



Ben Franklin
Technology PArtners

Southeastern Pennsylvania

PHYSICAL SCIENCES INVESTMENTS
2021-2022 APPLICATION

TABLE OF CONTENTS

Application Cover Page	2
Non-Confidential Executive Summary	3
Scientific and Technological Aspects of the Project	5
• Needs Statement	
• Background	
• Proposed Program of Work	
• Data	
• Resources	
• Qualifications of Personnel	
• Previous Work	
Intellectual Property	7
Management	8
Commercialization Aspects of the Project	9
Financial Information	12
• Financial Statements	
• Summary Financial Projections	
• Capitalization Plan and Follow-On Funding	
• Current Capitalization Table	
Budget & Milestones	13
Commitment Letter & Letter of Intent	15

*Funding for this program is made possible by the Commonwealth of Pennsylvania, Ben Franklin
Technology Development Authority.*

APPLICATION COVER PAGE

COMPANY NAME: _____ EIN: _____

Primary Contact: _____ Title: _____

Primary Phone/Mobile: _____ E-Mail: _____

Company Address: _____

City: _____ State: _____ Zip Code: _____ County: _____

Company Phone: _____ Fax: _____

Participating Organizations: Name all companies, schools, and other institutions participating, along with each participating organization's address:

Participating Organization	Address
_____	_____
_____	_____
_____	_____

Amount Requested from BEN FRANKLIN: \$ _____ *

Total Budget: \$ _____ *

* Please make sure these amounts match those listed on your project budget sheet

Technology: Please select the one technology category into which your project most closely fits.

- Physical Sciences Materials Sensors Environmental

Is your company currently working with or planning to use and/or commercialize nanomaterials or Nano processes? YES NO

Disclaimer: The submission of the proposal shall not create any rights on behalf of the submitter, contractual or otherwise. The submission of a proposal does not constitute or create any legally binding or enforceable agreement or commitment on the part of the Ben Franklin Technology Partners of Southeastern Pennsylvania (BEN FRANKLIN-SEP) other than to maintain the confidentiality of proposal information identified as confidential. No past or future action, or course of conduct by BEN FRANKLIN-SEP, will give rise to or serve as a basis for any legally enforceable duties or obligations on BEN FRANKLIN-SEP other than to maintain the confidentiality of proposal information identified as confidential.

Signature of Authorized Official at Applicant Company

Signature: _____ Date: _____

Type or Print Name and Title: _____

NON-CONFIDENTIAL EXECUTIVE SUMMARY

Note— Please limit to four pages. Target Reader: Non-Technical

Please provide, written in the third person, a concise yet comprehensive Executive Summary that will serve as an overview of the company. It is not required to follow the outline below but please be sure to include all of the information requested.

A. Business Overview

- Describe the business mission and revenue model.
- Describe the technology, current products and if there is a pipeline, include a table listing the products, proposed uses and stage of development. Briefly describe the technology platform, if applicable.
- Describe the sales and marketing efforts/results to date, including any key customers/strategic partners. Please include date commercialization began and/or is scheduled.
- Describe key product features and competitive advantages.

B. Market Opportunity

- Briefly describe the overall relevant market. Define the company's target segment(s).
- Quantify the size and growth characteristics of the target segment(s).
- Briefly identify key direct and indirect competitors.
- Describe the sales and distribution channels.

C. Management

- List Management, Board of Directors and Key Advisors.
- For Management briefly describe their roles, including level of commitment (part-time, full-time), skills, education and relevant experience. Provide a short biographical sketch on each.
- For Board of Directors and Key Advisors briefly describe their level of commitment, skills, relevant experience and whether they are or have been compensated to some degree with equity.
- Provide resumes of management and key advisors.

D. Intellectual Property

- Describe any significant Intellectual Property, if any, the company currently owns, has filed for or licenses, and/or expects to do so within the next year.

E. Funding

- Describe the company's funding history to date, e.g. current capital structure, key investors, and amounts invested in both cash and in-kind contributions.
- Describe the expected and confirmed source(s) of match for the BEN FRANKLIN funds.

F. Project Overview and Expected Outcome

- Assuming BEN FRANKLIN funding, briefly describe the key technical milestones, with expected dates, that you expect to achieve during the Project period, and over the next year (if different), and indicate what the key subsequent steps will be.
- Using some measurable outcomes, such as revenues, customers, beta sites, products or processes commercialized, number, type and location of employees, intellectual property filed, etc., describe the commercialization progress you expect the company to achieve during the Project period, and over the next year.

G. Summary Financial Results/Projections

*Use the same numbers as entered in the Budget & Milestones Templates.

	Year to Date	Year +1 Projected	Year +2 Projected	Year +3 Projected	Year +4 Projected
Revenue					
% chg					
COGS					
Gross Margin					
Expenses					
EBIT					
% chg					
Capital Needs					
Employees FT					
In PA					
Employees PT					
In PA					

SCIENTIFIC AND TECHNOLOGICAL ASPECTS OF THE PROJECT

Note— Please limit to twelve pages. Target Reader: Technical

A. Needs Statement

- What is/are the overall need(s), which your project addresses?
(This can be the resolution of a technical problem, a market need, a manufacturing need, a medical need, or any scientific need.)
- Describe how your project goals address the need(s) stated above.
- Summarize key technical steps that will achieve your project’s goals that aligns with your budget and milestones. (Pre-clinical experiments, development of a working prototype, software upgrade, etc.)
- Please prepare a simple project time line with the key technical steps and provide a breakdown of the key uses of BFTP funds. For example:

Key Technical Steps	Expected Date of Completion	Dollar Amount of BFTP Funds	Combined Cash and In-kind Match
Machine design	Month/Year	\$20,000	\$20,000
BETA Version Completed	Month/Year	\$25,000	\$40,000
Beta testing	Month/Year	\$45,000	\$35,000
Commercialization	Month/Year	\$70,000	\$100,000

B. Background

- What is the present state of the company’s technology that is the basis for the project? Please include photographs or drawings, if appropriate. (Software has yet to be developed, working prototype is developed, device has been tested in laboratory conditions, etc.)
- What competing technologies now exist? (Other medical treatments, software, manual devices, etc.)
- What are the limiting factors of these competing technologies? (Current drugs have significant side effects, available technology is too costly, unreliable, or difficult to use, etc.)
- Compare directly both the strengths and weaknesses of the company’s existing or to-be-developed technology with the competing technologies described above.
- How will customers and/or end-users benefit from this new or improved technology?

C. Proposed Program of Work

- What technical method(s) will you use to accomplish your project goals? What makes this method desirable?
- Describe, in detail, the specific technical work to be performed. (This technical work plan should correspond with the technical goals described in Section A and with the Milestones section)
- What technical problems, if any, do you anticipate? How do you plan to solve these technical problems?

D. Data

- Summarize any test results or preliminary data that support your choice of methodology and the technical feasibility of the proposed project. If no data is available or is incomplete, please explain. Raw technical data should be included in Attachment B.

E. Resources

- Specify clearly the role and duties of each participating organization (companies, universities, subcontractors or other parties), and where the work will be carried out.
- What equipment, facilities, or other resources will each participating organization provide? How will the equipment or resources be used and under what terms?

F. Qualifications of Technical Personnel

- Describe the roles of key technical personnel in the project and the technical team's experience. Indicate specific industry experience or technical skills that will be helpful to or are necessary for the successful completion of the project.
- Please include resumes for each of the project principals in Attachment C. Please do not exceed three (3) pages per person.
- Identify any deficiencies in the technical team (e.g. key skill sets that are missing) and describe plans to remedy these deficiencies.

G. Previous Work (applicable only to Applicant Companies that have received previous Ben Franklin investments)

- Describe the technical progress made with previous Ben Franklin support.
- Describe and explain any deviations from technical milestones included in the company's previous BEN FRANKLIN investment.

INTELLECTUAL PROPERTY

Include here only if not fully addressed in your executive summary.

Strong intellectual property (IP) is a critical element of the commercial viability of a product or technology platform. There are three components to developing a strong IP strategy: (1) the existing IP, (2) the potential for ongoing work to build upon and grow the IP, and (3) an understanding of the IP surrounding a particular product or technology.

1. Provide a summary of the intellectual property (e.g., patents, patent applications, copyrights, trade secrets) the applicant is contributing to this project. Please list existing intellectual property that you are using in this project. For each patent or patent application list, patent or application number, title, jurisdiction filed, filing date or, if applicable, issue date.
2. Describe ownership of the IP. If the IP is not owned by the applicant, identify the owner and how the rights have been obtained (e.g., license). Describe the status of the IP and the ownership rights or licenses granted (exclusively or nonexclusively) to the applicant. Summarize the scope and key financial terms of any licenses.
3. Describe competing intellectual property of which you are aware. Have freedom-to-operate searches been performed? If so, when and by whom?
4. Describe any additional third party IP rights that you believe will be necessary to commercialize your product or service as planned.
5. Indicate how the work proposed will contribute to existing intellectual property or what new IP may be generated.

MANAGEMENT

Include here only if not addressed in your Executive Summary

1. List Management, Board of Directors and Key Advisors.
2. For Management briefly describe their roles, including level of commitment (part-time, full-time), skills, education and relevant experience. Provide a short biographical sketch on each.
3. For Board of Directors and Key Advisors briefly describe their level of commitment, skills, relevant experience and whether they are or have been compensated to some degree with equity.
4. Attach resumes of management and key advisors in Appendix.

COMMERCIALIZATION

Target Reader: Non-Technical

A. Market Analysis (Indicate sources of data. Include summaries of the results of third party market research in Appendix. Do not include lengthy original source material.)

- Identify the size, growth rate, and other characteristics of the target market.
- Identify individual market segments or customer profiles for this product/service. If applicable, differentiate between “end-users” and “customers.”
- Quantify the size of these individual market segments in unit and sales volumes.
- What are the consumer’s needs? How does your product/service meet this need?

B. Competitive Analysis

- Discuss current and potential direct and indirect competitors for the target market and each market segment. Briefly describe their products, including features and pricing.
- What are the competitors’ sales and distribution strategies?
- Describe the company’s key competitive advantages.

C. Marketing, Sales, Distribution and Customer Service

- Discuss the sales and marketing strategy and implementation plans. Include the expected dates of product testing and product launch.
- Describe the company’s product positioning strategy.
- What is the company’s pricing strategy?
- How does price compare to the expected unit costs of the product?
- What penetration in each segment does the company hope to achieve and when?
- Has the company had any discussions with potential strategic partners or signed any agreements? Do these partners provide critical resources or market access?
- Describe the proposed distribution model. Will direct sales, manufacturers representatives, or distributors be used, or will marketing and sales be outsourced to others? Discuss management’s experience with the chosen model.
- Describe which commercial activities are/will be the responsibility of the distribution channels. How will the company support these activities?
- Discuss customer service after the sale.

D. Senior Management

- Describe the senior management team's relevant experience in bringing this product or service to market. Indicate specific industry, entrepreneurial, and/or sales and marketing experience that will be helpful to the company.
- Identify any deficiencies in the management team (e.g. key skill sets that are missing) and describe plans to remedy these deficiencies.
- Describe the financial control systems currently in place at the company and identify the individuals responsible for the implementation of these systems.
- Individuals responsible for the implementation of these systems.

E. Board of Directors or Advisors

- Identify outside consultants or advisors who currently provide assistance to the company including experts in accounting, law, capital formation, technology, or marketing. Indicate how these advisors are compensated (e.g., pro bono, fee for service, future consideration).
- If the company has a board of directors, please identify its members, their qualifications and their roles. If the company has advisory boards, please provide the same information. Please do not repeat information provided previously in the technology section.

F. Production

- Describe the production method the company plans to use. Distinguish between short and long-term approaches.
- If licensing-out the manufacture of the product is contemplated, indicate the rationale and identify the licensee, if applicable. Describe the characteristics of the licensee that make it particularly appropriate. Describe the quality control mechanisms.
- What will be the expected start-up costs? Per unit costs?

G. Protection and Timing of Proprietary Rights

- What intellectual property protection does the company currently have?
- What are the company's future intellectual property protection plans? Have these plans been developed in consultation with an intellectual property attorney? Include estimates of the anticipated timing in obtaining the protection.
- If the technology is not proprietary, what barriers to entry exist for potential competitors?
- Are there any existing patents, copyrights, licensing agreements, trade secrets or other types of protection held by others that must be considered? How did the company determine the answer to this question? Does the company have the right to utilize technology in which others may have an interest? Please explain if applicable.
- If proprietary technology results from the project, will the company own the discovery?

H. Regulatory, Clinical or Other Approvals

- Does the project require FDA, EPA or other regulatory approvals or waivers before marketing can begin? Indicate the timing of such approvals.
- Are there approvals or endorsements, which, although not required, would facilitate market acceptance of the product? If so, please explain.

I. Pennsylvania Job Creation

- Describe the number, nature, and timing of the jobs to be created in Pennsylvania as a result of this project.

J. Social Impact

- If your business will provide impact in Pennsylvania, such as social, economic or environmental impact, briefly explain how it will be carried out and measured.

FINANCIAL INFORMATION

A. Financial Statements

Attach financial statements prepared by the company for the most recent fiscal quarter and the past two years. If financial statements are not available, corporate tax returns may be used as a substitute. For newly formed companies, please provide any available financial information.

B. Summary Financial Projections

Supply three-year pro forma financial statements. These should include income statements, balance sheets and cash flow projections. The income statement should identify revenues by source. Provide monthly information for the first year and quarterly information in subsequent years. Provide a list of the assumptions that support these projections.

C. Capitalization Plan and Follow-On Funding

Ben Franklin funding and matching support described in this project application are generally not sufficient to successfully commercialize a venture. Project the amount of capital needed to reach profitability and positive cash flow. Indicate what sources of follow-on funding or investment capital are available to meet these needs. If applicable, indicate the level of interest or commitment that the sources of funds may have already expressed. Letters of interest or commitment may be attached to document the availability of follow-on funding. Please note that follow-on funding sources do not constitute matching support unless specifically provided during the period for which BEN FRANKLIN funding is anticipated.

D. Current Capitalization Table

Cap Table. Please include a cap table. A table showing the capitalization of a firm, which typically includes the amount of capital obtained from each source – long-term debt and common equity – and the respective capitalization ratios.

BUDGET & MILESTONES

The Budget & Milestones portion of your application should reference your total budget and sources from one or more of the following: Applicant Company; Participating Companies; and Other Sources.

A. Budget

Please provide a description of each expenditure from each source. The amounts here should coordinate with the project milestones. (Examples and templates are located in the application package or your convenience)

B. Budget Instructions

In addition to BEN FRANKLIN investment, funding sources fall into three categories:

- 1) Applicant Company: The Company that applies for BEN FRANKLIN funds which is generally required to supply matching support.
- 2) Participating Companies: Companies contributing cash and/or in-kind support, e.g. a law firm or IT consultant that is discounting their fees.
- 3) Other Sources: Federal grants, local government funding, venture capital, private investors.

In addition, please specify the amount of cash (including BEN FRANKLIN funds) vs. in-kind contribution. Applicant company in-kind plus cash sources for personnel costs should approximate reasonable market wages.

C. Use of Funds

Expenditures are categorized as: 1) Personnel; 2) Consultants and Subcontractors; and 3) Other Direct Expenditures. Please note the following:

- 1) Personnel for the project should be listed individually by their title. Please include the number of hours, cost per hour, including benefits and the State where the individual or organization is located.
- 2) Consultants include individuals from universities, as well as consulting firms. Subcontracts include contracts for marketing, manufacturing or related functions. Please include the same information as requested above for Personnel.
- 3) Other Direct Expenditures include materials, cost of equipment use, travel directly related to the R&D or to its commercialization, printing, search fees, rent, etc.

Equipment rentals should be itemized and the market value of each piece listed in the "Other Direct Expenditures" category. Purchased or donated equipment, which is used as match, should be valued at its rental value over the period of the project or, alternatively, at the amount of depreciation expected for the equipment over that period. Equipment purchases with BEN FRANKLIN funds are not permitted.

The Total Project Budget, shown on the Proposal Cover Page, is the sum of the expenditures from each source including BEN FRANKLIN.

D. Milestones

Please identify the major milestones to be achieved during the project period. As much as possible these should represent completed deliverables. A small number of activities may continue beyond the end of the project period. If that is the case, please identify the cost of the efforts only to the end of the project period with a subscript identifying the total cost. A recurring expense item, such as rent, should be listed only once but should include the cost for the entire project period. The amount listed for each individual (or expense item) on the project budget form should match the sum of an individual's line item total(s) on this form and thus the project totals will also be the same on both forms. Please use more pages, if necessary.

Commitment Letter & Letter of Intent

Commitment Letter & Letter of Intent Instructions

Applicant companies are required to show evidence of a 1:1 cash match for all Ben Franklin funding. A letter of commitment from the company, as well as from other committed sources of support, including third party sources, must be submitted with the application.

A separate Letter of Intent from each source of matching support is required. If the company has not secured sufficient matching commitment at the time of application, the company should include the amount yet to be raised in its own commitment letter. It is acceptable that match commitment be made contingent upon award of the BEN FRANKLIN funding.

Commitment letters should be on company letterhead and follow the format and address the same points as the following sample letter, if applicable. (Attach this letter to Appendix)

Date

Ben Franklin Technology Partners of Southeastern Pennsylvania
Building 100 Innovation Center, Suite 200
4801 S. Broad Street
The Navy Yard
Philadelphia, PA 19112

Dear Ben Franklin Technology Partners SEP,

This letter represents a commitment by (Company) to provide \$0.00 in matching support for the investment of (Applicant Company Name).

Of this support, \$0.00 is a cash payment to carry out work on this project and \$0.00 is in-kind, including the salary cost of personnel, use of company equipment, materials, and other services devoted to this project.

Sincerely,

Signature

Title