

ANNEX

TERMS OF REFERENCE (ToR)

Title of Assignment:	National Expert for the Implementation of the Project on Facilitating the Transfer of Appropriate Technologies in the Kingdom of Bhutan for Community Development through Universities and Research Institutions
Name of unit/sector:	Division for Least Developed Countries, Regional and National Development Sector, World Intellectual Property Organization
Place of Assignment:	Home-based
Expected places of travel:	Expected to Undertake National Outreach Activities and Field Visits in Bhutan, as required
Expected duration of assignment:	12 months, from September 30, 2023 to September 30, 2024

1. Objective of the assignment

The World Intellectual Property Organization (WIPO) and the Royal University of Bhutan have embarked on a partnership to implement a pilot *“Project on Facilitating the Transfer of Appropriate Technologies in the Kingdom of Bhutan for Community Development through Universities and Research Institutions”* (hereinafter *“Appropriate Technology Project for Bhutan”* or *“Project”*).

The Project aims to (i) facilitate and support the building of national capacity in the use of technical and scientific information contained in patent information; (ii) assist in the identification of an appropriate technology for local application; and (iii) facilitate the development, adaptation, delivery and deployment of the identified appropriate technology to the beneficiary communities.

The Project will also provide an opportunity for knowledge generation, capacity building, learning, innovation, and collaboration on the development of an appropriate technology for addressing socio-economic challenges for sustainable development in Bhutan.

In light of the above, the specific objectives of the Project include:

- (a) To facilitate and support the building of capacity, particularly at universities and research institutes, to make use of technical and scientific information contained in patent documents;

- (b) To facilitate the retrieval of relevant technical and scientific information to identify appropriate technology or a technological solution for addressing an identified development need;
- (c) To facilitate and support the development, adaptation, demonstration and deployment of the identified appropriate technology through the universities and research institutes for addressing specific development needs of beneficiary communities.

The Project implementation strategy will include the identification, by the Royal University of Bhutan, of one development need area to be addressed by appropriate technology and one local beneficiary community to which the appropriate technology shall be delivered and demonstrated.

The Project implementation process will result in the preparation of: (i) a Patent Search, which will provide a detailed picture of the technical and scientific solutions available and enable the subsequent identification of an appropriate technological solution; (ii) a Technological Landscape Report; and (iv) a Business Plan for the sustainable implementation of the project at the national level.

The implementation strategy will also consist of the capacity building activities to beneficiary stakeholders in Bhutan to assist technological capacity building, in particular their efforts to use scientific and related technical information for addressing development needs.

In this context, the Project will include the preparation of a Business Plan, which would be instrumental for deploying the identified technologies at the national, local and community levels to generate developmental impact.

In particular, the Business Plan will include a concrete and well-defined strategy to assist relevant national institutions/stakeholders in applying the identified technologies in the designated communities. In doing so, the business plans should provide answers to the following key questions:

- What is being proposed in the business plan?
- Who are the ultimate beneficiaries of the proposed technology? (Communities, households, businesses etc.)
- What technology is being planned?
- Why the proposed technology is appropriate to the circumstances and for addressing the identified needs? (Financial expectations, social and development impacts, environmental benefits, growth potential, replicability potential and other benefits.)
- Where will the business plan be implemented? (Location, market, regulatory and operating settings where the implementation will take place).
- Who shall lead to the implementation of the business plan to its final completion? And who else must be involved? (All the parties and institutions whose cooperation and support are needed.)
- How will the proposed technology be implemented?
- How will the planning be completed?
- What kind of resources would be needed? (Time, cost and financial structure and other resources required.)

- How will the proposal be financed?
- How will operations and maintenance, monitoring and evaluations occur?
- How will risks be managed and problems addressed?
- How will progress be monitored and reported?

2. Purpose

The WIPO Secretariat seeks to recruit a National Expert, in accordance with these Terms of Reference, for the implementation of the “Project on Facilitating the Transfer of Appropriate Technologies in the Kingdom of Bhutan for Community Development through Universities and Research Institutions”.

3. Tasks

The National Expert is expected to be available from September 30, 2023, to September 30, 2024.

During this period, the National Expert is expected to undertake the following tasks:

- (a) Take follow-up actions, as required, and submit periodic monthly reports and bi-weekly updates on the progress of Project implementation to WIPO;
- (b) Provide support to the International Expert and Project Team, as required, in (i) refining the search criteria for the technology required for the identified need area; (ii) preparing Technology Landscape Report using the findings of patent information search and non-patent scientific and technical information to facilitate the identification of the most relevant appropriate technology for the identified need area;
- (c) Contribute to the organization of the Training Workshop No 3 on “Business Plan Development and Pitching”;
- (d) The preparation of a Business Plan, which will guide the development and deployment of the identified technology/technological solution in the relevant beneficiary community.
- (e) Contribute to the process of developing a prototype of the identified technology * (demo-ready prototype - Minimum viable product (MVP)), as required;
- (f) Participate in the process of demonstration of a prototype of the identified technology * (demo-ready prototype - Minimum viable product (MVP)) with the beneficiary community;
- (g) Contribute to and assist the Project Team in preparing the End-of-Project Report, which provides details on the completion of Project Deliverables, outlined in the Project Document, and articulates the achievements against the set objectives, challenges faced, lessons learnt and suggestions on possible ways forward;
- (h) Prepare and submit a Final Report, which (i) reports on and provides details of the completion of the related Project deliverables and tasks (Business Plan, Periodic Reports and Updates, Follow-up Actions etc.), (ii) provides the details on the contribution made by the National Expert for the organization of the Training Workshop 3: “Business Plan Development and Pitching”; the outreach activity, as well as involvement in the process of development of a prototype of the identified technology and the demonstration of the prototype with the beneficiary community.

- (i) Contribute to other relevant Tasks and Activities, as outlined in the Project Document.

4. Deliverables/services

The following deliverables will apply to the National Expert:

Deliverable	Timeline
<p>Monthly Reports and Bi-weekly Updates, which provides information on follow-up actions taken and progress made on tasks/activities/deliverables, as specified in the Project Document, Implementation Time;</p>	On Monthly and Bi-weekly basis
<p>Part 1 of the Business Plan, which contains the following sections:</p> <ul style="list-style-type: none"> - Introduction about the proposed technology - Conditions in the beneficiary communities and target client groups - Operating conditions 	To be determined in accordance with the Project's Implementation Timeline
<p>Part 2 of the Business Plan, which contains the following sections:</p> <ul style="list-style-type: none"> - Regulatory conditions (including all required approvals) - Team (who will champion implementation of the business plan) - Stakeholders - Governance and management structure (decision-making, authority and responsibility for the implementation of the business plan, reporting, monitoring and evaluation) 	To be determined in accordance with the Project's Implementation Timeline
<p>Part 3 of the Business Plan, which contains the following sections:</p> <ul style="list-style-type: none"> - Implementation steps and Work Plan for development and deployment of the proposed technology (Steps and schedule from planning to completion, Operations, Maintenance, Management, Accounting, Reporting Plans) - Expected costs and required resources, divided between planning, pre-operation and operation - Financial Assumptions and Projections (Financing Plan, Structure and Resource Mobilization) - Financial Summary (provides a financial snapshot of the project) 	To be determined in accordance with the Project's Implementation Timeline
<p>Part 4 of the Business Plan, which contains the following sections:</p> <ul style="list-style-type: none"> - Expected Impacts and Outcomes - Risks and measures to address (Sensitivity analysis) - Conclusions and recommendations - Executive Summary 	To be determined in accordance with the Project's Implementation Timeline
<p>Consolidated, finalized version of the Business Plan</p> <ul style="list-style-type: none"> - Presentation of the Business Plan to the Project Team, chaired by the President of Jigme Namgyel 	To be determined in accordance with the Project's Implementation Timeline

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<p>Final Report, which (i) reports on and provides details of the completion of the related Project deliverables and tasks (Business Plan, Periodic Reports and Updates, Follow-up Actions etc.), (ii) provides the details on the contribution made by the National Expert for the organization of the Training Workshop 3: “Business Plan Development and Pitching”; for the organization of the outreach activity; the involvement in the process of development of a prototype of the identified technology; the demonstration of the prototype with the beneficiary community, as well as contribution made to the technology search process and preparation of the End-of-Project Report.</p>	To be determined in accordance with the Project’s Implementation Timeline

5. Reporting

The National Expert will report to Mr. Chi Dung Duong, Director, Division for Least Developed Countries, Regional and National Development Sector, WIPO, who is the WIPO Project Manager for the implementation of the Appropriate Technology Project for Bhutan. The contractor shall provide updates the Project Manager on a bi-weekly basis about the progress made on the tasks and deliverables of the Project.

6. Profile

The National Expert should possess substantial first-hand experience, understanding and knowledge of the specific technological needs of Bhutan, and direct expertise and knowledge on issues related to the implementation of technology transfer projects.

Specific requirements include:

- Considerable technical and professional knowledge/experience in the respective sectors of Bhutan related to the identified need area of the Project.
- Experience in the design, formulation and implementation of business plans for technology transfer and development projects in Bhutan, especially for public, private sector institutions and development agencies;
- A good analytical understanding of and experience in the processes of technology transfer, development, adaptation and deployment and the tools that can help promote it, such as, public private partnership, university/private sector collaboration, etc.;
- Experience in the use of project appraisal and feasibility analysis tools and software would be an advantage;
- Postgraduate degree in science, engineering or other similar discipline.

7. Duration of contract

The duration of the contract is 12 months, from September 30, 2023, to December 30, 2024.

Annex 1. Key elements and outline of the Business Plan:

- 1. Executive Summary**
- 2. Financial Summary** *(provides a financial snapshot of the project)*
- 3. Introduction about the proposed technology**
(It must summarize why a particular proposed technology is appropriate to a client group or community (affordable, offers significant benefits, better than other alternatives) and why the identified technology makes sense and is sustainable.)
- 4. Conditions in the beneficiary communities and target client groups**
(Social, economic, political-governmental, demographic and cultural circumstances and characteristics of the region, community, sector and market where the core concept and technology will be implemented)
- 5. Operating conditions**
- 6. Regulatory conditions** *(including all required approvals and the national laws and rules that will govern the creation and operation of the proposed technology. These can include safety, environmental and construction regulations and others).*
- 7. Team** *(Institutions, enterprises, communities, experts and other actors who will have the responsibility for converting what is being proposed into action, who will champion the completion of the business plan.)*
- 8. Stakeholders**
- 9. Governance and management structure** *(decision-making, authority and responsibility for the implementation of the business plan, reporting, monitoring and evaluation)*
- 10. Implementation steps and Work Plan for development and deployment of the proposed technology** *(Steps and schedule from planning to completion, Operations, Maintenance, Management, Accounting, Reporting Plans)*
- 11. Expected costs and required resources, divided between planning, pre-operation and operation**
- 12. Financial Assumptions and Projections** *(Financing Plan, Structure and Resource Mobilization)*
- 13. Expected Impacts and Outcomes** *(social and development impact for the beneficiary community or target client groups, environmental implications and other benefits)*
- 14. Risks and measures to address** *(Sensitivity (what if?) analysis on potential key events (for instance, schedule disruptions, cost and revenue variances, output performance changes, team and staff changes, changes in law and regulation, funding and sponsor changes) that can alter cost, timing, service delivery and outcome, and on how those circumstances can be dealt with.)*
- 15. Conclusions and recommendations**

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