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**AFTER II**  
**Appui à la Formation Technique et à l'Emploi au Rwanda**

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**Terms of Reference**

**Consultancy services to develop trainers' and trainees' manuals  
for plumbing technology and public works TVET curricula**

**Activity code: 2.1.2**

## **I. CONTEXT/PROJECT**

### **1. Context and justification of the need:**

The Government of Rwanda and Agence Française de Développement (AFD) signed 5 years grant/loan agreements on 8<sup>th</sup> March 2023 to implement AFTER II Project (*Appui à la Formation Technique et l'Emploi au Rwanda*). AFTER II aims to improve technical and vocational education and learning conditions in order to strengthen the skills of youth in line with labor market requirements.

Project management will be provided by two contracting authorities: Rwanda Polytechnic (RP) for colleges-related interventions, and Rwanda TVET Board (RTB) for TVET schools-related interventions, through their respective Single Projects Implementation Unit (SPIU).

Expertise France will provide technical assistance to the project implementation. Short and long-term expertise are mobilized on the basis of a technical offer validated by AFD, with the agreement of the Rwandan party.

On RP side, the beneficiary sites are Karongi and Kitabi colleges located in Karongi and Nyamagabe Districts respectively. On the side of RTB, the beneficiary sites are Muhororo and Cyanika TVET Schools located in Karongi and Nyamagabe Districts respectively.

### **2. Objectives of the project:**

The main objective of AFTER II project is to reinforce the employability of youth and increase the number of TVET students in Nyamagabe and Karongi districts.

AFTER II project is divided into 4 main components and 2 cross-cutting components:

- **Component 1:** The IPRC Kitabi and Karongi and TVET schools of Cyanika and Muhororo campuses are expanded, modernised and environmentally friendly

- Component 2: The training offer in the IPRC Kitabi and Karongi and TVET schools of Cyanika and Muhororo is strengthened and more attractive
- Component 3: The link between TVET providers and the private sector is strengthened, and employment and entrepreneurship support mechanisms are more efficient
- Component 4: The quality and leadership of RP and RTB as institutions in the TVET sector are reinforced
- Cross-cutting component 5: The TVET programs are more gender-responsive and inclusive and specifically address dropouts of the general education
- Cross-cutting component 6: Greening TVET – TVET programs provide youth with green skills and competencies for sustainable economic growth

### 3. Progress of the activity concerned by the ToR

In line with the implementation of AFTER II project, the project has supported the development of Level 5 curriculum in plumbing technology and public works.

The next step after the development of curricula is the elaboration of training manual for each module identified in the approved curriculum.

The project aims to develop manual for level 3, Level 4 and level 5 of plumbing technology and public works as one of the trades supported at Muhororo TSS.

These manual will support both trainers and trainees by ensuring standardization of the training, consistency, efficiency and effective training

## II. OBJECTIVE AND EXPECTED RESULT OF THE MISSION

### 1. General objective

The main objectives of the assignment are the development of different trainers' and trainees' manuals for plumbing technology and public works that aligns with the RTB approved TVET curricula.

### 2. Specific objective

Specifically, the following number of manual will be developed:

- To develop **67** trainees' manuals (modules) that provide clear, concise, and user-friendly instructions for participants undergoing training programs in Level 3,4, and 5 for Plumbing Technology and Public Works trades.
- To develop **67** trainers' manuals (modules) that equip trainers with the necessary methodological guidance and information to effectively deliver the training curriculum in level 3,4, and 5 Plumbing Technology and Public Works trades.

**Note:** A list of selected modules is presented in Annex 1 to this document.

### 3. Anticipated results

The following anticipated result are expected at the end of the assignment:

- 67 trainees' manual (modules) have been developed based on approved curricula of RTB
- 67 trainer's manual (modules) have been developed on approved curricula of RTB

### 4. Description of the assignment and Scope of work

Expertise France is supporting Rwanda TVET Board in the AFTER II project implementation. In this framework, Expertise France will recruit a consultancy company to support the development of trainers' and trainees' manuals for plumbing technology and public works based on the approved TVET curricula of Level 3, Level 4 and level 5

In line with the objective of this assignment, the consulting firm will work in a close collaboration with RTB department in charge of curriculum and instructional materials development and will:

1. Participate in an initial kick-off meeting with key stakeholders to discuss the curriculum, objectives and expectation
2. Conduct a detailed review of the approved curriculum and existing material like format of the manual
3. Develop 67 trainees' manual (modules) for specific, general and complementary competencies for TVET level 3,4, and 5 for Plumbing Technology and Public Works curricula;
4. Develop 67 trainer's manual (modules) for specific, general and complementary competencies for TVET level 3,4, and 5 for Plumbing Technology and Public Works curricula;
5. Incorporate visual aids, charts and diagrams where necessary
6. Provide regular progress updates and submit the draft manual for review
7. Perform Iterative refinement of the manual based on the feedback from RTB
8. Finalise and submit the completed training manual developed

**Note:** The consultancy firm shall comply with RTB acceptable formats for training manuals development and Designs.

## 5. Place, duration and terms of performance

This assignment can be performed at any place. In case of face to face meeting, the place shall be at RTB offices in Kigali or any other place defined by RTB

- a. **Implementation period:** 1 October 2024 to 30 June 2025
- b. **Start date:** 1<sup>st</sup> October 2024
- c. **End date:** to be defined later
- d. **Effective duration per assignment:** 1 year
- e. **Schedule/programme:** to be defined later based on agreed work plan

## 6. Assignment reports

The hired consulting firm will report to RTB through the Head of Curriculum and Instructional Material Development and Expertise France and will provide periodic briefings during the execution of the assignment.

## III. REQUIRED EXPERTISE AND PROFILE

The consultancy firm should have at least 2 years of proven experience in the development of competency-based curricula and Training manuals.

The consultancy team should consist of at least the following team members:

- i. **A Team leader:** Responsible for overall project coordination
  - At least a Master's degree in Education Science, Curriculum and instructions or a related field
  - At least 5 years of experience in competency-based curriculum development and training material development, especially in the TVET sector
  - Proven experience of 2 years in conducting similar assignments
  - Writing skills, leadership skills and organisational skills
- ii. **Content experts/ Author:** In charge of developing the core material of the manual
  - At least an advanced diploma in the field
  - At least 3 years of experience in the field
  - Experience with 2 similar assignments in training material development
  - Proficiency in English language, very good writing skills and word

processing skills

iii. **Reviewers:** In charge of evaluating the content for accuracy, relevance and comprehensiveness

- At least an advanced diploma in the related field
- At least 3 years of experience in the related field
- Experience of 2 similar assignments in training material development
- Proficiency in English language and very good writing skills and word processing skills

iv. **Editors:** In charge of refining the text for clarity, coherence and correctness and ensure consistency in style and format

- At least a Master's degree in English or other related qualifications
- Have experience in editorial work proven by 2 certificates of completed services
- Very good spelling and grammar and very good writing skills and skills in word processing

v. **Illustrators:** In charge of creating visual elements that enhance the manual's usability

- At least an Advanced diploma in Graphic design or other related qualifications;
- At least 3 years of Experience in Illustrations design of Educational Materials such as training manuals or study texts books;
- At least 3 years proven experience in working with publishers related assignments

vi. **Graphic Designers:**

- At least an Advanced diploma in Graphic design or other related qualifications;
- At least 3 years of Experience in designing of Educational Materials such as training manuals or study texts books;
- At least 3 years proven experience in working with publishers related assignments.

**Note:** The number of people to be mobilised shall be clearly indicated in the application

#### IV. DELIVERABLES AND TIMELINE

The consulting firm is expected to deliver the following:

#	List of deliverables	Timeframe
1	Participation in kick off meeting	5 days After the signing of the contract
2	<b>Inception report</b> containing the methodology, a detailed work plan and other details for the assignment	10 working days after the kick off meeting
3	<b>Draft version</b> of 134 training manuals (67 trainees' manuals + 67 trainers' manuals) developed	Maximum of 6 months from the approval of the inception report  <b>Note:</b> Each Manual developed will be submitted once finished to receive feedback
4	<b>Final version</b> of 134 training manuals (67 trainees' manuals + 67 trainers' manuals) developed in both pdf and word document	Maximum of 3 month from the reception of recommendation from RTB
5	<b>Final Report</b> providing all outputs, list of participants, description of process and the achievements, as well as recommendations for implementation	Two weeks from the reception of validation of all the manual

It will be noted that:

- The reports and training manuals shall be submitted officially to RTB through the Head of Curriculum and Instructional Material Development and expertise France
- All written deliverables submitted to RTB shall be in English.
- The final version of manuals approved will be submitted in hard and soft copy (PDF and Word).
- The consulting firm is expected to submit the deliverables on or before the agreed-upon deadlines. Approved deliverables shall be the basis for payments under this assignment.
- RTB reserve the right to reduce the number of manual to be developed before the start of the assignment

## V. COORDINATION

The consultancy firm shall nominate a contact person for project implementation purposes

For the side of Rwanda TVET Board, all the communication shall be addressed to  
Mr Aimable Rwamasirabo,  
Head of department Curriculum and Instructional Material Development  
Email: [arwamasirabo@rtb.gov.rw](mailto:arwamasirabo@rtb.gov.rw)  
Tel: +250788546636

For the side of Expertise France, all the communication shall be addressed to  
Mr Kiba Muvunyi,  
Component manager for TVET and Institutional development  
Email: [kiba.muvunyi@expertisefrance.fr](mailto:kiba.muvunyi@expertisefrance.fr)  
Tel: +250788355036

Close collaboration must take place with the contact persons from assignment preparation right up to completion. Furthermore, regular exchanges must take place with the contact persons on assignment progress and any difficulties that may be encountered.

## VI. SUBMISSION OF OFFER

### Technical Proposal:

- A cover letter expressing your interest in this assignment
- Technical proposal with a brief description of why you would be considered as the most suitable for the assignment, relevant expertise, and a detailed, clear methodology, your approach to complete the assignment
- Company registration certificate
- Proof of successful completion of related assignments.

### Financial Proposal:

Since the number of trainees and trainer's manuals to be developed are indicative and subject to change based on the budget, the financial offer of applicants shall indicate:

- A unit cost per one Trainee's manual (module)
- A unit cost per one trainer's manual (module)

The financial offer will be calculated based on man-days (see table below to be filled)

### Cost for Trainee's manual (module)

Position	Description of tasks	Number of experts	Number of man-days per expert	Total man-days	Unit cost per man-day	Total cost (currency)
Team leader						
Content expert/ Authors						
Reviewers						
Editors						
Illustrators						
Graphic designs						
<b>Total cost per one trainee's manual (module)</b>						
<b>Total cost of 67 manuals to be developed</b>						<b>xxxxxxx</b>

### Cost for Trainer's manual (module)

Position	Description of tasks	Number of experts	Number of man-days per expert	Total man-days	Unit cost per man-day	Total cost (currency)
Team leader						
Content expert/ Authors						
Reviewers						
Editors						
Illustrators						
Graphic designs						
<b>Total cost per one trainer's manual (module)</b>						
<b>Total cost of 67 manuals to be developed</b>						<b>xxxxxxx</b>

### Note:

- The cost related to travel and accommodation will follow Expertise France procedures
- Other costs (except travel cost and accommodation) to be mentioned as well
- All cost must be tax inclusive

## ANNEXES 1: SELECTED MODULES

### 1. LIST OF COMPLEMENTARY AND GENERAL MODULES FOR PLUMBING TECHNOLOGY AND PUBLIC WORK TRADES (21 Modules)

Level 3 modules			Level 4 modules			Level 5 modules		
SN	Module Code	Module Title	SN	Module Code	Module Title	SN	Module Code	Module Title
	GENKK302	Kutumia Kiswahili Wastani		CCMFT402	Exprimer des opinions en français élémentaire		CCMOB502	Organise a Business
	GENAM301	Apply Algebra and Trigonometry		GENFA402	Applied Mathematics		CCMIW502	Apply ICT at Workplace
	GENBC301	Demonstrate Basics of Chemistry		GENMP402	Applied Physics		CCMKN502	Gukoresha ikinyarwanda cy' intyoza
	GENPY301	Apply general physics		GENAC402	Applied Chemistry		CCMEN502	Use upper-intermediate English at workplace
	CCMOL302	Describe the occupation and learning process		CCMKS402	Kutumia Kiswahili katika mawasiliano ya kawaida		CCMFT502	Echanger les idées en Français élémentaire
							CCMKK502	Kutumia Kiswahili katika mawasiliano ya kazini
							CCMPE502	Apply Professional and

								multicultural ethics at workplace
							CCMCZ501	Develop attitudes of living together in harmony
							GENAP502	Apply Mathematical Analysis, Statistics and Probability
							GENDM502	Apply dynamics and mechanical waves
							GENAC502	Demonstrate basics of Analytical Chemistry

## 1. LIST OF CORE MODULES FOR PLUMBING TECHNOLOGY TRADE (19 Modules)

Level 3 modules			Level 4 modules			Level 5 modules		
SN	Module Code	Module Title	SN	Module Code	Module Title	SN	Module Code	Module Title
	PLTBE302	Perform basic Electricity		PLTPW401	Plumbing basic welding		GENBH501	Apply basics of Hydraulics
	PLTSA302	Install sanitary appliances		PLTTD401	Basic technical drawing and AutoCAD		GENRS501	Apply basics of REVIT MEP software

	BDCIA302	Integrate the workplace		PLT WD 401	Installation of water distribution networks		PLT IA502	Integrate the workplace
				PLTGS 401	Fuel gas system installation		PLTWI501	Install water treatment system
				PLTFF 401	Firefighting system installation		PLTWW501	Install wastewater treatment system
				PLTPS401	Pumping system Installation		PLTWF501	Install water features system
				PLTHW401	Hot water system installation		PLTHI501	Install hydronic system
				PLTHW401	Integrate the workplace		PLTII501	Install irrigation system

## 2. LIST OF CORE MODULES FOR PUBLIC WORKS TRADE (27 Modules)

Level 3 modules			Level 4 modules			Level 5 modules		
SN	Module Code	Module Title	SN	Module Code	Module Title	SN	Module Code	Module Title
	PWOTD301	Basic Technical Drawing		PWOTD401	Apply Technical drawing		PWOSS501	Conduct Site Supervision of Public Works
	PWOSH301	Public Works Hygiene and Safety Precautions		PWODM401	Perform Drainage system maintenance		PWOAC501	Apply Auto - CAD Civil 3D Software
	PWORS301	Establish Road Signs, Marking and Crush Barriers		PWOC5401	Perform Surveying data collection and setting out		PWOBC501	Construct bridges
	PWOMW301	Perform masonry works		PWOSW401	Perform steel bar works		PWOAP501	Construct asphalt pavement
	PWOPR301	Describe Public Works Resources		PWOAT401	Perform Aggregates' Tests		PWOWS501	Construct spring water supply and sewerage structures
	PWORW301	Construct Retaining walls		PWOCW401	Perform Cement concrete works		PWOCE501	Estimate cost in public works
	PWOIAP301	Integrate the Workplace		PWOST401	Perform Full soil identification and insitu dry density		CCMIA502	Integrate the workplace

					test			
				PWONB401	Perform Non bituminous pavement construction			
				PWOPM401	Perform non-bituminous pavements maintenance			
				PWOCT401	Perform cement tests			
				PWOCO401	Perform Concrete tests			
				PWODT401	Apply Do-nou technology in earth road maintenance			
				PWOIA402	Integrate the workplace			

#### Annex 2: RTB template for Trainee's manual development

[https://docs.google.com/document/d/19Ozq0gZhJNBMPtUbMVdEzt7yQJLDLNpg/edit?usp=drive\\_link&oid=105826802186331939862&rtpof=true&sd=true](https://docs.google.com/document/d/19Ozq0gZhJNBMPtUbMVdEzt7yQJLDLNpg/edit?usp=drive_link&oid=105826802186331939862&rtpof=true&sd=true)

#### Annex 3: RTB template for Trainer's manual development

[https://docs.google.com/document/d/1eVzNuPYApoZ6b9gnissPYljACnU1i7sf/edit?usp=drive\\_link&oid=105826802186331939862&rtpof=true&sd=true](https://docs.google.com/document/d/1eVzNuPYApoZ6b9gnissPYljACnU1i7sf/edit?usp=drive_link&oid=105826802186331939862&rtpof=true&sd=true)

#### Annex 4: RTB curricula

- Level 3 plumbing technology curriculum:  
<https://drive.google.com/drive/folders/1wTu3KZkdivAmsbXu0ViLB9PcByR36zrC?usp=sharing>
- Level 4 Plumbing technology curriculum:  
[https://drive.google.com/drive/folders/1AZ\\_JutrrbHEJTDDv8PZ2S1A6bNvp2Pgs?usp=sharing](https://drive.google.com/drive/folders/1AZ_JutrrbHEJTDDv8PZ2S1A6bNvp2Pgs?usp=sharing)
- Level 5 plumbing technology curriculum:  
[https://drive.google.com/drive/folders/1SpWiqkyYz-tAaY1Js--9-6cCykDQ\\_jYi?usp=sharing](https://drive.google.com/drive/folders/1SpWiqkyYz-tAaY1Js--9-6cCykDQ_jYi?usp=sharing)
- Level 3 public works curriculum: [https://drive.google.com/drive/folders/1-Okr5bxm\\_ZyOqv5fvHaik-llwNu-7ehC?usp=sharing](https://drive.google.com/drive/folders/1-Okr5bxm_ZyOqv5fvHaik-llwNu-7ehC?usp=sharing)
- Level 4 public works curriculum: <https://drive.google.com/drive/folders/1Ku-OoGERcZhSr8qCmFR2wC3r73A4Z-Aq?usp=sharing>
- Level 5 public works curriculum: [https://drive.google.com/drive/folders/16-o772G86HS4T54A\\_G7JGLnK2l4mOTy0?usp=sharing](https://drive.google.com/drive/folders/16-o772G86HS4T54A_G7JGLnK2l4mOTy0?usp=sharing)