

Accelerating Growth Through Strategic

Partnerships



BIRD

Israel-U.S.

Binational Industrial Research
and Development Foundation



tepav

Economic Policy Research Foundation of Turkey

BIRD Foundation

BIRD = Binational Industrial Research and Development

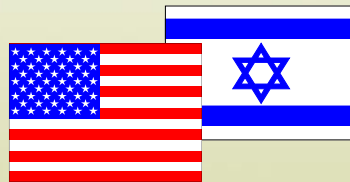
Joint fund, established in 1977 as a joint initiative between the US and Israeli governments

Mission

To stimulate, promote and support joint (non-defense) industrial R&D of mutual benefit to Israel and the United States

Funding

Income from interest earned on \$110 million endowment grant and from repayments from successful BIRD projects



BIRD's Approach in a Nutshell

- BIRD helps in finding strategic partners (“matchmaking”)
- BIRD offers conditional grants for joint development on a risk sharing basis (private sector cost-share)
- BIRD funds **up to 50%** of each company’s R&D expenses associated with the joint project
- BIRD claims **repayments** as royalties only if commercial revenues are generated from the project (repayments: **up to 150%** of the original conditional grant, CPI adjusted)
- As an example of **mutual benefit**: *U.S. company* benefits from access to innovation and IP; *Israeli company* benefits from complementary required capabilities and market access

For Mutual Benefit:

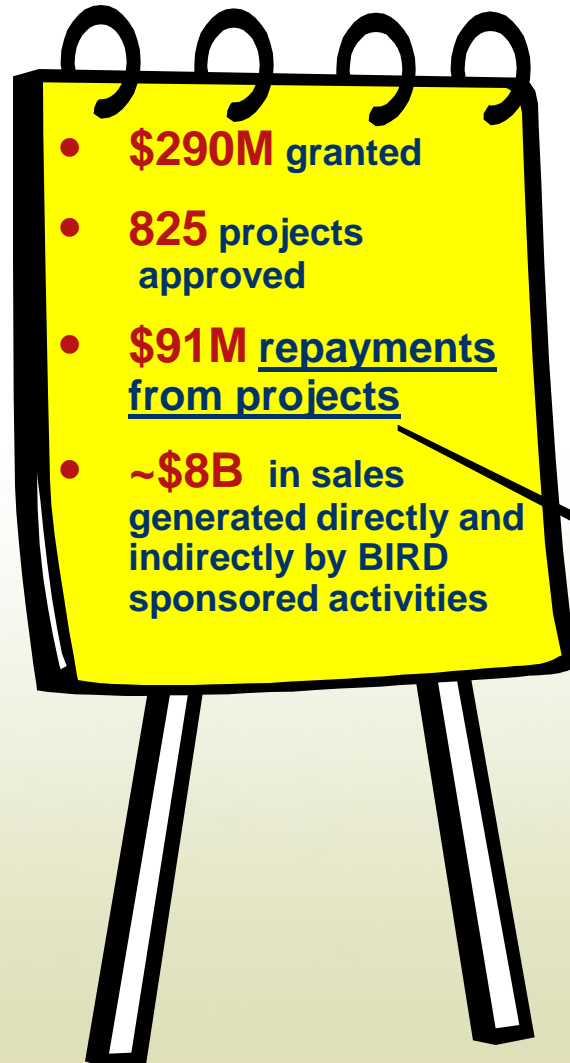
Israeli companies gain invaluable access to know-how and markets, achieving improved competitiveness and chances of success

U.S. companies increase their competitive advantage by gaining access to cost-effective innovation capabilities

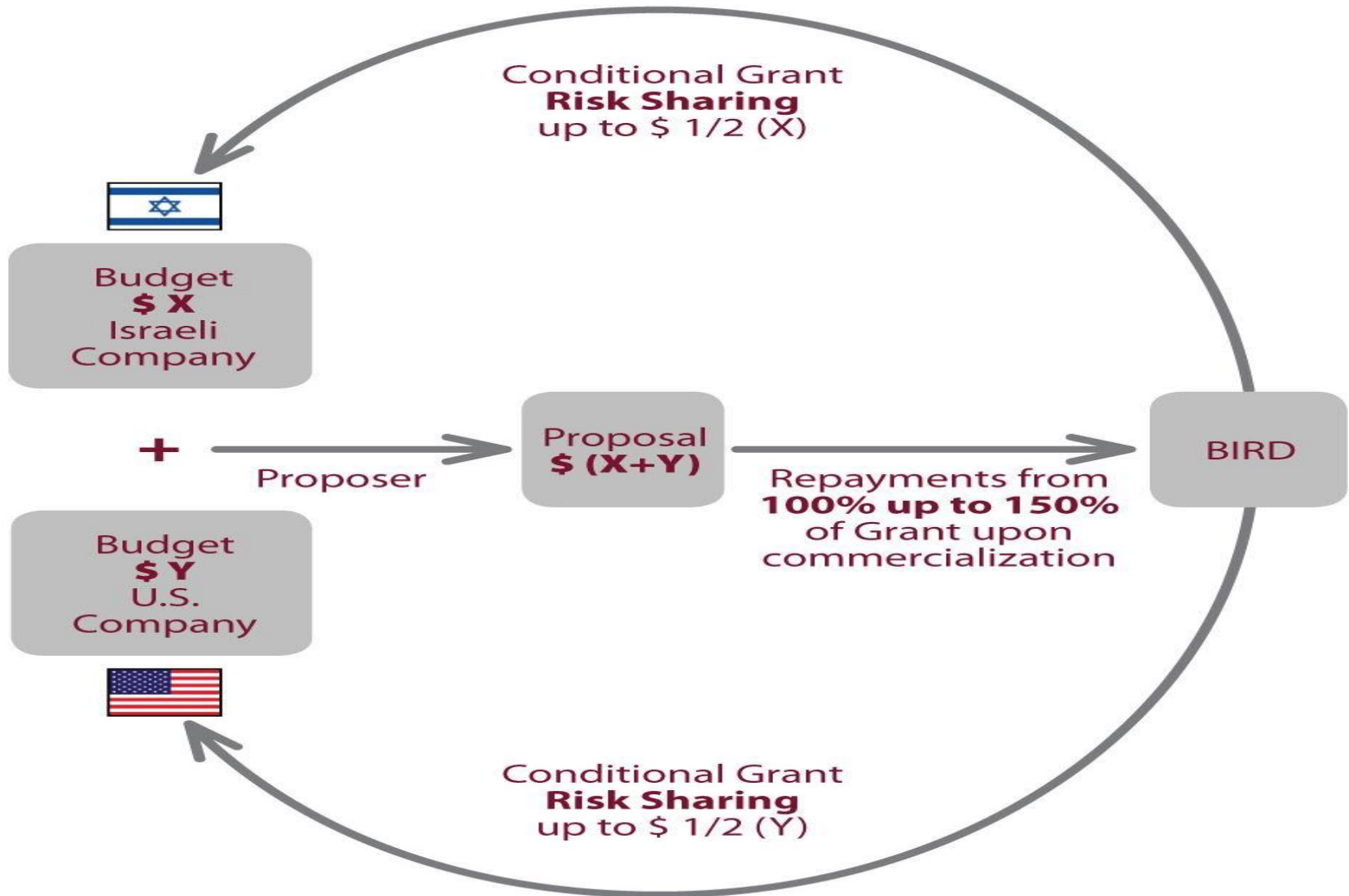
For Mutual Benefit:

- **Employment** – increase employment opportunities in the U.S. and Israel
- **Joint Innovation** – Promoting technological changes necessary for economic growth
- **Risk Sharing:** Leverage Funding of Research where every dollar invested yields at least \$2 of activity
- **Mergers & Acquisitions** - accelerating global growth expansion
- **Regional Cooperation** – increased opportunities for Middle East Regional Cooperation

BIRD – Performance Summary



The BIRD Model



Repayments Schedule (Based on Revenue)

Years from Project Completion	% of the grant to be repaid
1	100%
2	113%
3	125%
4	138%
5 & Beyond	150%

Maximum repayment obligation: 150%

Repayment rate: 5% of Sales

Semiannual repayments, indexed to CPI-U

Submitting Process for BIRD:

Executive Summary of the Proposal-March 14, 2012

Final Proposal – April 24, 2012

External Evaluation – Evaluators appointed by

NIST & Chief Scientist Office

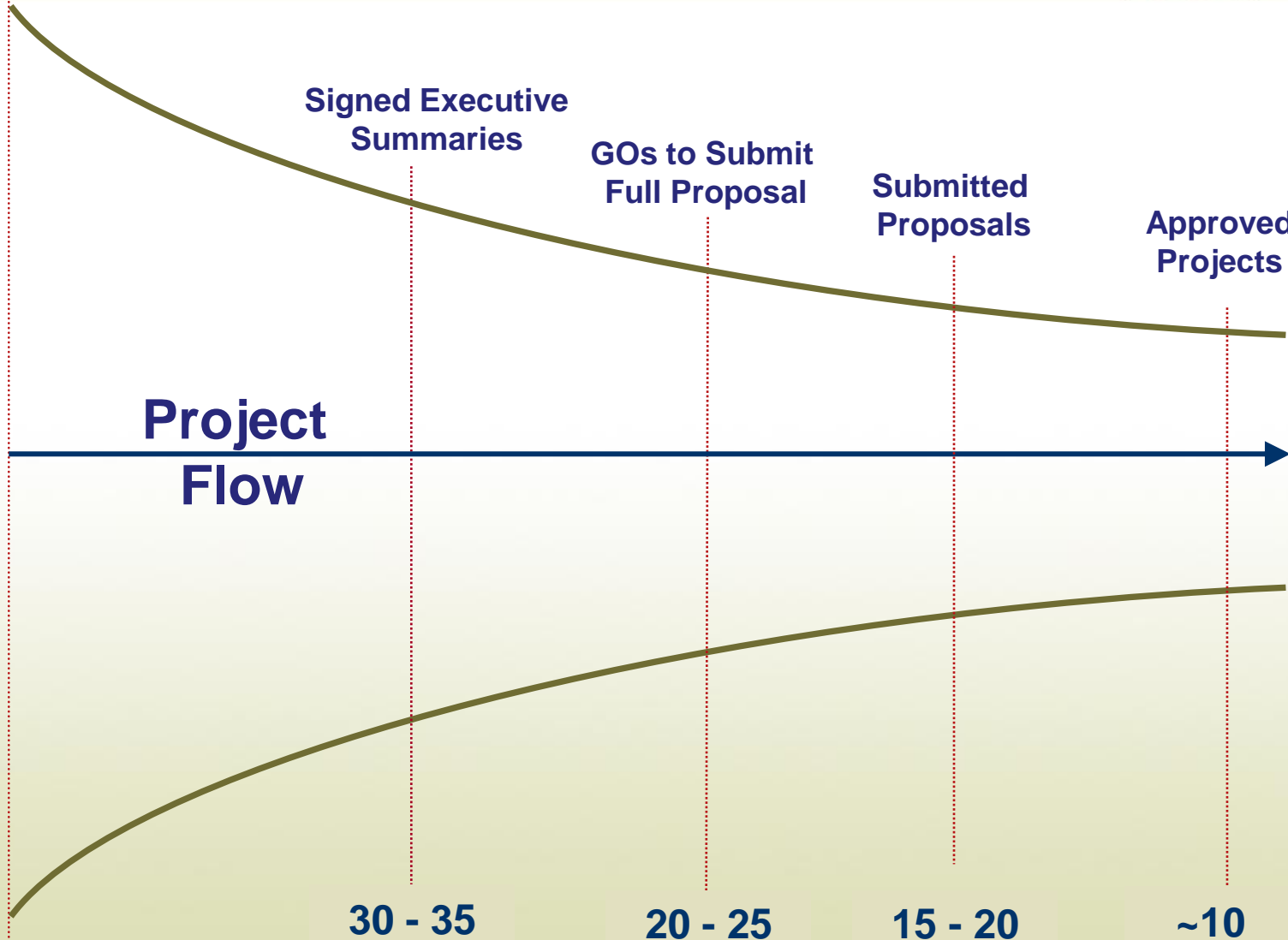
Board of Governors – June 21, 2012

BIRD Project Funnel

(Typical/ Twice a Year)



Candidate
Projects



Once Project is Awarded...

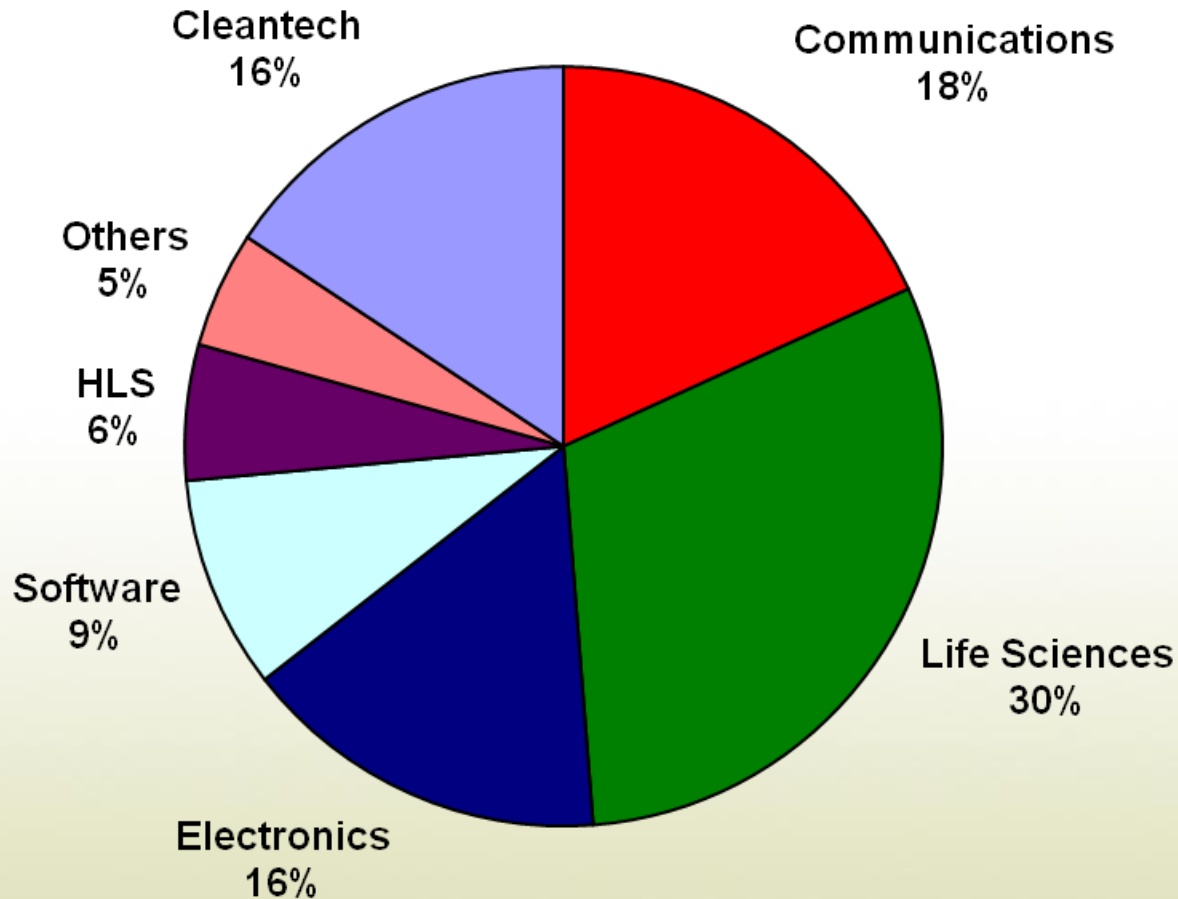
Company to Company Agreement

Financial Due Diligence

Cooperation and Project Funding Agreement



BIRD Approved Projects by Industry 2006- 2010



Total # of Projects = 121, including “BIRD Energy” (9 projects)

BIRD Awardees

Examples of US Companies

BIRD
Israel-U.S.
Binational Industrial Research
and Development Foundation



Johnson & Johnson



AVAYA

BIO-RAD



Alcatel-Lucent 

P&G



Kodak



The McGraw-Hill Companies



FLEXTRONICS

BIRD Awardees

Examples of US Companies - continued

BIRD
Israel-U.S.
Binational Industrial Research
and Development Foundation

molex



Edwards Lifesciences



B | BRAUN



Schering-Plough



GENERAL DYNAMICS
Armament and Technical Products

Amphenol TCS



bp solar

eStran

InFocus

AGA
Architectural Glass & Aluminum



**CINCINNATI
MACHINES**

BIRD Awardees

Examples of US Companies - continued

BIRD
Israel-U.S.
Binational Industrial Research
and Development Foundation



BIRD Awardees

Examples of US Companies - continued

BIRD
Israel-U.S.
Binational Industrial Research
and Development Foundation



“BIRD Energy”



Ministry of National Infrastructures

BIRD
Israel-U.S.
Binational Industrial Research
and Development Foundation.



U.S. DEPARTMENT OF
ENERGY

*Leveraging BIRD's Success
and
Experience*

“BIRD Energy” Implementation

- “BIRD Energy” uses the same principles and similar procedures as BIRD
- Scope: Renewable Energy and Energy Efficiency projects
- Management by the BIRD team, with minimal overhead
- Executive Committee for oversight: Assistant Secretary EERE*, Director General MNI* and a member of the BIRD Board of Governors (or their designees)
- Project reviewers appointed by DOE/EERE and by MNI

* **EERE: Energy Efficiency and Renewable Energy, U.S. DOE**

* **MNI: Ministry of National Infrastructures, Israel**

“ BIRD ENERGY ”

OPPORTUNITY TO SUBMIT U.S. - ISRAEL JOINT RENEWABLE ENERGY PROPOSALS

BIRD
Israel-U.S.
Binational Industrial Research
and Development Foundation



The U.S. Department of Energy (DOE), the Israeli Ministry of National Infrastructures and the BIRD Foundation have established “BIRD Energy”:
a program for U.S. - Israel joint renewable energy developments

“BIRD Energy” follows the same rules and procedures as BIRD.

Please refer to BIRD’s website for submission details - www.birdf.com.

To be considered, a project proposal should include:

- ❖ R&D cooperation between two companies or cooperation between a company and a university/research institution (one from the U.S. and one from Israel).
- ❖ Innovation in areas such as: Solar Power, Alternative Fuels, Advanced Vehicle Technologies, Smart Grid, Wind Energy or any other Renewable Energy/Energy Efficiency technology.
- ❖ Significant commercial potential; the project outcome should lead to commercialization.

The maximum conditional grant is \$1M per project.

Timetable and deadlines:

1. Executive Summaries (using BIRD’s template) – **May 05, 2011**
2. Full Proposals (following BIRD’s detailed instructions) – **June 30, 2011**
3. Decisions – **September 2011**

**Decision:
September 13,
2011**

DOE PR – 2011 Projects

BIRD
Israel-U.S.



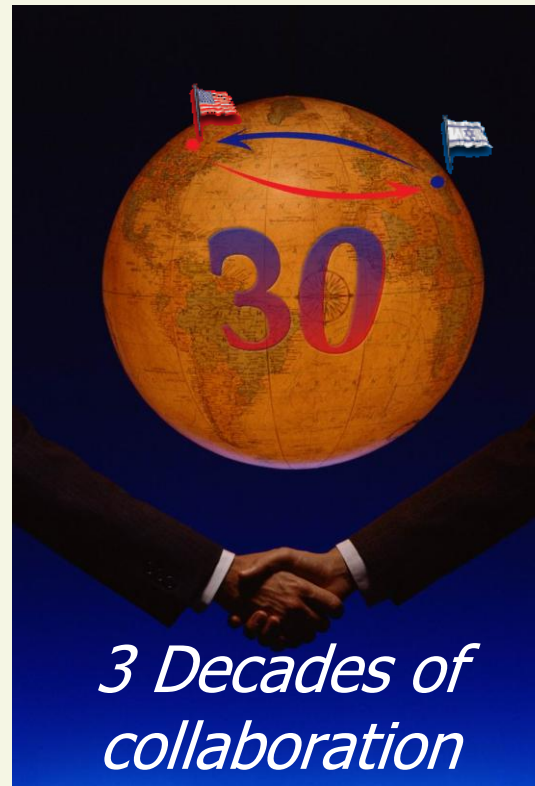
U.S. DEPARTMENT OF
ENERGY | Energy Efficiency &
Renewable Energy

DOE and Israel Announce \$3.1 Million in Cooperative Clean Energy Projects

September 26, 2011

The U.S. Department of Energy (DOE) today highlighted a milestone in U.S.-Israel cooperation on clean energy technology. DOE and the Ministry of National Infrastructures of Israel (MNI) have selected four projects in California, Pennsylvania, and Washington to receive \$3.1 million under the 2011 Binational Industrial Research and Development (BIRD) Energy program. Each of the cooperative projects includes a U.S. and Israeli partner and addresses energy challenges and opportunities of interest to both countries, while focusing on commercializing clean energy technologies that improve our economic competitiveness, create jobs, and support innovative companies. The selected projects will leverage private sector cost-share for a total project value of \$8.46 million:

- Cima NanoTech, Caesarea, Israel and Integrated Photovoltaics, Inc. (IPV), San Jose, California have been selected for an award of up to \$800,000. The two companies will test and demonstrate a process for producing low-cost crystalline silicon solar wafers and solar cells that combines IPV's low-cost high-efficiency wafer technology with Cima Nano's electrode coating process. This project includes \$1.40 million in private sector cost-share.
- Ener-T International Ltd., Jerusalem, Israel and Halotechnics, Inc., Emeryville, California have been selected for an award of up to \$800,000. The companies will develop a high-efficiency concentrating solar thermal plant design using high-temperature molten salts as a heat transfer fluid and for energy storage. This project includes \$1.45 million in private sector cost-share.
- Greenlet Technologies, Tel Aviv, Israel and Viridity Energy, Philadelphia, Pennsylvania have been selected for an award of up to \$700,000. Greenlet and Viridity will jointly develop a WiFi-based load management system for residential and commercial buildings that can monitor and control individual appliances without the need for professional installation. The project includes \$1.3 million in private sector cost-share.
- Pentalum Technologies, Rechovot, Israel and 3Tier, Seattle, WA, have been selected for an award of up to \$800,000. The companies will develop and test a LIDAR-based system, which gathers data using lasers, to facilitate wind speed and power output forecasting in wind farms. This project includes \$1.2 million in private sector cost-share.



More about BIRD -

Specific Project Examples

Medical Instrumentation



Argo Medical invented the external wearable skeleton enabling the walking of paraplegic patients.



Allied Orthotics & Prosthetics business is the design, custom-manufacturing, fitting, training of a complete range of orthotic and prosthetic products for disabled people.

Project title: ReWalk – Clinical Trials at MossRehab (Philadelphia)



Joint development product: ReWalk is a motorized exoskeleton suit that enables patients with lower limb disabilities, including complete paralysis, to independently engage in ambulatory activities, including standing, walking and in some cases climbing stairs.



Software/Education



tegrity

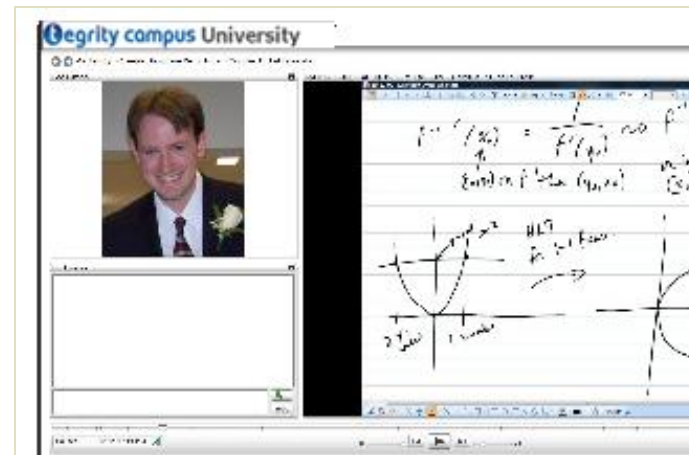
Tegrity Ltd. is the maker of Tegrity Campus, the leading class capture Web service, leading provider of platforms for e-learning content creation and distribution.



**Mc
Graw
Hill Education**

McGraw-Hill Higher Education, a unit of McGraw-Hill Education, is a premier provider of teaching and learning solutions for 21st century post-secondary and higher education markets worldwide.

Project title: Lotus



Joint development product:

Active access to students and instructors between multiple types and sources of learning objects (lectures, tutorials, sessions, etc.)

Oct. 4, 2010, 8:32 a.m. EDT .

McGraw-Hill Education Acquires Tegrity, Provider of Award-Winning, Automated Service That Captures Class Lectures for College Students

Tegrity's expertise and innovative lecture capture technology bolsters McGraw-Hill's ability to develop and deliver the next generation of digital learning services

NEW YORK, Oct 04, 2010 /PRNewswire via COMTEX/ -- McGraw-Hill Education, a division of The McGraw-Hill Companies, Inc. ([MHP 32.97](#), -0.02, -0.06%) , today announced the acquisition of Tegrity, Inc., a privately held company. The terms of the acquisition were not disclosed.

Tegrity's service acts, in part, as a fully searchable digital video recorder for the classroom, enabling colleges and universities to automatically record every class for review by students anytime and anywhere. But this innovative lecture capture technology takes student engagement well beyond the passive act of listening to, or viewing recorded course content. Rather, students using Tegrity can interact with the content, along with fellow classmates and instructors, in ways that make the learning process more efficient and more personal. With Tegrity's innovative "search anything" technology, students can instantly recall key class moments for replay online, or on mobile devices.

Food Technology



Fresh-Point is a private company specializes in the area of smart packaging, such as novel organic crystal-based time-temperature indicator



Ciba Specialty Chemicals Corp. is a leading global company dedicated to producing high-value effects for its customers' products.

Project title: Novel Time Temperature Indicators.



Freshness check at a glance – OnVu™ time-temperature indicators show accumulated chill-chain history of perishables

Joint development product: novel printable & chargeable time temperature indicator

Biogasoline Production



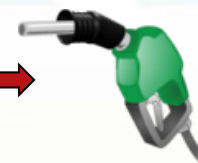
HCL Cleantech's technology is based on proprietary acid recovery replacement in a proven industrial process for the conversion of biomass to fermentable sugars



Virent was founded in 2002 based on catalytic, aqueous-phase reforming technology, named BioForming® which readily converts renewable plant sugars to biogasoline, other liquid hydrocarbon fuels, and chemicals

Project title: Wood Sugars for Biogasoline and Bioproducts Production

Joint development product: low cost cellulosic sugars to produce biogasoline



Biogasoline Production



BIRD Energy Grant Awarded to Virent, HCL CleanTech

January 4th, 2011 by [Foxy](#)

A \$900,000 BIRD Energy grant has been awarded to Madison, Wisconsin-based [Virent Energy Systems, Inc.](#) and Israel-based [HCL CleanTech](#) from the [BIRD Foundation](#) along with the U.S. Department of Energy and the Israeli Ministry of National Infrastructures. BIRD Energy is a program for the U.S. and Israel to jointly develop renewable energy.

[Virent](#) and [HCL](#) have partnered on a \$2.1 million project that combines HCL's proprietary lignocellulosic conversion technologies that produce cost competitive non-food sugars with Virent's BioForming technology that converts plant sugars into hydrocarbon molecules similar to those now refined from petroleum. These sugars can then be used as chemicals or as "drop-in" fuels for cars, trucks, trains, and aviation that can be transported using existing pipelines.

"Economically converting plentiful cellulosic biomass into renewable, fungible hydrocarbon fuels and products will enable broad market acceptance and is the most realistic alternative to displace petroleum and create a clean energy transportation sector in the coming years," said Lee Edwards, Virent CEO. "Virent

has proven it can transform cellulosic, non-food sugars into environmentally superior hydrocarbon fuels with the same energy content and performance as petroleum fuels. "Utilizing HCL CleanTech's cost-effective biomass hydrolysis technology to provide inexpensive cellulosic sugar feedstocks may be a key component of a complete and sustainable biofuels solution."

Life Sciences - Pharma



Bio-Technology General Ltd. had extensive expertise in production and purification of recombinant proteins for parenteral use (acquired by **Savient Pharmaceuticals Inc.**)



Mountain View Pharmaceuticals, Inc. experts in protein chemistry and the synthesis of PEG derivatives.

Project title: Development of PEG-Uricase for Treatment of Intractable Gout and Related Conditions



Joint development product: Development of effective therapy for patients with severe and presently untreatable gout. **The drug is called Krystexxa, marketed by Savient Pharmaceuticals**

Manufacturing



CogniTens

CogniTens develops, manufactures and markets 3D vision measurement systems for industrial applications, mainly targeted at the automotive and the aerospace industries



TESCO

TESCO Group Companies deliver a wide range of high quality agile manufacturing systems and services for today's global automotive market

Project title: Flexible 3D Measurement System for the Automotive Industry



I3 Measurement Cell

Joint development product: Automated measurement systems designed for process control and quality assurance on the production floor

Cleantech/Desalination



Desalitech pioneered a brand new approach to reverse osmosis desalination by implicating closed circuit desalination based on hydrostatic principles



GE (Global Research) – one of the world's most diversified industrial research labs, providing innovative technology for all of GE's businesses

Project title: Integrated Low-Cost RO Systems for Seawater Desalination

Joint development product: By combining the innovative closed-circuit reverse osmosis desalination scheme of Desalitech with next-generation capabilities developed by GE, the companies will productize an integrated solution that will dramatically reduce the capital expenditures and the energy consumption of saltwater desalination plants.



Bionic Eye

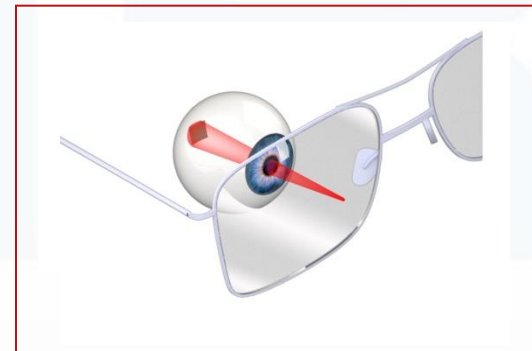


Rainbow Medical: is a medical devices innovation house, already responsible for the successful launching of design and implementation of numerous medical devices.



Zyvox Labs exploits its predecessor company Zyvox Corporation's technology for Micro-Electro-Mechanical-Systems (MEMS) microfabrication and 3D microassembly.

Project title: : Nano Retina



Joint development product: A nanotechnology approach for sight restoration based on an Artificial Retina which interfaces electrodes with living retinal cells (neurons)



Energy Efficiency for Buildings



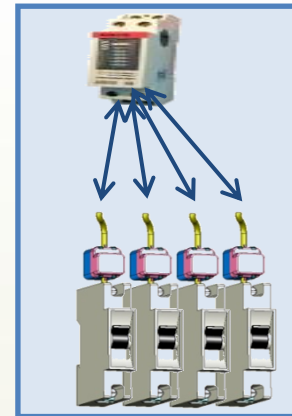
Panoramic Power develops low-cost, high granularity, energy visibility components and platforms for in-building circuit level electricity monitoring



Mazzetti Nash Lipsey Burch (MNLB) is nationwide full-service consulting and design firm focused on the engineered systems of buildings, and specifically on power systems

Project title: Wireless Miniature Self Powered Current Sensor

Joint development product: A self powered, wireless current sensor for circuit level electricity monitoring within a building and system installation at a customer site.



THE TRIDE FUND

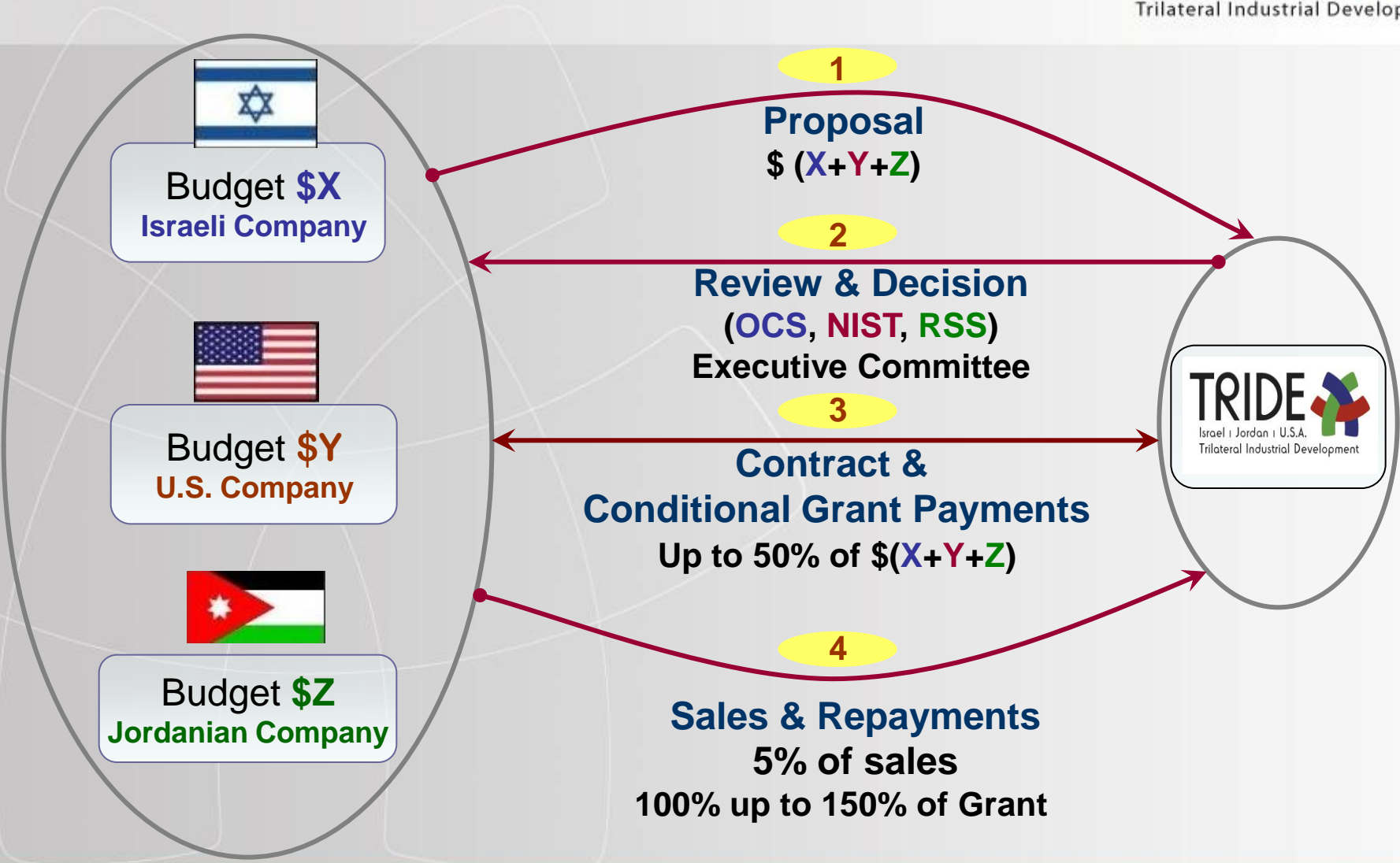


Trilateral Industrial Development

*A Catalyst for
Joint Regional Cooperation and Development*



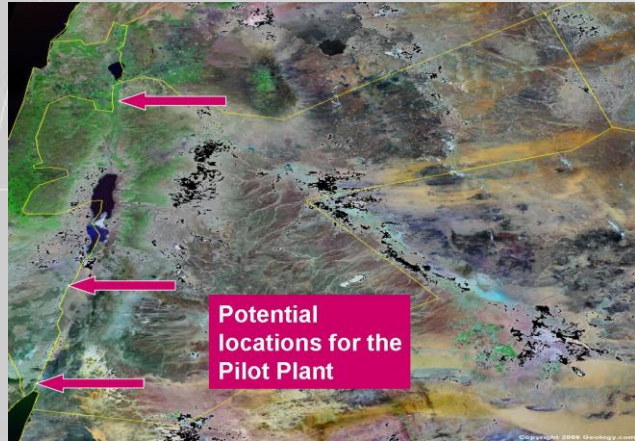
THE TRIDE MODEL



TRIDE Project – Example



Name of Project:	Second Generation, Bio-Synthetic Diesel Fuel Production		
Project budget:	\$1M (TRIDE grant: 50%)		
Duration:	15 months		
	Jordanian Co.	Israeli Co.	U.S. Co.
Name of Co.	NERC	MME-IL	Nibor Enterprises
Location	Amman, Jordan	Beit Yitzhak, Israel	Miami, FL





Fostering Business Collaboration

B2B Matchmaking:

Identifying

Approaching

Establishing Relationship



Characteristics of a U.S. Company

- Active in diverse application markets
- Significant marketing and sales channels
- Maintain a corporate R&D and business development function
- Has a track-record of outsourcing and in-licensing of technologies
- Has a track-record of partnering with companies outside the U.S.

Research your Prospect

Web sites

PR articles

Local business magazines

Conferences and exhibitions

Analyst reports



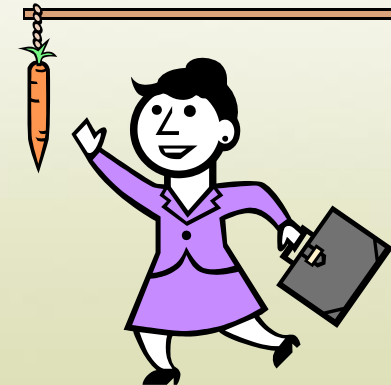
Identify the “Champion”

- Alliances & Partnerships
- Business Development
- Research and Development
- External Innovation
- Licensing
- VC

Motivation for a positive response

- Current business relationship with Turkey
- Working with Turkish companies
- Competition
- Executives of Turkish descent or other connection

“Show me the money”



Request for a meeting / Conference call

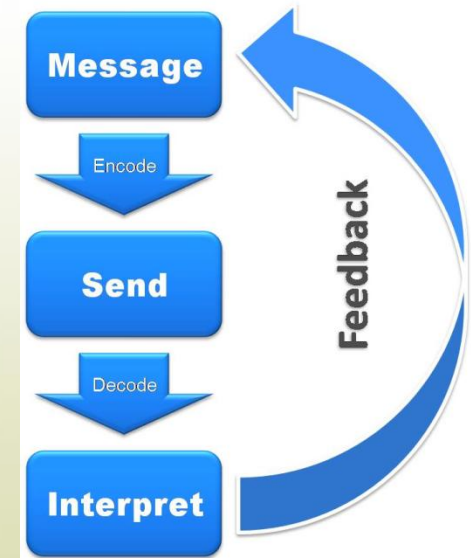
Cold vs. Warm

Way of approaching

- *E mail*
- *Letter*
- *Telephone*
- *Leveraging an Assistant*
- *LinkedIn*

Content

Teasers



Developing a pitch

- Personalized presentation for the U.S. company
- Information about Turkish companies that could fit the interest of the U.S. company
- General information about the Turkish industry
- Articles about competitors engaged with Turkish companies
- Any additional valuable information for the U.S. Company

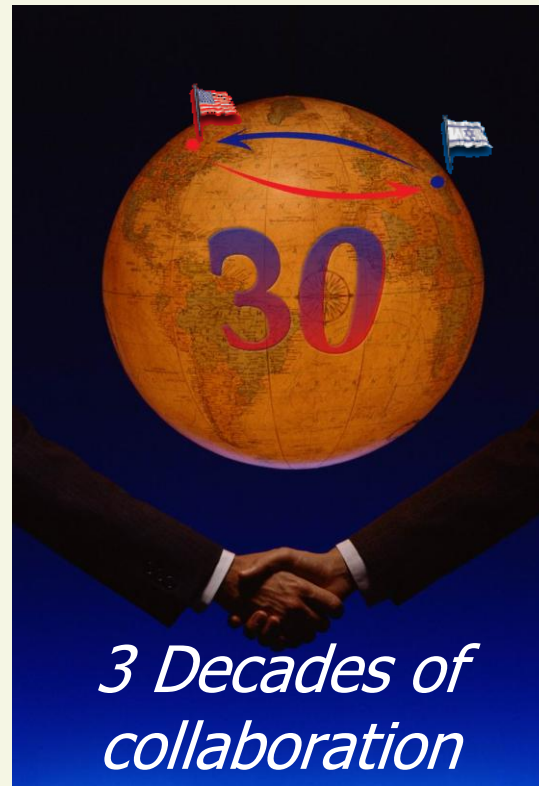


The Purpose of the Meeting

- Establish your credibility
- Learn about the needs and interest of the company
- Find out about the internal partnering process
- Obtain wish list
- Action items
- Follow up quickly on action items

Maintaining Relationship

- Facilitations of conference calls/ Skype with Turkish companies
- Meetings at International Conferences
- Inviting for round tables or other local events
- Newsletters
- Send related information



Who we are?

BIRD Staff

- Located in Israel:
- Executive Director Eitan Yudilevich, Ph.D.
- Chief Business Officer Weiss, Ph.D.
- Director, Business Development Ron Maron, Ph.D.
- Director, U.S. B. Dev. & BIRD Energy Limor Nakar-Vincent
- Chief Financial Officer Shlomo Cohen
- CFO Assistant Asaf Keren
- Office Manager Chava Doukhan
- Information Systems Manager Maha Wakileh
- Senior Administrative Assistant Einat Spivak
- Located in the US:
- East Coast & Mid West: Andrea Yonah
- West Coast : Michal Miasnik

BIRD Representatives in the US

American - Israel Chamber of Commerce – Southeast Region	Atlanta, GA	Tom Glaser
America- Israel Chamber of Commerce – Central Atlantic Region	Philadelphia, PA	Debbie Buchwald
Ohio - Israel Chamber of Commerce	Cleveland/Akron, OH	Howard Gudell
Virginia-Israel Advisory Board	Vienna, VA	Ralph Robbins
Maryland / Israel Development Center	Maryland	Barry Bogage
New-England Israel Business Council	Boston, MA	Yuval Malinsky

Cooperation with Israeli Missions

Economic Mission	New York, NY	Nili Shalev
Economic Mission	Houston, TX	Roe Madai
Economic Mission	Los Angeles, CA	Sigal Admony-Ravid
Economic Mission	Chicago, IL	Yariv Becher
Commercial Attaché, Embassy of Israel	Washington, DC	Ohad Cohen

Means & Tools

- Meetings with U.S. & Israeli Companies
- Emphasis on Success Stories
- Work with Local Representatives in the U.S.
- Events/ Delegations - in the U.S. and Israel
- Contacts with VC's, Technological incubators, Accelerators, etc.
- Improved Website & Use of Social Networks – LinkedIn and Facebook
- Newsletter
- PR in the U.S. and Israel

teşekkür ederim

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