's Defence Value Chain

Elbit, Israel Aerospace Industries, Rafael, Tadiran, Israel Military Industries, Elisra, Aeronautics Defence Systems, Plasan, and Magal are examples of well-established Israeli companies in the defence industry that develop innovative military and civil systems in 11 areas such as aviation, maritime, counterterrorism, law enforcement, and physical infrastructure protection. Israel is also regarded as a global leader in the development of unmanned aerial vehicles and air defence system like Iron Dome, Arrow, and others. Major products:

### Small arms

- Dror light machine gun
- IMI Negev light machine gun
- Uzi submachine gun
- Uzi pistol
- Desert Eagle pistol
- Jericho 941 pistol
- BUL M-5 pistol
- BUL Storm pistol
- SP-21 Barak pistol
- IMI Galil assault rifle
- IMI Tavor assault rifle
- M89SR sniper rifle
- Hezi SM-1 semi-automatic PDW

### Tanks

- Isherman tank
- Sho't tank
- Magach tank
- Sabra tank
- Merkava tank

### Anti-tank rockets and missiles

- MATADOR Shoulder-launched missile weapon
- B-300 Shoulder-launched missile weapon
- Shoulder-Launched Multipurpose Assault Weapon
- Shipon Shoulder-launched missile weapon
- FGM-172 SRAW
- MAPATS ATGM
- Spike ATGM
- LAHAT ATGM
- Nimrod ATGM

### Other missiles

- Guided Advanced Tactical Rocket - Laser
- Shafrir air-to-air missile
- Derby air-to-air missile
- Python air-to-air missile
- Gabriel naval anti-ship missile
- ADM-141 TALD
- Popeye AGM-142 air-to-surface missile
- Delilah cruise missile / anti-radiation missile
- LORA theater ballistic missile
- Jericho medium-range ballistic missile

### Unmanned aerial vehicles

- Tadiran Mastiff UAV
- Casper 250 UAV
- Silver Arrow Micro-V UAV
- Silver Arrow Sniper UAV
- IAI Scout UAV
- IAI Searcher UAV
- IAI Harpy UAV
- IAI Harop UAV
- IAI Bird-Eye UAV
- IAI I-View UAV
- IAI Ranger UAV
- IAI Heron UAV
- IAI Eitan UAV
- IAI Panther UAV
- IAI Ghost UAV
- IAI RQ-2 Pioneer UAV
- IAI RQ-5 Hunter UAV
- Elbit Skylark UAV
- Elbit Hermes 90 UAV
- Elbit Hermes 450 UAV
- Elbit Hermes 900 UAV
- Aeronautics Dominator UAV
- Aeronautics Orbiter UAV
- Urban Aeronautics X-Hawk UAV
- MicroFalcon UAV

# Israel Defence Industry – Value Chain

## Output of Israel's Defence Value Chain

### Aircraft

- IAI Arava cargo aircraft
- IAI Sea Scan surveillance aircraft
- IAI Neshar fighter aircraft
- IAI Kfir fighter aircraft
- IAI Namer fighter aircraft
- IAI Lavi fighter aircraft
- ATG Javelin jet trainer aircraft

### Watercraft

- Shaldag class fast patrol boat
- Dabur class patrol boat
- Dvora class fast patrol boat
- Super Dvora Mk II class fast patrol boat
- Super Dvora Mk III class fast patrol boat
- Sa'ar 3-class missile boat
- Sa'ar 4-class missile boat
- Sa'ar 4.5-class missile boat
- Sa'ar 5-class corvette
- Gal-class submarine
- Dolphin-class submarine

### Spaceflight

- Shavit spaceflight launch vehicle
- EROS earth observation satellite
- Ofeq reconnaissance satellite
- TecSAR reconnaissance satellite

### Air-defence systems

- Machbet self-propelled anti-aircraft weapon
- Barak 1 naval surface-to-air missile
- Barak 8 naval surface-to-air missile
- SPYDER air-defence system
- Arrow anti-ballistic missile
- Tactical High Energy Laser
- Iron Dome short-range rocket defence system
- David's Sling medium-range rocket defence system

### Radar

- EL/M-2032 fire-control radar
- EL/M-2052 AESA radar
- EL/M-2075 Phalcon AEW&C radar
- EL/M-2080 Green Pine target tracking radar
- EL/M-2083 AEW&C radar

### Unmanned surface vehicles

- VIPeR UGCV
- Protector USV
- Guardium UGV
- Raam
- HaShachar unmanned Caterpillar D9 armoured bulldozer
- Silver Marlin USV

### Optronics

- ITL MARS reflex sight
- LITENING targeting pod
- Spice EO-GPS PGM guidance kit
- Skystar 300 ISR system

### Fighting vehicles

- M113 variants
- Nimda Shoet APC
- Trail Blazer ARV
- IDF Nagmachon APC
- IDF Nakpadon CEV
- IDF Puma CEV
- IDF Achzarit APC
- IDF Namer IFV
- Nemmera ARV
- AIL Abir
- AIL Storm
- Plasan Sand Cat
- Wolf Armoured Vehicle
- Golan Armored Vehicle
- AIL M325 Command Car

### Artillery

- Davidka mortar
- Soltam M-66 mortar
- Soltam M-68 howitzer
- Soltam M-71 howitzer
- Soltam M-120 mortar
- L-33/39 Ro'em self-propelled howitzer
- Makmat self-propelled mortar
- MAR-240/290 rocket artillery launcher
- LAR-160 rocket artillery launcher
- LAROM rocket artillery launcher
- Cardom mortar
- Rascal self-propelled howitzer
- ATMOS 2000 self-propelled howitzer
- Sholef self-propelled howitzer
- Perch missile carrier

### Weapon stations

- CornerShot SWAT weapon
- Rafael Overhead Weapon Station
- Samson Remote Controlled Weapon Station
- Typhoon Weapon System

### Active protection systems

- Trophy active protection system
- Iron Fist active protection system
- Flight Guard airborne IR countermeasures system

# Israel Defence Industry – Investments

## Investments Announced in the Defence Sector

❖The country's budget for homeland security is expected to cumulatively valueUS\$24.2 billion. The key areas of investment are expected to be multi-role aircraft, helicopter, naval vessels, armoured vehicles, and surveillance systems.

❖In a previous notable acquisition of an Israeli threat intelligence company, U.S-based aerospace and defence giant 3i Boeing paid \$70 million in 2010 for Narus, a developer of traffic monitoring solutions that detect and mitigate malicious traffic in real time.

❖In 2014, the Ben-Gurion University of the Negev (BGU) signed an \$8.5 million agreement with the Israel National Cyber Bureau to develop CyberSpark, a set of facilities that includes a National Cyber Research Centre adjacent to BGU's campus. Telecom giant Deutsche Telekom and Lockheed Martin, one of the largest defence contractors in the world, are among the international cyber security companies that have announced intentions to invest in CyberSpark R&D facilities.

❖In May 2016 US passed a defence bill to invest \$600m in Israeli missile defence-Of the \$600 million, \$269 million will go to overall research and development, \$62 million will go to funding the short-range Iron Dome antimissile program, and \$270 million will go to funding the longer-range Arrow and David's Sling antimissile programs.

❖In February 2016 US and Israel each decided to invest \$ 120 billion into Israeli tunnel detection system which will guard Israel's borders.





# B3Globe Customized Industry Analysis

B3Globe provides a full spectrum of Business/Market Research services, we also provide custom report solutions to our clients tailored for their business landscape, to help them stay ahead of the competition and stay on top of emerging trends.

## Tailored Research

Our team focuses on the product-market mix to suit the geography and demography of the market. We dive in deep to extrapolate primary information from the stake holders throughout the value chain. Our ability to map the competitive landscape helps us extract data with surgical precision.

## Custom Market Research

Our market research is lured for its accurate industry data that spans more than 200 industries and global markets. Our collaborations with renowned publishers and most respected data source providers help us acquire the most accurate information on demand.

## Collaborative Process

We find value in collaborating with our clients in sharing our findings throughout the process. This approach allows our clients to participate and set the direction of the research that is fully aligned with their intentions. Our collaborative strategy makes our research highly adaptable, customized, on-demand and extremely relevant.

## Scope of Our Customized Industry Analysis

- Market Definition.
- Industry Classification
- Current Industry Outlook
  - Industry Size – Global/ National/Regional,
  - Contribution to GDP National/Global.
- Industry growth past 3-5 years
- Growth Forecast for 3-5 years.
- Market Drivers
  - Key drivers
  - Restrains
  - Opportunities
- Key Drivers of historical demand
- Applicability of Key drivers in Demand Forecasting.
- Key drivers of future demand and reasonability of the assumptions
- Industry Structure, Industry Life cycle stage.
- Current Business models In the Industry.
- Business Models likely to do well in future.
- National / Global Factors that affect the Industry (PESTEL-analysis).
- Overall capacity in the market.
  - Production
  - Procurement
- Value Chain Analysis
- Demand supply Gap.
- Import & Export scenarios
- Local Market Operators
  - Product Segment wise Producers & Importers
- Overseas markets
  - Top Product segments for Export
  - Top Export markets for respective product segments.
- Number of companies participating in the industry National/Global.
- Market Segmentation
  - Product Wise.
  - Distribution Channel wise.
  - Consumer Segmentation.
  - Competitor Segmentation.
- Porter's Five Forces Analysis
- Entry Barriers,
- Government policies, incentives & Subsidies for the Industry – National/State Level/Country Level
- Applicable Taxation & legal laws
- Industry Value chain analysis.
- Supply chain, Logistics framework analysis
- Funding avenues for Industry Growth
- M&A activities in the industry – Global/National.



## About B3Globe

**Business Beyond Boundaries (B3) Globe** is the **Management Consulting division** of **KPM ASSET**. We are a global advisory firm, providing Strategic Consulting, Transaction Execution and other value added Business Solutions to Global mid-market Corporate and Institutions.

B3 Globe is formed with an objective to provide seamless Market Access to Clients who aspire to transcend Geographic Boundaries in search of new Frontiers for growth opportunities across the globe. Over the years, we have built an excellent track record of delivering innovative and result-oriented Solutions across various Geographic and Industries Segments.

## Our Services

Market Research

Business Readiness Assessment

Market Entry Support

Hand Holding Support Services

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