

## **TERMS OF REFERENCE**

### **NATIONAL CONSULTANT FOR MODERNIZATION OF SRI LANKA GERMAN RAILWAY TECHNICAL TRAINING CENTER AT RATMALANA**

#### **I. BACKGROUND**

1. The Government of Sri Lanka has received financing from the Asian Development Bank (ADB) for the Railway Efficiency Improvement Project (REIP) and intends to apply a portion of the proceeds to engage a national consultant (the Consultant) to support the modernization of the Sri Lanka German Railway Technical Training Center (SLGRTTC) at Ratmalana. The Ministry of Transport & Highways (MOTH) is the executing agency. The project will be implemented by the Project Management Unit (PMU) of REIP.
2. The successful implementation of REIP, and of future projects to be implemented to support the modernization of the suburban railway network of Colombo and overall railway network of Sri Lanka, has significant implication on the ready availability of trained and competent workforce for execution and maintenance of upgraded and expanded railway network in Sri Lanka. The modernization, expansion, and institutional capacity of the SLGRTTC has been included as a component of REIP to support the improvements and sustainability of the railway network.
3. The SLGRTTC was established by the Government of Sri Lanka in 1984 at Ratmalana, a suburban area of Colombo City, with the financial and technical assistance of the Federal Republic of Germany. The main aim of the institute is to cater for trained manpower and technical upgradation training requirements of Sri Lanka Railways (SLR). The institute offers:
  - a. Four full-time technical courses viz diesel engine mechanic, machinist, electrician, and welder. All courses are structured and linked to the national vocational qualification (NVQ) framework at NVQ level-4;
  - b. Short-term technical and capacity building courses in a variety of disciplines for the existing workforce of the SLR including training of diesel loco operators and railway guards; and
  - c. Facilitation of in-plant training for engineering and technical students at railway workshops and facilities
4. The present roles of SLGRTTC include:
  - a. Produce technically-skilled and competent workforce according to the National Competency Standards to cater the skilled worker requirement of SLR as well as the country;
  - b. Conduct short-term training courses to upgrade knowledge and skills of existing SLR workforce including locomotive operators, guards and technicians in newer technology and operations;
  - c. Make available laboratory and workshop facilities for trade tests and skills assessments; and
  - d. Facilitate in-plant training of undergraduates, technical students, and other departmental employees.
5. The current rolling stock of SLR consists of old and moderately new locomotives, carriages, wagons, and diesel multiple units. Sri Lanka Railways is facing a shortage of experienced skilled technical workforce for maintenance of these equipment, which is further accentuated by retirement of experienced staff. With the upcoming railway modernizations and the planned introduction of new locomotives (both

diesel and electric), newer knowledge and skills of advanced technologies are essential to be planned right away.

6. The SLGRTTC has hardly been upgraded with modern technology and new capacities of laboratories and staff since 1984. It mainly caters to the technical training requirements which were identified along with technology introductions linked with diesel traction. The implementation of the Colombo Suburban Railway Project, which includes the planned modernization and electrification of four suburban railway lines in Colombo, will lead to a change of the hauling traction of railway from diesel to electric. REIP will also modernize the ticketing, telecom, signalling system of SLR and supply of Train simulator for SLGRTTC. The SLGRTTC being the major supplier of skilled manpower and technical trainings and productivity improvement programs to Sri Lankan Railways, thus needs to be upgraded along with the planned modernization of SLR.

## **II. OBJECTIVE OF THE ASSIGNMENT**

7. The objective of the assignment is to develop a systemic approach for the modernization and expansion of SLGRTTC, and facilitate its implementation with on-site continuous training in order to support current and future skilled manpower requirements of SLR and worldwide.

## **III. SCOPE OF WORK**

8. The scope of work of the consultant includes, but is not limited to the following:

- a. Development of systemic approach for SLGRTTC modernization with new courses and advance training facilities according to the planned modernization and expansion of SLR;
- b. Survey of the present and future skilled manpower needs of the SLR, worldwide and recommendation on the new courses to be offered from SLGRTTC;
- c. Upgrading of existing four trades (diesel engine mechanic, electrician (power), machinist, and welder) including curriculum, learning material, and assessment scheme as per the identified needs of the skilled workforce by SLR;
- d. Design and development of new course for training for train simulator including curriculum, learning material, and assessment scheme as per the identified needs by SLR and foreign job market;
- e. Design and development of new courses (minimum of six new courses), including curriculum, learning material, and assessment scheme as per the identified needs by SLR and foreign job market; Consider following new training programs for Implementation:
  - i. Mechatronics technician
  - ii. Railway signalling and telecom technician
  - iii. General fitter
  - iv. Electronic technician
  - v. Electrical traction engine mechanic
  - vi. Railway track engineer
  - vii. Rolling stock engineer
  - viii. Permanent way construction craftsman
  - ix. Carpenter and aluminium fitter
  - x. Railway driver (diesel and electric loco)
- f. Designing of short-term and bridging training programs for working personnel of SLR, including in the following suggested areas or any:

- i. Railway commercial and accounting systems
  - ii. Railway ticketing and seat reservation systems
  - iii. ERP system, and computer awareness course
  - iv. Geographical information system and global positioning system technology
  - v. Updating training for station master, guards, drivers, etc.
- g. Implementation of information and communications technology-based training methodology and blended learning concepts.
  - h. Supporting the accreditation process of new courses and upgrade of existing courses up to NVQ 7 as per NVQ guidelines and Sri Lanka Qualification Framework (SLQF) through National Apprentice and Industrial Training Authority and Tertiary and Vocational Education Commission.
  - i. Prepare guidelines for recruitment and selection of management, administrative, and training staff for SLGRTTC with close support from SLR;
  - j. Establishment of standard operating procedure and training plan for the operation of SLGRTTC.
  - k. Preparation of quality policy for SLGRTTC and suggest a quality management system for implementation (e.g. International Organization for Standardization ISO:9000, European Foundation for Quality Management, etc.).
  - l. Development of the technical and pedagogical competence of SLGRTTC training instructors by planning and organizing training at in-country and abroad institutions.
  - m. Development of the managerial and administrative competence of management and administrative staff through coaching and trainings (in-country and abroad).
  - n. Designing and development of a marketing and public relation strategy for SLGRTTC, and implementation of a communication program.
  - o. Preparation of business plan, annual workplan, and budget for the operation of SLGRTTC;
  - p. Securing linkages of SLGRTTC with international railway training institutions for sustainable cooperation and exchanges.

#### IV. EXPERTS QUALIFICATION REQUIREMENTS

9. A minimum of 9 person-months of national experts, The position qualifications and person-months are presented in Table 1.

**Table 1: Required Qualifications and Inputs of Experts**

No	Position	Qualification	Person-months
1	National consultant	<p>The training facilities and curriculum design expert should have a proven track record in setting up training facilities viz laboratories and workshops and course designing in a reputable TVET institution.</p> <p>He/she should have at least 8 years of experience in setting up of course curriculum in a TVET institution and 5 years of experience in a management position.</p> <p>He/she should have a degree qualification with a minimum 10 years of overall professional experience.</p> <p>Railway training related experience will be an added qualification</p>	9

TVET = technical and vocational education and training.

## V. REPORTING REQUIREMENTS AND SCHEDULE FOR DELIVERABLES

10. The selected Individual consultant will report to the head of SLGRTTC. The consultant will have prior consultations with the project management unit (PMU), SLR, and relevant departments while conceptualizing and preparing important reports. The consultant will also brief the ADB project team leader and team members regularly. Feedback and guidance provided by SLR, SLGRTTC, and ADB project team will be incorporated by the consultant in its work.

11. An indicative time schedule for the main deliverables is given in Table 4. This will be updated in consultation with SLGRTTC and ADB going forward. The consultant will submit two printed copies and electronic copies of all the key deliverables and final reports.

**Table 4: Schedule of Deliverables**

No.	Deliverables	Timeline Month (at the end of)	Payment milestones
D-1	inception report including project mobilization plan, placement of resources, activity implementation schedule, training plan	1	10%
D-2	Contextual survey report detailing observations and findings for new courses at SLGRTTC,	2	15%
D-3	Draft Report for Curriculum planning and adaptation report, learning resources, course module development for new courses, pilot trainings initiated for trainers and staff, sessions for students,	6	25%
D-4	Draft Report including implementation status, quality management system, accreditation status, status of international linkages of SLGRTTC	8	25%
D-5	Final report (3 Hard copies and Digital copy)	9	25%

### Client's Input and Counterpart Personnel

12. The PMU and SLGRTTC will:
- a. Provide Infrastructure development plans
  - b. Assist consultant for liaison with other departments and project stakeholders and arrangement of meetings.
  - c. Provide counterpart personnel for training and capacity building, as necessary
  - d. Provide office space including furniture and office equipment to the consultant for executing his/her deliverables.

L 3806: Railway Efficiency Improvement Project  
 COST ESTIMATES FOR CONSULTANCY SERVICE  
 NATIONAL CONSULTANT FOR MODERNIZATION OF SRI LANKA GERMAN  
 RAILWAY TECHNICAL TRAINING CENTER AT RATMALANA

(Expressed in US Dollars)

**SUMMARY**

	<b>Total (USD)</b>
1. <u>Consultants (Main)</u>	36,000
Remuneration, traveling, printing, communication	36,000
3. <u>Contingency</u>	3,600
4. <u>VAT</u> 18%	7,128
<b>Total Amount</b>	<b>46,728</b>

NC-1: Remuneration, traveling, printing, communication

Position	Qty	Number of Person-Months	Total Person-Months	Agreed Fixed Monthly Rate	Estimated Amount
NC-01 National consultant for modernization of Sri Lanka German railway technical training center at Ratmalana	Month	9	9	4000	36,000
<b>Sub total</b>	<b>Month</b>	<b>9</b>	<b>9</b>		<b>36,000</b>