



Virginia Israel Advisory Board
Office of the General Assembly

MEMORANDUM

TO: The Honorable M. Kirkland Cox - Speaker of the House
The Honorable Ryan McDougle - Chairman Joint Rules Committee
His Excellency Governor Ralph Northam

FROM: Mel Chaskin – Chairman, Virginia Israel Advisory Board

DATE: November 29, 2018

RE: FY 2018 Annual Review of the Virginia Israel Advisory Board

CC: Distribution List (Attached)

The VIAB contributed to the growth of 177 new jobs in FY 2018. Israeli companies' tax contribution to the Virginia Treasury exceeded 25 times VIAB's budget in 2018, rendering a 550% ROI over the terms of the past four Governors.

Mel Chaskin
Chairman, Virginia Israel Advisory Board

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Virginia Israel Advisory Board

Annual Report



Mel Chaskin - Chairman
Chuck Lessin - Vice Chairman
Dov Hoch - Executive Director
November 2018

FY 2018

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Chairman's Message



FY 2018 was a very interesting and challenging time. As our former VIAB Executive Director, Ralph Robbins announced his retirement in Aug. of 2017, the VIAB Board announced an international search for his replacement. Simultaneously, the Governor's office notified our Board that the replacement would be named by the Governor and not by our Board. This would then be a political appointment and the Boards' ability to operate independently and non-politically would no longer exist.

Our Board, in near unanimous authority, asked the Governor to reconsider the appointment. The Executive Director of the Virginia Israel Advisory Board had never been a political appointee and in creating such a precedent the Board felt strongly that such a move would severely weaken our Board and its ability to carry out its statutory task. After much discussion and multiple meetings, the VIAB Chairman and Vice-Chairman reached a compromise that in the end has strengthened our Board. A bill passed through the Virginia General Assembly and was signed by Governor Northam that shifted the authority of the Board from the Executive branch to the Legislative branch. Within this new statute the Board is now responsible to report and meet with the Speaker of the House and the Chairperson of Senate Rules Committee as well as a continued obligation to meet with and report to the Governor. All of the original tasking remained the same.

As the Hebrew phrase details; "Gam Zu L'Tova" "this too is for the best." What at first seemed ominous, ended as a significant improvement for the Commonwealth. Our best efforts along with those of the House, Senate and Governor's office has propelled our Board and its mission to new heights. Additionally, we were able to hire our new Executive Director, Mr. Dov Hoch, who the Board approved originally.

Mel Chaskin

Chairman

Virginia Israel Advisory Board

Executive Director's Statement



There are strong business synergies and similarities between Israel and Virginia - each has the same size population, similar GDP and both have a city that claims to be the center of the Universe: Ashland and Jerusalem.

The fact that [Virginia is ranked the best East Coast state](#) in which to do business really resonates with Israeli companies considering entering the U.S. market through Virginia.

I am proud to share that my first act of business was to move the VIAB's office to Richmond. Every time I enter our new offices in the Pocahontas Building, I am inspired by the Capitol building and, with the support of the Board, hope to richly contribute to the economy of the Commonwealth of Virginia.

My core undertakings are to: (i) Develop quality jobs by helping Israeli companies establish and grow their operations in Virginia and (ii) help Virginia companies source innovative technology in Israel that can provide a unique competitive advantage, enabling them to grow their businesses and expand their workforces.

I thank the Board for giving me the opportunity to serve and look forward to its support in creating quality jobs in Virginia and lasting partnerships/friendships between the Commonwealth and Israel.

Dov Hoch

Executive Director

Virginia Israel Advisory Board



Project Recycle

The company converts 95% of municipal garbage into a new material to fabricate green products thus eliminates the need for landfills. The garbage was made into a garbage can in one hour. ([see projects section](#)) VIAB's Executive Director Dov Hoch with the company's CEO at their Israel plant.

Executive Summary

The VIAB underwent a transformative year effecting every aspect of its operations. Long-time Executive Director Ralph Robbins retired in September 2017 after 17 years of service while his replacement Dov Hoch only began working in July 2018 – thus rendering most of the year lacking core personnel. We also moved our offices from Tyson’s Corners to the Pocahontas Building in Richmond.

Due to a new statute, structurally the authority of the Board moved from the Executive branch to the Legislative branch. From a reporting stand point, the Board is now responsible to report and meet with the Speaker of the House and the Chairperson of Senate Rules Committee in addition to our continued obligation to meet with and report to the Governor.

Continued Job Creation The VIAB contributed to creating 177 new jobs last year, many in established companies that will continue to add jobs next year: Sabra Dipping (Colonial Heights) expanded their work force by 10% and Oran Safety Glass- OSG (Emporia) added 40 of the 55 jobs they committed to, all in the context of doubling the plant’s capacity after the VIAB helped retain them.

Compelling Pipeline of Prospects – We developed several multi-site projects that if/when the companies are established will later roll-out additional plants throughout the state. We also developed two renewable energy projects including several solar energy utility-scale plants and a venture that generates electricity from sea waves that will attract major data centers to Virginia that require renewable energy.

New Programs VIAB conceptualized and launched defense and security programs to target \$800m of U.S. military aid to Israel whose recipients must now establish U.S. plants. Activities include a partnering event in Virginia with the Israel Ministry of Defense, and programs that support native Virginia companies to access Israeli technology and innovation including funding for joint R&D and commercialization projects.

Israeli companies’ tax contribution to the Virginia Treasury exceeded 25 times VIAB’s budget in 2018, rendering a 550% ROI over the terms of the past four Governors.

Defense partnering event with the Israeli Ministry of Defense to attract \$800m U.S. funded Israeli contracts need to move to U.S. under new military aid MOU.

Israeli Maritime Business Accelerator teamed with the Hampton Roads Region.

VIAB provides native Virginia companies access to Israeli technology and innovation including funding for joint R&D and commercialization projects.



Sabra Dipping Expanded its work force by 10% with the addition of 65 jobs.

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Job Creation in Virginia

Israeli companies brought to Virginia by the VIAB hired 177 workers last year, many of which were part of on-going expansions that will continue through next year. Sabra Dipping added 65 jobs – a 10% expansion of their work force. Oran Safety Glass OSG added 40 new positions and is on an accelerated track to add their committed 55 jobs in three years and double their Emporia plant’s capacity.

177 New Jobs In Virginia



Several small Israeli companies relocated workers to Virginia to conduct sales activities before committing to building plants here. The VIAB is working with these companies to explore building facilities in the defense and healthcare IT sectors - one of which is committed to building a plant in the Virginia Beach area.

Future job growth will be driven by renewable energy projects the VIAB is advancing throughout Virginia, including several utility scale solar energy projects and a venture that generates electricity from sea waves. Renewable energy is a must-have per-requisite to attract data centers in Virginia.



Governor McAuliffe reviewing OSG’s plant in Israel ahead of OSG doubling its production capacity in Emporia and adding 155 new jobs.

550% ROI on VIAB’s budget over the terms of the past four Governors



SABRA DIPPING

Expanded its work force by 10% with the addition of 65 jobs.



ORAN SAFETY GLASS (OSG)

OSG Hired 40 new workers 2 years ahead of the company’s grant commitment to hire 55 in three years. VIAB worked closely with Governor McAuliffe to keep OSG from moving out-of-state and double their Emporia plant’s capacity.



IMMUNARRAY

Founded through licensing technology from the Weizmann Institute of Science in Israel, ImmunArray maintains R&D in Israel and now has half of its workforce in the Virginia Bio Technology Park in Richmond.



Programs:

Regional, Sector-Specific and Partnership based VIAB Programs

The VIAB has conceptualized and launched several programs focused on a many-to-many approach that enables multiple Israeli and Virginia companies to partner and grow their respective businesses in Virginia. In the past, the VIAB used this model at the Virginia Biotechnology Research Park where a third party funded and brought Israeli companies to the Richmond area (e.g. Cupron and ImmunArray).

An example of the many-to-many model is the VIAB Maritime Teaming Program that pairs port and shipping related companies from [The Dock](#) (an Israeli maritime business accelerator which develops and funds early stage ventures) with the Port of Norfolk and economic development units at Old Dominion University. The Maritime Teaming program will assist these Israeli maritime related companies in building their U.S. operations in the Hampton Roads region.

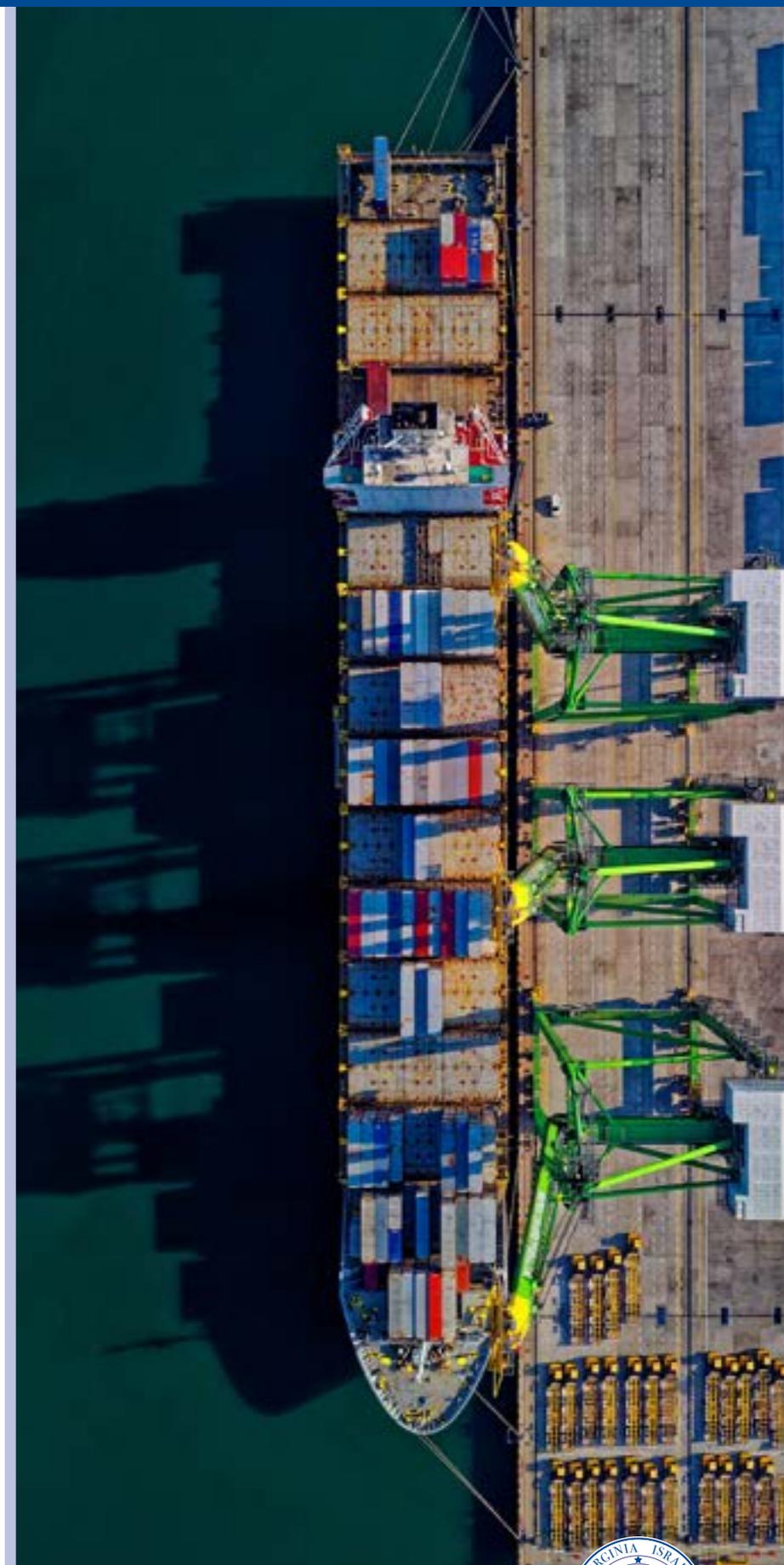
The VIAB is conducting a **defense industry event** to partner Israeli defense, security and cyber companies with companies throughout the Virginia federal contracting ecosystem. The event is in conjunction with the Israel Ministry of Defense which, to date, have only conducted it in three other states.

Sector-Specific Programs

The VIAB inaugurated several sector-specific programs which due to competitive purposes (vis-à-vis other states) are not detailed in this report. The Executive Director is available to discuss these programs and the regions in which they will potentially have an economic impact. Please feel free to reach out to Dov Hoch dovhoch@viab.org to learn about these programs.

The core criteria for VIAB Programs (see chart) are:

- **Leverage Virginia's synergies and non-financial benefits** Attract Israeli companies to Virginia through synergies (industry and stage company) and with non-financial benefits by focusing on sectors that bring extreme added value to Israeli companies entering the U.S. market (e.g. maritime and defense).
- **Many-to-Many Interactions** a wholesale approach that organizes third-parties to bring many Israeli companies to Virginia. This approach is being adopted in the Open/External Innovation Programs which enable county and city economic development units; law and accounting firms to serve Virginia companies' technology and product development needs by sourcing them in Israel.



Program Chart

Sector/Programs	Partners/Stake Holders	Rationale/Drivers/Synergies	Successful Example/Model
Defense/Security/ Cyber	<p>Va Federal Suppliers & Defense Contractors</p> <p>Israeli Defense & Tech companies</p> <p>Israeli Ministry of Defense</p> <p>Va. Law and Accounting firms</p>	<p>\$800m U.S. funded Israeli contracts need to move to U.S. under new military aid MOU</p> <p>Teams Israeli companies with proven prowess seeking to enter U.S. market with the Va. federal contracting ecosystem.</p>	5 leading Israeli defense companies in VA; Oran Safety Glass; dual purpose products with sales to civilian market
University Economic Development Units	<p>State-funded Va. Universities</p> <p>Regional Business Eco-systems</p>	<p>State-wide presence that access every region</p> <p>Economic development mandate aligned with VIAB</p>	Old Dominion University - VIAB collaboration on maritime, open innovation and navy programs.
Hampton Roads Regional Focus	Strong active partners: Chamber of Commerce; Port; Navy Vets; ODU; Jewish Federation; Christian Groups	<p>Leading VA economic center;</p> <p>Large presence of VIAB focus segments Maritime & retired Navy</p>	Ecowave Power - wave to electricity power plants for sea facing cities/counties (VDOT Bridges)
Projects with Multiple Sites	Often renewable energy & ecological ventures that are publicly and politically well received	<p>Initial success births other projects throughout VA</p> <p>Overcomes win/loss zero sum competition with other states</p>	Virginia Bio Park Model (2010) - brought several companies to Richmond; Energix; Project ReCycle and Ecowave
Open (External) Innovation	<p>Large Va. Enterprises with tech requirements</p> <p>Early stage Israeli Innovation / Tech / R&D. Government funding (Mainly Israel)</p>	<p>Israel is THE global leader in R&D, and funding for early stage tech.</p> <p>VA companies' have structured units to source R&D, tech and product development requirements externally.</p> <p>Partnerships (R&D & product development) will be Va based</p>	Examples of Open Innovation between the largest U.S. companies and start-ups (e.g. Coca Cola in Israel)



Open Innovation Program

Virginia companies access Israeli innovative technologies to gain competitive advantages and develop quality jobs in Virginia.

Israel has the highest number of people working in R&D in the world and the highest venture capital investment levels per capita in the world. To access Israeli innovation, many leading U.S. companies built substantial R&D centers and business accelerators in Israel (e.g. Google; Apple; Intel; Motorola; CNN; Coca Cola; Microsoft). In fact, Warren Buffet's first acquisition of a non-U.S. based company was in Israel.

These factors created a pool of hundreds of early-stage, innovative Israeli companies seeking entry into the U.S. market, and they are ripe to partner with mature Virginia businesses.

The Virginia Israel Advisory Board (VIAB) is working with Virginia enterprises with structured Open (External) Innovation programs mandated to enhance internal R&D by acquiring I.P. technology and products outside of the company. [15 examples of Open Innovation between the largest U.S. companies and start-ups](#)

VIAB provides Virginia companies direct access to Israeli technology that can provide competitive advantages and help grow their Virginia based businesses.

VIAB Open Innovation Program - Process

- Large Virginia enterprises with structured open innovation programs provide their requirements
- VIAB identifies and vets innovative Israeli technologies for Virginia companies per their criteria
- Jointly develop product and partnerships between the Israeli and Virginia entities through a range of models including new company formation in Virginia and expanding the Virginia company's operations.
- Fund the joint Israeli-Virginia R&D and commercialization projects through Israeli funding sources.

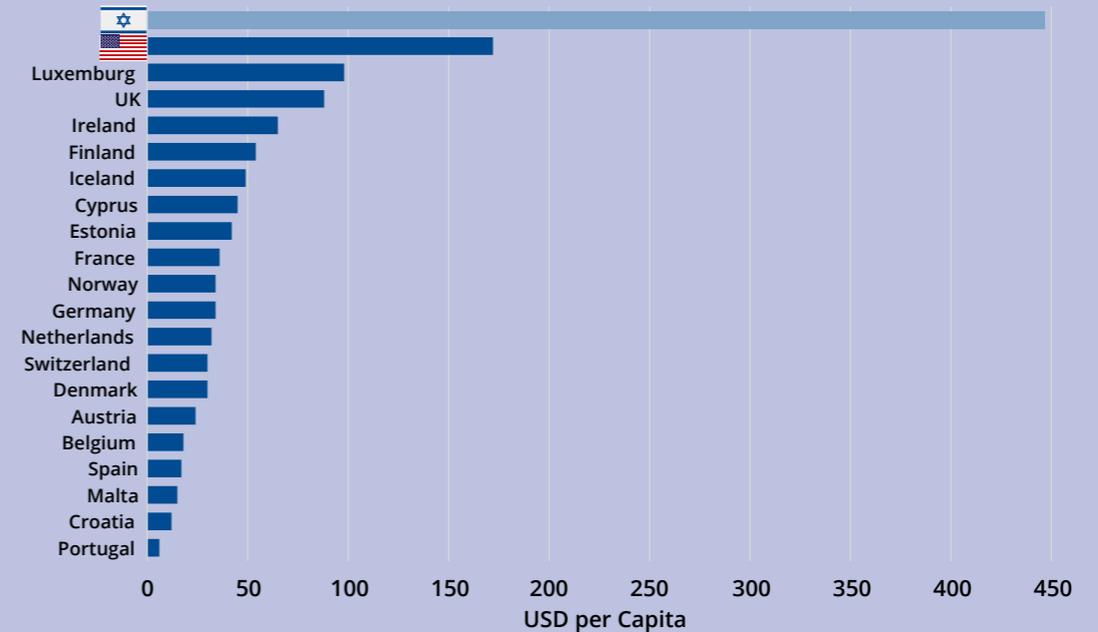
Key contributors to the program providing access to large Virginia enterprises are:

- Law and Accounting firms
- City, County, State & University Economic Development units
- Chambers of Commerce
- Tech related organizations

National Expenditure on R&D, 2017



VC Investment by Country, 2017



Israel has the highest R&D expenditures; the most startups and the highest VC funding rate (per capita) in the world. This talent pool, structured in funded early stage ventures are prime partners for Virginia companies. The VIAB Open Innovation Program gives Virginia companies access to Israeli technologies and R&D partners.



Maritime Program

Brings Israeli Shipping, Port and Logistic Related companies to the Hampton Roads Region

The Maritime Program brings Israeli shipping, port and logistic related companies to the Hampton Roads region. Focusing on an industry segment.

Core partners in the program are:

- **The Dock Israel Maritime business accelerator** (involves leading Maritime concerns e.g. Maersk and Lloyds Registrar) funds and develops products for early stage Israeli companies. VIAB is bringing companies developed by The Dock to enter the U.S. market through the Norfolk region.
- **Old Dominion University** including: ODU's Business Outreach Center (VBOC); The Center for Enterprise Innovation (CEI) and ODU's own maritime accelerator.
- **The Ports; Hampton Roads Chamber of Commerce; City and county economic development units; Navy Veteran owned businesses**



The Dock Israeli Maritime business accelerator partners with the world's leaders in the maritime sector (e.g. Maersk and Lloyds Registrar) to fund product development for early stage Israeli companies. The VIAB is bringing these product proven, innovative companies to enter the U.S. market through Virginia.

EcoWave Power – converts sea waves to electricity. The VIAB is discussing building trial power stations with sea facing counties and to base EcoWave floats on area bridges to generate electricity.



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Defense, Security and Cyber Program

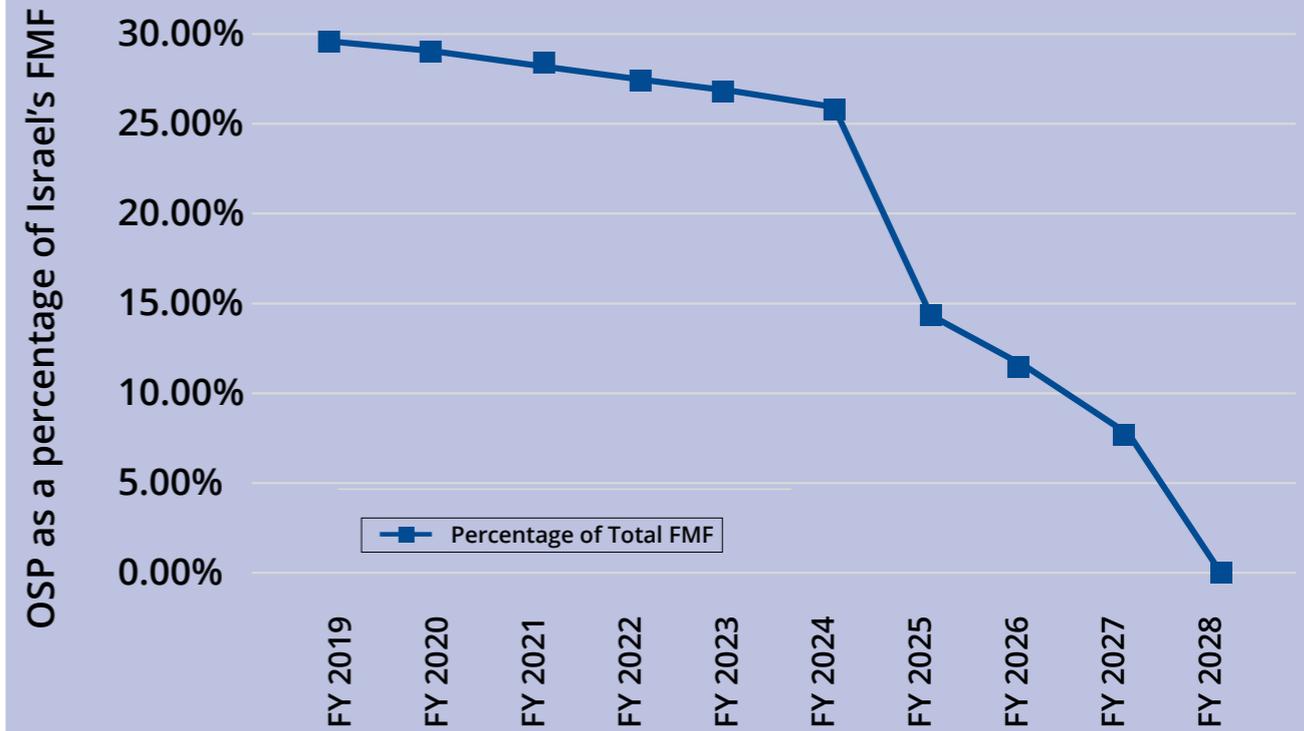
In a segment with proven Israeli prowess, the Defense, Security and Cyber program pairs Israeli companies seeking entry into the U.S. market with players in the Virginia federal contracting ecosystem.

Core Initiatives are:

Bringing Israeli companies to Virginia that are currently funded \$800m through U.S. military aid and in the next several years will have to comply with *Buy America* clause (MOU) that commits them to either manufacture in the U.S. or partner with a U.S. company.

Israeli Ministry of Defense – Virginia partnering event. VIAB is working with the Israel Ministry of Defense to arrange a two-day event in Virginia that teams Israeli and Virginia defense and security related companies. The event will have a Navy related technology day in the Norfolk area.

Phase-Out Under Obama MOU (2019-2028)



\$800m of defense contracts shifting from Israel to the U.S. The Virginia Israel Advisory Board is positioning Virginia companies to access them.



The green area shows the \$800m Off-Shore Procurement (bought in Israel) of the U.S. military aid to Israel that is now committed to a buy-America condition – causing Israeli Defense companies to set up operations in the U.S. The VIAB is working to bring these companies to Virginia.



The F15 Baz Meshopar – Israel was one of the first customers for the American F-15 fighter. It has served admirably as the backbone of the Israeli Air Force (IAF) throughout the late 1970s to the present day.



Prospects in the Pipeline

Prospective companies the VIAB is working to bring to Virginia

This year the VIAB advanced several renewable energy and ecological ventures as part of our program to focus on multi-site ventures which will provide jobs in several regions. Multi-site ventures also overcome a major constraint in competing with other states in a zero-sum game for a single project in which a lost project goes to another state and there is no residual business for Virginia.

Forecast of Job Creation by Israeli Companies Building Operations in Virginia

Project Code Name	Program	Industry	Decision Phase	Jobs 1-2 Years
Project Turbine	Multi-Site	Renewable Energy	Operating	Enables Data Centers
Ballistic	Defense	Defense	Operating	10
Project Recycle	Multi-Site	Recycling	Late Stage	100
Salty Fish		Aquaculture	Late Stage	50
Tire		Recycling	Late Stage	120
Ecowave Power	Multi-Site	Renewable Energy	Early Stage	50
Vegan		Food	Early Stage	50
Total Jobs Forecasted from Israel FDI in Virginia				450

Companies are referred to by project names both to insure confidential business plans and as a competitive factor vis-à-vis other states.

- 1. EcoWave Power Multi-site**– Renewable energy company that converts kinetic energy from sea waves into electricity. Company has a working trial in Europe for the past two years and expanding it to 5 megawatts. VIAB is presenting them to sea-facing cities and counties in Virginia as the first U.S. installation. The system is attached to existing structures (e.g. sea walls, wave breakers and Piers) and is appropriate to put on the bases of Virginia bridges to power the bridges requirements or sell electricity to the grid. The prospect fits VIAB’s multiple site model, meaning this single company can build multiple facilities in Virginia.
- 2. Vegan** - Non-Meat producer and packager – The leading Israeli vegan, non-meat fresh and frozen food producer sold in all major supermarkets is fulfilling sales in the U.S. from its Israel plant. They are seeking to build a U.S. manufacturing facility. In the short term want to outsource production and packaging to a U.S. partner / contractor who will (i) hire and manage 10 workers immediately, dedicated to this product line. In a later phase, the company will build its own plant and require 40-50 workers.
- 3. Ballistic** – Product that analyzes (counts and calibrates) weapons systems for management and maintenance. Already selling to federal agencies and defense establishment. Two Israelis relocated to the Hampton Roads region in 2017. They are well funded and seeking to build manufacturing operations in the area. Likely to hire 10 employees.
- 4. Re-cycle** – Multi-site Company recycles 95% of municipal waste and converts it to a new material that can be used for nearly every application plastic is used including building materials. The process eliminates the need for landfills. The company visited Virginia several times and is contemplating establishing its U.S. headquarter here as well as its first U.S. recycling facility. It will require several plants to serve the entire state. Expected jobs for HQ and initial plant 120 – 1-2 years.
- 5. Salty -Fish** – Sea and fresh water fish hatcheries and captive grow fish farming. The company visited Virginia and conducted site reviews. Hatchery and fish farm involves a \$17m investment and will employ 50 people within 2 years.
- 6. Tire** - Recycle tires to produce synthetic rubber with unique qualities/ characteristics at below market prices. Company put a down payment on property and is in advanced stages of committing capital. They solve one of the biggest problems in solid waste disposal which will likely entitle it to a tax benefit for it. The plant will require 125 employees in its first two years of operations.
- 7. Project Turbine** – A multi-billion dollar Israeli real estate and renewable energy concern with significant properties in D.C. / Northern Virginia is developing several solar energy sites in Virginia to produce electricity. Expanding renewable energy capacity is a requirement of major data centers to locate in Virginia.



Other Undertakings

Universities: VIAB is cultivating a range of University stakeholders with aligned economic development missions and is enhancing ties between Israel and Virginia applied research. These involve:

- Economic Development units within public universities to facilitate partnerships in their region
- Applied Research & Commercialization for the U.S. market
- Student exchanges to study in Israel
- Virginia Student internships with Israeli companies
- Out-reach to enterprises in order to source innovation and technology from Israel

Virginia Tech MBA Student Research Project with Amdocs

VIAB arranged for MBA students from the Center for Business Intelligence and Analytics (CBIA) at Virginia Tech to perform a year-long, fee-based research project for Israeli cellular billing company Amdocs. (NASDAQ: DOCS). Five MBA students presented their research to Amdocs in Israel at a two day session.

Funding Virginia and Israeli companies for joint R&D and Commercialization projects:

VIAB helps companies access Israeli government funding for joint Virginia-Israel R&D and product development projects in order to commercialize Israeli innovation and enter the U.S. market through Virginia.

Non-Dilution Grants from Israeli Sources

Israel Innovation Authority

The Israel Innovation Authority funds joint Israel-Virginia R&D and Commercialization projects through the [Virginia – State of Israel Agreement](#) (executed by Tim Kaine).

The process:

1. Virginia companies indicate their requirements for technology partners from Israel
2. The Virginia Israel Advisory Board (VIAB) identifies; vets and presents Israeli partners per the VA companies criteria
3. IIA funds the Israeli partners participation in VA-Israel R&D partnerships and joint ventures to commercialize R&D.

IIA Application Links

[Terms And Conditions](#)

[Instructions For Applicants](#)

BIRD Foundation Grants

The BIRD Foundation (Bi-national Industrial Research and Development) provides up to a \$1 million grant per project for joint R&D projects between an Israeli company and a Virginia based company. The VIAB provides Virginia companies with access to funding and partnerships with Israeli companies with cutting-tech innovative technologies.



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30 BIRD
Years of
Collaboration



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