**Development of Transformative Sanitation Technologies (TST) for Indian Household and Community Settings**

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| **Basic Information** |
| **Name of the organization:**  |
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| **Title Of the Proposal:** |
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| **Proposal Duration (in Months):**  |
|  |
| **Total Budget (Rs.) (in Lakhs):**  |
|  |
| **Type of Organisation:**  |
|  |
| **Proposal Submitted:** |
|  |
| **No. Of Collaborators:** |
|  |
| **Collaborator Details** |
| **Collaborator(s)** | **Name of Contact Person** | **Email Address** | **Collaborator Type** | **Collaborator Type2** |
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| **Particulars Of The Applicant** |
| **(Incase of a Company)** |
| **Applicant Details** |
| **Name Of the Applicant:** |
|  |
| **Registered Office Address:** |
| **Address1: Address2:****Street/Village: City/Town:****State: Country:****Pin/Zip Code: Landline:****Mobile:** **Fax: Website:** |
| **Details of the Project Implementation Site:**  |
| **Address1\*: Address2:****Address3: City/Town\*:****Country\*: State\*:** **Pin/Zip Code: Landline\*:****Mobile: Fax** |
| **Brief Background Of The Applicant**  |
|  |
| **Date Of Incorporation Of The Applicant\*:**  |
|  |
| **R&D Activity\*:**  |
|  |
| **Trading / Imports & Marketing\*:**  |
|  |
| **Applicant Registration Details** |
| **Applicant Type\*:****Incorporation Certificate (PDF Only Max. Size Upto 2MB.) \*:****Annual Report For Previous Three Financial Year (PDF Only Max. Size Upto 2MB.) \*:****Are The Shares Of The Company Held To The Extent Of 51% By Indian Citizens (including NRIs) \*:****Promoters Background Including Association With Other Industries And Contribution In Those Industries(PDF Only Max. Size Upto 2MB.) \*:****CA certified share holding pattern of the Company of current quarter as on 30-09-2023 (PDF Only Max. Size Upto 2MB.)(According to the Prescribed Format) \*:** |
| **Please attach a scan copy of the PASSPORT (first and last page only) or ADHAAR Card of all the shareholders holding more than 10% of company shares (PDF Only Max. Size Upto 2MB.):** |

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| **Project Implementation Details** |
| **Incubation with any of the recognized Incubation Facility/Industry Partner? \*** **Upload (Company Letter Head)\*****Valid Upto:****Name Of Incubation Centre/Industry Partner:** |
|  |
| **Outstanding Loan** |
| **Are There Any Outstanding Loans?\*:****Please Upload Details in** [**Prescribed Format**](https://www.birac.nic.in/user/downloadformat.php?filename=Loan_Format.doc):**Has The Applicant Received/Applied For Funding From Government/Any Other Agency?\*( *If yes then details of research projects executed by the company  in last 3 years*):****Number of Times\*:** |

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| **Details Of The Funding Received By PI From Government/ Any Other External Agency For The Same Or Technically Related Projects** In case of changing the status of proposal please select no of time again and fill fresh details. |
| **Project Title** | **Source Funding\*** | **Total Project Cost(Rs. In Lakhs)\*** | **Present Project Status\*** | **Date of Sanction** | **Date/Due Date of Completion** | **Amount Received As Grant-In-Aid(Rs. in Lakhs)** | **Amount Received As Loan****(Rs. in Lakhs)** | **Total Approval Cost****(Rs. in Lakhs)** |
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| **Particulars Of The Applicant** |
| **(Incase of a Institute)\*** Universities, academic institutions, and S&T institutions with any industry partner will be preferred. |
| **Organisation Details** |
| **Date of Incorporation of the Applicant\*** |
|  |
| **Recognition or Accreditation Status\*** |
|  |
| **Upload File\*** |
|  |
| **Describe the R&D Strategy and Portfolio/Pipelines(not more than 500 words):\*** |
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| **Details Of The Project Implementation Site\*** |
| **Address1\*: Address2:****Address3: City/Town\*:****Country\*: State\*:****Pin/Zip Code\*: Landline\*:****Mobile: Fax:**  |

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| **S. No** | **Particular of Collaborator/Consortium Partners**  | **Consortium Partner-1** | **Consortium Partner-2** | **Consortium Partner-3** |
| 1 | Description of organization  |  |  |  |
| 2 | Complete registered address  |  |  |  |
| 3 | Complete corresponding address  |  |  |  |
| A | If a company, shareholding distribution *(please insert a capitalization table here)* |  |  |  |
| B | If company, are the shares of the company held to the extent of 51% by Indian citizens (including NRIs) | Yes / No  |  |  |
| 4 | If LLP, are minimum half of LLP’s Partners Indian citizens? | Yes / No  |  |  |
| 5 | If academic institution, is it established in India and having NAAC/ UGC/ AICTE or any equivalent recognition certificate? | Yes / No  |  |  |
| 6 | If Trust, Society; Is it established in India under the relevant Indian Law currently having at least half of the stakeholders (trustees/members etc.) as Indians?  | Yes / No  |  |  |
| 7 | Annual turnover of the immediate last financial year, i.e. April-March (In Rs; In Lakhs) (If foreign organization, in USD) |  |  |  |
| 8 | Specify the size of your organization in terms of employee count |  |  |  |
| 9 | List of attachments  | 1. Certificate of Incorporation (if company, LLP), Registration Certificate (if Society, Trust), if academic institute (accreditation certificate) (PDF only max. size up to 2MB)
2. Annual Report For Previous Three Financial Year (PDF only max. size up to 2MB)
3. Promoters background including association with other organization/sand contribution therein (PDF only max. size up to 2MB)
4. If company, CA certified capitalization table of the company of current quarter (PDF only max. size up to 2MB) (in the Prescribed Format)

if Society, Trust, academic institute, CA certified list of partners/members/trustees with their nationalities (PDF only max. size up to 2MB)  |

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|  **Principal Investigator Details**  |
|  **Title\*:** **First Name\*: Last Name:** **Designation\*: DOB\*:** **Gender\*: Highest Qualification\*:** **Email\*:** **Address1\*: Address2:** **Street/Village\*: City/Town\*:** **Pin/Zip Code:** **State\*: Country:** **Area of expertise\*: Department\*:** **Landline:** **Mobile:** **Upload Resume in Prescribed Format(Please Upload Signed Copy in PDF Format)\*:****Upload Organization's Authorisation Letter To For Submission Of Proposal In**[**Prescribed Format (Please Upload Signed Copy in PDF Format) \***](https://www.birac.nic.in/user/downloadformat.php?filename=Authorisation_letter_format_gci.doc)**:** |

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| **Details of Project Execution Team**  |
| **S.No.** | **Name** | **Designation** | **Email** | **Landline** | **Mobile** | **Resume** | **Edit** | **Current Status** |
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**PROPOSAL DETAILS**

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| **PROPOSAL DETAILS** |
| 1. **Challenge Track *(please choose one)***
 |
| a. TRACK-1: Development of Black Water Household Transformative Sanitation (Toilet) Technology (b-HTST) |
| b. TRACK-2: Development of Grey + Black Water Household Transformative Sanitation (Toilet) Technologies (gb-HTST) |
| c. TRACK-3: Development of Grey & Black Water Community Transformative Sanitation (Toilet) Technologies (gb-CTST) |
|  |
| **2.Executive Summary (500 words)** Please provide a brief description of the proposal for developing the product/solution, that includes background, a concise problem statement that proposal will address, primary objective and proposed approach to achieve, and impact of the solution, as per the details of the particular Track chosen by you (please refer to the RFP document for the description of product/solution for each Track). \*. |
| Do Not Exceed 500 Word Limit  |
| **3.Proposal Information (500 words)**What is your big idea?The novelty of Innovation/Product/ TechnologyBrief work plan to achieve the proof of concept/ pilot for your idea which will include limited field testing/validation**\*.** |
| Do Not Exceed 500 Word Limit |
| **4.Rationale (300 words)**How proposed product/technology aims to address the current gaps as per the scope of the call?\*. |
| Do Not Exceed 300 Word Limit |
| **5. What is the work done so far / current stage of development (both actual and conceptual)?** What is the stage of the proposed idea? (PoC /validation/being commercialized/ others (please specify)) Is the solution/technology/innovation is ready for validation or commercialization, kindly clarify the national/international regulatory requirement or status (ISO 30500, CPCB, NGT etc.)(1) If yes, please provide details, including certificates, data, results, third-party reports etc:(2) If not, please explain your planned pathway to achieve the specific regulation |
|  |
| **6. Is your product/technology an integrated solution, or does it offer component/s of the solution (like solid-liquid separation, sludge treatment, resource recovery etc.)?***Please refer to the details of particular Track given in the RFP document.* If yes, please explain. If no, please describe how you intend to achieve the integrated solution.  |
|  |
| **7. Technology Readiness Level****(1)** Please provide evidence of your TRL assessment (such as, test results, field trial report, third-party validation, pilot results, details of publications) – max. 1000 words. **(2)** Please describe your plans to graduate your technology’s/product’s/solution’s current readiness level to higher readiness levels, and explain your requirements, in terms of resources and readiness specific-timelines, for the same - (Max. 1000 words).  |
|  |
| **8. Manufacturing Readiness Level (Link to MRL Scale)****(1)** Using the MRL definitions provided in Annex-2, please assess your technology’s manufacturing readiness level.**(2)** Please describe your plans to graduate your technology’s/product’s/solution’s current manufacturing readiness level to higher manufacturing readiness levels, and explain your requirements, in terms of resources and readiness specific-timelines, for the same - (Max. 1000 words).**(3)** Please describe cost of manufacturing (with unit economics) of your proposed product/solution, and its basis. Also, please suggest your technical plans and other possible ways by which the unit cost can be reduced.**(4)** How do you see the extent of which you can reduce cost of your product/solution in the next a. 18 months b. 30 months  |
|  |
| **9.Please describe your strategy in following areas (at industrial scale)** This may include details of your in-house capabilities, strategic alliances, outsourced manufacturing plans, marketing and sales partnerships, technology transfer/out-licensing etc.**1)** **Product Manufacturing:** **(2) Commercialization:**  |
| Do Not Exceed 1000 Word Limit |
| **10. Market Size and Opportunity (both National and International)** **What would be your next steps be if you are successful in this work?** Whether the solution is scalable for Indian markets and relevant globally?Is the proposed solution economically sound and sustainable, especially in India**?**  **(300 words)** |
|  |
| **11. Please describe the major hurdles (current and potential) with respect to the following:** 1. Product development, refinement, (re)engineering
2. Product testing, trials, pilots
3. Regulatory approvals, certifications
4. Large-scale manufacturing
5. Backward & forward supply chain development
6. Commercialization through direct deployment, licensing or technology transfer?
7. Cost-reduction\* :
 |
| Do Not Exceed 1000 Word Limit |
| **12**. **Path to impact:** Is the proposed solution designed for mass diffusion and support last mile deployment?Is the developed technology / solution adaptable to local environments and varied Indian soil types and groundwater conditions? Is it scalable across varied geographies, dense urban settlements and peri-urban communities? |
|  |
| **13.Translation Value (300 words)**How does the proposed solution addresses India’s adverse sanitation need and does the solution has applied value in terms of tackling water stress, environment degradation and public health risks etc.  |
| Do Not Exceed 500 Word Limit |
|  |
| **14. Organizational Capacity (500 words)**Address the feasibility of the proposed study in terms of availability of the resources needed to execute the proposal (expertise, capacity, equipment, infrastructure etc.**) \*:** |
| Do Not Exceed 500 Word Limit |

**PROPOSAL OBJECTIVE AND WORKPLAN**

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| --- | --- | --- | --- |
| **Objectives** | **Methodology/Experimental Design/Proposed Activities/****Detailed Work Plan** | **Process Indicators to assess accomplishment of objective** | **Timelines (Month of Start-Month of End)**  |
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**PROPOSED MILESTONES**

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| **S. No.** | **Milestone**  | **Month Of End Of Activity****(In Months)** | **Performance Indicators to be used to Assess Accomplishment of Milestone** |
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**OBJECTIVE WISE BUDGET DETAILS**

**Please provide a detailed budget (inclusive of all), along with suitable break up, to execute the project** *(Please follow the guidelines provided in the RFP document for this purpose).*

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| **OBJECTIVE** | **BUDGET (In Lakhs)** |
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**BUDGET JUSTIFICATIONS**

**DETAILS OF EQUIPMENTS AND ACCESSORIES**

**Available Equipment Details**

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| --- |
| **Details of Equipment Available for this Project with Applicant** |
| **Select**  | **Name Of Equipment** | **Number of Units available** |
|  |  |  |
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**Details of Equipment Available for this Project with Collaborators(s)**

|  |
| --- |
| **Company** |
| **Select**  | **Name Of Equipment** | **Number of Units available** |
|  |  |  |
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**PROPOSED EQUIPMENTS & ACCESSORIES DETAILS**

**Details Of Equipment Proposed To Be Acquired Through BIRAC Contribution For Applicant**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Select** | **Infrastructure/ Equipment** |  **Capacity** |  **Quantity** | **Specific Requirement****In The Project** | **Total Estimated Value(Rs.In Lakhs)** |
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| --- | --- |
| **Total** |  |

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| **Accessories To Be Acquired ( Rs in Lakhs):** |  |

**Details Of Equipment Proposed To Be Acquired Through BIRAC Contribution For Collaborator(s)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Select** | **Equipment** |  **Capacity** |  **Quantity** | **Name Of The Collaborator For Whom The Equipment Is Requested** | **Specific Requirement In The Project With Justification** | **Total Estimated Value(Rs. In Lakhs)** |
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| --- | --- |
| **Total** |  |

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| **Collaborator Name** | **Accessories To Be Acquired ( Rs in Lakhs)** |
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**DETAILS OF MANPOWER**

**MANPOWER DETAILS AVAILABLE**

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| **Manpower (Scientific and Technical) Already Available With Applicant Who Will Work In This Project** |
| **Select** | **Name** | **Qualification** | **Age (In Years)** | **Full Time/Part Time (Specify Hours Per Day)**  | **Experience (In Years)** | **Role In The Project** | **Position** |
|  |  |  |  |  |  |  |  |

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| --- |
| **Manpower (Scientific and Technical) Already Available With Collaborators(s) Who Will Work In This Project** |
| **Select** | **Name** | **Qualification** | **Age (In Years)** | **Full Time/Part Time (Specify Hours Per Day)**  | **Experience (In Years)** | **Role In The Project** | **Position** |
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**MANPOWER DETAILS TO BE HIRED**

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| **Manpower (scientific and technical) to be hired for the project through BIRAC contribution for Applicant** |
| **Select** | **Position** | **No Of Positions** | **Minimum Qualifications** | **Experience (In Years)** | **Age Limit, If Any (In Years)** | **Duration For Which To Be Hired (In Years)** | **Role In The Project** | **Proposed Annual Salary (Rs. In Lakhs)** | **Total Cost** |
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| **Manpower (scientific and technical) to be hired for the project through BIRAC contribution for Collaborator(s)** |
| **Select** | **Position** | **No Of Positions** | **Collaborator Where Manpower Is To Be Positioned** | **Minimum Qualification** | **Experience (In Years)** | **Age Limit, If Any (In Years)** | **Duration For Which To Be Hired (In Years)** | **Role In The Project** | **Proposed Annual Salary (Rs. In Lakhs)** | **Total Cost** |
|  |  |  |  |  |  |  |  |  |  |  |

**CONSUMABLES DETAILS**

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| --- |
| **Through BIRAC Contribution For Applicant** |
| **Select** | **Items** | **Quantity** | **Units****(e.g. g/ml etc.)** | **Approximate Cost****(Rs.in lakhs)** | **Justification For The Requiremen** |
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| **Total Amount Required For Consumables:** |  |

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| **Through BIRAC Contribution For Collaborator(s)** |
| **Select** | **Items** | **Quantity** | **Units****(e.g. g/ml etc.)** | **Approximate Cost****(Rs.in lakhs)** | **Justification For The Requiremen** | **Collaborators** |
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| **Total Amount Required For Consumables:** |  |

**JUSTIFICATION FOR OTHER RECURRING HEADS**

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| --- |
| **Through BIRAC's Contribution For Applicant** |
| **Travel Cost (Rs. In Lakhs)** |  **Travel Justification** | **Contingency Cost (Rs. In Lakhs)** | **Contingency Justification** |
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| **Through Contribution For Collaborator(s)** |
| **Collaborator(s)** | **Travel Cost (Rs. In Lakhs)** |  **Travel Justification** | **Contingency Cost (Rs. In Lakhs)** | **Contingency Justification** |
|  |  |  |  |  |

**DETAILS ON WORK TO BE OUTSOURCED**

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| --- | --- | --- | --- | --- |
| **Select** | **Work Proposed To Be Outsourced** | **Name Of The Institution/Organization To Whom It Is Proposed To Be Outsourced** | **Whether The Applicant has Already Signed Any Contract With This Institution/Organization** | **Estimated Cost Involved In (Rs.in Lakhs)** |
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| **Total Support Requested From BIRAC** |  |

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| **DETAILS ON WORK TO BE OUTSOURCED for Collaborator** |
| **Select** | **Work Proposed To Be Outsourced** | **Name Of The Institution/Organization To Whom It Is Proposed To Be Outsourced** | **Whether The Collaborator has Already Signed Any Contract With This Institution/Organization** | **Estimated Cost Involved In (Rs.in Lakhs)** |
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| **Total Support Requested From BIRAC** |  |

**OTHER FINANCIAL DETAILS**

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| 1. **Details Of The Other Sources Of Funding Received/Requested/Committed For The Proposed Study. Please Include Government, Private, International Any Other Source.**
 |
|   |
| 1. **Funding Received So Far/Approved By Any Of The Government Agencies To The Applicant To Carry Out Any Other Activity During The Last Five Years(Give Details Like Project Title, Amount Received/Approved, Funding Agency And Status Of The Project)**
 |
|  |

**BUDGET DETAILS**

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| **BUDGET DETAILS OF THE APPLICANT** |
| **Non Recurring Cost(Rs. In Lakhs)** |
|  **Equipment****(A)** | **Accessories****(B)** |  **Total****(A+B)** | **Total Support Requested From BIRAC (Rs in. Lakhs)** |
|  |  |  |  |
| **BIRAC Contribution In The Form Of** | **Percentage** |  **Amount ( Rs in Lakhs)** |
|  **Grant-In-Aid** |  |  |

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| **Recurring Cost(Rs. In Lakhs)** |
|  **Manpower (A)** | **Consumables** **(B)** |  **Travel****(C)** |  **Contingency** **(D)** | **Outsourcing** **(E)** | **Total****(A+B+C+D+E)** | **Total Support Requested****From BIRAC (Rs in. Lakhs)** |
|  |  |  |  |  |  |  |
| **BIRAC Contribution In The Form Of** | **Percentage** | **Amount ( Rs in Lakhs)** |
|  **Grant-In-Aid** |  |  |

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| **BUDGET DETAILS OF THE COLLABORATOR** |
| **Non Recurring Cost(Rs. In Lakhs)** |
|  **Equipment****(A)** | **Accessories****(B)** |  **Total****(A+B)** | **Total Support Requested From BIRAC (Rs in. Lakhs)** |
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| **Recurring Cost(Rs. In Lakhs)** |
|  **Manpower (A)** | **Consumables** **(B)** |  **Travel****(C)** |  **Contingency** **(D)** | **Outsourcing (E)** | **Operational****(F)** | **Total****(A+B+C+D+E+F)** | **Total Support Requested****From BIRAC (Rs in. Lakhs)** |
|  |  |  |  |  |  |  |

 **Budget Summary**

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| --- |
| **Name of the Company :**  |
|  **Support Requested From BIRAC :** |  **Grant-In-Aid** |
| **Applicant** |  |  |
| **Collaborator** |  |  |
| **Sub Total:** |  |  |
| **Total Project Cost** |  |
| **Budget Summary for Foreign Collaborators** |
| **Total Budget required for foreign collaborator (Dollars) :** |  |

**Details of Intellectual Property Rights (IPRs)**

(1) Please provide the following details with respect to the intellectual property rights that protects/claims different components/features/technologies of your product/solution

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S No** | **Description of the technology/component covered/claimed/protected by the IPR** | **Form of IPR***(Patent /Trademark /Copyright /Design)* | **Status of IPR***(Filed & Under Prosecution; Prosecution Done, Result Awaited; Granted)* | **IPR Owned By (Name of Organization)** | **Details of IPR***(Application No./Patent No.)* | **Territories / Countries Covered**  |
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(2) Which abovementioned IPRs are co-owned by Applicant / Consortium Member with, or is in-licensed from, third part(ies)?

(3) Please explain the restrictions/limitations in accessing the technologies/solutions, as mentioned above, to execute this project. Please explain how such IPRs shall be made available for this project in a way that it shall not hamper the commercialization of proposed product/solution.

(4) Will you require any third-party owned IPRs or technology(ies) to execute this project in order to commercialize the proposed product/solution in territories of interest? If so, please provide details of such third-party IPRs/technologies, and how you will access it in a way that it shall not hamper the commercialization of proposed product/solution.

(5) Have you conducted Freedom-To-Operate (FTO) analysis of your product/solution (i.e. are you aware of any claim (actual, pending or potential) that your technology/solution may infringe the rights of any third party?) If yes, please provide details of the same (max. 1000 words).

 **SUPPLEMENTARY INFORMATION (if any)**

Please Upload only pdf files

\* File Name should Contain only Alphanumerics(a-z,A-Z,0-9) and Underscore(\_)

\* File size should not be greater than 2MB

|  |  |
| --- | --- |
| **Attachment No.** | **Description** |
|  **Provide references with full citations that are relevant to the proposal** |  |
| **Provide background on the current status of relevant research activities, either nationally or internationally** |  |
| **Describe the public disclosure for your proposal which could be put in the public domain** |  |
|  **Details of any work to be outsourced**  |  |
| **Please upload any additional information** |  |