

Science and Technology Human Resource Development Project

General Guideline for Strengthening Industry Linkages

(Guidelines applicable to Technology Faculties and the Engineering Faculty supported by STHRD Project)

Introduction

1. The Output Number 03 of the Project is on Strengthening Industry Linkages and International Collaborations. In the area of Industry Linkages, it is expected that universities will develop joint proposals with industry partners for:-
 - i) Research and Development activities to solve industry problems or come up with new products or services,
 - ii) Customized training programmes to meet industry demand in technology and engineering areas to improve students' employability or existing workers' skill upgrading, and
 - iii) Other innovations in industry-university linkages.

The project will provide grants to support proposals competitively selected by a technical committee established by the Ministry of City Planning, Water Supply and Higher Education (MCPWR&HE) and University Grants Commission (UGC). The project management unit (PMU) and UGC will monitor the financial and technical progress, respectively.

2. In order to perform above functions by the university, the relevant powers provided to the university by the Universities Act No. 18 of 1978 are as follows:

"29. Subject to the powers, duties and functions of the Commission, a University shall have power –

(d) to provide postgraduate courses, and for this purpose, to co-operate with other universities or authorities in Sri Lanka or abroad, in such manner and for such purposes as the University may determine;

(q) to provide for extension services to the general public, including employees and school-leavers, in trades and industry and in accordance with any By-law providing for the same;

(r) to make arrangements for conducting courses or parts of courses in educational institutions outside the University, in accordance with any By-law providing for the same;

(t) to do all such other acts and things, whether incidental to the powers aforesaid or not, as may be requisite in order to further the objects of the University."

Broad Guidelines for implementation of Industry Partnerships

i) Research and Development

3. Industry collaborations for Research and Development will involve Undergraduate Research, Postgraduate Research and joint university-industry research on identified research topics relevant to address the problems and challenges faced by Sri Lankan industries.
4. Undergraduate researches are short term researches or projects having credit value of 6 to 8 in order to primarily build the research competencies of students. These research projects may focus on improvement of products or services in the industry or solving problems in the industry. There will be many researches in this category in a given semester, depending on the number of students. These research activities may be administered by the Academic Department and the formal letters exchanged between the Head of the Academic Department and the authorized person in the industry are sufficient in this regard. Industry may facilitate the research by way of providing access to relevant sections of the industry plant, guidance by industry supervisors and supply of tools and equipment. The output of the research may be shared with the industry for improvement of their products or services. If the industry requires the university to maintain the confidentiality of part or full research work, the Academic Department may comply with such requirement. Short research work of taught postgraduate programmes also can fall into this category.
5. Postgraduate Research leading to M Phil and PhD degrees are long term research and some of these research may be based on industry requirements. Technology and Engineering Faculties should base researches on industry requirements, should they apply for research funding from the project. There can be two categories of students in these research degree programmes namely; students sponsored by the industry and the students enrolled by the university without the mediation from a particular industry. Further, these students may study full time or part time.
6. Joint university-industry research on identified research topics are aimed at improving production processes or generating new knowledge, products or services. Initiatives for such research may originate from the university or on the request of an industry that are of industry relevance. In either case, faculty/university must establish criteria for evaluation of proposals and the selection of appropriate industry partners. These research should be based on formal agreements between the university and the industry where the inputs of each party are specified. Academic staff members and postgraduate students from the university and subject specialists from the industry may be involved in such research.
7. The output of research identified in above items 5 and 6 may lead to creation of Intellectual Property. The matters relating to ownership of such Intellectual Property should be clearly specified and stated in the agreement between the university and the industry partner. Some universities have established **Intellectual Property Advisory Committees** at the University Senate level to advise the Senate and the Council of the university on the ownership of Intellectual property and such committee may be guided by the Intellectual Property Act No. 36 of 2003 and internationally used instruments such as Lambert Toolkit. Lambert Toolkit provides specimen agreements for several types of partnerships.

ii) Customized Training Programmes

8. Customized training programmes may be designed and/or delivered by the industry to university students. An example is a product operating licenses and training programmes offered by the industry that can be delivered to the students, either within or outside the degree programme curriculum. There may be a fee involved in assessing, certifying and licensing. If such certifications or licenses are adding industry qualifications to students to enhance their employability, it would be allowed for financing from the project. Similarly, university may design and offer industry specific training programmes that will enhance employability of graduates.
9. The university may offer training programmes to the employees of the industry in modern technology areas to upgrade the skills of industry personnel. The university will be able to generate income from these training programmes and also can improve industry relations.

iii) Other innovations in industry-university linkages

10. Other industry-university linkages may include;
 - Industry Liaison Committees to advise on curriculum improvements
 - Relations with Accreditation Bodies and compliance with their accreditation requirements, including payment of recognition/accreditation evaluation fees
 - Industry resource persons for delivery of industry oriented study modules
 - Providing industrial training to students
 - Industry visits for students and delivery of guest lectures from industry
 - Career guidance and job fairs for students
 - University staff providing consultancy services to the industry
 - Participation in industry/profession body liaised exhibitions, Conferences, Seminars etc.
 - Recruiting industry liaison officer(s) to organize industry events
 - Facilitating industry sponsored laboratories.
11. Universities may look for more innovative ways of improving industry relations in order to improve the attributes of graduates and research activities of the university. Many of these activities will require funding throughout the year. Payments to Accreditation Bodies for assessments may come once in a few years.

Funding for strengthening Industry Linkages

Funding will be made available from the allocation at the PMU in the following manner;

12. Research and Development activities stated in items 5 and 6 above can be considered to be funded based on the proposals submitted by the universities. The proposal must include, in addition to justification/rationale, intended outcome and operating arrangements, the financial and in-kind contributions from the university and from the industry partner and how the Intellectual Property is owned.

13. Customized industry training programmes to students can be funded based on the proposals submitted. Income generated from training programmes offered to the industry may be credited to a fund within the department/faculty, if the provision exists in the university, to sustain industry training programmes offered to the students after the project period and other student competency enhancement activities.
14. Proposals under item 12 and 13 above must be screened at the Faculty Board level and submitted to the MOHCA (PMU) by PIU through the Vice Chancellor. Proposals received will be evaluated by a panel appointed by the PMU in each year and financial allocations will be made. Maximum allocation to each proposal will be US\$ 0.5 million under this category.
15. Other innovations in industry-university linkages listed in items 4, 10 and 11 will be funded by a fixed allocation to each degree programme and this amount will be Rs 5 Million per year. An annual activity plan must be submitted. Actual evaluation fees to be paid to respective Accreditation Bodies in respect of each specialization of a degree programme will be made available, in addition to the annual fixed grant under this category.

Proposal Submission

16. There will be two-stage submission process. The first stage is concept paper for initial screening and second stage is full proposal for approval. The first stage concept paper should include (i) objectives and outputs aligned with STHRDP's impact and outcome, (ii) rationale of the partnership, (iii) description and planned selection process for the candidate partner institutions which satisfy ADB's member country eligibility requirements; (iv) scope of collaboration, (v) possibility of downstream collaboration works, (vi) initial cost estimate, (vii) proposed collaboration period, (viii) team member, (ix) capacity of academic staff, (x) approval of university. The concept paper template is in Appendix 1. Once the concept paper is approved, applicants will submit second stage full proposal which will include, but will not be limited to, (i) detailed timeline, (ii) detailed estimated cost, (iii) detailed scope of collaboration (terms of reference), and (iv) sustainability of the partnership, in addition to the items included in the concept paper. The second stage full proposal should also reflect comments and suggestions provided by the technical committee at the approval of the concept paper. The proposals will be submitted to the project management unit (PMU) at MCPWR&HE.

Concept Paper Template

1. Objectives
This needs to be aligned with STHRDP impact, outcome and outputs principles.
2. Rationale of the partnership
Provide justifications and rationale of the need for this partnership.
3. Description and planned selection process for the candidate partner institutions
Describe the candidate partner institutions, and make sure they are located in ADB eligible member countries (i.e., 66 ADB member countries excluding Belgium).
Describe the selection or search process for the candidate partner institutions.
Partner institutions may be selected by the IAs on the basis of pre-existing partnerships, expressions of interest undertaken by the IAs, or other methods.
4. Scope of collaboration
Briefly describe the scope of collaboration.
5. Possibility of downstream collaboration works
Briefly describe downstream collaboration works (if any)
6. Initial cost estimate
Provide rough cost breakdown by main activities, and discuss value for money.
7. Proposed collaboration period
MM YYYY – MM YYYY
8. Team member
List up all the team members of this proposal.
9. Capacity of academic staff
Discuss previous similar research experiences
10. Approval of University
Clarify if this concept paper has been approved for submission.

Assessment Criteria

Assessment Ratings -	1 – Does not satisfy
	2 – Marginally satisfy
	3 – Satisfy

Note: All bullet points must be rated according to the above rating criteria. Critical fields are marked by bullet (*) and these fields should have received rating 3 (satisfy), together with satisfactory ratings for other fields in the opinion of the Technical Committee for a proposal to be acceptable. For the purpose of ranking the proposals, cumulative of ratings 2 and 3, ignoring ratings 1, will be taken.

Proposal	Rating	Key reason(s) for the rating
1. Objectives <ul style="list-style-type: none"> • Are the objectives clearly stated? * Are the objectives aligned to the STHRD Project outputs? • Are the objectives likely to be achieved during the stated time frame? 		
2. Rationale of the partnership <ul style="list-style-type: none"> * Is the need for partnership clearly justified? 		
3. Description and planned selection process <ul style="list-style-type: none"> • Is the proposed partnering institute situated in an ADB member state? * Is the method used for identifying the partnering institute acceptable?(Ref. para 7 of Annex1) * If there had been a selection process, is it a transparent process to select the partnering institute according to ADB guidelines? 	Yes/No	(if No, the assessment process terminated)
4. Scope of collaboration <ul style="list-style-type: none"> * Is the scope of collaboration aligned with the objectives? • Do the activities identified adequate to achieve the objectives? • Will the activities identified likely to make a positive impact for the development of the Department/Faculty? 		
5. Possibility of downstream collaboration works, if any <ul style="list-style-type: none"> • Do the set objectives provide for downstream collaborations? • Do the downstream works identified as continuation of the main proposal? • Is there a flexibility in the proposal not to 		

continue to downstream works, if the objectives are not fully achieved?		
6. Cost estimates <ul style="list-style-type: none"> • Is the cost estimate comprehensive and cover all activities? • Are the components such as cost of travel and living expenses comply with government regulations? * Are the benefits of the collaboration match with money spent? 		
7. Proposed collaboration period <ul style="list-style-type: none"> • Is the period of collaboration match with the time required to accomplish the activities identified in the scope? 		
8. Team members <ul style="list-style-type: none"> • Is the list of team members available? • Do sufficient number of staff members benefit from the activities? • Is the services of a Consultant(s) obtained and a justification to that effect is provided? 		
9. Capacity of academic staff <ul style="list-style-type: none"> • Are there staff members with similar collaborative/research experience involved in the activities? • Can the academic staff devote sufficient time for the activities of collaboration? 		
10. Approval of the Faculty Board/university <ul style="list-style-type: none"> • Is the approval of the Vice Chancellor available for the Concept Paper (Initial Proposal)? • Is the approval of the Council of the university available for the final proposal and the agreement? 		

Comments of the Technical Committee:

Recommendation:

Signatures.