

LABOUR BASED TECHNOLOGY TRAINING INITIATIVES BY THE APPROPRIATE TECHNOLOGY TRAINING INSTITUTE (ATTI)

By: Emanuel W. Raphael – Principle ATTI

Abstract

The Appropriate Technology Training Institute (ATTI) is a Government Institution under the Ministry of Infrastructure Development established in 1993 with the financial support from NORAD and technical support from ILO ATTI was established with the objectives of developing courses and carrying out training on the use of appropriate technology methods in road construction, rehabilitation and maintenance through Labour Based Technology (LBT).

Currently, the Institute is under a four-year reform programme of “Taking Labour Based Technology to Scale”, which aims at transforming ATTI into a National Training Institute so as to become the leading provider of high quality training for Labour Based Technology practitioners in Tanzania and other countries.

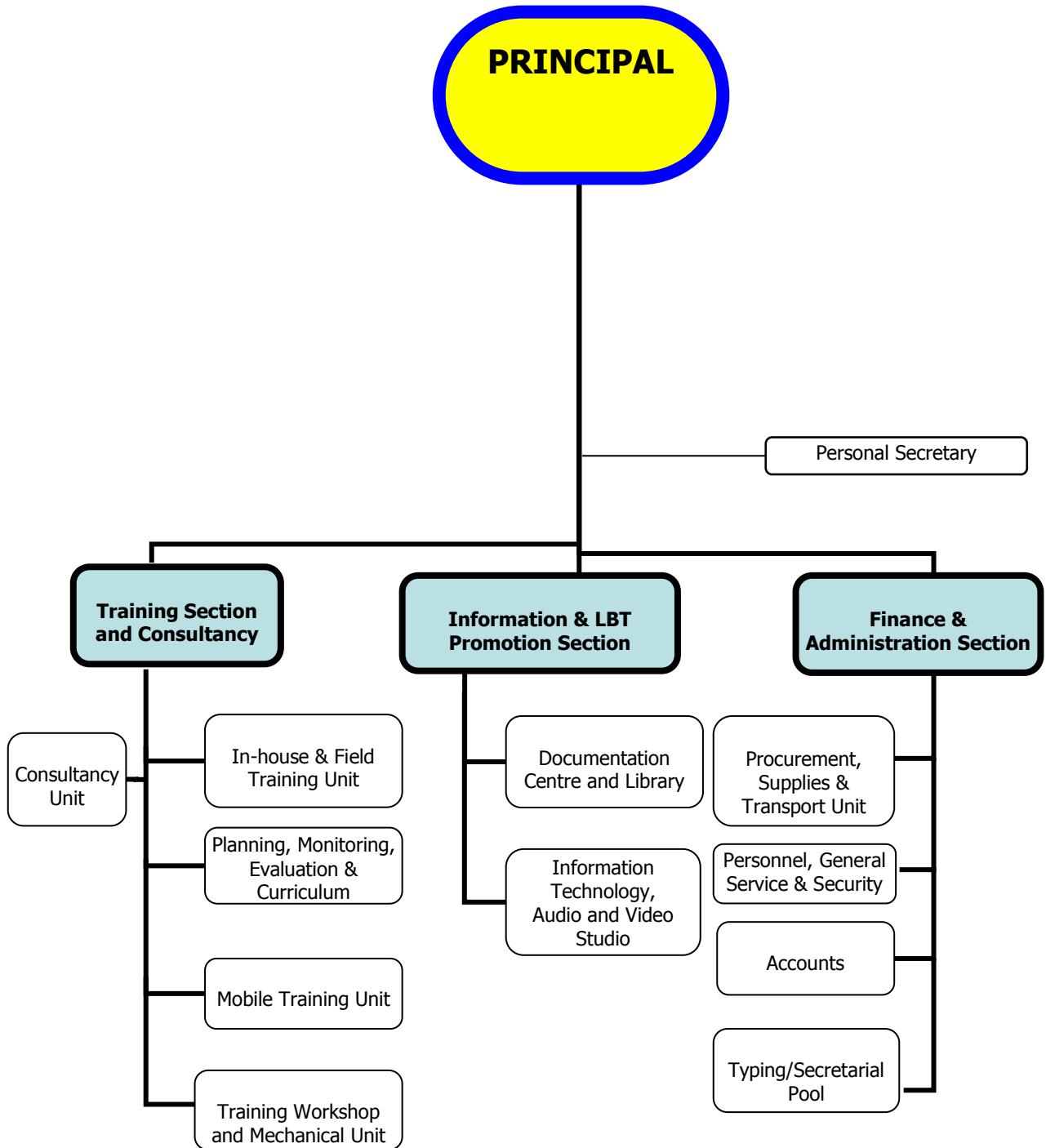
1.0 INTRODUCTION

The programme for “Taking Labour Based Technology (LBT) to Scale” in Tanzania was officially launched by the Government in October 2004. This was done by endorsing the programme document which was developed jointly by the Ministry of Infrastructure Development (the then Ministry of Works) and Prime Minister’s Office, Regional Administration and Local Government (the then President’s Office, Regional Administration and Local Government).

From November 2005 the Japan International Co-operation Agency (JICA) started implementation of ATTI Capacity Strengthening, whereby since June 2006 to date a team from Japan Engineering Consultancy (JEC) is assigned to carry out this task of “ATTI Capacity Strengthening”.

2.0 ATTI INSTITUTIONAL SET-UP

The ATTI organization set-up is shown in an organisation chart below:



3.0 ATTI VISION AND MISSION

The ATTI Vision and Mission shall be described as follows:

(i) ATTI Vision

ATTI would become the leading provider of high quality training for Labour Based Technology practitioners in Tanzania and other countries.

(ii) ATTI Mission

ATTI mission is to provide high quality training and information to LBT practitioners and policy makers to standardise, develop and coordinate LBT training in Tanzania and thus contribute to research and development of LBT and promote the application of LBT in the construction sector.

4.0 ACTIVITIES PERFORMED BY ATTI

The primary objective of establishing ATTI was to develop and carry out training programme on LBT for Road Inspectors and Foremen who were responsible for supervising works carried out by Force Account at then Regional Engineers' offices.

The establishment of Tanzania National Roads Agency (TANROADS) in 1997 involving private sector in the Road sector has made possible for ATTI to change its role from being the trainer for only Technicians of Ministry of Infrastructure Development (MoID), and now has expanded its training not only to public sector but also to private sector.

Different groups and categories of stakeholders that related to construction works need to be trained on Labour Based Technology.

The categories of groups requiring LBT training include:

- **Engineers**

To effect proper planning, programming, scheduling and monitoring according to anticipated timely results;

- **Technicians**

To effect implementation according to schedules;

- **Inspectors and Foremen**

To effect implementation, supervision and monitoring for best results;

- **Instructors and Trainers**

To effect transfer of technology/techniques at different levels;

- **Community Groups**

To effect adoption of new skills and enhance ownership appropriate use of local resources including labour with efficient modern techniques for development; and

- **Private Groups**

To effect utilization of the private sector participation: particular reference is made to Small and Medium Scale Contractors and Consultants.

Therefore, the current LBT training programme at ATTI responds to the training requirements of the above different categories.

5.0 ATTI's CLIENT AND SERVICES

ATTI has the following clients:

(i) District Council

District councils which are under PMO-RALG, are considered the most substantial and vital clients of ATTI. Thus, PMO-RALG is the key and vital partner for an up-scaling LBT use.

Also, other clients are Government implementing agencies such as TANROADS, etc.

(ii) Private Sector

ATTI also provides training courses to private sector, e.g. local contractors and consultants and community groups.

(iii) Current ATTI Training Courses

The current courses offered by the ATTI include:

S/N	COURSE	Type	GROUP	DURATION	
				Theory	Practical
1.	Engineers' course on gravel/earth roads	General	Clients & Contractors	2 Weeks	4 Weeks
2.	Technicians' course on gravel/earth roads	General	Clients	2 Weeks	4 Weeks
3.	Contractors course on gravel/earth roads	General	MD-Contractors	2 Weeks	2 Weeks

S/N	COURSE	Type	GROUP	DURATION	
				Theory	Practical
4.	Contractors course on gravel/earth roads	General	Technical Personnel	2 Weeks	4 Weeks
5.	Contractors course on gravel/earth roads	Mobile	Forepersons and Gangleaders	2 Weeks	4 Weeks
6.	LBT Contract Management course	Mobile	Client and Contractors	2 Weeks	2 Weeks
7.	Operation of Light Equipment and Hand tools Management (Every two years)	Special	Contractors	2 Weeks	4 Weeks

6.0 TRAINING PROGRAMME IN LBT TO COUNCIL STAFF, LOCAL CONSULTANTS AND CONTRACTORS

The Prime Minister's Office, Regional Administration and Local Government (POM-RALG) has entered into an agreement with the Ministry of Infrastructure Development (MoID) which mandate ATTI to conduct a training in LBT to Councils' Technical Staff and Contractors residing in 29 councils of Dodoma, Singida, Tabora, Rukwa na Mbeya regions. Also, one (1) local consultant from each of the above pilot regions will be trained.

Programmes main objective

The objective of this training programme is to enable participants to acquire knowledge and skills in LBT design, construction, rehabilitation and maintenance of gravel roads in their respective councils as gravel and earth roads are the major component of road network in the country.

The programme consists of 1275 trainees in the following categories:

S/N	Category	Number of Trainees
1.	Councils' Technical Staff	116
2.	Contractors' Staff	464
3.	Consultants' Staff	5
4.	Councils' Politicians and Administrative Staff	150
5.	Participants (Labourers) during practical training	540
TOTAL		1275

This training includes classroom training mixed with site demonstration at ATTI campus and practical/field training at identified venues at different selected districts/regions will be deployed.

The training course under each category of staff will take six (6) weeks i.e. two weeks for classroom training and four (4) weeks for practical training.

This programme started in May 2008 and it is on-going.

Classroom Training

This includes ATTI Instructors' orientation to facilitate classroom as well as practical training. Where the facilitation gap appears, short term staff, facilitators and consultants from established institutions with a long-term LBT experiences are invited to bridge it. Preparation and documentation of training plans is part of strategies to successful conducting/implementing of training. The programme covers the following subjects;

- Clients' and consultants' course on use of LBT in gravel roads;
- Contractors' course on use of LBT in gravel roads; and
- Contracts management course in use of LBT.

Practical/Field Training–Regional Level

During practical training the optimum of the available resources is made. These resources are classified as human (various categories of personnel), equipment (including hand tools) and materials (construction and administration).

This item will handle establishment of camps, preparation of implementation plan and strategies. A road is to be constructed/rehabilitated by making use of tractor/trailer combinations and labour force used for excavation/loading/spreading.

Each region has appointed one district to host the practical demonstration site. A site was selected from among existing work programmes being funded by the Road Fund or the LGTP.

Practical training would be conducted at the same site for all the trainees from that region. This means that, Councils Engineers, Technicians, Consultant and Contractors of the particular region will be at the same site.

Certificates

In promoting participants' sense of self-worth and identity, the institute places a strong emphasis on achievement. Therefore, at the end of the programme each participant after successfully completing the specified requirements will be awarded with the certificate of recognition, with an official authentication of the Ministry of Infrastructure Development.

Conducting LBT Awareness Seminars and Workshops

Awareness Seminars and Workshops is among the training methodology which is being adopted in this programme so as to cover the scope of this training assignment. The sensitisation awareness seminars and workshops are part of the effective widespread strategy to the successful application of LBT. The seminars and specialized workshops for Council politicians, administrators and non engineering staff were conducted.

The approach promotes better understanding and appreciation of the application of LBT and brings a deeper and broader knowledge when practicing with LBT.

rogramme monitoring

Monitoring, Evaluation and Quality Assurance

Monitoring and evaluation for the training programme is a tool and methodology which helps to determine the effectiveness of instructional process. The monitoring and evaluation for the training shall follow the work plan and scheduling and will be made continually with the target to:-

- Ensure and report on the performance of participants and instructors
- Ensure participants follow-ups of their trainings with relevant activities, to apply, improve, develop and reinforce their learning
- Assess the extent to which ATTI's trainings have been effective and identify factors of success/failures;
- Asses the extent to which the ATTI activities contribute to expansion of LBT use; and
- Based on these findings, facilitate continual learning and improvement of the ATTI activities

To ensure effective evaluation which will be carried out incessantly using the expertise of a consultant, and also as the matter of training quality management, PMO-RALG backstopping is necessary. This has been effected by establishment of the joint committee composing at least 10 people.

Quality Assurance, ATTI will conduct an impact assessment of the training outcomes ultimately targeted in all concerned Districts. This will involve evaluation of the quality of the work output with the regards to the application of the knowledge of the so acquired during the Training.

Training Monitoring Committee (TMC)

A Training Monitoring Committee (TMC) has been established to monitor component activities and report to the PMO-RALG and the participating Councils.

The TMC comprises of the following core membership:-

- Senior representatives from PMO-RALG;
- Senior representatives from MoID;
- One District Executive Director to be appointed by PMO-RALG
- Programme Co-ordinator from PMO-RALG;
- Two RS Engineers;
- Backstopping Consultant;
- One representative from TACECA;
- One representative from ACET; and
- Principal/ Project Manager ATTI.

Documentation and Reporting

The results of the training proceedings shall be recorded for each phase in order to have the clear flow of events. Regular and recorded document in form of a technical report will be prepared and issued in the following manner:-

- Inception Report;
- Progress reports;
- Special reports; and
- Final Report.

Cross-cutting Issues

The implementation of the training programme is done in close consultation with the public and private sectors and other stakeholders. All cross-cutting issues pertaining to gender and labour standards, HIV/AIDS and the environment are being addressed during training programme. Equal opportunities for women and men in the access to work and training programme is given priority as well as ensuring that working conditions on labour-based sites conform to the recognised standards.

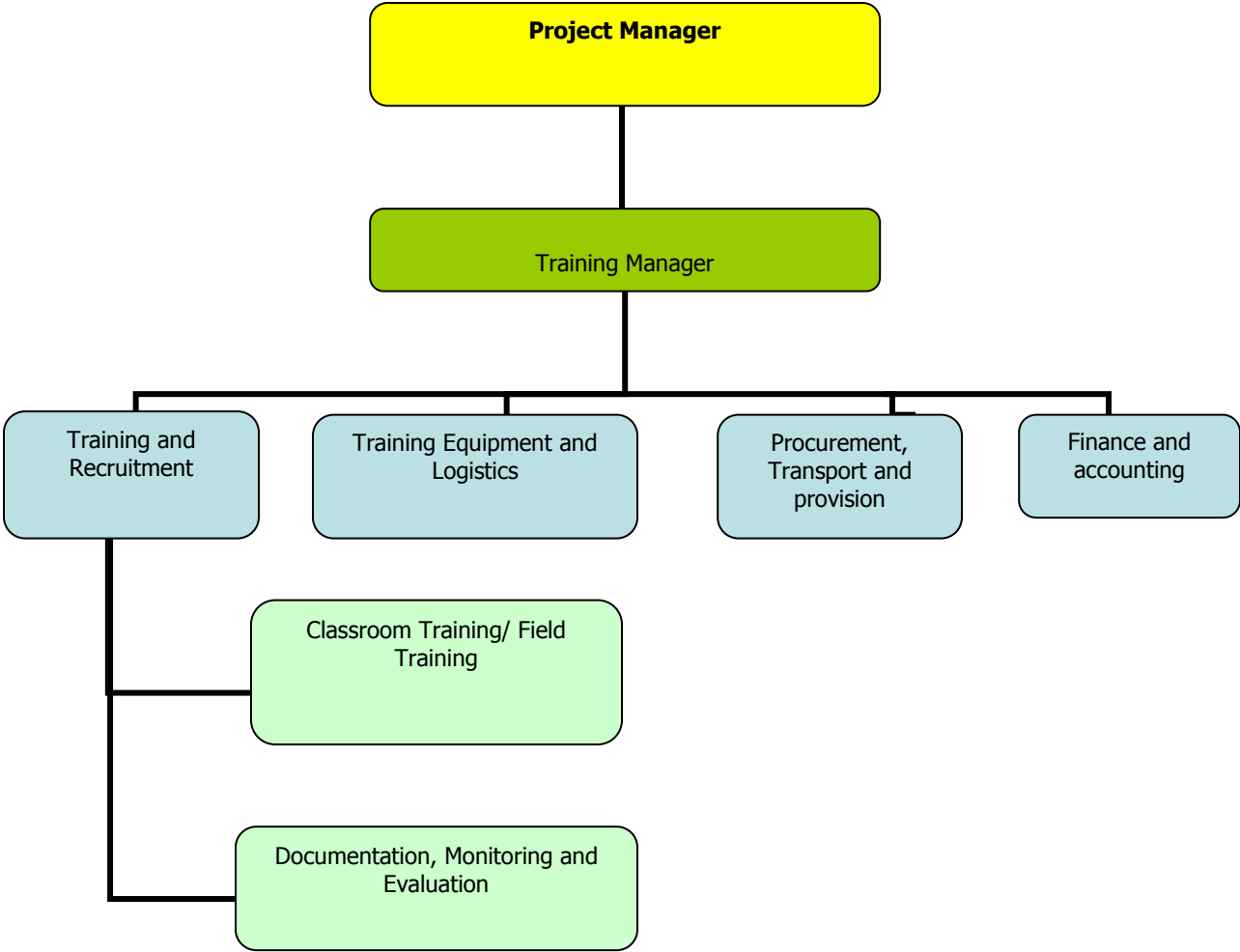
Expected outcome of the programme:

- This programme is expected to improve LGAs' capacity to effectively design, manage, supervise, monitor and carryout the execution of road infrastructure using LBT methods (LGAs, Local Consultants and Contractors);
- To increase Councils' absorption capacity in utilising the growing road fund allocation (LGAs);
- Increased income generation, hence contribute in poverty reduction (Rural Community);
- More improved condition of local infrastructure (Rural Community);
- To stimulate the sense of ownership (Rural Community);
- To strengthen capacity in accommodating more training using the available funds (ATTI); and
- Strengthened Institutional capacity towards the Governments' intention in transforming ATTI into a semi-autonomous LBT National Training Institute (ATTI).

7.0 PROJECT ORGANIZATION STRUCTURE

In order to make sure that this project runs smoothly and according to the client's expectations, ATTI has established an organization structure specifically for the managing of the project activities.

Project Organization Structure



8.0 ACHIEVEMENT MADE BY ATTI ON LBT TRAINING

Since its establishment in 1993 until April 2008, ATTI has conducted several training courses on LBT in road works for the following cadres:

S/N	Cadre	No of Trainee
1.	District Engineers	6
2.	Road Technicians form MoID	156
3.	Road Technicians from District Councils	40
4.	Village Gang Leaders	404
5.	DROMAS Course for District Engineers	24
6.	Small Scale Contractors	106
7.	Women Small Scale Contractors	71
8.	Road Forepersons	33
The total number of Trainees for various course		840

9.0 DEVELOPMENT PARTNERS SUPPORT TO ATTI

With the support of development partners NORAD and JICA, the following achievements have been realised to support implementation of the Taking Labour Based to Scale (LBT) Programme:

- Strategic Plan set-up;
- Action Plan on LBT Promotion and Networking;
- Curriculum and Syllabus and Annual Training Plan Developed;
- Monitoring and Evaluation Manual drafted;
- Procurement of training equipment (light equipment) and facilities; and
- Construction of Additional infrastructure and rehabilitation of existing infrastructure

10.0 CONCLUSION

The success of promotion of LBT application in Tanzania relies mainly on the commitment and support of the entire Construction Industry and specifically Local Government's Councils and mutual cooperation between the concerned Ministries and Agencies (PMO-RALG, MoID, TANROADS etc).

LBT training helps to develop an "enabling environment" and operational approach to encourage effective viable and sustainable solution to road infrastructure maintenance based on consideration of local circumstances.