| OMB APPROVAL NUMBER: 0693-0050 | EXPIRATION DATE: XX-XX-XXXX |
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| U.S. DEPARTMENT OF COMMERCE |
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| INICTITUTE OF OTANIDADDO AND TEOUNOLOOV |

| NATIONAL | INSTITUTE | OF ST | TANDARDS | AND | TECHNO | LOGY |
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| DAO 203-26 NATIONAL INSTITUTE OF STANDARDS AND TECHNOLO |)GY |
|---|-----|
| TECHNOLOGY INNOVATION PROGRAM (TIP) | |
| PROPOSAL INFORMATION SHEET | |
| NOTE: This application/questionnaire contains collection of information requirements subject to the Paperwork Reduction Act (PRA). Notwithstanding any other provisions of the law person is required to respond to, nor shall any person be subject to penalty for failure to comply with, a collection of information subject to the requirements of the PRA. The estimate response time for this application questionnaire is 37 hours. The response time includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this estimate or any other aspects of this collection of information, including suggestions for reducing the length of this questionnaire, to the National Institute of Standards and Technology, Attn., Barbara Lambis, via email at barbara.lambis@nist.gov or telephone (301) 975-4447. | d |
| 1. COMPETITION 2. LEGAL NAME OF SUBMITTING ORGANIZATION | |
| NUMBER: | |
| 3. PROPOSAL TYPE 4. ORGANIZATION TYPE 5. PROJECT DURATION 6. WILL CONTRACTORS SINGLE COMPANY JOINT VENTURE 5. PROJECT DURATION 6. WILL CONTRACTORS | |
| 7. Does the single company or if a joint venture, any joint venture member, have a parent company outside the United States? (If yes, complete form NIST-1022G, Foreign Owned Company Questionnaire, for each such company.) | |
| 8. Is the single company or if a joint venture, any joint venture member, majority owned by non-U.S. citizens? (If yes, explain below.) | |
| 9. Is the single company or if a joint venture, any joint venture member, subject to control by non-U.S. citizens? (If yes, explain below.) | |
| 10. Will any R&D work be performed outside the United States? (If yes, complete form NIST-1022H, R&D Work Performed Outside the United States by the Recipient or Contractor Questionnaire.) | |
| 11. Is the company or if a joint venture, any joint venture member, delinquent on any federal debt? (If yes, explain below.) | ╡ |
| 12. Are there any third party in-kind contributions? | = |
| 13. NONPROPRIETARY PROPOSAL ABSTRACT | _ |
| | |
| | |
| | |
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| | |
| | |
| | |
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| | |
| 14. In addition to the certification on item 18 of the SF-424 (R&R), I agree with the certification statements in the | |
| instructions to this item 14. | |
| | |

NIST-1022

| | | | | OMB A | APPROVAL NUMBER: 0693-005 | 0 EXPIRATION DATE: XX-XX-XXXX |
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| NIST-1022A DAO 203-26 | | | | N | | DEPARTMENT OF COMMERCE TANDARDS AND TECHNOLOGY |
| DAO 200-20 | | TECHNO | | ATION PROGRAM | (TIP) | |
| | | | | NTURE MEMBERS | | |
| 1. LEGAL N | IAME, ADDRESS, CONT | ACT INFOR | MATION & CON | NGRESSIONAL DIST N/ | RICT OF MEMBER | #1 |
| ORG: | | | | PRE | EFIX: |] |
| STREET 1: | | | | FIRST NA | AME: | |
| STREET 2: | | | | LAST NA | AME: | |
| CITY: | | | | MIDDLE NA | AME: | |
| COUNTY: | | | | SUF | FIX: |] |
| STATE: | ZIP: | |] | POSITION/TI | TLE: | |
| COUNTRY: | | | | DEPARTMI | ENT: | |
| PHONE: | | | | DIVIS | ION: | |
| FAX: | | | CON | GRESSIONAL DISTR | RICT: | |
| EMAIL: | | | | | | |
| 2. ORGANIZ | ZATION TYPE | | | | | |
| (Pick one) | | | | (Che | ck if applicable) | |
| SMALL- | SMALL-SIZED BUSINESS 🔲 NONPROFIT RESEARCH INSTITUTE – FOREIGN-OWNED, U.SLOCATED | | | | | |
| | ── ── ── ── ── ── ── ── ── ── ── ── ── | | | | | |
| LARGE- | | NATIONAL L | ABORATORY | | | |
| | | | | | | |
| 3. EMPLOY | ER IDENTIFICATION N | JMBER: | | 4. DUN AND BRADS | | |

| | OMB APPROVA | L NUMBER: 0693-0050 | EXPIRATION DATE: XX-XX-XXXX |
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| NIST-1022B DAO 203-26 | NATIONAI | | EPARTMENT OF COMMERCE |
| TECHNOLOGY INNOVATION | | | |
| | | | |
| 1. LEGAL NAME, ADDRESS, CONTACT INFORMATION OF CONTRA | | OF CONTACT | |
| NAME: | PREFIX: | | |
| | | | |
| STREET 1: | | | |
| STREET 2: | | | |
| CITY: | | | |
| COUNTY: | SUFFIX: | | |
| STATE: ZIP: | POSITION/TITLE: | | |
| COUNTRY: | DEPARTMENT: | | |
| PHONE: | DIVISION: | | |
| | _ | | |
| | | | |
| 2. ORGANIZATION TYPE | | | |
| (Pick one) | (Check if a | pplicable) | |
| SMALL-SIZED BUSINESS IN NONPROFIT RESEARCH INSTITU | | GN-OWNED, U | .SLOCATED |
| | ALION | GN-LOCATED | ENTITY |
| LARGE-SIZED BUSINESS NATIONAL LABORATORY GOVERNMENTAL LABORATORY (not including NIST) | | | |
| | | | |
| 3. ESTIMATED AMOUNT OF CONTRACT: | | | |
| 4. DESCRIBE SCOPE OF WORK AND IDENTIFY WHICH TASK OR TINVOLVEMENT. | ASKS IN R&D PLAN | I REQUIRE CO | NTRACTOR'S |
| | | | |
| | | | |
| | | | |
| 5. IS THIS A SOLE SOURCE CONTRACT? | | | |
| NO YES (If yes, explain; e.g., is this the only contractor that c capabilities/experience, etc.) | an perform the work, | what is the nat | ture of its unique |
| | | | |
| | | | |
| 6. DOES THE CONTRACTOR HAVE ANY FINANCIAL OR OTHER IN | | | |
| NO YES (If yes, briefly explain what type and how much.) | EREST IN THE SUE | | SANIZATION ! |
| | | | |
| | | | |
| | | | |
| 7. DOES THE SUBMITTING ORGANIZATION HAVE ANY FINANCIAL | OR OTHER INTERE | ST IN THE CO | NTRACTOR? |
| NO YES (If yes, briefly explain what type and how much.) | | | |

| NUCT 40000 | | | | OMB APPROVAL NUME | BER: 0693-0050 EXPIRA | | |
|--------------------------------------|--|---------------------------|---|-------------------|------------------------------------|-----------|-------|
| NIST-1022C DAO 203-26 | | | | | U.S. DEPARTN ITUTE OF STANDARDS | | |
| | | TECHNC | LOGY INNOVATION PROGR BUDGET NARRATIVE | AM (TIP) | | | |
| | | | BUDGET NARRATIVE | | | N | |
| Organization Nan | ne: | | | | | Year: | |
| A. Personnel | | | | | | | |
| Employee Name | | | Position Title | Annual Salary | Percentage of Time | Co | ost |
| | | | | | Time | | |
| | | I | | | TOTAL: | | |
| B. Travel | | | | | | | |
| Purpose of Travel | Destination | | Computation | | | Co | ost |
| | | | (Mode of transportation, lodging | g, and subsister | nce) | | |
| | | | | | | | |
| | | | | | TOTAL: | | |
| conference(s) are funded tasks), why | specifically related the information ca | I to the R& annot be o | nference(s) [include an explanation D activities of the TIP project (i.e., btained in the United States, and at the conference, etc.]: | how will the inf | ormation gathere | d contrib | |
| | | | | | | | |
| of the TIP project (| i.e., how will the in | formation of | an explanation of how the confer- gathered contribute to funded task at the conference, etc.]: | | | | |
| | | | | | | | |
| C. Equipment | | | | | | | |
| Item | | | Сотри | utation | | Co | ost |
| | | | | | | | |
| | | | | | TOTAL: | | |
| Justification for ea costs: | ch equipment item | exceeding | g \$100,000, to be purchased outsi | de the United S | tates, and/or any | constru | ction |
| | | | | | | | |
| D. Materials/Suppl | lies | | | | | | |
| Item | | | Сотр | utation | | Co | ost |
| | | | | | | | |
| | | | | | TOTAL: | | |
| E. Contractors | | | | | | | |
| Name of Contracto | r | | Service Provided | Con | nputation | Co | ost |
| | | | | | | | |

| SUBTOTAL: | | | | | | |
|---|---------------------------------------|-------------------------------|--------|--|--|--|
| If contractor's fees are in excess of \$550 per day, justify here: | | | | | | |
| | | | | | | |
| Contractor Expenses | | | | | | |
| Name of Contractor | Expense | Computation | Cost | | | |
| | | | | | | |
| | | SUBTOTAL: | | | | |
| | | TOTAL: | | | | |
| F. Other | | | | | | |
| Description | Computati | on | Cost | | | |
| | | | | | | |
| TOTAL: | | | | | | |
| Check here if audit is part of indirect costs. | (If checked, enter 0 for AUDIT costs | above.) | | | | |
| Check here if cognizant federal audit agenc | y will perform audits and provide nam | nes of agency: | | | | |
| | | | | | | |
| G. Indirect Costs | | | | | | |
| Percentage Rate: | | | | | | |
| Check here if the indirect cost rate has bee the agreement is included in proposal. | n negotiated and approved by a cogr | nizant federal agency and a c | opy of | | | |
| Check here if the indirect cost rate has not | been negotiated and approved by a d | cognizant federal agency. | | | | |
| | | | | | | |
| | | Total: | | | | |
| H. Cost Sharing | | | | | | |
| | | L (direct costs only): | | | | |
| | NONFEDERA | L (direct costs only): | | | | |
| NONFEDERAL (indirect c | osts only, which must be the same ar | mount in section G.): | | | | |
| | | Total: | | | | |
| | | | | | | |

| NIST-1022D DAO 203-26 | | | | NATIONAL INSTITUTE OF STANI | PARTMENT OF COMMERCE |
|------------------------------|--|---------|-----------------|-----------------------------|----------------------|
| A. Name of orga | THIRD PARTY II anization to receive in-kind contribu | | | | |
| | | | | | |
| B. In-kind contr | ibutions will consist of the followin | ig as n | oted: | | Project Year: |
| Type of Personnel Service | Employee Name & Position Title | | Percen of Ti | Method of Valuation | Cost |
| Equipment | | | entage Use | Method of Valuation | Cost |
| Research Tools | | | entage Use | Method of Valuation | Cost |
| Software | | | entage Use | Method of Valuation | Cost |
| Materials/Supplies | | | entage Use | Method of Valuation | Cost |
| Other | | | entage Use | Method of Valuation | Cost |
| | f third-party in-kind contributions: | | | | |
| | n, the donor of the in-kind contributior ove for the proposed Technology Inne | | | | e in-kind |
| Print Name and Title: | | | | | |
| Name of Organization | Donating In-Kind Contributions: | | | | |

TECHNOLOGY INNOVATION PROGRAM (TIP) ESTIMATED MULTI-YEAR BUDGET - SINGLE COMPANY

| | YEAR 1 | YEAR 2 | YEAR 3 | TOTAL |
|---|--------|--------|--------|-------|
| 1. OBJECT CLASS CATEGORY | | | | |
| A. Personnel salaries/wages | | | | |
| B. Travel | | | | |
| C. Equipment | | | | |
| D. Materials/supplies | | | | |
| E. Contractors | | | | |
| F. Other | | | | |
| G. Total direct costs (lines A thru F) | | | | |
| H. Total direct costs requested from TIP | | | | |
| I. Total direct costs shared by proposer (if any) | | | | |
| J. Total indirect costs absorbed by proposer | | | | |
| K. Total costs (lines G + J) | | | | |
| 2. SOURCES OF FUNDS | | | | |
| А. | | | | |
| А. | | | | |
| А. | | | | |
| B1. | | | | |
| C. Total of all sources of funds (same as line K) | | | | |
| 3. TASKS | | | | |
| A1 | | | | |
| B. Total of all tasks (same as line K) | | | | |

NIST-1022F DAO 203-26

| TECHNOLOGY INNOVATION PROGRAM (TIP) | |
|--|---|
| ESTIMATED MULTI-YEAR BUDGET - JOINT VENTURE | Ξ |
| | |

| YEAR: | | | | YEAR TOTAL ALL JV MEMBERS |
|---|---|---|---|------------------------------|
| 1. OBJECT CLASS CATEGORY | · | • | • | • |
| A. Personnel salaries/wages | | | | |
| B. Travel | | | | |
| C. Equipment | | | | |
| D. Materials/supplies | | | | |
| E. Contractors | | | | |
| F. Other | | | | |
| G. Total direct costs (lines A thru F) | | | | |
| H. Total direct costs requested from TIP | | | | |
| I. Total direct costs shared by proposer (if any) | | | | |
| J. Total indirect costs absorbed by proposer | | | | |
| K. Total costs (lines G + J) | | | | |
| 2. SOURCES OF FUNDS | | | | |
| Α. | | | | |
| А. | | | | |
| Α. | | | | |
| B1. | | | | |
| C. Total of all sources of funds (same as line K) | | | | |
| 3. TASKS | | | | |
| A1 | | | | |
| B. Total of all tasks (same as line K) | | | | |

NIST-1022F DAO 203-26

TECHNOLOGY INNOVATION PROGRAM (TIP) ESTIMATED MULTI-YEAR BUDGET - JOINT VENTURE

| ESTIMATED MULTI-YEAR BUDGET - JOINT VENTURE | | | | | |
|---|--|--|--|------------------------------|--|
| YEAR: | | | | YEAR TOTAL ALL JV MEMBERS | |
| 1. OBJECT CLASS CATEGORY | | | | - | |
| A. Personnel salaries/wages | | | | | |
| B. Travel | | | | | |
| C. Equipment | | | | | |
| D. Materials/supplies | | | | | |
| E. Contractors | | | | | |
| F. Other | | | | | |
| G. Total direct costs (lines A thru F) | | | | | |
| H. Total direct costs requested from TIP | | | | | |
| I. Total direct costs shared by proposer (if any) | | | | | |
| J. Total indirect costs absorbed by proposer | | | | | |
| K. Total costs (lines G + J) | | | | | |
| 2. SOURCES OF FUNDS | | | | | |
| Α. | | | | | |
| В1. | | | | | |
| C. Total sources of funds (same as line K) | | | | | |
| 3. TASKS | | | | | |
| A1 | | | | | |
| B. Total of all tasks (same as line K) | | | | | |

NIST-1022G DAO 203-26 U.S. DEPARTMENT OF COMMERCE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

| TECHNOLOGY INNOVATION PROGRAM (TIP) |
|-------------------------------------|
| FOREIGN OWNED COMPANY QUESTIONNAIRE |

Complete answers to all questions must be provided for each foreign-owned company participating in the proposed TIP project. Submit additional documentation if necessary. [See Chapter 1, section 4 in the TIP Proposal Preparation Kit for explanation.] Title of Proposal: Submitting Organization: 1. Is the foreign-owned company incorporated in the United States, or is the LLC, partnership, or sole proprietorship with foreign ownership organized in the United States? (NOTE: A company, LLC, partnership, or sole proprietorship is considered foreign owned if it is majority owned or controlled by a non-U.S. entity, or its ultimate parent, if any, is incorporated outside the United States.) No. You are ineligible to continue. Yes. Please continue. 2. Name of foreign-owned company and U.S. address where research for the project will be conducted. Name of ultimate foreign parent, address, and country of incorporation. Also provide percentage of ownership. 4. What is the type of participation of the foreign-owned company? Single Company Joint Venture Lead Joint Venture Participant 5. What is the role of the foreign-owned company? (Check all that apply.) Key contributor to the high-risk tasks of the project. Minor contributor to the high-risk tasks of the project. Supplier of materials, equipment, or software services. Manufacturer. Other. Please explain. 6. What skills, capabilities, and resources does the foreign-owned company bring to the project? How will the company's role affect project milestones and plans, if any, for commercialization?

| 7. Provide a brief description of: a. Facility or facilities where project activities will be carried out; b. Location, including address; c. Square footage; and d. Special equipment. |
|--|
| 8. How many employees will be dedicated to the project? |
| 9. Provide the names, titles, and main responsibilities of key project staff. |
| 10. Will there be any activities performed outside the United States? No. Yes. If yes, a completed NIST-1022H TIP R&D Work Performed Outside the United States by the Recipient or Contractor Questionnaire must be submitted. |
| 11. Does the foreign-owned company expect to develop any new products or apply any new processes to its product lines incorporating the TIP supported technology? |
| No. |
| Yes. If yes, provide the following: |
| a. For each new product or process, when will it first occur? b. Where? c. If in the United States, which facility? d. Which U.S. product line? e. Other? Please explain. |
| |
| 12. a. Provide investments that the foreign-owned company has made in research, development, manufacturing, distribution, sales, and marketing in the United States in the past 3 years. |
| b. State approximate dollar value. 13. Describe the relationship between the foreign-owned company and its ultimate foreign parent. Include financial arrangements, intercompany research agreements, and intellectual property arrangements. |

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TECHNOLOGY INNOVATION PROGRAM (TIP) R&D WORK PERFORMED OUTSIDE THE UNITED STATES BY THE RECIPIENT OR CONTRACTOR QUESTIONNAIRE

Title of Proposal:

Submitting Organization:

Name of Company To Perform R&D Work Outside the United States:

Country Where Work Will Be Performed:

1. Is the work to be performed outside the United States less technically challenging and lower risk relative to the work carried out in the United States?

Yes.

No. If no, explain.

2. Describe the impact on U.S. economic interests with and without the R&D being performed outside the United States.

3. What is the percentage of the total TIP project for R&D performed outside the United States?

4. What are the total dollars by organization for R&D performed outside the United States?

5. a. Explain how your organization made a good faith effort to identify alternatives to have this particular work performed outside the United States.

b. Explain why those alternatives were not considered adequate to meet the R&D plan needs (e.g., cost, schedule, insufficient interest, or commitment).

6. Would the project be less likely to generate substantial benefits to the United States if the work outside the United States were not carried out at all, or if TIP insisted that the work be performed in the United States?

Yes.

No.

Explain why: