|  |  |  |  |
| --- | --- | --- | --- |
| **Indian Implementation Agency** | **Indian Funding Ministry/Department**  **International (Bilateral) Cooperation Division Department of Science & Technology**  **Government of India** | **Republic of Korea Funding Ministry/Department**C:\Users\ADmin\Desktop\미래부로고.jpg  **Ministry of Science, ICT & Future Planning (MSIP) Republic of Korea** | **Republic of Korea Implementation Agency**  C:\Users\ADmin\Desktop\CI_emblem.jpg |

**India-Republic of Korea Joint Applied R&D Programme Request for Proposal – June 2014**

**Application Form**

**Part I. Project Overview**

**1. Title of Project**

|  |
| --- |
|  |

**2. Specific Research Field**

|  |  |
| --- | --- |
| **Field** | **Sub-Field** |
| * Cleantech : Waste Management, Clean Water and Energy Efficiency * Information & Communication Technology (ICT) including Electronic System Design& Manufacturing (ESDM) * Robotics & Automation * Choose one of above three fields |  |

**3. Project Duration: \_\_\_\_\_\_\_\_\_\_\_(duration in months)**

**4. Budget Description**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Yearly Budget | India | | | Korea | | |
| Request Budget from DST/  GITA  (INR) | Matching Funds | | Request Budget from KIST  (KRW) | Matching Funds | |
| Cash  (INR) | In-kind  (INR) | Cash  (KRW) | In-kind  (KRW) |
| 1st year |  |  |  |  |  |  |
| 2nd year |  |  |  |  |  |  |
| Total |  |  |  |  |  |  |

**5. Composition of Consortium**

|  |  |  |
| --- | --- | --- |
| Item | India | Korea |
| Project Lead/ Principal  Member | *Designated Official / PI of Industry (Company)* | *PI of main research organization* |
| *Industry (Company)* | *Main research organization* |
| Participating  Member | *Designated Official/PI of participating organization* | *Designated Official / PI of Industry (Company)* |
| *Participating organization* | *Industry (Company)* |

**6. Personal Data**

|  |  |  |
| --- | --- | --- |
| Item | INDIA | KOREA |
| Name of Project Lead / PI |  |  |
| Organization |  |  |
| Department |  |  |
| Position/Designation |  |  |
| Address of Organization |  |  |
| Office Phone Number |  |  |
| Cell Phone Number |  |  |
| Fax Number |  |  |
| E‑mail Address |  |  |
| Date of Birth |  |  |
| Name of Project Co‑Investigator/Partner |  |  |
| Organization |  |  |
| Department |  |  |
| Position/Designation |  |  |
| Address of Organization |  |  |
| Office Phone Number |  |  |
| Cell Phone Number |  |  |
| Fax Number |  |  |
| E‑mail Address |  |  |

**7. Participating Researchers**

**(Korea)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Organization | Position/Designation | Start date | Project Participation Ratio (%) |
| Field of Study/Final Degree | End Date |
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**(India)**

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| --- | --- | --- | --- | --- |
| Name | Organization | Position/Designation | Start date | Project Participation Ratio (%) |
| Field of Study/Final Degree | End Date |
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**8. Personal Data of Indian and Korean investigators to be attached (resumes)**

**※ Research History of both Project Investigators (PIs)/Project Leads**

**(Describe major scientific publications or patent applications during the last 5 years.)**

**Part II. Contents of the full proposal**

**1. Summary of Proposal**

|  |  |  |  |
| --- | --- | --- | --- |
| Keywords |  |  |  |
|  |  |  |
| Research  Goal |  | | |
| Approach |  | | |
| Expected  Outcome |  | | |

**2. Research Plan**

1. **Research Background**

|  |
| --- |
|  |

1. **Goal/Objectives, Significance**

|  |
| --- |
|  |

1. **Research Methods**

|  |
| --- |
|  |

**3. Justification for collaboration & brief introduction to the national and international backdrop to the proposed area of research.**

|  |
| --- |
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**4. Plan of Work (annual)**

|  |  |  |  |
| --- | --- | --- | --- |
| Timeline | | Responsibilities of  Indian Team | Responsibilities of  Korean Team |
| 1st Year | Company |  |  |
| Research organization or University |  |  |
| 2nd Year | Company |  |  |
| Research organization or University |  |  |

**5. Facilities related to project activity available at the institutions where the project will be carried out.**

|  |  |
| --- | --- |
| At the Collaborating Indian Organization/s | At the Collaborating Korean Organization/s |
|  |  |

**6. Expected Results of Cooperation**

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**Part III. Financial Information**

1. **Budget Plan**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Division | | | 1st Financial Year | | | 2nd Financial year | |
| Indian  (in INR) | Korean  (in KRW) | | Indian  (in INR) | Korean  (in KRW) |
| Direct Costs | Labor  Costs | Internal Labor |  |  | |  |  |
| External Labor |  |  | |  |  |
| Research Equipment and Materials | |  |  | |  |  |
| Research Activity, etc. | |  |  | |  |  |
| Commission  Project Cost | |  |  | |  |  |
| Indirect Cost | | |  |  | |  |  |
| Total Cost in Local Currency of Respective Country | | |  |  | |  |  |
| Total Cost in Equivalent US$ in Respective Country\* | | |  | |  |  |  |

**\*** US$ 1 = INR 60 for joint project budget estimation purpose only

US$ = KRW 1030 for joint project budget estimation purpose only

**※** **Research Cost Estimation Criteria (for Korea)**

• Indirect Costs

◦ University, government-funded institutions, special research institutions, and non-profit corporations to which the Indirect Cost Estimation Criteria shall be applicable.

- The Indirect Cost Estimation Criteria notified by the Ministry of Science, ICT and Future Planning for such institutions participating in the national research and development projects shall be applied.

◦ Any other non-profit corporations for which the indirect cost rates are notified:

- Within 17% of direct costs (excluding labor costs payable, costs in-kind)

◦ Profit-making corporations (including public corporations defined in Item 1,

Paragraph 3, Article 5 of the Act on the Management of Public Institutions)

- Within 5% of direct costs (excluding labor costs payable, costs in-kind)

※ Such business registered as an R&D service provider in Article 18 of The Special Act on Support of Scientists and Engineers for Strengthening National Science and Technology Competitiveness may be allowed up to 10% of direct costs.

•Labor Costs

◦Internal labor costs: Those researchers whose internal labor costs are not paid from this Project may also be included in the estimation of indirect costs.

(Max. 30% of participation rate may be allowable for the estimation

of the indexed cost items)

◦External labor costs: Costs paid to the researchers participating in this Project independently. These costs shall be within 40% of the total research costs.

**※** R&D Cost Estimates for Indian Applicants

**◦** Costs shall be estimated in accordance with the related local standards.

Project Budget Summary to be provided in Appendix 1 enclosed with this form

(mandatory for Indian applicants)

**Part IV. Technology & Innovation**

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Please consider the following for providing project related information in this section:

※ *The Innovation*

* *What is the current "best practice"?*
* *What are the current limitations? This is an opportunity to elaborate on the shortcomings that exist in the proposed area of innovation as a prelude to the description of the innovation and how it can overcome these shortcomings. Current limitations could include: high cost, sub-optimal performance, lack of attention to specific market opportunities, e.g., poor suitability to high-or-low-end markets, size, compatibility, nonconformance to standards, etc;*
* *What is the idea? Sketches, diagrams and tables could be included to help describe the innovation. This description should clearly identify in what way(s) the innovation overcomes current limitations. How the idea overcomes these limitations is to be contained in this section;*
* *How much will the proposed program cost and how long will it take to develop the product to the point of commercial readiness?*
* *What is the patent situation, including background patents and the potential for new patents? Are there any obligations to other agencies which have supported any part of the innovation development?*
* *Which standards relate to the developed product? Will the proposed product meet current and/or emerging standards?*

**Part V. Need and Target Market**

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Please consider the following for providing project information in this section:

※ *The Market*

*Although there are uncertainties implicit in predictions of future markets and possible competition for any new product or process, it is important to demonstrate that the participants have made a thorough analysis of the market. Such an analysis can typically include the following considerations:*

* *What market needs are served? Are one or more participants currently active in developing, manufacturing and selling similar types of products in this market? What is the basis for this market need?*
* *What is the total addressable market for the product? What is the current position of the participants in this market? What is the expected growth 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? What market share is expected to be captured in the year of market entry and over the product sales lifetime?*
* *What barriers, e.g., regulatory, might be encountered, and how will they be overcome?*
* *Who will be paying customers of the company and the possible end-users of its products or services?*
* *What competition exists or do you expect in the future? Provide an evaluation of the impact of competition on the commercialization of the proposed product.*

*This is only an indicative list. The basic message is that developing innovative concepts for commercial gain is an intrinsically risky, uncertain, but occasionally highly rewarding undertaking whose prospects of success can be immeasurably improved by finely tuned, objective and early planning. The participants should present whatever additional information they consider relevant.*

**Part VI. Business Concept and Commercial Feasibility**

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Please consider the following for providing project information in this section:

*※ Commercialization – Plans and Prospects*

*It is obviously beneficial to those making investment decisions regarding new technology if a single index can be derived which provides a "figure of merit" for deciding on a particular investment, or for evaluating various alternatives.*

*A preliminary financial analysis which includes the potential gain from successful implementation of the proposed project should be made using a Cash Flow Analysis approach of your choice.*

*Should the project prospects be encouraging, the commercial program needs to be planned and implemented? Some of the aspects to be highlighted here are:*

* *What is the product, service, business concept or expertise that the project seeks to develop.*
* *How can the product, service, business concept or expertise be scaled to market demand? How will it be brought to the international market?*
* *What are the commercialization plans and prospects/feasibility?*
* *Will the participants be engaged in production? What are the existing manufacturing facilities and how can the proposed product manufacturing be incorporated into the existing infrastructure?*
* *Who will sell to which market regions? What is the current sales level of the participants in the primary target regions for the proposed product?*
* *Do any of the participants 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? Describe the process by which the participants plan to establish such a network and the resources required;*
* *Considering the maximum cash requirements based on the cash flow analysis, to what extent are the necessary resources - financial or otherwise - available within the participating companies? If any additional resources will be required, how will they be mobilized? Describe all relevant potential sources.*

**Part VII. Benefits and Advantages**

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Please consider the following for providing project information in this section:

*※ Cooperation and Benefits*

*The clear expectation of risk and benefit sharing by participants during product development and commercialization is essential under this program. An important factor in evaluating the proposal, therefore, is the extent to which the participants will share in the research, product development and introduction to the marketplace, as well as the benefit to be derived by each participant during product commercialization. Also of importance are the expected socio-economic benefits in each participating countries in the form of new export markets, new employment opportunities, new capital formation, productivity improvements, etc.*

*Please elaborate these issues in the context of the agreement between the participants with respect to their agreed-upon roles during the various project stages including the commercialization process.*

*If there are plans for exchange of young researchers involved in this project, please indicate the length of exchange and the role(s) to be played in the R&D activities. Also explain how the exchange of young researchers adds value to the project goals.*

*The proposal should particularly highlight the following:*

* *What benefits will the project bring to the project partners’ direct customers and possible end users?*
* *What benefits will the project bring to the project partners’ business operation?*
* *What indirect benefits and impacts will the project create for the project partners’ cooperation network and society?*
* *What impact will DST/GITA and KIST funding have on the project implementation? Please describe the changes and most important impacts.*

**VIII. Competition and Market**

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Please consider the following for providing project information in this section:

* *What products or services will compete with the product/ solution to be developed?*
* *How will the product or service that the project aims for stand out from the competitors? Compare the project partners’ current position to that of the competitors.*
* *Can the product or service be protected? Do the project partners (individual applicants) own the patents and other intellectual property rights?*
* *What risks are associated with reaching the targets? Please estimate - for example the risks related to development, the market, funding and the personnel?*

**Part IX. Statement of Intent for the Participation in the**

**India-Republic of Korea Joint Applied R&D Programme**

The participants signing this form certify that the information provided in the RFP application is correct at the time of submission. The participants confirm their intent to cooperate in the project, with the aim of realizing the R&D/technological goals and deliverables as specified in the application.

|  |  |
| --- | --- |
| **Main**  **Organization**  **(Project Lead)** | **Indian Project Lead (IPL)**  Name Designation Signature Date |
| **(Head/Authorized Signatory of the Indian Organization: Indian Project Lead)**  Name Designation Signature Date |
| **(Korean PI)**  Name Designation Signature Date |
| **(Head of the Korean Organization)**  Name Designation Signature Date |
| **Participating Organization**  **(Partner)** | **(PI of the Indian participating organization)**  Name Designation Signature Date |
| **(Head/Authorized Signatory of the Indian participating organization)**  Name Designation Signature Date |
| **(PI of the Korean participating organization)**  Name Designation Signature Date |
| **(Head of the Korean participating organization)**  Name Designation Signature Date |

**Appendix 1 (Mandatory for Indian Applicants)**

**Finance Summary - Table I**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Table I: Finance Summary** | | | | | | | |
|  | **1** | **2** | **3** | **4** | **5** | **6** | **7** |
|  | **Organization name** | **Company Identification Number/ Organization Registration Number** | **Enterprise/ Organization  category** | **Contribution to project by each organization**  **(INR)** | **Funding sought from GITA**  **(INR)** | **Other funding from public sector bodies**  **(INR)** | **Total**  **(INR)** |
| **Indian Project Lead** |  |  | Please Select |  |  |  |  |
| **Indian Partner 1** |  |  | Please Select |  |  |  |  |
| **Indian Partner 2** |  |  | Please Select |  |  |  |  |
| **Indian Partner 3** |  |  | Please Select |  |  |  |  |
|  | **Total (INR)** | | |  |  |  |  |

**Finance Summary - Table II**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Particulars** | **Amount in INR** | | | | **Amount in KRW** | | | |
| **Project Budget – For Indian Project Lead (IPL)** | **Year 1** | **Year 2** | **Total**  **Budget** | | **Year 1** | **Year 2** | | **Total**  **Budget** |
| **Proposed Total Project Budget** |  |  |  | |  |  | |  |
| **Project Budget Summary** | | | | | | | | |
| **Indian partners**  **– Funding Sources** |  | | | | | | | |
| **Partners contribution** |  |  |  |  | |  |  | |
| Indian Project Lead (IPL) |  |  |  |  | |  |  | |
| Partner 1 |  |  |  |  | |  |  | |
| Partner 2 |  |  |  |  | |  |  | |
| Partner 3 |  |  |  |  | |  |  | |
| **GITA Contribution to the project in India** |  |  |  |  | |  |  | |
| **Funding from Other Government Sources in India (if any)** |  |  |  |  | |  |  | |
| **Total Budget** |  |  |  |  | |  |  | |
| **Republic of Korea partners - Funding Sources** |  | | | | | | | |
| **Partners contribution** |  |  |  |  | |  |  | |
| Republic of Korea  Project Lead (KPL) |  |  |  |  | |  |  | |
| Partner 1 |  |  |  |  | |  |  | |
| Partner 2 |  |  |  |  | |  |  | |
| Partner 3 |  |  |  |  | |  |  | |
| **KIST Contribution to the project in Republic of Korea** |  |  |  |  | |  |  | |
| **Funding from Other Government Sources in Republic of Korea (if any)** |  |  |  |  | |  |  | |
| **Total Budget** |  |  |  |  | |  |  | |

**Budget Justification for Indian Partners - Table III**

|  |  |  |  |
| --- | --- | --- | --- |
| **Indian Budget Justification – For IPL** | **Amount in INR** | | |
| **Particulars** | **Year 1** | **Year 2** | **Total Budget** |
| Labor Costs including Project Management Cost |  |  |  |
| Materials/Consumables |  |  |  |
| Capital Usage |  |  |  |
| Sub-contracts, Consultancy Fees  (including Fees for Trial and Testing) |  |  |  |
| Project Related Travel |  |  |  |
| Domestic Travel |  |  |  |
| International Travel  (between India & Republic of Korea) |  |  |  |
| Project Overheads |  |  |  |
| Other Costs |  |  |  |
| **Total proposed expenditures** |  |  |  |
|  | | | |
| **Indian Budget Justification – For Partner 1,**  **if any** |  |  |  |
| Labor Costs including Project Management Cost |  |  |  |
| Materials/Consumables |  |  |  |
| Capital Usage |  |  |  |
| Sub-contracts, Consultancy Fees  (including Fees for Trial and Testing) |  |  |  |
| Domestic Travel |  |  |  |
| International Travel  (between India & Republic of Korea) |  |  |  |
| Project Overheads |  |  |  |
| Other Costs |  |  |  |
| **Total proposed expenditures** |  |  |  |
|  | | | |
| **Indian Budget Justification – For Partner 2, if any** |  |  |  |
| Labor Costs including Project Management Cost |  |  |  |
| Materials/Consumables |  |  |  |
| Capital Usage |  |  |  |
| Sub-contracts, Consultancy Fees (including Fees for Trial and Testing) |  |  |  |
| Project Related Travel |  |  |  |
| Domestic Travel |  |  |  |
| International Travel  (between India & Republic of Korea) |  |  |  |
| Project Overheads |  |  |  |
| Other Costs |  |  |  |
| **Total proposed expenditures** |  |  |  |
|  |  |  |  |
| **Indian Budget Justification – For Partner 3,**  **if any** |  |  |  |
| Labor Costs including Project Management Cost |  |  |  |
| Materials/Consumables |  |  |  |
| Capital Usage |  |  |  |
| Sub-contracts, Consultancy Fees (including Fees for Trial and Testing) |  |  |  |
| Project Related Travel |  |  |  |
| Domestic Travel |  |  |  |
| International Travel  (between India & Republic of Korea) |  |  |  |
| Project Overheads |  |  |  |
| Other Costs |  |  |  |
| **Total proposed expenditures** |  |  |  |

**Technological Deliverables Milestones – Table IV**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Task** | **Milestones** | **Start Date** | **End Date** | **Deliverables** | **Responsible Party** |
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**Project Phases - Table V**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Title** | **Task**  **Description** | **Start Date** | **End Date** | **Effort Hours** | **Deliverable** | **Responsible party** |
| **Phase 1 – Technology research and development** |  |  |  |  |  |  |
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| **Phase 2 – Technology integration and validation** |  |  |  |  |  |  |
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| **Phase 3 - Trials/Pilot test runs/Demonstration/Prototype/**  **Pre-commercialization**  **(if applicable to your project)** |  |  |  |  |  |  |
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| **Phase 4 - Commercialization** |  |  |  |  |  |  |
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\* *Phases mentioned above are indicative. If your project has additional milestones/phases, you may please add them depending on your project schedule.*