

3. Proposal Preparation Guidelines

3.1. Introduction

Discussions with BIRD staff, visits by BIRD representatives to either or both companies, joint submission of the Executive Summary of Project Proposal by the two companies and a positive review of the Executive Summary by BIRD's staff all precede submission of a formal proposal. However, while impressions gained from these contacts are important, in the final analysis, the formal evaluations and decisions are based primarily on the formal proposal submitted by the two companies. The following guidelines for full-scale and mini-project proposals are to be strictly followed:

NOTE: *BIRD's dealings with the companies are treated confidentially, including the evaluation of proposals for full-scale projects by the two outside organizations responsible for conducting such reviews (see Sections 5.2.2. and 5.2.3. for typical Confidential Disclosure Agreements).*

3.2. Executive Summary of Project Proposal

Following preliminary discussions with BIRD staff regarding the suitability of the intended project, the companies will be requested to jointly complete and submit an "Executive Summary of Project Proposal". For either a full-scale project or a mini-project, the Executive Summary should comply with the following sections and include the information requested, in addition to company/product brochures. It should be 4-5 pages in length.

NOTE: *By request, BIRD's staff will review a draft of the Executive Summary before it is signed by the authorized persons and officially submitted to the Foundation. This preliminary review will address only the adequacy of information and level of detail required in the Executive Summary, and not the compliance of the companies or project with BIRD's criteria.*

Executive Summary of BIRD Project Proposal

(Maximum 4 pages)

	Israeli Company	U.S. Company
Company name		
Company locations (headquarters and relevant division address, including full street address, city, state)		
Company website		
Year established		
Revenues: most recent fiscal year	\$ million	\$ million
Increase / (Decrease) over previous year	%	%
Number of employees		
Ownership (Public / Private)		
Percentage ownership of the company by the other company		
Number of previous BIRD projects		

Israeli Company Registration Number	
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Expected project title	
Estimated project budget	\$
Expected project duration	months

- Abstract:** A summary of up to 10 lines, describing the essence of the project and its expected outcome. The abstract should be self-explanatory to someone who has no previous knowledge in the field.
- Company Background:** Describe the major technical, marketing and financial assets and strong-points of each one of the two companies that are relevant to the successful completion of the proposed development project, and to its successful commercialization. Describe the characteristics and qualities possessed by each company that would make it a good strategic partner to the other company.
- The Innovation:** Provide a concise description of the product to be developed within the project, including its uniqueness, its innovation, and how will it satisfy market needs that are not met today.
- Collaborative Relationship:** Describe the anticipated role of each company during the development project and during product commercialization. Indicate approximately how the development budget will be split between the two companies, and from where the non-BIRD portion of the project expenses will be obtained. Describe what the expected basis and arrangement between the two companies regarding sharing of profits and other benefits during commercialization.
- Commercial Potential:** State the estimated relevant market size for the developed product, and the expected market share after 1-3 years of commercialization. (Please indicate the sources employed in deriving this forecast.) Estimate the volume and the total \$ value of direct sales revenue expected to result from the developed products over each one of the first 3 years of commercialization.

Calendar year:	20xx	20xx	20xx
Target market size for developed product (M\$):			
Estimated market share (%):	-	-	-
Estimated sales quantity (units):	-	-	-
Estimated representative unit price (\$/unit):			
Estimated sales revenue (K\$):			
Estimated cumulative sales revenue (K\$):	0	0	0

Mandatory input:

Optional (but recommended) input:

Authorized Company Officials:

Israeli Company

U.S. Company

Signature: _____

Typed Name: _____

Typed Title: _____

Date: _____

Tel. no.: _____

Typed Email: _____

Contact Person Details:

Signature _____

Typed Name: _____

Typed Title: _____

Tel. no.: _____

Typed Email: _____

Signatures above do not constitute a legal commitment on the part of either party to undertake the project herein described. Such commitment, if made, will be subject to a separate agreement.

3.3. The Project Proposal

Following meetings with BIRD staff in which the proposed program is discussed and after an Executive Summary of Project Proposal receives a positive review by BIRD staff, the applying companies should jointly submit their Project Proposal for review by BIRD staff, according to the following guidelines.

Experts from the Office of the Chief Scientist (OCS) of Israel's Ministry of Industry, Trade and Labor and from the U.S. National Institute of Standards and Technology (NIST), who are contracted to evaluate full-scale project proposals, review the soundness of the technical approach, the quality of effort that will be applied, the business/marketing opportunities and the quality of the document. The purpose of BIRD's review is to ensure that the proposal is sufficiently detailed to enable the outside reviewers to perform a meaningful and critical evaluation of the proposed program. This "internal" review process will be carried out promptly and will result in the forwarding of detailed comments to the companies. These comments will relate to those sections of the proposal that, in the opinion of BIRD staff, need to be modified before the proposal can be submitted to OCS and NIST. After the proposal is satisfactorily modified, BIRD will advise the companies regarding formal submission of final copies of the joint proposal.

There are three major parts to the proposal:

1. Product description and the innovation in the product (see Section D).
2. Description of project execution and the cooperation between the companies – Proposed Approach – (tasks and milestones, see Section E); program plan as a Gantt Chart (see Section F); cooperation between the companies (see Section I); project organization and management (see Section J); the companies and their resources (see Section K) and the project budget for each company (see Section L).
3. The marketing and commercialization plan and prospects (see Sections G and H).

The following is a detailed description of the recommended contents of each section:

A. Cover Page (see next page)

Project Proposal Cover Page

Proposal

To: Israel-U.S. Binational Industrial Research and Development Foundation

From: Israeli Company: _____

Office Address -

Mailing Address -

Main Telephone No. _____

Fax No. _____

From: U.S. Company: _____

Office Address -

Mailing Address -

Main Telephone No. _____

Fax No. _____

Project Title: _____

Project Duration: ___ months

Project Budget: \$ _____

Submitted by:	Israeli Company Authorized Company Official	U.S. Company Authorized Company Official
Signature:	_____	_____

Printed Name:	_____	_____
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Title:	_____	_____
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Date Submitted	_____	_____
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Preferred date (month / year) for start of project funding ⁽¹⁾ _____

⁽¹⁾ Do not request a start date prior to the date of the final proposal submission.

**ALL THE REQUESTED INFORMATION IS MANDATORY.
DO NOT MAKE ANY CHANGES TO THE FORMAT.**

B. Table of Contents (including page numbers). The section numbering must be adhered to.

C. Executive Summary

Please insert here the complete Executive Summary of the Project Proposal you submitted previously, as described in Section 3.2. above. (There is no need to include the signatures of the authorized company officials here).

NOTE: *If the Executive Summary previously submitted contains information which has been updated, please revise it accordingly.*

D. The Innovation

This section should address the following:

How are things done in this area today? What is the current state-of-the-art for the target markets?

1. What are the limitations of the current technologies in the market? This is your opportunity to elaborate on the shortcomings that exist in the proposed product area as a prelude to the description of the innovation and how it overcomes these shortcomings. Current limitations could include: high cost, non-optimal performance, lack of attention to specific market segments, i.e., poor suitability to high- or low-end markets, size, compatibility, nonconformance to standards, etc.
2. What is the product concept? Sketches, diagrams and tables should be included to help describe the innovation. This description should clearly identify in which way the innovation overcomes current limitations.
3. Is this a unique product? Why do you believe it will be successful? How will the product differ from those on the market today?
4. What is the patent situation, including background patents and the potential for new patents?
5. Which regulatory and technical standards are relevant to the developed product? Will the proposed product meet current and/or emerging standards?
6. Are there any obligations to other government agencies (such as the OCS, the NIH or the NIST), which have supported any part of the innovation development thus far?

E. Proposed R&D Program

This section of the proposal is to be organized in two parts: "Analysis of the Problem" and "Proposed Approach":

E.1. Analysis of the Problem

The purpose of this section is to establish a credible basis for the proposed program, with the intent of identifying specific problem areas. These are the problems or difficulties which need to be solved/overcome in order to achieve the program objectives. For example, at the start of the BIRD project,

the companies are at Position A, which relates to the current limitations previously highlighted in Section B of the Proposal. By the end of the project, at the point of commercial readiness, the companies expect to be at Position B. What specific problems must be solved or overcome in order for the companies to reach Position B, consistent with the project budget and timetable? Clearly, these problems and their resolutions should be considered by the companies in formulating their Proposed Approach and in defining the Program Plan.

The problems may focus on a variety of technical issues: In some cases, the problems may relate to the need for fundamental technological breakthroughs in order to develop a currently non-existing product. In others, the technological problems may be relatively straightforward, with key issues relating to product integration into an existing line or management of a complex, inter-disciplinary, multi-task project. Items to be addressed in this section include:

1. Definition of the required properties and functions of the end product that will be used in the market environment. Often, this is referred to as the "spec. sheet". This is the Position B referred to previously in this section. What market input has contributed to formulating the end-product characteristics?
2. Identification and description of the challenges associated with realizing the required properties and functions. This is an in-depth discussion of the technological issues that must be addressed in order to achieve the program's objectives. The companies should indicate here the technological resources they have at their disposal to accomplish this.

E.2. Proposed Approach

1. A general plan of the proposed effort, setting the stage for the following, more detailed task descriptions. This overall plan includes the milestones that need to be reached in order to realize the program's objectives; in other words, "what has to be done". These should be straightforward descriptions, with no discussions as yet, of how you anticipate tackling the problems in order to get from Position A to Position B.
2. Description of the techniques and methods to be used for developing the product. This should include relevant experience in developing similar products, to illustrate the existence of a valid experience base.
3. Any technical or economic constraints.
4. Identification and detailed description of each task. This is the heart of the technical part of the proposal, stating the objective and contents for each task, the resources required and the company (or consultant or subcontractor) with primary responsibility for the task.
 - a. Define up to 25 specific and measurable tasks to be carried out throughout the development phase of the project. Number and name of each one of the tasks.

NOTE: *There must be complete consistency in the numbers, names and assignment of the tasks listed here and those listed in the program plan (see Section E) and project budget (see Section L), below.*

- b. Describe, for each task, the specific approach that will be employed, i.e., how to get from Position A to Position B. Detail the specific techniques to be used to solve the previously identified problems. Thus, in this section, the companies demonstrate that not only are they aware of the state-of-the-art in their industry (D.1.) and the limitations of current practices (D.2.), but they also have an innovative idea (D.3.), understand the challenges associated with developing the idea to commercial readiness (E.1.) and know how to deal with the major obstacles. For each task, provide supporting information which justifies the specific approach, where appropriate.

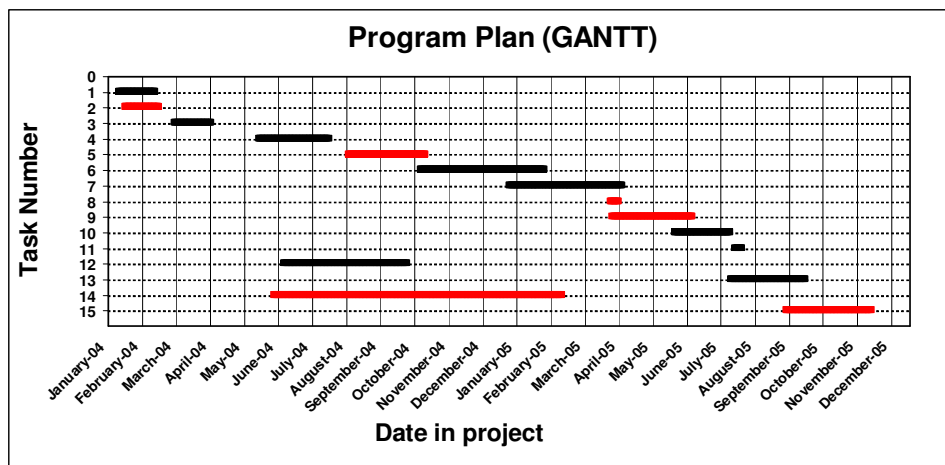
- c. Since the final objective is a product or process, tasks addressed should include compliance to standards (or why the product will not comply with relevant standards), prototyping, regulatory approvals, beta testing, exhibitions, marketing activities, documentation, etc. For those tasks relating to "testing", for example, details should be given as to what is to be tested, how many tests are needed, test objectives, test methodology, expected results, etc., rather than writing "tests will be performed".
- d. Discuss alternate approaches to resolving problems and the basis for selecting the preferred solution. Even if a preferred solution has not yet been identified, the various alternatives should be reviewed, along with their pros and cons.
- e. For each task, describe which of the two companies will be responsible for its execution. If the companies will share responsibility for a particular task, include the approximate % of the overall responsibility assigned to each company.

F. Program Plan

The Program Plan should consist of a chronological schedule of program activities, defined as tasks and presented in graphical form (as a GANTT chart). The chart should indicate clearly the estimated time required for the completion of each task, in addition to milestones. The tasks listed here should coincide with those described in Section E.2., both in assigned number and name. The plan should encompass the entire duration of the development program and should include all activities that must be performed until commercial readiness.

For each task, show which of the two companies will be responsible for its execution. If the companies will share responsibility, include the approximate % of the overall responsibility assigned to each company.

If the Program Plan comprises several pages, a one page summary GANTT chart must also be submitted. The employment of a GANTT chart generated using Microsoft Project® is strongly encouraged, although not compulsory. An example of a GANTT chart is illustrated below: (Kindly provide as much information as possible, including company names, dates, % of task for each company, etc.)



Israeli company's responsibility
 U.S. company's responsibility

Should the project be approved, the Program Plan will be incorporated into the Cooperation and Project Funding Agreement and will be used by the Foundation in monitoring project progress.

G. The Market

Although we are aware of the uncertainties implicit in predictions of future markets and possible competition for any new product or process, we need to be convinced that the companies have made a thorough analysis of the market and its current trends. Such an analysis will typically include the following considerations, which should be addressed in this section of the proposal:

1. Which market needs are served? Are either/both companies currently active in developing, manufacturing and selling similar types of products in this market? What is the basis for those market needs?
2. What performance features and selling price, and hence manufacturing cost, must be achieved to penetrate this market? Provide the basis for the manufacturing cost and enough information to enable the reviewers to determine the likelihood of achieving the target cost. How does this cost compare with those of other, similar products developed and sold by the companies? Identify any key aspects of the technical development which could adversely affect realization of the target manufacturing cost and describe the fall-back options. If the product is part of a system not to be developed within the BIRD project, indicate the leverage afforded for sales of the overall system by the proposed product and include a comparison of the manufacturing cost of the proposed innovation to that of the entire commercial system.
3. What is the total currently available market for the product (in physical units and in US \$)? What is the current position (market share) of the companies in this market? What is the expected growth rate of this market over the effective sales window of the product being developed and what is the basis for this projection? What events could significantly alter this projection?
4. What market share is expected to be captured in the first year of market entry and over the product sales lifetime? How many units does this represent in each year of sales? What is the unit selling price (to third parties) of the product to be developed? How will the unit selling price change from the year of the product launch to subsequent years? A well-constructed series of tables is essential, providing a full breakdown and explanation for Line S (Product Sales) of the Cash Flow Analysis (see Section H.2. below).
5. Additional pertinent market information, such as product brochures, expressions of interest from potential customers in the products or processes to be developed, marketing agreements, etc., should be included.
6. What barriers, i.e., regulatory, might be encountered and how will they be overcome?
7. What competition exists or can be expected? Who are the companies, what are their products, performance and prices? Provide an evaluation of the impact of competition on the commercialization of the proposed product.

This is not a complete list. The companies should present whatever additional market information they consider relevant. The quantitative estimate of the above market size and share of the above revenue forecast should be summarized in the table below (identical to the updated Executive Summary chapter, above):

Calendar year:	20xx	20xx	20xx
Target market size for developed product (M\$):			
Estimated market share (%):	-	-	-
Estimated sales quantity (units):	-	-	-
Estimated representative unit price (\$/unit):			
Estimated sales revenue (K\$):			
Estimated cumulative sales revenue (K\$):	0	0	0

Mandatory input:

Optional (but recommended) input:

H. Commercialization – Plans and Prospects

H.1. Product Manufacturing, Marketing and Sales Activities

In addition to a promising market potential, a solid commercialization program needs to be planned and implemented. Some of the questions to be discussed are:

1. Will both companies be engaged in production? What are the existing manufacturing facilities and how can the proposed product manufacturing be incorporated into the existing infrastructure? If product manufacturing is planned to be outsourced to subcontractors, which of the two companies will have the major responsibility for the product manufacturing function? List a few potential manufacturing subcontractors that could be outsourced.
2. Which of the companies will be responsible for marketing, sales and sales support of the developed product and in which market regions? What are the current sales activities of the companies in the primary target regions for the proposed product?
3. Do either or both companies currently have a suitable sales and service network? If there is such a network, it should be described. Alternatively, does such a network need to be created from scratch? If so, describe the process by which the companies plan to establish such a network and the resources required.
4. Considering the maximum cash requirements based on the cash flow analysis, to what extent are the necessary resources – financial or other wise – available within the companies? If any additional resources will be required, how will they be mobilized? Describe all relevant potential sources.

H.2. Cash Flow Analysis

A preliminary financial analysis which indicates the potential economic gain from successful implementation of the proposed project should be made using the Cash Flow Analysis. For our purpose, we wish to know how the companies have analyzed the financial exposure and potential return that they expect from the proposed project. What are the estimated investment cash flow and the projected earnings cash flow? Can the companies reasonably cope with the peak and aggregate investments that commercial success will entail?

A cash flow analysis of the proposed project is required in order to generate from it 3 main economic indicators that are essential in assessing the economic viability of the project: The joint project's estimated Internal Rate of Return (IRR), Net Present Value (NPV) and Payback Period (PBP). Please include in your proposal both the cash flow analysis table (see below) and an analysis of the resulting values of the above three economic indicators.

Set out hereunder are step-by-step instructions on how to prepare the cash flow analysis, with reference to the accompanying chart, illustrating a sample project (see below):

NOTE: *The cash flow analysis is an Excel spreadsheet and is available from BIRD as an e-mail attachment or it can be downloaded from BIRD's website.*

The eight-year period used in the chart below is chosen to cover the development phase (1 to 3 years) and sales growth to a peak, followed by a drop in sales as the product becomes obsolete. It is important that the whole life-cycle of the product be considered, since the concept of liquidating the venture in the last year is used in calculating an Internal Rate of Return (IRR). Shortening of the period under review can lead to results which are quite misleading. However, a period of eight years should only be used if it is relevant for your particular case.

NOTE: In the cash flow table below and in the spreadsheet, the mandatory input cells are highlighted in yellow. The cells highlighted in blue are input cells with default values which can be overridden. In the explanations below, lines requiring input data are underlined>.

Cash Flow Analysis: Sample Calculation

No.	Cash-Flow component	Derivation	N = No. of Years							
			2004	2005	2006	2007	2008	2009	2010	2011
Y	Calendar year	1st Calendar Year	1	2	3	4	5	6	7	8
	Project year									
Q	No. of units sold (Units)	estimate			6,000	7,000	9,000	10,000	8,000	5,000
P	Product Price (\$/unit)	estimate			1,000	950	900	900	800	800
S	Product Sales (K\$)	=QxP or estimate		0	6,000	6,650	8,100	9,000	6,400	4,000
M%	Manufacturing Cost (% of sales)	30%		30%	30%	30%	30%	30%	30%	30%
M	Manufacturing Cost (K\$)	=M% x S		0	1,800	1,995	2,430	2,700	1,920	1,200
O%	Operating Expenses (% of sales)	35%		35%	35%	35%	35%	35%	35%	35%
O	Operating Expenses (K\$)	=O% x S		0	2,100	2,328	2,835	3,150	2,240	1,400
D	Development Expenses (K\$)	estimate	700	900						
C	Capital Expenses (K\$)	estimate		700	300					
E	Depreciation (K\$)	linear over 5 yrs.	0	140	200	200	200	200	60	0
I	Before Tax Income/Loss (K\$)	=S-M-O-D-E	(700)	(1,040)	1,900	2,128	2,635	2,950	2,180	1,400
T1	Cumulative Losses carried over (K\$)		(700)	(1,740)	0	0	0	0	0	0
T2	Taxable Income (K\$)		0	0	160	2,128	2,635	2,950	2,180	1,400
T%	Income Tax Rate (%)	32%	32%	32%	32%	32%	32%	32%	32%	32%
T	Income Tax (K\$)	=T% x T2	0	0	51	681	843	944	698	448
OF	Operating Cash Flow (K\$/Yr.)	=I+E-T	(700)	(900)	2,049	1,647	1,992	2,206	1,542	952
W%	Working Capital (% of sales change)	25%		25%	25%	25%	25%	25%	25%	25%
W	Working Capital Change (K\$)	=W% x (Sn-Sn-1)		0	1,500	163	363	225	(650)	(600)
V	Residual Value of Assets		0	0	0	0	0	0	0	1,000
AF	Total Annual Cash Flow (K\$)	=OF-C-W+V	(700)	(1,600)	249	1,484	1,629	1,981	2,192	2,552
CF	Total Cumulative Cash Flow (K\$)		(700)	(2,300)	(2,051)	(567)	1,062	3,043	5,236	7,788
R	Annual Discount Rate (%)	15%								
DAF	Annual Discounted Cash Flow (K\$)		(609)	(1,210)	164	849	810	856	824	834
DCF	Cumulative Discounted Cash Flow (K\$)		(609)	(1,819)	(1,655)	(806)	4	860	1,684	2,519
IRR	Internal Rate of Return (%)	43%								

LINE Y: The calendar year corresponding to the first year of the project, which is the year in which the development will start under BIRD support.

LINE Q: Number of Units Sold – for each one of the years of commercial sales, enter an estimate of the number of units of products to be sold per year, using the expected market share and total available market over the product sales in life. (This should correspond with your estimate presented in Section F of the Proposal.)

LINE P: Product Price – for each one of the years of commercial sales, enter the estimated product price, in \$/unit, giving expression to the change in price over the years as a result of changes in the market environment (optional). (This price profile should correspond with your estimate presented in Section F of the Proposal.)

LINE S: Product Sales – if an estimate has been given for the sales quantity (Line Q), and of the sales price (Line P), then Line S is a computed line. Optionally, the annual product sales can be inputted directly, in K\$/Yr., by using either the value of new product or process substitution to prospective customers, the volume of similar products, or market share multiplied by market size. The estimate should be based on market study, research and experience. (This product sales projection should correspond with your estimate presented in Section F of the Proposal.)

LINE M%: Manufacturing Cost – enter the estimated direct manufacturing cost of the product, as a % of the product sales (or of the sales price). It is usually between 30-50% and is estimated using either the cost of similar products (processes), the development costs multiplied by an experience-based markup factor, or a detailed breakdown and manufacturing plan. You can enter either a fixed percentage for all years (in the "derivation" column), or enter a specific percentage for each year, expressing changes in manufacturing efficiency or in costs of labor/material with the years (optional).

LINE O%: Operating Cost – enter the estimated operating cost of the product as a % of the product sales (or of the sales price). It is usually between 20-35% and is estimated using historical ratios or detailed operating plans for the product (process). Continuing R&D, selling costs, advertising, general and administrative expenses, etc., are typical elements. You can enter either a fixed percentage for all years (in the "derivation" column), or enter a specific percentage for each year, expressing changes in operating costs as volumes change with the years (optional).

LINE D: Development Expenses – include all development and start-up expenses for years 1-3 of the cash flow planning period (up to initial commercialization), in K\$/Yr. Estimates should be based either on a comparison with similar developments or on a detailed product (process) development plan.

NOTE: *The total project budget should be included here, not just the portion to be financed by the companies. Likewise, repayments to BIRD should be excluded from the cash flow analysis.*

LINE C: Capital Expenditures – include all investments in fixed capital, in K\$/Yr., required to provide for the manufacturing and logistic functions during commercialization, including buildings, manufacturing equipment, vehicles, warehouses, etc.

LINE E: Annual Depreciation – (A computed value, given in K\$/Yr.) Computed assuming straight line depreciation of all the capital investment (Line C) over a 5 year period. The depreciation is not a cash-flow component and is included only as an allowance for income tax calculations.

LINE I: Before Tax Income/Loss – (A computed value, given in K\$/Yr.) Equals Line S minus Line M minus Line O minus Line D minus Line E.

LINE T1: Cumulative losses carried over – (A computed value, given in K\$) Equals the cumulative annual before tax losses (Line I) net of the cumulative annual before tax income (Line I), as long as this computed value is negative.

LINE T2: Taxable Income – (A computed value, given in K\$/Yr.) Equals the annual before-tax income (Line I) net of any cumulative losses carry-over (Line T1) and serves as the basis for the calculated income (corporate) tax.

LINE T%: Income Tax Rate – enter the applicable income (corporate) tax rate, as a %. You can enter either a fixed percentage for all years (in the "derivation" column), or enter a specific percentage for each year, expressing changes in income (corporate) tax rates due to changes in approved enterprise status, or other expected changes in government policy (optional).

NOTE: *The tax rate for the company expected to be responsible for actual product commercialization should be used. Where both companies are expected to have major responsibilities for product sales, a weighted average tax rate should be used, reflecting the tax rate of each company in proportion to the total sales expected for each company.*

LINE T: Income Tax – (A computed value, given in K\$/Yr.) Equals Line T2 multiplied by Line T%.

LINE OF: Operating Cash Flow – (A computed value, given in K\$/Yr.) Equals Line I minus Line T plus Line E.

LINE W%: Working Capital Rate – the estimated annual working capital required to fund inventories and receivables (net of payables), reflecting growing sales. It is estimated as a function of the volume of product sales and expressed as a percentage applied to the changes (increase or decrease) in product sales. The working capital rate is assumed constant throughout the planning horizon and is usually assumed between 25-35%. Use your experience as a base or a detailed plan for the product (process), including carrying times and costs.

LINE W: Changes in Working Capital – (A computed value, given in K\$) Equals the working capital rate (Line W%) multiplied by the difference between the current year's sales and the prior year's sales (year N minus year N-1 in Line S). Note that this line is zero if sales do not increase and it is negative when sales decline.

LINE V: Residual Value of Assets – (A computed value, given in K\$) This computed value is needed only for calculating the IRR (see below). It equals the cumulative capital expenses (Line C) minus the cumulative depreciation (Line E), plus the cumulative working capital change (Line W) over the whole lifetime of the project.

LINE AF: Total Annual Cash Flow – (A computed value, given in K\$/Yr.) Equals Line OF minus Line C minus Line W in all but the last year. In the last year, the same formula is used but Line V is added. This has the effect of liquidating the venture in the last year and selling off all the assets on the books.

LINE CF: Cumulative Cash Flow – equals the sum of Line AF cumulatively to date. In the early years of the project this will be negative. The year in which it becomes positive indicates the simple payback period (disregarding time-value of money), in years.

LINE R: Annual Discount Rate – Enter the annual discount rate (interest rate, or hurdle rate) by which annual cash flows will be discounted, as a %. The discount rate is used to calculate the discount factor, and it is usually between 10-25%, depending on the technological and marketing uncertainty inherent in the project (the venture's risk).

LINE DAF: Total Annual Discounted Cash Flow – (A computed value, given in K\$/YR.) Equals the total annual cash flow of Line AF multiplied by the discount factor, for each year (e.g., for a discount rate of 25%, Line AF in year 1 is multiplied by 0.80, Line AF in year 2 is multiplied by 0.64, Line AF in year 3 is multiplied by 0.51, etc.)

LINE DCF: Total Cumulative Discounted Cash Flow – (A computed value, given in K\$) Equals the cumulative value of Line DAF. The cumulative value at the end of the last year of the project (year 8 in the example) is known as the Net Present Value (NPV) of the project (\$2,519K in the example) at a given discount rate (15% in the example). The NPV is one of the economic parameters that has to be presented in assessing the economic viability of the proposed project.

The cumulative discounted cash flow will usually be negative in the first few years. The number of years in which the cumulative discounted cash flow (Line DCF) is negative (4 years in the example) is referred to as the Payback Period (PBP) and is also employed as an economic indicator of a project's risk.

LINE IRR: Internal Rate of Return (IRR) – (A computed value given as a %) is the discount rate at which the Net Present Value is equal to zero and is given in the "derivation" column (43% in the example). It is an economic indicator of the project's overall return on investment potential.

I. Cooperation, Economic and Social Benefits

Previous sections dealt with the proposed division of tasks between the two companies. Please summarize here the projected mode and extent of cooperative activity.

The clear expectation of risk-sharing by both companies during the product development stage and during commercialization is central to BIRD participation. An important factor in evaluating the proposal, therefore, is the extent to which the companies will share in the financial exposure of product development and introduction to the marketplace.

Equally important is the expected benefit to be derived by each company during product commercialization. The general nature of the planned revenue and profit-sharing arrangement between the two companies from sales of the developed product should be presented.

Please elaborate on the agreed-upon roles and risk/profit-sharing business relationship issues in the context of the agreement between the two companies.

Also of importance is the benefit to Israel and the U.S. in the form of new export markets, new employment opportunities, new capital formation, productivity improvements, etc., including social contributions of the project outcome.

J. Organization and Management Plan

This section should contain a presentation of the proposed management procedures for the program, including the internal review procedures and overall management plan that will ensure, barring unforeseeable circumstances, implementation according to design specifications, on schedule and within budget.

1. Describe the procedures to be implemented to maintain timely communications between each company's project team. Indicate the role of review meetings (when, where, or what purpose, with whom) during the project.
2. Provide an organization chart for the project, identifying each company's project manager and the overall program manager and indicate the relationship of this ad hoc organization to the formal hierarchies in the companies. Identify the program's key project personnel and their responsibilities.
3. Regarding staff – indicate positions to be filled by new employees and identify the status of these staff.
4. Identify the role of key consultants and subcontractors on the organization chart and indicate if a relationship between the consultants/subcontractors and the companies currently exists. Resumes of key consultants should be included.
5. Attach short resumes (up to one page each) of key personnel who will work on the project. The resumes should include each individual's role in the project, i.e., project manager, senior software engineer, field engineer, etc. Include the person's current company affiliation, job title, relevant job experience and significant accomplishments, starting from the most current position. List professional affiliations and committee memberships. Indicate higher education and degrees and provide a listing of relevant publications authored or co-authored.

NOTE: *In the final analysis, the determining factors in the successful commercialization of innovations are the people and the companies involved. The reviewers of the proposal need to see that the experience, education and capabilities of the professional staff are commensurate with the R&D tasks to be performed.*

K. The Companies and Their Resources

Please provide information about each of the companies, including the following:

1. The year in which each company was established, company ownership and principal business of each company.
2. Record of performance in similar/related undertakings. Describe the extent to which products similar or related to the proposed innovation have been developed and commercialized by either company. Describe the track record or history of each company that also substantiates a positive prognosis for this proposed product's successful commercialization.
3. Degree to which the proposed project can be absorbed into the existing structure of each company. To what extent are the staff, equipment, facilities, etc., available for the project? Identify the need to hire staff, obtain (purchase, lease or rent) capital equipment, or expand manufacturing operations.
4. Description of previous projects for which either company received BIRD funding. Indicate the program scope, program duration and outcome in commercial terms, i.e., revenues from commercialization of the BIRD product and repayments to BIRD. Also indicate the future commercial potential of products previously developed in BIRD projects.
5. Relationship of the proposed project to other company projects that receive/have received support from any outside agency for development of the proposed product, including from the Office of the Chief Scientist at the Israeli Ministry of Industry, Trade and Labor, the NIH or the NIST.
6. Financial information validating that the companies have the resources available not only for contributing their share of the project cost, but also to cover the commercialization phase. Public companies can submit annual and quarterly reports rather than specially prepared information. At a minimum, annual revenues expected during the current fiscal year and realized during each of the last two fiscal years should be given, in addition to an indication of the profitability of the company during this period.
7. Number of employees at the home country, at field locations and abroad should be given, along with an indication of changes in the employment picture during the past two years.
8. Description of relevant facilities, equipment, infrastructure, etc., which are expected to be utilized during the project and during product commercialization.

L. Project Budget

L.1. Introduction and General Guidelines

All development expenses directly associated with the project, to be incurred by each company throughout its entire development phase, should be included in the budget (and not only those expenses falling within the scope of work of the BIRD sponsored portion of the development). However, only those phases of the project up to, but not including, actual production and sales should be included in the budgets.

A separate budget should be presented for each company's activities and should cover the entire duration of the project, as proposed.

BIRD's funding of the project, if approved, begins from the effective start date of the BIRD project, which can be no earlier than the first day of the month in which the final proposal is received at BIRD headquarters, signed by an authorized official of each company. Expenses incurred by the companies prior to the effective start date cannot be recognized by BIRD.

Before starting the budget-building process, you should already have available:

- a. The definition of up to 15 major tasks (activities), including the number and name (short textual description) of each task. These tasks should completely coincide with the tasks defined and described in the section "Proposed R&D Program/Proposed Approach" (Section E.2), above.
- b. The start date and completion date of each task (in day/month/year format), or as a default, the duration (in days) of each task. The tasks should completely coincide with the GANTT chart presented in the section "Program Plan" (Section F), above.

L.2. Step by Step Explanation on Budget Preparation

In the proposal, each company should prepare its budget in detailed fashion, using the format on pages 36 to 37 for each specific "Task Budget" and the format of the "Total Budget" on pages 38 to 39, below, while referring to the instructions and explanations below.

NOTE: *The detailed budget components, the calculation of these components and the presentation of the budget in the format presented here have been incorporated in an Excel workbook. This workbook is available to the Proposer's (please download it from BIRD's website or ask BIRD staff to supply it to you by e-mail). It is essential that the budgets of each company be prepared and submitted to BIRD in the proposal using this workbook.*

1. Proceed to build your company's budget in the BIRD project using the Excel workbook. You can start the process with any of the tasks and in any order, by activating the corresponding worksheet labeled Task 1 through Task 15 (see pages 36 to 37 for the format of "Task Budget:"). You are asked **to relate only to the input data cells, colored yellow.**

NOTE: *Instructions and comments related to specific expense components and data items are given for items colored light green. You can read the comments by pointing to the specific cell. The instructions and comments are also given below.*

2. Whenever there is a need to define the name of a specific expense, such as the name & profession of a specific employee (in direct labor), the name and purchase cost of a specific equipment item, the name of a specific expendable material, etc., enter the definition in the appropriate location (always in a yellow-colored cell) of the "Total Budget" worksheet. The information you enter in the "Total Budget" worksheet will be copied to and will appear in all the Task worksheets.

NOTE: *If the formats of specific input cells do not provide you enough space to insert a meaningful description of the expense items, please attach an appendix to the budget form containing the referenced full-length description of these expense items.*

3. After defining a specific expense, return to the Task worksheet you have started to work on and complete the input information concerning the specific expense (again, by entering data only in the yellow-colored cells). Repeat this sequential procedure for all the expense categories relevant to the Task.
4. Follow the procedure described in Section 2-3 above for all the Tasks in your project. The total cost of a Task will be calculated at the bottom of the Task worksheet (including all built-in overhead allowances) and will also appear in the "Tasks Report" summary worksheet, itemized by expense type.
5. The cumulative values of all the expense components in all Tasks will appear in the "Total Budget" worksheet, at the corresponding location of the expense component in the Tasks worksheets.

NOTE: *Only the "Total Budget" worksheet (2 pages in total) for each company should be included in Section L of the proposal. Please do not attach the budget worksheets of the individual tasks to the proposal document. The complete Excel workbook softcopy of the "Task Budget", which includes the individual budgets of each task, should be uploaded to BIRD's upload system in parallel with the submittal of the hardcopy.*

Format of the Proposed "Task Budget" Form

Co. Name:

Task #: Task name:

PROPOSED TASK BUDGET From date: (M/D/Y) To date: (M/D/Y)

Task duration: 0 days

Description	Details	Cost (\$)	Total (\$)		
I. Direct Labor					
Employee's Name (TBD if yet unknown)	Employee's Profession	Gross Annual Salary* (\$)	% on Task	No. of Days in Task	Cost to Project (\$)
Empl. 1:		-		0	0
Empl. 2:		-		0	0
Empl. 3:		-		0	0
Empl. 4:		-		0	0
Empl. 5:		-		0	0
Empl. 6:		-		0	0
Empl. 7:		-		0	0
Empl. 8:		-		0	0
Empl. 9:		-		0	0
Empl.10:		-		0	0
Empl. 11:		-		0	0
Empl. 12:		-		0	0
Empl. 13:		-		0	0
Empl. 14:		-		0	0
Empl. 15:		-		0	0
Total, Direct Labor					0
Overhead @ 25%					0
Subtotal, Direct Labor + Overhead					0
II. Equipment					
Purchased Equipment Description	Purchased Cost (\$/unit)	No. of Units	% On Task	% Annual Depreciation	Depreciation (\$)
Item 1	-	-		33.3%	0
Item 2	-	-		33.3%	0
Item 3	-	-		33.3%	0
Item 4	-	-		33.3%	0
Item 5	-	-		33.3%	0
Item 6	-	-		33.3%	0
Item 7	-	-		33.3%	0
Item 8	-	-		33.3%	0
Item 9	-	-		33.3%	0
Item 10	-	-		33.3%	0
Subtotal, Purchased Equipment					0
Leased Equipment Description	Monthly Lease Cost (\$/unit)	No. of Units	% On Task	Total Leasing Cost (\$)	
Item 1	-	-		0	
Item 2	-	-		0	
Item 3	-	-		0	
Subtotal, Leased Equipment					0
Subtotal, Purchased or Leased Equipment					0
III. Expendable Materials & Supplies					
Description	Cost (\$)				
Item 1					
Item 2					
Item 3					
Item 4					
Item 5					
Item 6					
Item 7					
Item 8					
Item 9					
Item 10					
Subtotal, Expendable Materials & Supplies					0

Format of the Proposed "Task Budget" Form (continued)

	PROPOSED TASK BUDGET (cont.)				
Task #:		Task name:			

Description	Details				Cost (\$)	Total (\$)
IV. Travel						
Foreign Travel						
Destination	Purpose	Cost Per Person Per Trip (\$)	No. of Trips	No. of People Per Trip	Duration Per Trip (days)	Cost (\$)
		-	-	-	-	0
		-	-	-	-	0
		-	-	-	-	0
		-	-	-	-	0
		-	-	-	-	0
Subtotal, Foreign Travel			0			0
Domestic Travel						
Destination	Purpose	Cost Per Person Per Trip (\$)	No. of Trips	No. of People Per Trip	Duration Per Trip (days)	Cost (\$)
		-	-	-	-	0
		-	-	-	-	0
		-	-	-	-	0
Subtotal, Domestic Travel			0			0
Subtotal, Travel						0
V. Subcontracts						
Service to be Performed		Name of Subcontractor			Cost (\$)	
					-	
					-	
					-	
					-	
					-	
					-	
					-	
Subtotal, Subcontracts					0	
VI. Consultants						
Service to be Performed	Name of Consultant	Hourly Rate (\$/Hr.)	No. of Hours	Cost (\$)		
		-	-	-		
		-	-	-		
		-	-	-		
		-	-	-		
		-	-	-		
Subtotal, Consultants				0		
VII. Other Expenses						
Description					Cost (\$)	
					-	
					-	
					-	
					-	
Subtotal, Other Expenses					0	
Subtotal task budget, before G&A Expenses					0	
General & Administrative Expenses (G&A) @ 5%					0	
Total Task Budget					0	

Format of the Proposed "Total Budget" Form

PROPOSED PROJECT BUDGET

Company name:
 Project duration: months

Description	Details	Cost (\$)	Total (\$)		
I. Direct Labor					
Employee's Name (TBD if yet unknown)	Employee's Profession	Gross Annual Salary* (\$)	% on Project	Cost to Project (\$)	
Empl. 1:	Project Manager		0%	0	
Empl. 2:			0%	0	
Empl. 3:			0%	0	
Empl. 4:			0%	0	
Empl. 5:			0%	0	
Empl. 6:			0%	0	
Empl. 7:			0%	0	
Empl. 8:			0%	0	
Empl. 9:			0%	0	
Empl. 10:			0%	0	
Empl. 11:			0%	0	
Empl. 12:			0%	0	
Empl. 13:			0%	0	
Empl. 14:			0%	0	
Empl. 15:			0%	0	
Total, Direct Labor		* Including social benefits		0	
Overhead @ 25%				0	
Subtotal, Direct Labor + Overhead				0	
II. Equipment					
Purchased Equipment Description	Purchased Cost (\$/unit)	No. of Units	% On Project	% Annual Depreciation	Depreciation (\$)
Item 1			0%	33.3%	0
Item 2			0%	33.3%	0
Item 3			0%	33.3%	0
Item 4			0%	33.3%	0
Item 5			0%	33.3%	0
Item 6			0%	33.3%	0
Item 7			0%	33.3%	0
Item 8			0%	33.3%	0
Item 9			0%	33.3%	0
Item 10			0%	33.3%	0
Subtotal, Purchased Equipment					0
Leased Equipment Description	Monthly Lease Cost (\$/unit)	No. of Units	% On Project	Total Leasing Cost (\$)	
Item 1			0%	0	
Item 2			0%	0	
Item 3			0%	0	
Subtotal, Leased Equipment					0
Subtotal, Purchased or Leased Equipment					0
III. Expendable Materials & Supplies					
Description				Cost (\$)	
Item 1				0	
Item 2				0	
Item 3				0	
Item 4				0	
Item 5				0	
Item 6				0	
Item 7				0	
Item 8				0	
Item 9				0	
Item 10				0	
Subtotal, Expendable Materials & Supplies				0	

Format of the Proposed "Total Budget" Form (continued)

Description		Details				Cost (\$)	Total (\$)
IV. Travel							
Foreign Travel							
Destination	Purpose	Cost Per Person Per Trip (\$)	No. of Trips	No. of People Per Trip	Duration Per Trip (days)	Cost (\$)	
Dest. 1			0			0	
Dest. 2			0			0	
Dest. 3			0			0	
Dest. 4			0			0	
Dest. 5			0			0	
Dest. 6			0			0	
Subtotal, Foreign Travel			0			0	
Domestic Travel							
Destination	Purpose	Cost Per Person Per Trip (\$)	No. of Trips	No. of People Per Trip	Duration Per Trip (days)	Cost (\$)	
Dest. 1			0			0	
Dest. 2			0			0	
Dest. 3			0			0	
Subtotal, Domestic Travel			0			0	
Subtotal, Travel							0
V. Subcontracts							
Service to be Performed		Name of Subcontractor		Country Service Given	Cost (\$)		
Subcont. 1					0		
Subcont. 2					0		
Subcont. 3					0		
Subcont. 4					0		
Subcont. 5					0		
Subcont. 6					0		
Subtotal, Subcontracts							0
VI. Consultants							
Service to be Performed		Name of Consultant & Country Service Given		Hourly Rate (\$/Hr.)	No. of Hours	Cost (\$)	
Consult. 1					0	0	
Consult. 2					0	0	
Consult. 3					0	0	
Consult. 4					0	0	
Consult. 5					0	0	
Consult. 6					0	0	
Subtotal, Consultants							0
VII. Other Expenses							
Description						Cost (\$)	
Item 1						0	
Item 2						0	
Item 3						0	
Item 4						0	
Item 5						0	
Subtotal, Other Expenses							0
Subtotal budget, before G&A Expenses							0
General & Administrative Expenses (G&A) @5%							0
Total Project Budget for Company							0
Projected Expenditure, by Segment				Segment Duration (months)	% of Total Budget	Projected Expenditure (\$)	
First segment						0	
Second segment						0	
Third segment						0	
Fourth segment						0	
Fifth segment						0	
Total				0	0%	0	

I. Direct Labor

The Gross Annual Salary, an input item, is the actual current salary plus social ("fringe") benefits of employees expected to work on the project. The maximum annual salary (including social benefits for a full-time position) currently recognized is \$100,000 for Israeli companies and \$150,000 for U.S. companies. Typically, in addition to the engineering and technical personnel, the staff includes prototyping, R&D documentation and marketing personnel. NOT to be included are corporate executives, secretarial staff, legal staff, administrative staff or staff engaged in selling activities; such expenses are included in the overhead allowance.

The % on Project, an input item, is the average portion of any given worker's time spent directly on the project throughout the entire project, given as a %.

The Cost to Project, a computed item, is the product of the Gross Annual Salary (including social benefits) X% on project X number of months on the project / 12.

Overhead (O/H), at the rate of 25% on the total direct labor, is a computed item and includes all indirect labor overhead expenses.

II. Equipment

Depreciation – this budget item refers to depreciation allowance on capital equipment employed and not to capital expenditures. The depreciation allowance equals the purchase cost of the equipment item being employed (an input item given in \$/unit) X number of units employed (an input item) X % of the time in which the equipment is employed on the project (an input item) X the annual depreciation rate (in % per year). The annual depreciation rate currently allowed is 33.3%.

The Leasing Cost equals the monthly lease cost or rental cost of capital equipment (an input item given in \$/unit/month) X the number of units leased/rented (an input item) X % of the time in which the leased/rented equipment is employed by the project (an input item) X project duration (in months).

III. Expendable Materials & Supplies

List and describe each major item or groups of related items categorized as expendable materials and supplies.

For any item that is over \$50,000, we ask that you provide a breakdown and more detail.

IV. Travel

Travel expenses should be classified as either foreign or domestic travel. In either case, the trips should be itemized by the destination and the purpose of the trip, which should be described in a few words.

The cost (\$) is the cost per person per trip (an input item in \$) X the number of people per trip (an input item) X the number of trips of the same kind taken throughout the project (an input item). The duration per trip (in days) is just an informative data item.

V. Subcontracts

Please identify each subcontractor, the service to be performed and the cost for each service. Explain the basis for the costs.

For any item that is over \$50,000, we ask that you provide a breakdown and more detail.

VI. Consultants

Please identify each consultant, the nature of the consulting activity, the hourly rate upon which the charge will be made (an input item given in \$/hr.) and the estimated number of consultant hours (an input item).

For any item that is over \$50,000, we ask that you provide a breakdown and more detail.

VII. Other Expenses

Typical "Other Expenses" include items such as exhibits, regulatory activities, standards certifications, field trials, patent registration, market surveys or other miscellaneous development-related expenses not covered by any of the previous expense categories.

Please note that patent registration costs are allowable at up to \$20,000 per patent, subject to a maximum of \$25,000 per registration in two continents, with a maximum of two patents (\$40,000 or \$50,000) per project.

For any item that is over \$50,000, we ask that you provide a breakdown and more detail.

General & Administrative Expenses (G&A), computed at 5% over the subtotal budget, represents all operating overhead items such as secretarial services, legal staff, rent, utilities, etc.

Projected Expenditure, by Segment

The overall project period is organized in (equal, if possible) segments of approximately 6 months each, for the purpose of monitoring, reporting and payment of the conditional grant funds. For each segment in the project, please specify the segment duration (6 months, unless otherwise approved by BIRD) and the estimated relative expenditures for the segment (given as % of the total budget). Please note that the total segments duration must equal the total overall project duration and that the % of total budget for all segments must sum to 100%.

M. Risk Analysis

1. Use the following tables to describe the main risks of the project.
2. TABLE 1A: Identify at least 5 main risks. The table can be extended to add additional risks, but not more than 10. Number the risks and give each one a short identification name. Keys for probability ranking and for evaluating impacts are provided in the 4 small tables, hereinafter.
3. TABLE 1B: Describe each of the identified risks concisely. Use additional space, if needed for clarity. Risks can be of different types, as exemplified in the explanation to TABLE 1B. Other types may be used by adding them to the explanations.

Note: The Tables' template can be found as a Word file, downloadable from BIRD's website. Do not make any changes to the template.

RISK ANALYSIS TABLES

TABLE 1A

Risk #	Name	Ranking	Impact		
			Duration ¹	Budget ²	Commercialization Potential ³
1					
2					
3					
4					
5					

TABLE 1B

Risk #	Description	Type*
1		
2		
3		
4		
5		

*Type: Technical (T), Project Management/Resources (M), External to the Project (E)

Ranking	Probability of Risk Occurring
High	Above 50%
Medium	30 – 49%
Low	10 – 29%
Very Low	1 – 10%

Impact	Duration ¹
High	Above 6 months
Medium	3 to 6 months
Low	Below 3 months

Impact	Budget ²
High	Above 20% increase
Medium	10% to 20% increase
Low	Below 10% increase

Impact	Commercialization Potential ³
High	Above 50%
Medium	30% to 50%
Low	1% to 29%

1. Duration of project extended by the given amount
2. Cost of project increases by the given percentage
3. Forecasted sales in the next 3 or 5 years reduced by the given percentage

N. Sundry Information - Mandatory

To enable the Foundation to prepare the CPFA, (see Section 5.1.1. below) on a timely basis following approval of the grant application by BIRD's Board of Governors, please provide the following information in the proposal itself:

1. Venue for the applicable law governing the CPFA between the companies and the Foundation, i.e., one of the States of the Union or Israel, as agreed upon by the companies:
2. Name, direct telephone number, e-mail address and position of the assigned Project Manager from each company.
3. Company's Certificate of Incorporation
4. Details of bank accounts to enable the Foundation to transfer the conditional grant payments to the companies. Specifically, for each company.
 - a. Name of account and account number
 - b. Name of bank, branch number (if applicable)
 - c. Complete bank address
 - d. U.S. companies should include any routing number, i.e., Swift, ABA, applicable to transfers to their account.