

2nd Phase – KU-IRDP/NTIC Project

Operational Plan

R&BD Program

August 2021



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Background

One of Nepalese Government's major strategic goals in the science and technology field is to promote future economic growth through the new and advanced technologies development. Recently, Nepalese government and Korean government agreed to cooperate to achieve this strategic goal and signed an agreement on building a research and development infrastructure for integrated rural development. In accordance with this agreement, KOICA (Korea International Cooperation Agency) on the behalf of Korean Government has launched a project, "Integrated Rural Development of Nepal through Strengthening Research and Development Capacity of Kathmandu University (IRDP)." After the successful completion of the first phase, now KOICA will provide USD 1.38 million worth of human and financial supports in the second phase for the following activities; i) Research and Business Development, ii) Technology Data Base and Networking, iii) Smart Health Technology, iv) Testing and Accreditation, v) Education and Training Services vi) Startup and Incubation vii) School Based Enterprises. Kathmandu University is the exclusive local partner of IRDP project and all activities of IRDP project will be carried out in collaboration with Kathmandu University.

Research and business development as one of the support programs of KU-IRDP/NTIC aims to support program aims to serve as a research and business development (R&BD) platform of Nepal through relevant operational/support programs. The core of the project is to promote integrated development of the community through strengthening of R&BD capabilities focusing in the area of agriculture and rural development, alternative and renewable energy and health related livelihood. The support from R&BD may range from prototype/process/technique development and improvement, production and commercialization support.

Objectives of the Program

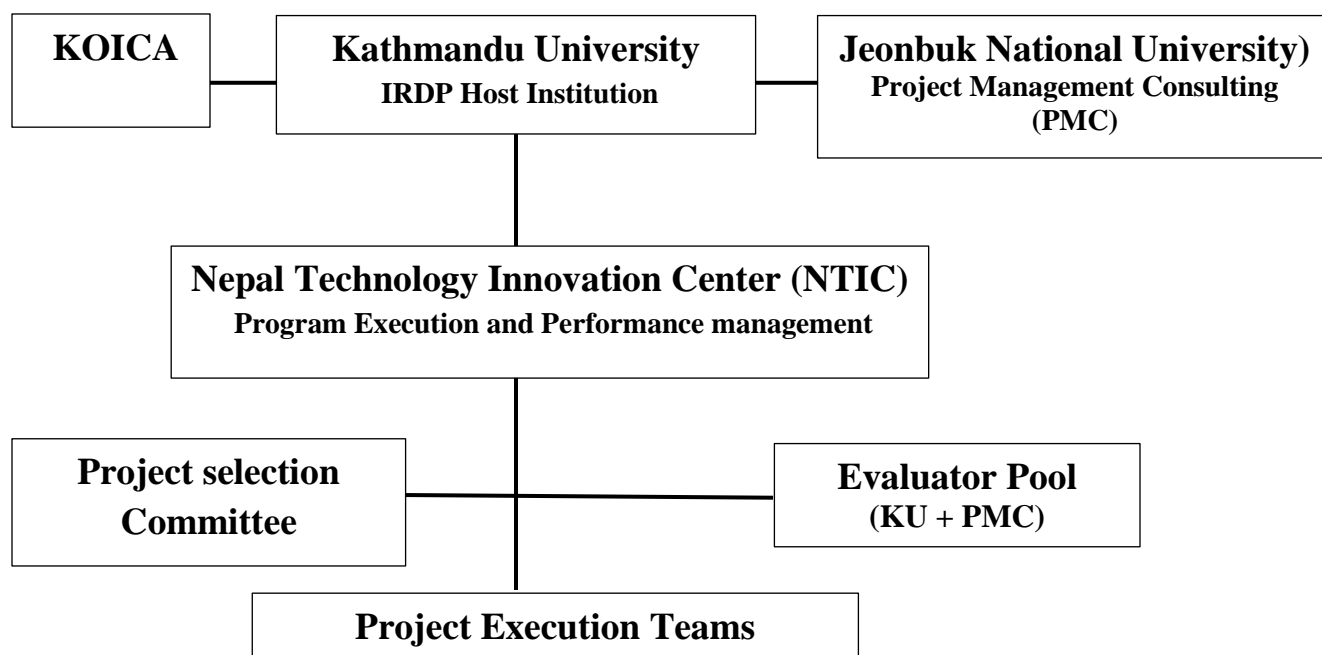
The objectives of this program as a part of the IRDP project are to:

- Support technologies development with business prospects to solve economic and social problems of rural areas in Nepal.
- Promote enterprise development to bridge the gap between research output and commercialization.
- Generate information that is crucial for future technological innovations for rural development.
- Develop a business model or commercialize for propagation of innovative technologies
- Establish and adjust the direction to enable commercialization. (As the main scope will be research and business development activities that can directly contribute to commercial purposes and commercialization of the project outcomes in order to differentiate it from the various research institutes that carry out the basic research field.)

Total Supporting Fund and Period of Program

Category	Details
Total Support Fund	NRs 3,00,00,000
Support Period	2021.11 ~ 2023. 03 (Within 16 months)
Support Fund	Up to NRs 1,00,00,000 per project
Number of Supported Project	Up to 5 projects
Selection Method	Open Competition within KU

Program Implementation System



The Thematic Areas

- a. Agriculture and Rural Development Sector
- b. Alternative & Renewable Energy Sector
- c. Health Sector Related to Rural Livelihood
- d. Other Sectors Contributing to Integrated Rural Development

Eligibility for the Application

- The following eligibility criteria needed to be fulfilled for the application:

For Principal Investigator/s (PIs):

- a. Must be Kathmandu University (KU) faculty or, individual researcher or staff from KU with at least master degree from recognized institution.
 - b. The project team is preferred to be organized into a consortium of KU and external organizations (e.g. industry).
- **Application cannot be accepted if;**
 - a. PI restricted from participation of the research fund program by Nepalese or overseas institution.
 - b. PI has already received research fund on same or similar project.
- **Application will be disqualified if;**
 - a. The proposed project does not match to any of the application areas.
 - b. The proposed project does not have any commercialization scope.
 - c. The proposed project is same or similar compared to the projects that have been already developed or supported.
 - d. PI previously failed to carry out obligation such as: submission of reports, payment of royalties/the balance/claw back, and so on for another different technology development project.
 - e. The full-time equivalent (FTE) of PI is less than 15% and the number of projects handling during the time of application must not be more than 2.

Eligible Types of Projects

- The eligible projects can be of the following types:

1. Single project: the project that deals with any one of the application areas and carried out by a KU or a consortium of multiple research institutions
2. Multi-disciplinary project: the project that deals with multidimensional area of application, for example, inter-linked project from technology development to

commercialization, which is carried out by KU with consortium of multiple research institutions or industries.

Project Budget

- The project budget consists of the supported fund by KOICA and matching fund by the lead research institution unit in which PI belongs and external institution(s) to carry out the project.
- The matching fund must be counted in kind or, in cash.
- The ratio of matching fund should be 10% of the fund supported by KOICA.

Calculation of Project Expenses

- The fund shall support the labor cost and required materials/equipments for the project. However, in the case that the associated institution requests to include other project related items in KOICA's fund, it can be considered with the joint approval of the authorized team from KOICA, PMC and KU-IRDP/NTIC.
- The salary of the PI and associated research personnel as a full-time employee of KU or an external institution shall be calculated as the matching fund in kind.
- The expenses of students, postdoctoral researchers, research assistants/associates, and guest researchers employed to perform a project can be calculated in cash.
- A lead research institution can claim the overhead cost up to 5% of the total fund supported by KOICA for the project.
- Any unspent or excess or difference fund must be returned.
- The final project budget can be adjusted after budget review.
- Calculation of the project expenses should be in compliance with the "Guidelines for R&BD Budgeting and Accounting" attached herewith.

Evaluation of Project Proposals (including bonus and negative points)

- The evaluation for selecting projects to be supported consists of two stages; evaluation of project proposal and presentation.
- Three thematic areas specific experts (two from Nepal and one from PMC, Korea) will be nominated from the evaluator pool for each application areas. However, there will not be any financial liabilities of Korean experts from the budget allocated to R&BD support program.

- The PI or the representatives from the lead research institution must submit the required documents including the project proposal within the deadline. The proposal or documents received after the deadline will not be accepted.
- The total score of project proposal evaluation is calculated by combining the scores from the evaluation of the documents and presentation.
- The evaluation criteria of project proposal are as follows;

Criteria (Score)	Details
Goals and significance (10)	<ul style="list-style-type: none"> - Goals, significance and details of technology development (5): challenging level of goals, relevance of contents - Possibility of business development (5): feasibility, relevance to the areas, development needs, commercialization
Characteristics of technology (20)	<ul style="list-style-type: none"> - Innovativeness (15): technological innovativeness and business model - Differentiation (5): technological differentiation
Development strategies (20)	<ul style="list-style-type: none"> - Business & Technology development system (10): appropriateness of the development system and current market needs - Risk control measures (5): feasibility of risk control measures - Budgeting (5): validity of budgeting for the technology development project
Development capacity (10)	<ul style="list-style-type: none"> - Capacities of the project team including the PI (10): researchers, research & development infrastructure, etc.
Possibility of Commercialization/Propagation and Economic Feasibility (35)	<ul style="list-style-type: none"> - Plan for commercialization/propagation (10): utilization of investment strategies, etc.

	<ul style="list-style-type: none"> - Relevance of commercialization/propagation plan (15): implementation strategies for commercialization, etc. - Economic feasibility (10): patent, profitability, sensitivity analysis, job creation, etc.
Expected outcomes (5)	<ul style="list-style-type: none"> - Additional impacts (5): technological, economic, social impacts

- Bonus points in evaluating project proposal are provided when:
 - PI has obtained a patent on or an experience to develop and commercialize results of their R&BD project (2 points)
 - A female PI or female researchers accounting for 20% of the total take part in the project and maintain throughout the project (2 points)
 - Any collaborative projects with any Korean University or, any Korean research institution or, any Korean Industry or any Korean researchers/faculties. (2 points)
 - Any collaborative projects with any non-Korean universities or, research institutions or, industries or, researchers/faculties (1 point)
 - PI has collected royalties for his work based on the royalty agreement with other organizations (industries) (1 point)
- ※ The evaluation committee combines all the bonus points according to the above criteria though the total score must not exceed 5 points.
- Negative points in evaluating project proposal are provided when:
 - PI has previously implemented a technology development project funded by Nepalese or other countries' institution but the project was suspended due to negligence or considered as negligence in the results of project evaluation. (3 points)
 - PI has previously abandoned the agreement on technology development project funded by Nepalese or other countries' institution without justifications, after being selected as or during the course of project implementation. (3 points)

- PI has committed any kind of research misconduct. (3 points)
 - ※ The evaluation committee combines all the negative points according to the above criteria though the total deduction must not exceed 5 points.

Application Processes

- The period of application and place of submission are as follows;

Category	Period and Method
Call for application	Announcement in the Kathmandu University website and KU-IRDP/NTIC website. September 8 to October 8, 2021 Virtual press meet will also be organized for the announcement of the call
Application form and relevant templates	Available at the website of Kathmandu University and KU-IRDP/NTIC (for download) September 10 to October 8, 2021
Submission of project proposal and required documents	Drop off hard copy at KU-IRDP/NTIC office at KU or Send electronic copy via email at ntic@ku.edu.np September 10 to October 8, 2021

- In case of multi-disciplinary project type, the proposal will be registered by the PI.
- PI should sign and submit the ethics pledge form in the application process.
- If any misconduct found in submitted documents such as data fabrication, falsification, plagiarism, etc., projects that have committed such acts will be penalized like forfeiting the selection, terminating the agreement, and so on according to the relevant guidelines.

Document List for Application

- The documents to be submitted are as follows;

Document type	No. of copies	Notes
Application for technology development project support & Project proposal	1	Prescribed form, hard copy or electronic
Budget sheet	1	Prescribed form, hard copy or electronic
Certificates of eligibility for application (for example, main incorporation establishment permit or organization registration certificate, audit report etc.)	1 for each lead research institution	Scanned copy (PDF Format)
Letter of intent for the participation by representative of partner research institution(s)	1 for each representative	Hard copy or scan to PDF
Project participation agreement	1 for each participant	Prescribed form, Hard copy or electronic
Project participant's employment certificate	1 for each participant	Hard copy or scan to PDF
Project participant's profile	1 for each participant	Prescribed form, hard copy or electronic
Certificates of bonus or negative points	optional	Hard copy or scan to PDF

Procedures for Program Implementation

Procedure	Major Activities	Subject	Date
Posting announcement calling for project proposals	<ol style="list-style-type: none"> 1. Announce application for development projects fund support. 2. Virtual press meets 3. Post on KU website and KU-IRDP/NTIC website 	KU-IRDP/NTIC Team	09/2021
Receiving project proposals	Receive main project proposal and other required documents	KU-IRDP/NTIC Team	09-10/2021
Organizing evaluation committee	<ol style="list-style-type: none"> 1. Select evaluation committee members by each sector 2. JBNU, KU faculties and Nepalese experts 	Selection committee	10/2021
Evaluation project proposal and submitted documents	<ol style="list-style-type: none"> 1. Check eligibilities, evaluation score preferences and evaluation score deductions 2. Selection of the potential project 	KU-IRDP/NTIC Team Selection Committee and Experts	10-11/2021
Evaluating presentations of project proposal	<ol style="list-style-type: none"> 1. Present main project proposal by each PI 2. 10 mins presentation and 20 mins questions and answers 	Evaluation Committee and Experts	10-11/2021
Selecting project	<ol style="list-style-type: none"> 1. Review the evaluation results 	Selection Committee	10-11/2021

	2. Confirm projects to be supported		
Obtaining Approval from KOICA	Approve the result of projects selection	KOICA	10-11/2021
Notifying final selection result to lead research institutions	<ol style="list-style-type: none"> 1. Notifying final selection result to lead research institutions 2. Giving guide on the procedures and documentation for project contract 	KU-IRDP/NTIC Team and PMC	10-11/2021
Making project contracts and depositing KOICA fund	<ol style="list-style-type: none"> 1. Check all documents for project execution agreement 2. Make agreement between the PI, head of lead research institution, KU-IRDP/NTIC, PMC and KOICA 3. Deposit KOICA's fund by PMC 	KU-IRDP/NTIC Team and PMC	10-11/2021

Collection of Royalty.

- After the project ends, royalties can be collected from lead research institution if they are evaluated as "Innovative performance ", "Normal performance ", or "Sincere performance " wherever applicable.
- A lead research institution shall pay basic royalty and ordinary royalty to KU-IRDP/NTIC in KU if the organization(s) utilizes the technology development result wherever appropriate.
- The ordinary royalty is calculated by multiplying sales obtained from the utilization of technological development result by the ratio of ordinary royalty in following table.

Lead research Institution/ Participating Organization	Basic royalty	Ordinary royalty
Kathmandu University	2% of fund supported by KOICA	2% of Profit

- The royalty collection period is for five years since the time when the revenue occurs or for seven years after the project ends, whichever comes first.
- The project that is unable to generate a revenue till the seven years of time period bonded, the project should compensate the KOICA support fund as per the decision of steering committee of NTIC.

Other Notifications

- If any project that has been submitted or after signing the agreement is found to have been already developed or supported, the issue of duplication of projects can be raised.
 - o From the date of the project competition announcement to the end of interim evaluation period to PMC or Project Management and Support Team
 - o By submitting the official letter (relevant ground materials attached) in the name of the representative of the organization or the person that is raising the issue
- Though bonus points given in the evaluation process regarding the participation of female researchers, if the respective organization fails to maintain the conditions for obtaining bonus points such as the number and proportion of female researchers, the labor cost that cover female researchers are subject to disapproval.
- During project implementation, funding can be subjected to changes resulted from KOICA’s policies and budgeting, or selection committee’s judgment, or evaluation committee’s evaluation results until and unless reasonable justification is made.
- Tangible outputs, such as equipment, research facilities, prototype products, etc. that are created during project implementation are owned jointly by lead research institution and KU-IRDP/NTIC. Yet, in cases where tangible outputs are achieved for the purpose of ownership in line with its project proposal, the output is owned by the respective PI.

- Intangible outputs, such as intellectual property rights, copyrights of papers, research notes, etc. that are created during the project implementation are solely owned by the institution that develops any of them. Yet, in cases where multiple organizations are involved in joint development of an intangible output, the output is subject to joint ownership of those involved institutions; whether an intangible output is solely or jointly owned depends on the involved institutions' contributions to the development of the output, based on the details of their project plan (implementation methods, contribution level, research area of each implementing organization, composition of the budget, etc.)
- The project proposal should use the templates provided.
- Budget allocation, adjustment, management, execution and settlement should be in compliance with attached "Guidelines on R&BD Budgeting and Accounting."
- Project agreement and on-site inspections, interim and final evaluations of a project and etc. should comply with "Guidelines on Project Implementation and Management."
- Those cases that are not mentioned in this plan, attached guidelines or other relevant materials as well as different views should follow the decisions made by the Steering Committee with the consent from KOICA.

Contacts

- For further information and templates, please refer to the website of KU-IRDP/NTIC; <http://ntic.ku.edu.np/>
- For further information and enquiries about this program, please email;
 - Project Management and Support Team at ntic@ku.edu.np and irdp@ku.edu.np
 - Contact Person in R&BD Support Team at rmaleku@hotmail.com
 - Contact Person in PMC at ysoh@jbnu.ac.kr

NOTE: The operation plan shall be amended considering the current COVID-19 pandemic