

1. BIRD Awards

1.1. Introduction

This Handbook is intended to provide prospective applicants with information regarding the Israel-U.S. Binational Industrial Research and Development Foundation (henceforth "BIRD"). However, before a company starts preparing a proposal, as stipulated in the following pages, we strongly recommend a personal meeting with our staff in Israel or with our colleagues in the U.S. Such meetings enable a preliminary discussion of the project, the proposed partnership, and the various options available to prospective participants.

BIRD is managed by an Executive Director and a staff, headquartered in Tel Aviv, Israel. The Executive Director reports to a Board of Governors, comprising three senior government officials from both the U.S. and Israel. BIRD's U.S. offices are located in the Western and Eastern regions of the U.S., with logistical support provided by several other regional offices nationwide. Information pertaining to BIRD's offices and affiliates can be found in our website www.birdf.com and in BIRD's annual reports.

All BIRD-funded projects must be jointly proposed and implemented by a partnership between an Israeli company and a U.S. company. Although BIRD is happy to assist companies from either country to find a suitable corporate partner, the main responsibility for forming the partnership belongs to the companies. No BIRD project agreement can be signed and exercised (with potential grantees whose proposal has been approved) until there is a viable business agreement between them.

1.2. The BIRD Model

1.2.1. Overview

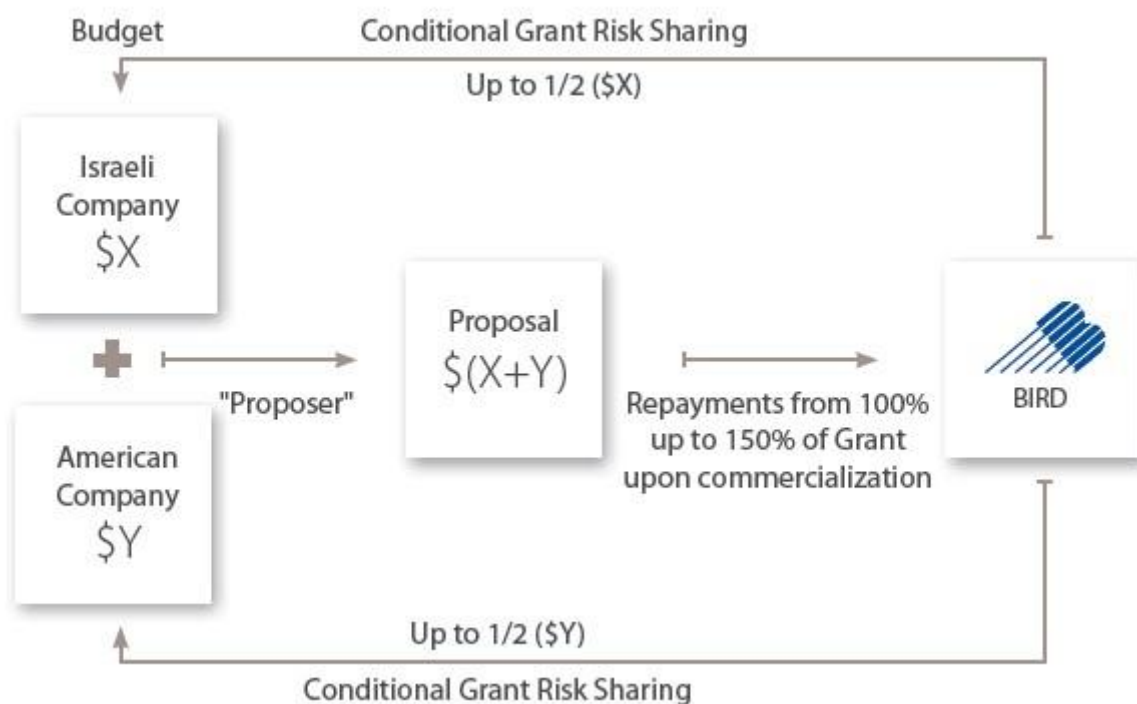
Any two companies, one registered in Israel and the other in the U.S., may jointly apply for BIRD support, as long as they have the combined capability and infrastructure to define, develop, manufacture, sell and support an innovative product or service, referred to as "the Product". The two partnering companies are collectively referred to as "the Proposer". One key criterion is that each company has the demonstrated ability to carry out its part of the Product's joint development program, referred to as "the Project", as well as its part in the commercialization. Another key criterion is that the nature of the business relationship between the two companies is that of sharing; both in the Product's development program and in the revenues derived from its commercialization.

BIRD cost-shares with the Proposer in the development, to the point of commercial readiness, of innovative (non-defense) technology-based products or processes which have reasonable potential for generating revenues and profits commensurate with the investment and the risks.

For many Israeli companies, finding a qualified U.S. corporate participant capable of assisting in product definition, gathering market intelligence, and taking responsibility for marketing, sales and service, is the key to maximizing the business benefit of their innovative ideas. The incentive for U.S. companies to collaborate with Israeli partners is to expand their product lines with cutting edge Israeli technology and leapfrog the competition. An additional incentive is that products manufactured largely in Israel benefit from duty-free entry into EEC countries. As a result of the Free Trade Area Agreement between the U.S. and Israel, many products manufactured in either country will enter the other country either duty-free or at reduced tariff rates.

BIRD participates in the Project's development cost, referred to as "the Budget", with the Proposer, by funding up to 50% of the Project's budget, and referred to as "the Conditional Grant". The two companies, separately and together, are obligated to repay BIRD the total Conditional Grant received,

referred to as "the Repayment", but only from the revenue generated by the Product's sales upon successful commercialization. (Please see a schematic diagram of **BIRD's model of payments-repayments** in the figure below.)



Companies should note that according to Generally Accepted Accounting Principals ("GAAP"), a company that receives a grant from BIRD can record it as a reduction of Research & Development expenses (in the Income Statement) and not as a liability (in the Balance Sheet). Since there is no assurance of a successful outcome for the project at the time the grant is received, the funding is considered a contingent liability that should be included in the notes to the financial statements. The grant is repaid only when, and if, revenues occur. Should commercial revenues eventuate, BIRD receives repayments or royalties, depending on the form of commercialization, as discussed in Section 1.2.7., up to a maximum of 150% of its investment, in constant dollars. All payments to the Foundation are a pre-tax business expense.

1.2.2. The Product

The jointly developed product must have significant technological innovation. One or both companies should possess intellectual property rights to the technology being developed and to the finished product. The Product should target an attractive and growing market that is not necessarily geographic specific, but is familiar to and serviced by at least one of the two partnering companies.

BIRD will consider products employing any area of technology and targeted for any market segment or application, but encourages and preferentially supports projects employing breakthrough or state-of-the-art technologies which are receiving global attention and address market segments where Israel has a relative technology or business long-term advantage. The only exception to the above is BIRD's restriction to support products targeted for military markets or applications.

1.2.3. The Project

The Project is defined as the scope and duration of the development program undertaken jointly by both companies, at the end of which the Product should be market-ready. All activities required for subsequent commercial manufacturing, specification, and market introduction, should be detailed in the Project, including beta-site testing, regulatory approvals, and test marketing.

Because of the wide range of projects and partnerships that may qualify for BIRD support, there are no hard and fast rules for the detailed nature of the cooperation between the partners. They must follow their own judgment as to the division of activities that will most cost-effectively accomplish the project's technical and commercial goals. For example, if the bulk of the R&D is to be performed by one partner, the contribution of the other partner may focus on marketing, along with detailed product specification, sales and service. Manufacturing may be conducted by either or both partners or by subcontractors. Institutions or non-manufacturing companies may act as subcontractors in the R&D or testing phases of the project.

Project start date may be as early as the 1st day of the month in which the final Project proposal is submitted jointly by the companies, and Project duration may be as long as 3-4 years, if deemed necessary for reaching commercial readiness.

A limitation of BIRD's funding agreement is that sponsored projects may not be conducted in geographic areas which came under the administration of the Government of Israel after June 5, 1967, and may not relate to subjects primarily pertinent to such areas.

1.2.4. The Proposer

The U.S. company and the Israeli company are collectively referred to as the Proposer. Both companies should have the majority of the necessary R&D resources required for the Project in their respective countries. The two companies should have the combined, proven capability and infrastructure to define, develop, manufacture, sell and support the Product defined by the Project.

Typically (but not necessarily), the Project partners include one larger company and one smaller company. Both partners should contribute and share their technological expertise and intellectual property in execution of the joint development program, but their respective contributions do not necessarily have to be identical. However, the task assignments should be divided in such a way that neither partner's portion in the combined budget is less than 30%. Manufacturing responsibilities of the Product can be divided between the companies as they see fit, and can be performed by subcontractors in any geographical location. Marketing and sales support of the Product can be divided between the

project partners. Preferably, at least one partner (usually the larger company) should have extensive market presence, as well as a proven track record in marketing and infrastructure, to successfully realize, upon product commercialization, the bulk of the sales projections indicated in the proposal.

A typical profile of the larger company is one that develops, manufactures, sells and supports technology-based products; has \$50-\$500 million annual sales and growing; is preferably public or at least moving in that direction; and is willing to enter into strategic partnerships with companies having complementary skills and resources.

Among younger companies, BIRD seeks medium-sized, small, or start-up companies with leading-edge technological capabilities, good management, and strategic direction combined with the willingness and flexibility to develop products for a potentially large market that match the business strategy of a large, established company.

1.2.5. The Project Budget

The Project Budget is estimated by the Proposer and is submitted as part of the project proposal in the grant application process. It must include practically all development expenses to be incurred during the course of the Project, including direct labor and its associated overhead, materials, subcontractors, consultants, travel, depreciation on new or used equipment employed and marketing expenses related to the development effort. The budget is prepared and submitted separately by the Israeli company (\$X in the diagram on page 2) and the U.S. company (\$Y), and covers the entire duration of the project.

1.2.6. The Conditional Grant

BIRD will cost-share in the joint development by extending to the Proposer a conditional grant (G) totaling up to 50% of the Project Budget (X+Y in the diagram). Each partner directly receives the portion of the total grant that is relative to its share in the budget.

Payments are made after receipt and approval of a joint technical report and a separate fiscal report submitted by each partner at the end of each one of N segments (generally every 6 months). These reports cover the development progress and the actual expenses incurred during the segment. For the sake of cash flow planning, grantees can assume N+1 equal payments of $\$G/(N+1)$ every 6 months, the first one extended immediately after the CPFA is signed by all parties.

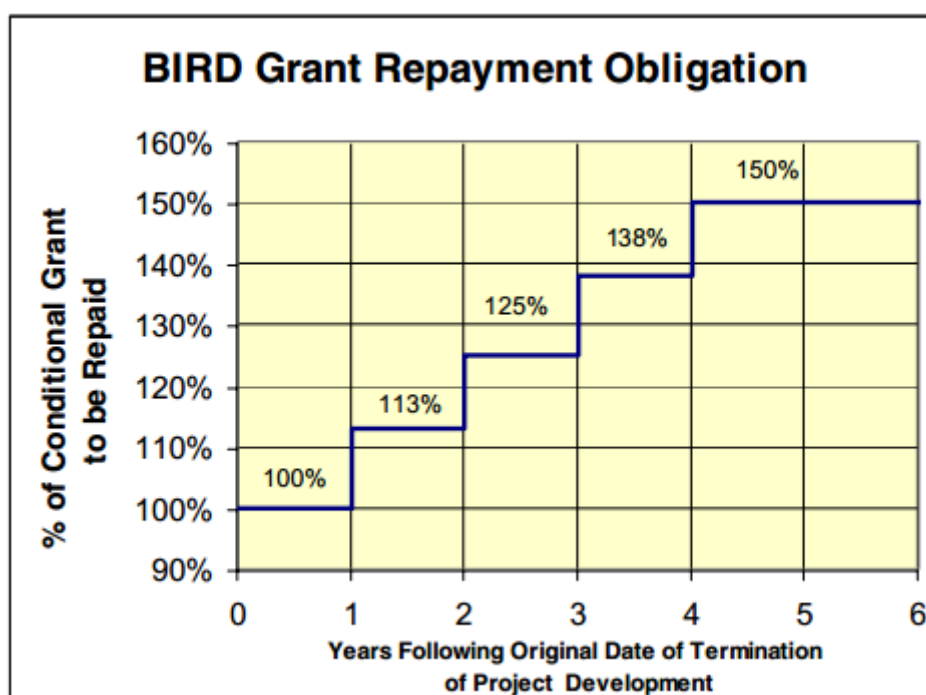
BIRD funding covers only a portion of the companies' product development and commercial readiness costs, i.e., it does not include funding of manufacturing resources, ongoing marketing costs and any other downstream cash requirements before positive cash flow is achieved. The companies must, therefore, be able to demonstrate that they have the infrastructure and resources needed to complete the development project (or access to it), offer it as a commercial product and realize its full commercial potential.

1.2.7. Grant Repayments

Upon product commercialization, the gross sales (and not the profit) derived by either partner from sales of the Product (or subsequent products based on the technology developed in the Project), become the basis for repayment of the BIRD Grant. Repayments are made at the rate of 5% of each \$ of reported sales revenue.

Additional revenue sources for repayments to BIRD are those derived from extending licensing rights to the technology, at the rate of 30% of the revenue earned, or from the outright sale of the technology to any third party, at the rate of 50% of the sales value. The maximum repayment amount due by the Proposer is dependent on the length of time that it takes to complete the repayments, as detailed in the table and chart below:

Years Following Original Date of Termination of Project Development	Maximum Percentage of Conditional Grant and other sums to be Repaid (indexed by the U.S. CPI)
1 st	100%
2 nd	113%
3 rd	125%
4 th	138%
5 th and more	150%



For a full year after Project completion (the 1st year of product commercialization), the repayment amount due is the actual cumulative sum granted by BIRD to the Proposer, linked to the U.S. Consumer Price Index (CPI). Since the repayment sum due does not increase beyond the 5th year after Project completion, the maximum repayment obligation that the Proposer can ever assume is 150% of the total sum granted by BIRD, linked to the CPI.

If product commercialization is unsuccessful, and no revenue is generated, whether due to technological or marketing failure, BIRD will not seek repayment of the Conditional Grant. Thus, BIRD participates with the Proposer in the risk of an unsuccessful product development investment.

“Pharma Model” Projects

Repayments from projects defined by the Foundation as “Pharma Model” will be based upon achieving milestone(s) and not as a percentage of sales. (Please refer to BIRD’s website for additional information on the [“Pharma Model”](#)).

1.3. The Partnership Agreements

1.3.1. The Cooperation and Project Funding Agreement (CPFA)

Once a Project is approved by BIRD's Board of Governors, or BIRD Energy's Executive Committee, a Cooperation and Project Funding Agreement (CPFA) is signed by the two partners (the "Proposer") and the Foundation. The CPFA (see Section 5.2.1. for a draft version) describes the work plan, project budget, payments due the Proposer, repayments due the Foundation from sales or other income resulting from the project, reporting requirements, etc.

It is the Proposer, (see earlier definition), separately and jointly, that actually receives the conditional grant funds according to BIRD's CPFA, and it is the responsibility of the Proposer to repay the Foundation in the event that the technology (in whole or in part), developed in the BIRD project is commercialized.

1.3.2. The Company-Company Agreement

(referred to as the "Business Agreement" in Section 5.1.3.)

The company-company arrangement is a two-party contract between the U.S. and Israeli companies. This agreement is not a BIRD document and BIRD is not a party to this agreement. However, the agreement needs to be submitted to BIRD for review prior to signing of the CPFA. This formal company-company agreement should address issues relating to manufacturing rights, marketing responsibilities, ownership of technology, benefits to each company during commercialization, etc., and, of course, repayments to BIRD. The risk and profit sharing nature of the cooperation, classifying it as a business partnership rather than a sub-contracting arrangement, should be clearly defined and understood. Agreement on these issues prior to initiation of the joint venture is critical to maintaining the cohesiveness of the company-company affiliation throughout all phases of cooperation.

As part of their separate agreement, Israeli and U.S. companies include a few "BIRD clauses" which, in effect, define what is agreed-upon by the companies regarding funds to be received from BIRD and repayments to be made. Of course, this company-company understanding covers many other issues and items.

1.4. Project Awards

Projects are BIRD's main business. As detailed below, there are two types: full-scale and mini-projects, depending on the total cost (budget) of the proposed project.

Once a U.S. company and an Israeli company select a project that meets our general criteria (as established from discussions with the BIRD Foundation either in Israel or in the U.S.), we ask them to jointly submit an "Executive Summary of Project Proposal". Joint submission of this document is essential before submitting proposals for either full-scale or mini-projects (see Section 3.2.). Following our review of the Executive Summary, typically within two weeks, we advise the companies as to the proposal preparation and subsequent steps, inviting them to submit a formal proposal in accordance with the guidelines detailed in Section 3, "Proposal Preparation Guidelines". A copy of the Executive Summary of Project Proposal can be found in Section 3.2., and on our website www.birdf.com

1.4.1. Full-Scale Projects

A Full-Scale Project is defined as one in which the total development cost to the two companies (up to the point of commercial readiness) (Budget $x+y$ in the above diagram) is at least \$400,000. BIRD's cost-share is up to 50% of the total cost of such projects.

Decisions whether to approve or reject proposals for funding full-scale projects are made by BIRD's Board of Governors. The Board of Governors convenes semiannually to act on proposals for full-scale projects. Members of the Board include U.S. representatives from the Department of Commerce, represented by the National Institute of Standards and Technology (NIST), the Department of Treasury and the Department of State. Israel's Board members are the Director General and Chief Scientist of the Ministry of Economy (former Ministry of Industry, Trade and Labor, OCS) and the Director General of the Ministry of Finance.

(A) BIRD Projects

The Board meets to deliberate the approval of projects twice a year, usually in June and December. In addition, each year, up to 14 meritorious proposals that missed those dates by a few weeks may be brought for review by a special meeting of the Board. This may take place twice a year between the regularly scheduled meetings, upon the recommendation of the Executive Director.

The decision by the Board is based on BIRD's internal review and also on confidential proposal technological reviews by two expert agencies, the NIST and the OCS of Israel's Ministry of Economy. Adherence to the proposal preparation guidelines detailed in Section 3 is essential for the proper review.

(B) BIRD Energy Projects

The Executive Committee meets to deliberate the approval of projects once a year, usually in October and November.

Members of the Committee include U.S. representatives from the Department of Energy and the Department of Commerce, represented by the National Institute of Standards and Technology (NIST). Israel's Committee members are the Chief Scientist of the Ministry of National Infrastructures, Energy and Water Resources and Israel representatives from the Ministry of Economy.

The decision by the Executive Committee is based on BIRD's internal review and also on confidential proposal technological reviews by two expert agencies, the U.S. Department of Energy and the Israel Ministry of National Infrastructures, Energy and Water Resources. Adherence to the proposal preparation guidelines detailed in Section 3 is essential for the proper review.

1.4.2. Mini-Projects

It is often appropriate for two companies contemplating a partnership to define an initial project of modest size rather than to plunge into a higher-cost, full-scale project of greater risk and duration. BIRD has, therefore, designed and introduced the Mini-Project, which has proven to be a powerful and successful tool for rapid and relatively low-risk involvement of U.S. and Israeli companies in relatively small but meaningful product developments of a cutting edge technology.

The Executive Director is empowered by the Board of Governors to allocate up to 20% of annual conditional grant funds for the support of mini-projects. The budget of a BIRD mini-project is limited to \$400,000. Grants are a maximum of \$200,000, or 50% of actual project costs, whichever is less.

It is important to note that despite the relatively small size of such joint ventures, the scope and total budget of the mini-project must be such that at its completion the developed product will be market-ready. A proposal for a mini-project in which product development, although advanced, is not fully completed to enable its prompt initial commercialization, will usually not be approved.

Mini-project proposal preparation guidelines are identical to those of the full-scale project. The same strict criteria regarding business and technical capabilities and commercial potential are applied.

The decision to approve Mini-Project proposals is made by BIRD's Executive Director, after review of the proposal. Proposals for mini-projects are accepted throughout the year, and a definitive response to such proposals is typically given within four to eight weeks.

Once approved, mini-projects are implemented under the same CPFA as full-scale projects (see Section 5.1.1.).