



**RAPPORT D'EVALUATION DE LA MISE EN OEUVRE DU PROJET DE
CYBERCAFE POUR LES PERSONNES AVEUGLES, MALVOYANTES ET
VOYANTES**

PROJET NO. GLO0763

OUAGADOUGOU, BURKINA FASO

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PREAMBULE

Le présent rapport concerne l'évaluation du Projet de création d'un Cybercafé pour les personnes aveugles, malvoyantes et voyantes et renforcement d'une cellule de formation en TIC adaptée pour le compte de l'Association Burkinabé des personnes aveugles et malvoyantes (ABPAM).

Le projet a été financé à travers une convention de Partenariat entre le Ministère des Postes et des Technologies de l'Information et de la Communication (MPTIC) du Burkina Faso et l'Union Internationale des Télécommunications (UIT).

A travers ce projet, l'ABPAM ambitionne de :

- Accroître et pérenniser sa capacité de formation en informatique et aux TICs adaptées aux personnes aveugles et malvoyantes ;
- Faciliter leur insertion dans la société de l'information à travers les TICs ;
- fonctionner comme activité pouvant générer des revenus par la création d'un Cyber Café adapté à tout public (aveugles, malvoyants, voyants) et la commercialisation de services annexes comme la photocopie, la télécopie, le téléphone, scanner des documents, la vente de boissons, etc.

L'initiative de ce projet résulte d'une saisine du Ministère des Postes et des TIC en juin 2008 par l'ABPAM, en vue de l'appuyer dans la mise en place de ce projet. Sur la base des initiatives régionales adoptées, par la Conférence mondiale de développement des télécommunications (CMDT-06) tenue en 2006 à Doha, le MPTIC a alors soumis cette requête au bureau de développement de l'UIT à la faveur de l'Atelier régional pour l'accessibilité des handicapés aux TICs, organisé par l'UIT les 15 et 16 juillet 2008 à Lusaka (Zambie) où ce projet a été présenté et par la suite, par une requête officielle adressée au Directeur du BDT.

C'est ainsi que le 11 novembre 2009, le Directeur du bureau des télécommunications de l'UIT (BDT), représenté par le vice –secrétaire général et le ministre des postes et des TIC du Burkina Faso, ont signé à Ouagadougou, la convention pour la mise en place d'un cyber café pour les personnes aveugles, malvoyantes et voyantes et le renforcement de la cellule de formation en TIC adaptée.

Au travers de cet instrument, l'UIT apporte son appui technique et financier par la prise en charge de l'expertise, des fournitures et travaux informatiques du projet, le MPTIC, la prise en charge des bâtiments, des aménagements, de l'environnement et des équipements divers.

Les Etudes de faisabilité et d'évaluation du projet ont été élaborées du 04 au 17 février 2009 par un expert recruté et mis à disposition par l'Union internationale des télécommunications, en collaboration avec le MPTIC et l'ABPAM.

Après analyse des résultats de l'étude, des contraintes budgétaires ont conduit les parties (ABPAM, MPTIC, UIT) à une révision à la baisse des besoins identifiés. Le coût du projet a été arrêté de commun accord à la somme de Cent Quatre Vingt Sept Mille Sept Cents Vingt Neuf (187 729) dollars \$ US dont 100 525 à financer par l'UIT et 87 204 par le MPTIC (ABPAM).

Comme souligné plus haut, le projet est entré en vigueur le 11 Novembre 2009 par la signature de la Convention de Partenariat entre le Gouvernement du Burkina Faso et l'UIT.

DONNEES DE BASE DU PROJET

Données préliminaires

Titre du projet	<u>Création d'un Cybercafé pour les personnes aveugles, malvoyantes et voyantes et renforcement d'une cellule de formation en TIC adaptée</u>
Pays	BURKINA FASO
Lieu	OUAGADOUGOU
Bénéficiaire	ASSOCIATION BURKINABE POUR LA PROMOTION DES AVEUGLES ET MALVOYANT (ABPAM)
Partenaires	MPTIC/UIT
Date de début	01/05/2009
Date de fin	31/12/2010
budget	187 729 \$ US
Financement	
UIT	100 525 \$ US
MPTIC	87 204 \$ US
Entrée en vigueur	11/11/2009
suivi	MPTIC/Consultant UIT/ABPAM
Démarrage travaux	23/06/2010
Fin des travaux	01/07/2010
Recette provisoire sur site	01/07/2010
Mise en fonctionnement	01/07/2010
inauguration	11/03/2011



Entretien avec le gestionnaire (aveugle) du Cybercafé

Indicateurs de performances

Indicateurs	niveau	observations
<u>Performance à la réalisation</u>		
- Cyber Café	Satisfaisant	Réalisation 100%
- Renforcement du centre de formation	Non satisfaisant	Réalisation 100%
- Création activités annexes		Réalisation 0%
- Délai d'exécution	Satisfaisant	
- Exécution Financière	Satisfaisante	Décaissement 100%
<u>Performances opérationnelles</u>		
- Cyber Café	Satisfaisant	En exploitation
- Renforcement du Centre de Formation	Non satisfaisant	Non opérationnel
- Création activités annexes	Non satisfaisant	Non réalisé
Performances Entrepreneur	satisfaisant	
Performances UIT	satisfaisant	
Performances MPTIC	satisfaisant	
Performances ABPAM	acceptable	Non réalisation de l'ensemble des obligations
Performance consultant	satisfaisant	

L'exécution physique du projet a été confiée à l'entreprise WASTIAUX du Burkina Faso suite à une procédure d'appel d'offres restreinte organisée par l'UIT en collaboration avec le MPTIC. Les travaux ont démarré le 23 juin et se sont achevés le 1^{er} juillet 2010 par la recette provisoire sur site et la mise en fonctionnement des équipements. Le projet a été inauguré le 11 mars 2011 par le Ministre des Postes et des TIC du Burkina Faso et un représentant du Directeur du BDT en présence de quatre autres ministres Burkinabè.

Le présent rapport, objet du CONTRAT d'ENGAGEMENT SPECIAL N° 3612 fait l'évaluation des performances du projet. Un accent particulier est mis sur :

- Le niveau de mise en œuvre du projet ;
- Les résultats de la réalisation ;
- Les performances et impacts du projet ;
- La durabilité du projet ;
- La formulation de Recommandations pour les actions d'amélioration.

I. RESUME DE L'EVALUATION

La mission d'évaluation s'est déroulée du 17 Mai au 24 juin 2011 à Ouagadougou. L'évaluation a été faite sur la base des documents contractuels du projet (convention, spécifications, bon de commande, certificat de recette...), des constats de réalisations sur le site du projet et des échanges avec le MPTIC, la direction

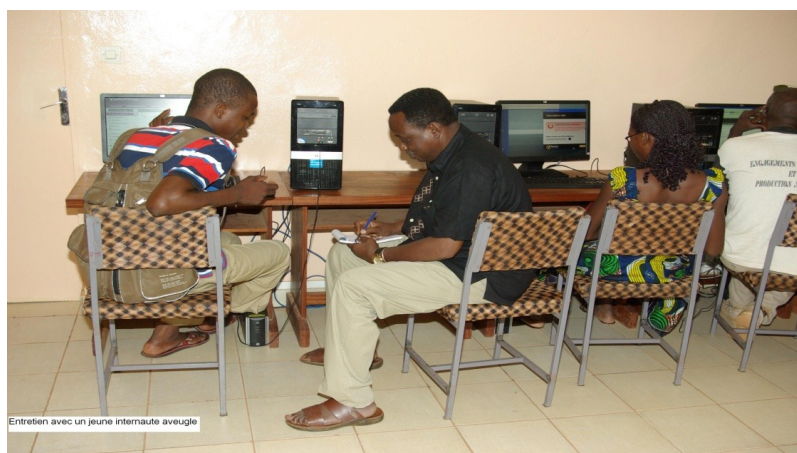
et le formateur de L'ABPAM l'Entrepreneur, des stagiaires et clients du cyber café. Les résultats de l'évaluation se résument en ce qui suit :

- 1.1. Le projet initial prévoyait un volet renforcement de la capacité du Centre de Formation de l'ABPAM et la Création d'un Cybercafé pour personnes aveugles, malvoyantes et voyantes accompagné par la création d'activités annexes génératrices de revenus ;
- 1.2. Le projet s'est achevé avec un niveau de mise en œuvre satisfaisant se traduisant par la réalisation complète de ces deux composantes essentielles, à savoir la création d'un Cyber Café pour personnes aveugles, malvoyantes et voyantes et le renforcement du Centre de Formation en TICs adaptées de l'ABPAM. Seul le volet « création d'activités annexes génératrices de revenus (ventes de boissons, photocopie, téléphone, fax...) » n'a pu être réalisé à ce jour : ce qui n'est pas préjudiciable au bon fonctionnement du projet ;

Un volet renforcement de capacités des formateurs avait initialement été prévu dans la composante renforcement du centre de formation mais n'a pu être retenu par manque de ressources.

- 1.3. Les équipements installés sont de bonne qualité, réputés robustes et conformes aux spécifications techniques. Les logiciels et particulièrement ceux adaptés aux handicapés visuels sont de versions récentes. Les installations ont été faites conformément aux règles de l'art ;
- 1.4. Les différents intervenants (MPTIC, UIT, ABPAM, Entrepreneur) ont assuré de façon satisfaisante leurs obligations si bien qu'aucune défaillance susceptible d'affecter la bonne réalisation des travaux n'a été constatée ;
- 1.5. Le cyber café est fonctionnel avec une capacité de deux (2) postes de travail pour les personnes non voyantes, deux (2) pour les malvoyantes et deux (2) ordinaires pour personnes valides. Il est ouvert au grand public depuis son inauguration en Mars 2011.
- 1.6. La capacité du Centre de Formation a été matériellement renforcée par le passage de 1 à 4 postes de travail de formation ; soit un apport de trois (3) postes supplémentaires qui ne sont pas encore en exploitation par manque de formateurs.
- 1.7. Les effets du projet sont très visibles au niveau de la création du Cybercafé. Il est régulièrement fréquenté par la population cible (non voyants, malvoyants et voyants) et a déjà permis à bon nombre de handicapés visuels de se familiariser à l'informatique adaptée et à l'utilisation de l'internet, notamment le courrier électronique et la navigation, leur ouvrant ainsi une fenêtre sur le monde numérique ;
- 1.8. Aussi l'on constate aisément que ce Cyber café constitue un lieu privilégié de contact et d'échanges entre les handicapés et les personnes valides contribuant à l'amélioration des relations sociales des déficients visuels et à la réduction de leur isolement ;
- 1.9. Bien que pour l'instant, la fréquentation est très faible, le Cyber Café génère néanmoins des recettes que l'ABPAM espère améliorer en partie par l'augmentation de sa fréquentation que va engendrer le renforcement de la capacité de son Centre de Formation ;

- 1.10. Le renforcement du Centre de Formation n'a pas encore produit les effets attendus par manque de formateurs pour l'animation des trois (03) nouveaux postes de formation créés par le projet. Mais sa pertinence est fortement perceptible au niveau de l'ABPAM par un nombre de plus en plus grandissant de handicapés visuels en attente de formation (environ 100 actuellement) et la charge excessive du seul formateur dédié ;
- 1.11. Après l'achèvement du projet, les plus grands défis qui se posent à l'ABPM restent la pérennisation des ses effets, son amélioration ainsi que son extension afin de toucher le plus grand nombre de personnes handicapées ;
- 1.12. Cela est essentiellement fonction entre autres, de sa capacité à entretenir correctement les équipements afin d'assurer leur bon fonctionnement, à les exploiter efficacement, à poursuivre et améliorer le projet.
- 1.13. Ceci nécessite forcément des investissements dont la capacité financière précaire de l'ABPAM, ainsi que les recettes attendues du présent projet seront très insuffisantes à réaliser.
- 1.14. La question financière constitue et reste le principal point faible de la majorité des initiatives d'amélioration de l'accès des populations aux TICs et plus particulièrement les couches sociales les plus défavorisées comme celle des handicapés.



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Personnes rencontrées

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II. PRESENTATION DU PROJET

2.1. Objectifs du projet

Le projet a pour objectifs de permettre à l'ABPAM qui dispose d'une cellule légère de formation en TICs adapté aux personnes aveugles et malvoyantes, de :

- Améliorer et pérenniser la formation des personnes aveugles et malvoyantes en informatique et aux TICs adaptées à leurs handicaps ;
- Faciliter l'accès des personnes aveugles et malvoyantes à l'informatique et aux TICs par la création d'un Cybercafé pour personnes aveugles, malvoyantes et voyantes ;
- Mener des activités annexes génératrices de revenus.

2.2 Description du projet

Pour la réalisation du projet, Ces objectifs ont été déclinés en trois (03) composantes ci-dessous décrites :

- **Renforcement de la formation en TIC adapté ;**
- **Création d'un Cybercafé pour personnes aveugles, malvoyantes et voyantes ;**
- **Création d'activités annexes génératrice de revenus.**

Renforcement de la formation en TIC adapté

Cette composante vise l'atteinte des objectifs quantitatifs et qualitatifs que se fixe l'ABPAM à court terme en matière de formation en informatique et aux TIC adaptés. Elle se décompose comme suit :

- Extension du nombre de postes de formation de la cellule existante de 1 à 4 ;
- Perfectionnement du formateur principal (recommandé tous les 2 ans) ;
- Formation de deux (2) formateurs pour la cellule de formation ;

- Formation de deux (2) assistants en TICs adaptées pour le Cybercafé ;
- Renforcement de la cellule de transcription ;
- Appui aux stagiaires pour la pratique de l'informatique après leur formation (location pour une somme modique d'ordinateurs portables gérés par la cellule de formation).

Cybercafé pour personnes aveugles, malvoyantes et voyantes

Cette composante vise à donner particulièrement la possibilité aux personnes aveugles et malvoyantes d'avoir accès aux TICs par la création d'un Cybercafé accessible à tout public.

Elle se décompose comme suit :

- Création de postes de travail adaptés aux personnes aveugles ;
- Création de postes de travail adaptés aux personnes malvoyantes ;
- Création de postes de travail ordinaires pour personnes voyantes ;
- Installation d'un poste de gestion du Cyber Café ;
- Mise en réseau informatique sécurisé de l'ensemble des postes de travail de la cellule avec un accès internet WIFI de 1 Mbits ;
- Aménagement d'un local.

Activités annexes

En plus de l'exploitation commerciale du Cybercafé, cette composante permettra à l'ABPAM d'améliorer ses recettes par la création de certaines activités génératrices de revenus. Elle se décompose comme suit :

- Acquisition de photocopieur ;
- Acquisition d'imprimantes ;
- Acquisition de scanners ;
- Installation d'une ligne téléphonique et d'équipements pour télécentre ;
- Installation de télécopieur ;
- Acquisition d'un réfrigérateur ;
- Acquisition d'une machine à café.

2. 3. Configuration finale du projet

Une revue technique du projet a été faite entre les parties (MPTIC, UIT, ABPAM) afin de cadrer le périmètre du projet aux disponibilités financières. Ainsi, les besoins du projet identifiés et évalués par l'étude préliminaire ont de commun accord avec toute les parties, été réajustés à la baisse avec une répartition de responsabilités entre les parties comme l'indique le tableau ci-dessous

TABLEAU 1
Etat Quantitatif définitif et responsabilités des parties

Article no.	Article	Quantité prévue	Quantité retenue (Définitif)	Intervenants
1	Ordinateur PC de bureau (à équiper JAWS)	4	2	UIT

Article no.	Article	Quantité prévue	Quantité retenue (Définitif)	Intervenants
	Ordinateur portable	4	0	
3	Ordinateur PC de bureau ordinaire	2	2	UIT
4	Licence JAWS	6	1	UIT
2	Ordinateur PC de bureau (à équiper Zoom text)	4	2	UIT
5	Scanner professionnel	2	2	UIT
6	Imprimante Braille Basic Index 4x4	3	1	UIT
7	Imprimante mixte	2	1	UIT
8	Plage tactile braille	2	2	UIT
9	Onduleur	8	6	UIT
10	Accès Internet 1 Mbit/s	1 an	6 mois	MPTIC
11	Routeur WIFI ADSL	1	1	UIT
12	Logiciel de Grossisseur d'écran pour malvoyants Zoom Text	4	2	UIT
13	Logiciel de reconnaissance de caractères (OCR) ou OMNIPAGE PRO	4	2	UIT
14	Antivirus version serveur	1	1	UIT
15	Logiciel gestion Cyber	1	1	UIT
15	Formation de formateur principal	1pers/21 jours, France	2 jours sur site Sur les équipement	UIT
16	Formation de formateurs	0	0	UIT
17	Bâtiment et environnement	1	1	MPTIC (ABPAM)
18	Mobilier	1	1	MPTIC (ABPAM)
19	Equipements pour activités annexes	1	1	MPTIC (ABPAM)

2.4. Montage financier

Conformément à l'état quantitatif définitif, le coût du projet a été arrêté à la somme de **Cent Quatre Vingt Sept Mille Sept Cent Vingt Neuf (187 729) USD** et financé conformément à la matrice des responsabilités et selon le montage ci-dessous :

financement	Montant (USD)	composantes
UIT	100 225	Expertise, équipements informatiques et logiciels, formation, administration, suivi-évaluation
	87 525	Environnement, salles, aménagement, mobilier,

MPTIC (ABPAM)		accès Internet et équipements divers pour activités annexes
TOTAL	187 525	

III. REALISATION DU PROJET

Le projet a été réalisé conformément aux spécifications techniques et à la matrice de responsabilités convenue entre par les parties.

3.1. PART UIT

La part de l'UIT a concerné l'acquisition des biens et services ci-après :

- Fourniture, installation et mise en fonctionnement de l'ensemble des équipements et logiciels informatiques du projet;
- Formation des agents de l'ABPAM à l'exploitation des équipements.

Elle a été réalisée comme ci-dessous décrite ;

3.1.1. Sélection du fournisseur

La sélection d'un entrepreneur devant assurer l'ensemble des prestations s a été faite à travers une procédure de consultation restreinte organisée par le MPTIC, pour le compte de l'UIT.

Trois sociétés d'informatique résidant au Burkina Faso ont été consultées. Il s'agit de :

- WASTIAUX BURKINA
- NOUVEL ESPACE TECHNOLOGIQUE
- ENTREPRISE CHECK et SUCSESSEURS

Les offres ont été dépouillées par le MPTIC et transmises à l'UIT qui, conformément à ses règles et procédures internes, a retenu la société WESTIAUX.

3.1.2. Signature du Bon de Commande

Le Bon de Commande IUT N° 304258 d'un montant 81 743 \$ US a été signé entre l'UIT et la société WASTIAUX BURKINA aux termes duquel, WASTIAUX BURKINA s'engage à assurer la fourniture, l'installation, la mise en fonctionnement des équipements ainsi que la formation des formateurs de l'ABPAM sur leur exploitation.

3.1.3. Exécution des travaux

La livraison des fournitures a eu lieu le 23 juin 2010 sur le site d'installation, et les travaux d'installation ont démarré à la même date.

Les travaux ont été achevés le 1^{er} juillet 2010. Ils ont porté essentiellement sur :

- L'installation physique de l'ensemble des équipements et logiciels informatiques du projet ;
- La construction d'un réseau informatique sécurisé ;
- La connexion du cybercafé à l'Internet ;

- Les tests de fonctionnalités ;
- La mise en fonctionnement des équipements ;
- La formation des formateurs de l'ABPAM à l'exploitation des équipements.

3.1.4. Recette Provisoire sur site

Le fournisseur a présenté les réalisations à la recette provisoire sur site le 1^{er} juillet 2010.

Les opérations de recette ont été menées par une équipe composée de:

- deux (02) représentants du MPTIC ;
- un (01) représentant de l'ABPAM ;
- le consultant recruté par de l'UIT ;

La recette a été faite sur la base des spécifications techniques du projet et du contrat de l'entrepreneur. Elle a porté sur :

- Les contrôles quantitatifs du matériel ;
- Les contrôles qualitatifs des équipements ;
- le contrôle des installations ;
- Les tests de fonctionnalités.

A l'issue de ces opérations, les équipements, logiciels et travaux ont été réputés conformes en quantité, qualité et fonctionnalité aux spécifications techniques et au contrat. La recette provisoire sur site a été alors prononcée le 01 Juillet 2010. Le rapport et le certificat de recette figurent à l'annexe 3 au présent rapport.

3.1.5. Exécution financière

Un seul décaissement d'un montant de 100.225 \$ était prévu. Il couvre la facture de l'entrepreneur pour la réalisation de la part UIT du projet. Ce décaissement a été entièrement réalisé.

3.2. PART MPTIC (ABPAM)

Le MPTIC devrait couvrir à travers l'ABPAM les responsabilités suivantes:

- Mise à disposition du local aménagé pour le Cyber Café ;
- Mise à disposition d'un local aménagé pour le Centre de formation ;
- Fourniture de l'ensemble du mobilier du projet (tables pour ordinateur, chaises, armoires... ;
- Mise à disposition des conditions d'environnement (Climatisation des locaux et énergie des équipements) ;
- Acquisition d'équipements divers pour activités annexes (Photocopie, Fax, Téléphone, boissons...)

Les réalisations suivantes ont été faites :

- Aménagement et mise à disposition du local pour le Cyber Cafe ;
- Aménagement et mise à disposition du local pour le Centre de Formation ;
- Fourniture de mobilier pour l'ensemble du projet ;
- Fourniture des équipements d'environnement (Energie et climatisation) ?

Les volets climatisation et acquisition d'équipements divers annexes (réfrigérateur, machine à café.....) n'ont pas été réalisés par manque de ressources financières.



Le tableau ci-dessous résume l'état de réalisation de l'ensemble du projet.

Tableau 2
Etat de réalisation du projet

Article no.	Article	Quantité	part	Etat de mise en ouvre
1	Ordinateur PC de bureau (à équiper JAWS)	2	UIT	réalisé
2	Ordinateur PC de bureau ordinaire	2	UIT	réalisé
3	Licence JAWS	1	UIT	réalisé
4	Ordinateur PC de bureau (à équiper Zoom text)	2	UIT	réalisé
5	Scanner professionnel	2	UIT	réalisé
6	Imprimante Braille Basic Index 4x4	1	UIT	réalisé
7	Imprimante mixte	1	UIT	réalisé
8	Plage tactile braille	2	UIT	réalisé
9	Onduleur	6	UIT	réalisé
10	Accès Internet 1 Mbit/s	6 mois	UIT	réalisé
11	Routeur WIFI ADSL	1	UIT	réalisé
12	Logiciel de Grossisseur d'écran pour malvoyants Zoom Text	2	UIT	réalisé
13	Logiciel de reconnaissance de caractères (OCR) ou OMNIPAGE PRO	2	UIT	réalisé
14	Antivirus version serveur	1	UIT	réalisé
15	Logiciel gestion Cyber	1	UIT	réalisé
15	Formation des utilisateurs	2 jours sur site	UIT	réalisé

Article no.	Article	Quantité	part	Etat de mise en oeuvre
16	Aménagement des locaux	1	MPTIC	réalisé
17	Fourniture de mobilier	1	MPTIC	réalisé
17	climatisation	1	MPTIC	Non réalisé
18	Equipements divers pour activités annexes	1	MPTIC	Non réalisé

IV. RESUTATS DE LA REALISATION

La réalisation du projet portait sur :

- Le renforcement de la cellule de formation en TICs adaptées existante de l'ABPAM ;
- La création d'un cybercafé ouvert à tout publique ;
- La création au niveau du cybercafé d'activités annexes génératrices de revenus.

Elle a donné les résultats ci-dessous détaillés:

4.1. Renforcement du centre de formation

- Le centre de formation a été renforcé par la mise la mise à disposition de :
- Trois (3) nouveaux postes supplémentaires de formation en TIC adapté aux personnes aveugles et malvoyantes faisant passer la capacité du centre de 1 à 4 postes ;
- Une imprimante braille ;
- Une plage tactile braille ;
- Un scanner professionnel ;
- La sécurisation par onduleur de l'alimentation électrique de chaque poste de travail et l'installation d'antivirus ;
- La formation du formateur principal à l'exploitation des nouveaux postes de formation.

4.2. Création d'un Cybercafé ouvert à tout publique

Un Cybercafé pour personnes aveugles, malvoyantes et voyantes a été effectivement créé avec la mise à disposition de :

- 2 postes de travail pour personnes aveugles ;
- 2 postes de travail pour personne malvoyantes ;
- 2 postes de travail ordinaires ;
- 1 Poste de gestion du Cyber Cafe ;
- L'installation d'antivirus sur chaque poste ;
- La sécurisation par onduleur de l'alimentation de chaque poste ;
- 1 Imprimante braille ;
- 1 plage tactile braille ;
- 1 scanner professionnel ;
- 1 réseau informatique sécurisé ;
- 1 connexion Internet 256 Kbits ;
- L'aménagement et la mise à disposition d'un local dans l'enceinte du siège de l'ABPAM ;

- Le recrutement d'un gestionnaire.

4.3. Création d'activités génératrice de revenu

Ce volet n'est pas encore réalisé et l'ABPAM est en quête de financement pour sa réalisation.

Les résultats de la réalisation du projet sont satisfaisants. Toutes les composantes essentielles ont été entièrement réalisées.

V. PERFORMANCES DU PROJET

5.1. Performances à l'exécution

5.1.1. Délais de réalisation

Le délai d'exécution physique du projet est jugé satisfaisant. Les travaux ont démarré le 23 juin 2010 et ont été achevés le 01 juillet 2010.

5.1.2. Exécution physique

La réalisation du projet devrait permettre, le renforcement de la cellule de formation, la création d'un Cybercafé ouvert à tout public et la création d'activités annexes génératrices de revenus au profit de l'ABPAM. Les performances à la réalisation de ces objectifs sont ci-dessous présentées.

Composante renforcement du centre de formation

Cette composante a été entièrement réalisée conformément aux spécifications techniques et de façon satisfaisante. Les équipements et logiciels installés sont de bonne qualité, et répondent bien aux caractéristiques techniques des cahiers des charges. Les versions logicielles fournies sont d'actualité.

Conformément au contrat et au titre de cette composante, une formation de deux (2) jours a été dispensée par le fournisseur au formateur principal. Cette formation lui a permis la prise en main immédiate de l'exploitation des nouveaux équipements.

Cyber café pour personnes aveugles malvoyantes et voyantes

Toutes les prévisions contractuelles relatives à cette composante ont été réalisées avec satisfaction. Mis en œuvre dans un local climatisé aménagé par le MPTIC / ABPAM dans l'enceinte de son siège, Le cyber café est entièrement fonctionnel et dispose d'une capacité de deux (2) postes de travail adaptés aux personnes aveugles, deux (2) aux personnes malvoyantes, deux (2) ordinaires ainsi qu'une imprimanteaille, une imprimante ordinaire, un scanner professionnel et une plage tactile braille.

Le réseau informatique sécurisé a été installé conformément aux règles de l'art avec une connexion internet de 256 Kbits/s et tous les accessoires complémentaires pour le fonctionnement d'un cyber café professionnel.

Activités annexes génératrice de revenus

A ce sujet, l'ABPAM est toujours à la recherche de financement pour sa réalisation.

Globalement, les activités de mise en œuvre du projet ont été achevées avec un niveau d'exécution très satisfaisante surtout au niveau des composantes majeures ; à savoir le renforcement du «Centre de Formation en TIC adapté »et la création du cyber café.

La non réalisation à la date d'achèvement du projet du volet « création d'activités annexes génératrices de revenus », n'impacte que de peu le niveau de satisfaction de l'exécution du projet car n'étant pas préjudiciable au bon fonctionnement du projet.

5.2. Performances opérationnelles

5.2.1. Centre de formation en TIC adapté

La capacité matérielle additionnelle apportée par le projet n'est malheureusement pas du tout opérationnelle. Aucun des trois (3) postes de formation supplémentaires n'est jusqu'à présent exploité.

Cette situation résulte d'un manque de formateurs pour l'animation de ces postes.

Dans la formulation initiale du projet par l'ABPAM, le renforcement du centre de formation prenait en compte trois (03) nouveaux postes de formation accompagnés du recrutement et de la formation de trois (03) formateurs ainsi que le recyclage de l'actuel formateur principal.

Les restrictions budgétaires qui ont conduit au redimensionnement du projet n'ont pas permis de retenir la réalisation de cette formation de formateurs telle que prévue par l'ABPAM. Seule une formation de deux (2) jours sur site a été retenue pour être dispensée par le fournisseur sur l'exploitation des nouveaux équipements.

Cette situation compromet sans doute, l'un des objectifs majeurs de l'ABPAM à savoir, le renforcement de sa capacité de formation afin de satisfaire une demande de plus en plus croissante et faciliter ainsi l'accès à l'informatique et aux TICs du plus grand nombre de la population des personnes déficientes visuelles. Cette composante a aussi pour effet l'accroissement de la fréquentation du Cyber Café.

5.2.2. Cyber Café

Le cyber café qui est fonctionnel depuis le 1^{er} juillet 2010 est officiellement entré dans sa phase opérationnelle après l'inauguration du projet le 11 mars 2011.

Conformément à son principal objectif, il est fréquenté par des personnes aveugles, malvoyantes et ordinaires. Ce cybercafé, qui constitue le tout premier point d'accès public du genre au Burkina Faso, permet effectivement aux jeunes handicapés visuels, de pratiquer et de mieux s'insérer dans la Société de l'Information après leur formation par l'utilisation de l'Internet.

En plus du personnel de l'ABPAM et de l'Ecole des Jeunes Aveugles, le cyber à une fréquentation quotidienne d'environ dix (10) personnes en ce début de fonctionnement. L'heure de navigation a pour le moment été harmonisée avec les autres cybers à 250 F CFA soit 0.7 \$ dollar. L'ABPAM envisage de revoir ce prix à la baisse en faveur des personnes handicapées visuelles. Il est géré par un jeune déficient visuel titulaire d'une maîtrise en droit.

Le cyber café est situé dans l'enceinte du siège de l'ABPAM ce qui rend quelque peu difficiles son accès et sa visibilité.



5.3. Performances des intervenants

5.3.1. Entrepreneur

L'Entrepreneur a réalisé avec satisfaction les activités découlant de ses obligations contractuelles en ce sens que :

- Les fournitures ont été conformes en quantité et en qualité aux spécifications techniques et à son contrat ;
- Les équipements sont de renom (HP) et les versions logicielles sont d'actualité ;
- Les travaux ont été réalisés conformément aux règles de l'art et dans un délai fort appréciable d'environ dix (10) jours ;
- L'entrepreneur a dispensé conformément à son contrat, une formation de deux (2) jours sur l'exploitation des nouveaux équipements et logiciels ;
- La recette provisoire a été prononcée sans réserve majeure.

5.3.2. Performance de l'UIT

L'UIT a tenu tous ses engagements pris dans le cadre de la convention de Partenariat avec le Gouvernement du Burkina Faso pour la réalisation de ce projet.

L'UIT a assuré un suivi de bout en bout de toutes les phases du projet jusqu'à son inauguration officiel. Aussi, elle s'est entièrement acquittée de toutes ses obligations financières.

5.3.3. Performance du MPTIC / ABPAM

Le MPTIC a assuré avec satisfaction la supervision générale et la coordination du projet dans toutes ces phases à savoir :

- La recherche de financement ;
- La contribution à l'élaboration de la convention ;
- La contribution au recrutement du consultant ;
- La contribution au choix de l'entrepreneur ;
- La mise en relation des intervenants ;
- Les négociations techniques et financières ;
- Le suivi des réalisations ;
- La recette ;
- La mise à disposition de la connexion du Cybercafé à l'Internet ;
- L'inauguration du projet ;
- Les rapports d'étapes, qui ont été régulièrement transmis à l'UIT ;
- L'aménagement du local abritant le Cybercafé ;
- L'aménagement de la salle de formation ;
- La fourniture du mobilier pour l'ensemble du projet ;
- Le recrutement d'un gestionnaire du cyber ;
- Le suivi des travaux ;
- Participation à la recette provisoire.

5.3.4. Performances du consultant

Le consultant a assuré avec satisfaction les tâches suivantes :

- Etude de réalisation du projet ;
- Participation aux négociations techniques et financières ;
- Suivi des réalisations ;
- Suivi des travaux de recette sur site ;
- Evaluation de la réalisation du projet.

VI. IMPACTS DU PROJET

6.1. Renforcement du centre de fonctionnement

Le renforcement de la capacité du centre de formation n'a pour le moment aucun impact significatif, l'appui apporté par le projet n'étant pas encore exploité pour manque de formateurs.

Pourtant, ce renforcement reste très pertinent au regard de l'accroissement du nombre de jeunes handicapés en attente de formation (environ 100) et de la charge excessive du seul formateur dédié.

Cette contre performance compromet l'accélération de l'accès aux TIC au plus grand nombre d'handicapés visuels et aussi l'accroissement de la fréquentation du Cyber Cafe.

Des mesures diligentes doivent être prises pour faciliter au plus vite la mise en exploitation effective de cette composante.

6.2. Cyber Café

- La mise en exploitation du Cyber Café a eu un effet immédiat. A ce jour, il est quotidiennement fréquenté conformément à ses objectifs. Il permet ainsi ; Particulièrement aux jeunes aveugles formés d'avoir un accès public aux TIC, les permettant désormais de pratiquer et tirer profit de la formation reçue ;

- Aux personnes déficientes visuelles en général, de disposer d'un point d'accès public leur permettant de se familiariser avec les outils TIC et de s'insérer désormais dans la société de l'information ;
- Aux handicapés visuels et aux personnes voyantes de partager la même espace TIC, source d'échange, de contact et de rupture d'isolement social ;
- De générer des ressources financières supplémentaires pour l'ABPAM ;
- De mieux faire connaître l'ABPAM ainsi que les TIC adaptés aux déficients visuels ;
- D'améliorer, l'accessibilité générale aux TIC notamment dans la zone géographique de l'ABPAM.

VII. DURABILITE

La durabilité du présent projet sera entre autres essentiellement fonction de :

- La qualité des équipements et logiciels installés ;
- La capacité de l'ABPAM à les exploiter dans le sens des objectifs visés par le projet ;
- La capacité de l'ABPAM à assurer leur entretien correcte, à poursuivre et améliorer le projet ;
- De la capacité de l'ABPAM à supporter conséquemment les charges de fonctionnement.

Les équipements fournis dans le cadre du projet sont de bonne qualité et réputés robustes. Mais L'ABPM dans sa situation actuelle ne dispose pas d'une capacité financière à même d'assurer leur pleine exploitation, encore moins à poursuivre et à améliorer le projet.

Pour preuve la capacité de renforcement du centre de formation apportée par le projet est totalement inexploitée pour faute de ressources financières à recruter et former les formateurs nécessaires.

Aussi la licence d'utilisation de l'antivirus protégeant les ordinateurs du projet est arrivée à expiration sans que l'ABPAM ne soit financièrement capable de par elle-même, de la renouveler pour environ 225 \$ US, pris en charge par une source extérieure.

Les revenus attendus de l'exploitation commerciale du Cyber Café (environ 5,5 \$ US/jour actuellement) ne seront certainement pas d'un apport suffisant.

Aussi, la durabilité de ce projet reste essentiellement une question financière. L'ABPAM dont la situation financière reste précaire ne saurait par elle-même, assurer le fonctionnement normal du projet encore moins sa pérennité. Elle a nécessairement besoin d'appuis financiers sans lesquels le projet ne survivra pas.

VIII. CONCLUSIONS ET RECOMMANDATIONS

Le projet s'est achevé avec un niveau de réalisation satisfaisant. Toutes les composantes essentielles prévues ont été réalisées avec satisfaction à l'exception du volet création d'activités annexes génératrices de revenus dont la réalisation à la charge de l'ABPAM, a été différée par manque de ressources financières. Ceci n'est pas du tout préjudiciable au bon fonctionnement du projet.

Les différents intervenants ont remplis avec satisfaction les responsabilités découlant de leurs obligations si bien qu'aucune défaillance de nature à compromettre la bonne réalisation du projet n'a été constatée.

Pour le moment, les impacts du projet ne sont visibles qu'au niveau du cybercafé qui est en exploitation commerciale et régulièrement fréquenté par la population cible à savoir les personnes aveugles, voyantes et voyantes.

Il a déjà permis à beaucoup de déficients visuels une insertion effective dans la société de l'Information en se familiarisant à l'utilisation de l'Internet, notamment à la messagerie électronique et la navigation (échange de courrier, consultations de sites...).

Bien que faibles, le cybercafé génère déjà des recettes que l'ABPM espère améliorer avec entre autres les effets d'accroissement du taux de fréquentation que va apporter l'augmentation du nombre de jeunes aveugles formés aux TICs adaptés attendue de la composante renforcement du Centre de Formation.

Cette composante n'a pour l'instant généré aucun impact significatif. Cette situation déplorable est due au manque de formateurs devant prendre en charge l'animation des nouveaux postes de formation. L'ABPAM n'ayant pas la capacité financière d'en recruter avait exprimé le besoin à l'évaluation initiale du projet. Aussi compte tenu du son coût, les contraintes budgétaires n'ont pas permis de le retenir.

Le projet ne produira entièrement les effets attendus qu'avec la mise en exploitation de cette composante majeure qui constitue l'un des principaux prés requis pour l'accessibilité des handicapés visuels aux TIC.

De l'analyse des facteurs de durabilité du projet, il ressort clairement que l'élément fondamental à prendre en compte reste la capacité financière. L'ABPAM qui a une situation financière précaire est clairement incapable d'assurer par elle-même la pérennité des effets de ce projet. Aussi les recommandations suivantes sont formulées pour permettre de consolider les acquis du projet et poursuivre son amélioration.

RECOMMANDATIONS

A l'ABPAM

- i) Prendre les actions nécessaires à la finalisation de l'entière opérationnalité de toutes les composantes du projet afin qu'il produise tous les effets attendus;
- ii) Prendre des actions nécessaires pour améliorer le taux de fréquentation du Cyber Café notamment son accès et sa visibilité;
- iii) Elaborer un plan directeur de gestion et de développement durable du projet afin d'assurer sa pérennité et son extension aux autres grands centres du pays;
- iv) Elaborer un plan de financement et entreprendre les contacts et recherches d'appuis et de partenaires pour sa mise en œuvre.

A L'UIT

- i) Poursuivre et accroître son appui aux Etats dans la mise en œuvre de leurs politiques en matière d'accès et de service universel, la prise de mesures particulières pour garantir aux personnes handicapées l'accès aux services des TIC;
- ii) Inciter et Encourager ses Membres des pays développés à apporter un soutien plus efficient aux pays en développement notamment les plus pauvres dans le cadre de leurs stratégies d'accessibilité aux TIC et d'insertion sociale des handicapés ;
- iii) Poursuivre son appui au développement de ce projet dans le cadre du renforcement des capacités des formateurs dédiés.

TRANSLATION OF RECOMMENDATIONS FOR THE ITU FROM THE WEB

1. Continue and increase its support to States in the implementation of their policies for access and universal service, taking specific measures to ensure disabled people access to ICT services.
2. Inspire and encourage members of the developed countries to provide more efficient support for including the poorest developing countries in their access to ICT and social integration of persons with disabilities strategies;
3. Continue its support for the development of this project through the strengthening of the capacity of the dedicated trainers.

AU MPTIC

- i) Encourager et accroître son appui à la duplication et à la vulgarisation des initiatives telles que celle de l'ABPAM destinées à améliorer et faciliter l'accès des populations aux TIC et plus particulièrement les couches sociales défavorisées.
- ii) Conformément aux dispositions du cadre réglementaire des communications électroniques adopté en 2008, développer des initiatives en partenariat avec le secteur privé (opérateurs de télécommunications et fournisseurs d'accès internet) afin de faciliter la mise en œuvre d'infrastructures visant à faciliter l'accès des handicapés aux services des TIC.
- iii) La prise en compte des besoins spécifiques des personnes handicapées dans le cadre de l'édification de la société de l'information doit être un engagement du Gouvernement du Burkina Faso : en cela, le fond d'accès et service universel peut et doit aussi être utilisé dans la mise en œuvre d'infrastructures visant à faciliter l'insertion des handicapés dans la société de l'information inclusive.

Annexé 1

POINTS DE VUE DE QUELQUES INTERNAUTES ET RESPONSABLES DU
CYBERCAFE ET CENTRE DE FORMATION EN TIC ADAPTEE DE L'ABPAM.

Nom : COMPAORE
Prénom : Raphael
Sexe : Masculin
Occupation : Elève en classe de 1^o A
Déficient visuel
Internaute du cybercafé

« Je suis très soulagé par la création du cybercafé en ce sens que j'arrive à accéder convenablement à l'internet surtout par l'intermédiaire du ZOOM TEXT. Cela me permet surtout de dialoguer aisément avec mes correspondants.

Je souhaiterais vivement que le coût de l'heure de navigation soit vraiment revu à la baisse surtout pour les élèves handicapés visuels qui sont les plus grands utilisateurs et aussi qui perdent beaucoup de temps à cause de leur lenteur dans l'utilisation des TIC adaptés, surtout pour les débutants.

Je souhaite aussi la mise disposition de l'imprimante du cyber que j'utilise beaucoup et qui ne marche pas pour faute cartouche d'encre. Le plus grand impact sur moi de ce cybercafé reste la facilité de dialogue avec mes correspondants. »

Nom : SARE (aveugle)
Prénom : Mariam
Sexe : féminin
Age : 20 ans
Occupation Elève
Internaute débutante

« Je suis tout juste une débutante. Mais je suis très contente de la création de ce cyber servi qui va me permettre d'apprendre à utiliser pratiquement l'ordinateur et à accéder à Internet et enfin j'aurai la possibilité de dialoguer avec beaucoup de correspondant et d'apprendre beaucoup »

Nom : Ouédraogo
Prénom : Souleymane
Age : 31 ans
Occupation : Gestionnaire bénévole du cybercafé
Déficient visuel titulaire d'une maîtrise en droit

« Le cybercafé dispose de 2 ordinateurs équipés JAWS, 2 équipés Zoom TEXT et de 2 ordinateurs ordinaires. En ce début, la fréquentation du cyber varie de 10 à 15 clients/jour. La clientèle est majoritairement constituée des élèves aveugles et malvoyants, du personnel de l'ABPAM et de l'Ecole des jeunes aveugles et des habitants du quartier. Cette fréquentation augmenterait par des campagnes publicitaires que l'ABPAM n'a encore pu faire par manque de moyens financiers.

L'imprimante noir et blanc dont dispose le cyber n'est pas adaptée au grand public et l'utilisation de l'imprimante braille se heurte aux difficultés financières d'acquisition du papier dont le coût reste élevé pour l'ABPAM. Le bon fonctionnement de ce cyber dans la durée reste essentiellement une question de moyens financiers.

Pour ce fonctionnement durable du cyber, mes inquiétudes se situent au niveau des charges d'exploitation, de maintenance et de développement du cyber dont l'ABPAM n'a pas du tout la capacité de supporter. Par exemple pour le renouvellement de la licence de l'antivirus du cyber au coût de 115 000 F CFA, il a fallu l'intervention de l'Ecole des Jeunes aveugles.

Le centre de formation en TIC adapté a pris à ce jour une dimension sous régionale avec des stagiaires venant de plusieurs pays de la sous région à savoir

Côte d’Ivoire : 01 stagiaire qui vient de finir sa formation et 01 attendu

Benin : 01 en formation et 01 attendu

Togo : 02 dont une fille et un garçon 01 attendu

Aussi il nécessite un recrutement et un perfectionnement périodique de formateurs.

Mr OULE Christophe

Formateur principal en TIC adapté

Tel : +226 70 45 54 26

E-mail : formation@abpam.com

Déficient visuel

“ Les déficients visuels sont généralement émerveillés par la mise en œuvre de ce projet, mais la grande question qui se pose à nous est comment soutenir son fonctionnement durable car l’ABPAM ne dispose pas encore de capacité à le faire et est toujours en quête de soutien.

Le cyber nécessite obligatoirement des ressources financières pour couvrir ses charges courantes d’exploitation et de maintenance

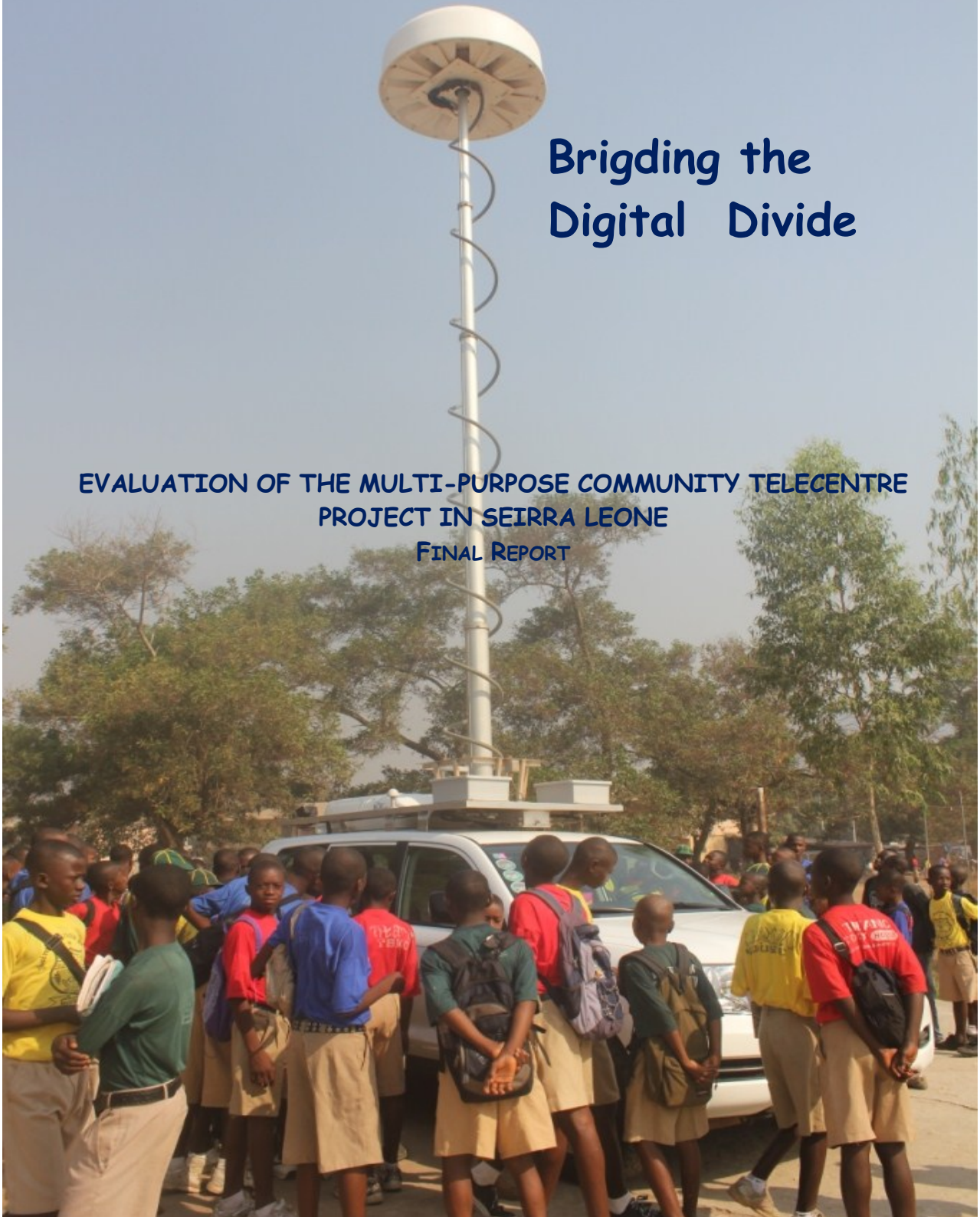
Le centre de formation qui est le principal pourvoyeur de clients potentiels pour le cyber et qui commence à recevoir des stagiaires étrangers ne dispose que d’un seul formateur qui est bénévole à savoir moi-même. Certes le projet a apporté 03 positions de formation, mais il faut des formateurs pour les animés. Du reste l’ABPM avait exprimé dans le cadre de ce projet ce besoin qui n’a pût être pris en compte.

La formation a besoin d’une mise à niveau périodique des formateurs compte tenu de l’évolution technologique rapide dans le domaine des TICs. Ce besoin aussi avait été clairement exprimé dans ce projet mais n’a pût aussi être pris en compte. »



Brigding the Digital Divide

EVALUATION OF THE MULTI-PURPOSE COMMUNITY TELECENTRE
PROJECT IN SEIRRA LEONE
FINAL REPORT



Acknowledgements

This report has been prepared by ITU expert MS Ann Rita Ssemboga under the direction of the ITU Regional Office for Africa, and the kind support of the Ministry of Communications, Government of Sierra Leone, through the National Telecommunications Commission (NATCOM), the office of Universal Access Development Fund (UADF) and the various institutions who facilitated this evaluation through discussions and visits which provided invaluable inputs to the report.

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EXECUTIVE SUMMARY

The International Telecommunications Union (ITU), together with the Government of Sierra Leone, Ministry of Communication, through the National Telecommunications Commission (NATCOM), and the Commonwealth Telecommunications Organisation (CTO) in March 2010, initiated aimed at providing access to telecommunication services to five rural and underserved areas namely, Kambia, Makeni, Kono, Pujenhun and Mile 91 through the establishment of Multipurpose Telecommunication Centers (MCTs). Below is a summary of findings of the assessment on the level of implementation of the project conducted by the ITU in March 2012;

1. Operational Status

Although none of the centres were officially operational, a number of planned activities under phase 1 and 2 had been completed including;

- a) **Selection of project location:** Except for the MAKENI MCT, all MCTS are located at the District Council Head Quarters, due to their strategic locations, administrative frameworks and readiness in terms of pre-existing infrastructure,
- b) **Site Preparation:** The Government of Sierra Leone invested in the refurbishment and in most cases constructed new District Council HQ, to ensure sufficient space to accommodate the MCTS. The MCTs in Mile 91, Pujenhun, Kono and Makeni are all set up in new or refurbished structures while MCT at Makeni is a fully loaded with top of range furniture and modern cafe equipment.
- c) **Procurement of equipment and services:** All equipment including furniture had been delivered and the Local Area Network, including VSAT equipment, power generators were set up and connected;
 - 1. Each centre has been provided with a VSAT connection with a capacity of 256 and 512 megabytes upload and download respectively. The MCTs were running on limited capacity but NATCOM confirmed that full capacity will be switched on by 14th April 2012.
 - 2. The internet billing software and monitoring tools had been installed at each MCT although not tested.

- d) **Administrative Structure:** Each MCT had defined their administrative structure which mirrors the existing local administration framework. MCTs are headed by either the local area Member of Parliament, the Mayor or the Local Council Chairpersons. The Chairpersons are supported by other local community members who constitute the steering committee.
- e) **Recruitment of staff:** It is envisaged that each centre shall have at least; a Technician, a Business Manager, an Administrative Manager and a Cleaner. By the time of the visit, Technician had been enrolled to oversee the installation of the PCs and setting up of the LANs. Other recruitments were yet to be completed.

Activities not completed included;

- a) **Training and capacity development:** CTO with support from NATCOM was required to provide access to education content, training materials, including the development and customisation of ICT services and application suitable for particular needs of the community and train staff, trainers and end-users. Neither the training nor the content had been provided by the time of the visit.

2. Services to be provided;

- a) Regular commercial cafe services such as internet, photocopying, printing among others shall be provided by each MCT. To complement the above, library services (in the case of Makeni and Kambia), mobile phone charging, Digital satellite TV broadcasting (DSTV), sale of prepaid mobile phones and advertising and announcement services are also planned.
- b) A number of the MCTs visited however, did not show readiness (in terms equipment and personnel) to provide ICT skills training and additional enhanced services such as e-health services, e-education, gender based programs, e-governance, among others envisaged at the launch of the project had been planned.

3. Sustainability

- a. The sustainability of each MCT shall be dependent on their ability to minimise costs especially energy costs while maintaining a desirable demand for both basic and enhance services. We estimate that on average, each MCT will be required to spend at least 1774 USD per month equivalent to USD 71 per day. In an optimistic and pessimistic scenario, earning per day may gross to USD 100 and USD 50 respectively. In the case of the later, sustainability of the MCTs may be of concern.

4. Fund disbursements

- a. The ITU pledged to provide in cash CHF 107,280 while the CTO and NATCOM had pledged to contribute CHF 74,946 and CHF 152,055 respectively. ITU had fully met its monetary contribution while in-kind contributions from NATCOM could not be verified although planned activities had been fully implemented. On the other hand, CTO's in-kind contribution will be delivered once the MCT's internet connection is upgraded by end of June .

5. Recommendation

1. Site preparation
 - a. Considerations should be made to build ramps to allow access for Persons with Disabilities.
 - b. The partition of the MCT at Mile 91 should be reviewed to ease monitoring and access to the MCT.
2. Equipment and connectivity
 - a. NATCOM should consider procuring UPSs for all MCTs and low power usage computers and solutions should be explored for future projects given the reliance on generator powered energy.
 - b. NATCOM should ensure that all equipment is labeled and insured before project handover. An ITU logo should be placed inside and outside the MCT premises.
 - c. The billing software should be programmed to enable off site monitoring and tested prior to launch of services.
 - d. Efforts should be made to increase capacity and explore alternative and cheaper internet solutions.
3. Training
 - a. NATCOM should seek confirmation from CTO as to when the training material shall be provided and a commitment on how and when the training of trainers, staff and end-users shall be conducted.
4. Sustainability
 - a. Alternative energy solutions such as solar power should be explored to enhance sustainability by reducing the cost of energy.
 - b. NATCOM should ensure that each MCT has in place provisions to train and assist the local community on ICT usage as well as provide enhanced services as a

means of generating demand. A clear framework to achieve this should be drawn.

- c. Cafes should explore different pricing strategies such as promotional offers, youth rates, in order to enhance awareness. It may for instance be more desirable for some MCTs to price internet access in slots of 15 or 30 minutes to improve affordability.
- d. MCTs should consider reviewing the number of personnel, the IT Technician for instance could take up some of the responsibilities of the administrator and the Manager may be in charge of business promotion during the initial stages of the project to minimize of recurrent expenses.

5. Administrative Structure

- a. Whereas it is evident that the local administrators are key in enhancing community ownership and awareness, the functions and responsibilities for the MCT leadership and members of the Steering Committees should be clearly defined including the procedure for election of members, the term of office for member and remuneration if any to avoid political and ownership related clashes.

6. Monitoring and Evaluation

- a. It is crucial that an operational requirement schedule be drawn and signed by the administrators of the MCTs before NATCOM handover. The requirement should include monthly and annual report sheets, list of inventories as well as the defined prerequisite such as opening hours; mandatory service, among others.
- b. A memorandum of Understanding should be reached between NATCOM and all MCT operators as well as a proposal for the official launch of the project should be drawn in consultation with the ITU.

CHAPTER 1: BACKGROUND

1. INTRODUCTION

The International Telecommunications Union (ITU), together with the Government of Sierra Leone, Ministry of Communications, through the National Telecommunications Commission (NATCOM), the Regulatory Agency and the Commonwealth Telecommunications Organisation (CTO) in March 2010, initiated a project called the Multi-purpose Community Telecenters for Rural and Underserved areas of Sierra Leone. The project aimed at providing access to telecommunication/ICT services to five identified and selected rural and underserved areas of Sierra Leone, namely Kambia, Makeni, Kono, Pujehun and Mile 91 through the establishment of Multipurpose Telecommunication Centers (MCTs).

The International Telecommunications Union pledged to provide in cash CHF 107,280 while the CTO and NATCOM pledged contribution was CHF 74,946 and CHF 152,055 respectively.

1.2 Back Ground of the Project

Sierra Leone is a country in post conflict transition following a ten year civil war that ended in 2002. The country is therefore in the process of rebuilding infrastructure and the economy; reconstructing the education, health and governance systems. To achieve this, the Government of Sierra Leone formulated a Poverty Reduction Strategy which among others focuses on rebuilding supportive infrastructure and improving access to information and communications services (ICTs).

The project was therefore intended to feed into efforts to achieve government's goal by establishing five (5) MCT facilities in rural and underserved areas of Sierra Leone. Ten sites were survey during the feasibility study undertaken in March 2009 and five provinces were selected to benefit from the project as shown in the map below.



Map 1- Map of Sierra Leone showing Project Locations

1.3 Project objective

The project objective was to enable use of telecommunications/ ICTs for social and economic activities by providing and improving access to ICT and applications and usage in rural and underserved communities and in particular to vulnerable groups including women, children, youth and persons with disabilities by establishing 5 MCTs.

The project also aimed at harnessing the potential of ICTs to build human capacity, reduce illiteracy, improve access to knowledge and enhance opportunities for employment.

Intended output of the project included:

- I. The establishment of 5 MCTs in identified rural areas
- II. MCT staff trained for operation and maintenance of the MCTs
- III. ICT applications and content developed and customized to meet local needs
- IV. Training in ICT basic literacy and its use for day to day social and economic activities
- V. Use and awareness of ICT services and applications through targeted human capacity building.

The outputs were to be measured based on the following performance indicators:

- I. Number and range of services offered at the centre
- II. Number of users per day classified by type of individuals, gender etc and

III. Number of persons trained.

1.4 Scope of the Assignment

The field visit which was conducted between 5th and 9th March, 2011 aimed at assessing the level of implementation of the project, mainly focused on examining:

- i. If the MCTs are operational and the suitability of the equipment deployed in the centres
- ii. The level and relevance of services provided to the targeted beneficiaries
- iii. The technical and administrative capacity of the project implementers as well as an assessment of the experts providing training to trainers and users
- iv. The ability of the project to sustain its operations and thus continued rendering of services to the public and target community.
- v. Programs conducted by the centre to build awareness of the projects and promote access to ICTs use by disadvantaged members of the community such as women and persons with disabilities.
- vi. The level of training conducted
- vii. The social and economic impact of the project to the target population and to draw lessons and experiences so far gained and
- viii. Attainment of the performance indicators set out in the project document.

The following program was adopted for the visit:

Date/ Time	Location	Remarks
05th March 2012		
11.00 am	NATCOM Office	Introductory Remarks from NATCOM & UADF Top Management
3.00 pm	Working Group meeting	Project Committee
6th March 2012		
9;00 am	Kambia	Site Visit/ Engage with Steering Committee
2:00 pm	Makeni	Site Visits/ Meeting with Steering Committee
7th March 2012		
1.00 pm	Kono	Site Visit
8th March 2012		
10.00 am	Pujehun	Site Visit
3.00 pm	Mile 91	Site Visit
9th March 2012		
9.00 am	Ministry of Information & Communication (MIC)	Project overview and preliminary Findings
12:00	UADF Special Supervising Committee	Project overview and preliminary findings

CHAPTER 2 FINDINGS

2. OPERATIONAL STATUS

The MCT project was signed off in April 2010 following the completion of phase 1 that involved the appointment of the local team and site preparation.

The second phase was focused on implementation and was scheduled to run between May 2010 and December 2011 with the following planned activities;

- i. Identification of equipment suppliers
- ii. Procurement of equipment and services
- iii. Installation and transfer of equipment
- iv. Marketing and promotion campaign

The 3rd phase to run between March and December 2011 involved operational training and capacity building with the following scheduled activities;

- i. Recruitment of trainers and staff
- ii. Training of trainers
- iii. Development of local content, educational and training materials
- iv. The launch of the MCTs
- v. Training of end users

Monitoring and evaluation planned in phase 4 was scheduled for December 2011.

Emerging issue-

By the time of the visit, NATCOM through the UADF had completed all the scheduled items under phase 1 and 2 which included the identification of sites and the procurement of the relevant equipment and services. The equipment had been delivered to the relevant MCT locations. However, none of the centres was operational and none of the training / capacity building activities planned in phase 3 of the project had been conducted. The reasons for the delay in implementation are discussed further in the report.

A review of the implementation of the project as per the planned activities is provided in the following sections.

2.1 Selection of project location

The initial locations for the project were Kambia, Makeni, Segbwema, Pujenhun and Mile 91. These were chosen ideally on the basis of their strategic locations and readiness in terms of pre-existing infrastructure. At implementation, the MCT at Segbwema was relocated to Salima as it was more populace and with a newly refurbished building to house the project.

2.2 Site Preparation

Except for the MCT at Makeni where the MCT was located at St Francis Secondary school, all the MCTs were located at the District Council Head Quarters. The HQs are centrally located and open to the public, enabling ease of access by the community.

Secondly, the Government of Sierra Leone invested in refurbishment and in most cases built new District Council offices and libraries throughout the councils. The MCTs in Mile 91, Pujenhun, Kono and Makeni are all set up in new or refurbished structures.

The building housing the Makeni MCT was built by the old students association of St Francis Makeni Secondary School. It is fully loaded with ports, top of the range furniture and all necessary equipment for the café as shown below. This MCT should be used as a reference /model for future projects.



Picture 1: A Newly Refurbished Kambia District Resource Centre



Picture 2: State of the Art Makeni Resource Centre

Emerging issues

All the MCTs are housed in either new or freshly refurbished suitable buildings. Some of the buildings however lack suitable access ramps for PwDs.

Recommendation

1. Ramps to allow access for Persons with Disabilities should be built at all MCT premises.
2. The partition of the MCT at Mile 91 should be modified to ease monitoring and access to the MCT.



Picture 3: Installation Works at the Newly Constructed Mile 91 District Council Head Quarters

2.3 Procurement of equipment and services

M/S SAB Technologies supplied, installed and commissioned all equipment for MCTs. By the time of the visit, equipment including furniture for the MCTs had been delivered, the Local Area Network, the VSAT equipment set up and connected.

The table below shows the equipment planned for the project. :

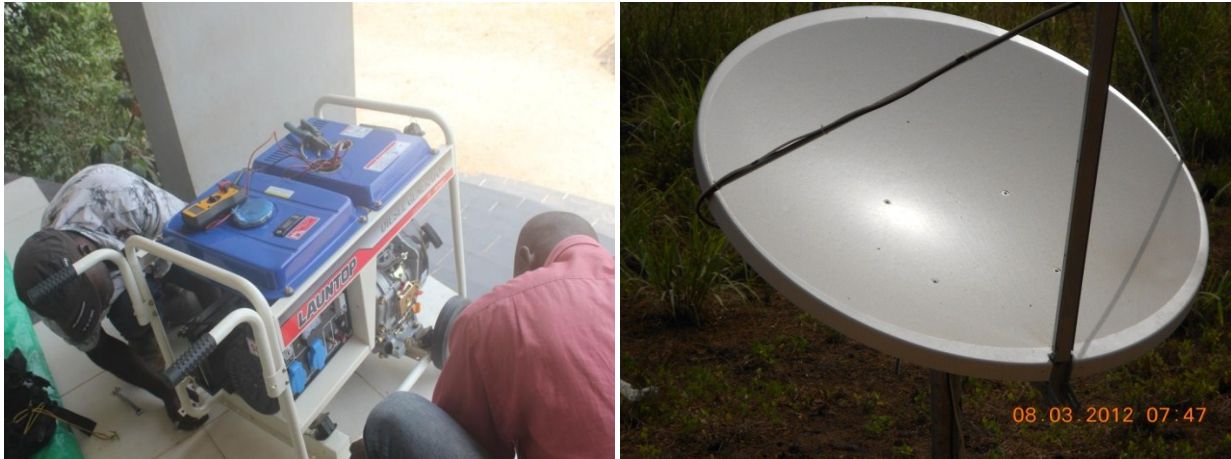
Item	Responsible Institution	Kambia	Makeni	Pugehum	Mile 91	Kono
PCs (Window 7/XP) with Multimedia facilities and OS	ITU	10	10	10	10	10
Anti- virus software	ITU	10	10	10	10	10
Microsoft Office applications packages	ITU	10	10	10	10	10
Local Access network equipment and Routers +WIFI	ITU	1	1	1	1	1
Multi functional printer /photocopiers/ scanner (black & white)	ITU	1	1	1	1	1
MCT accommodation and furniture	NATCOM	3	3	3	3	3
Stationary equipment & consumables- Paper, stapler, puncher	NATCOM	1	1	1	1	1
Internet High speed access with terminal	NATCOM	1	1	1	1	1

equipment for access over terrestrial network						
Internet Software for management, billing and remote monitoring and reporting	ITU	1	1	1	1	1
Generator / Alternative Power	NATCOM	1	1	1	1	1
Training materials	CTO	1 lot	1 lot	1 lot	1 lot	1lot

Table 1: List of Equipment Supplied to the MCTs

The following notes and observations are made in relation to the equipment purchased and status of implementation:

1. Each centre has been provided with a VSAT connection with a capacity of 256 and 512 megabytes upload and download respectively. At the time of the visit, the MCTs were running on limited capacity but NATCOM confirmed that full capacity will be switched on by 14th April 2012. It is anticipated that more capacity shall be available once the government's national backbone infrastructure project is completed and the country is connected to the high capacity international Sub-marine cable through Gambia.
2. The CTO had by the time of the visit not supplied any training materials for either the MCT staff nor for the end-users.
3. No provisions were made to purchase UPSs. It was assumed that since PCs were to be run on generators, the need for the UPSs was limited. This may not be the case especially when grid power is extended to MCTs.
4. None of the equipment procured is labelled nor insured which may pose a risk to the project.



Picture 4: Generators and VSAT Links Supplied to all MCTS

In terms of appropriateness of equipment supplied:

1. The PCs procured run on regular power (grid) and yet all MCTs are running on costly generator power, despite the proliferation of low energy PC solutions.
2. Generators procured have a capacity of 5 KVA and whereas they may be sufficient to run a 10 PC computer room, the generators cannot be used to service the entire buildings – councils buildings housing the MCTs nor the additional products and services that the MCT may operate in future. Most of the generators procured are running as back-up solutions at some of the Council HQs that already have generators.
3. The internet billing software and monitoring tools had been installed at each MCT. It had however not been tested since the centres were not yet operational.



Picture 5: Inside the St Francis Makeni MCT



Picture 6: Inside the Pujehun MCT

Recommendation

1. NATCOM should seek confirmation from CTO as to when the said training material shall be provided and a commitment on how and when the training of trainers, staff and end-users shall be conducted.
2. NATCOM should consider procuring UPSs for all MCTs
3. Low power usage computers and solutions should be explored for future projects
4. Alternative energy solutions such as solar power should be explored to enhance sustainability by reducing the cost of energy.
5. NATCOM should ensure that all equipment is labeled and insured before project handover. An ITU logo should be placed inside and outside the MCT premises.
6. The Billing software should be programmed to enable off site monitoring and tested prior to launch of services.
7. The internet connectivity if reliable should be sufficient in the initial stages of the projects but efforts should be made to increase capacity together with other government internet capacity development project.

2.4 Services to be provided

The following commercial core services shall be provided by each MCT once they are fully commissioned:

1. Internet service
2. Photocopying
3. Desktop publishing
4. Printing
5. Payphone services
6. Phone charging



Picture 7: Mr. Wundu Passay, the IT Manager for the Pujehun MCT

Complementary services that are ready to be launched once the MCTs are fully functioning include library services (in the case of Makeni and Kambia), mobile phone charging, Digital satellite TV broadcasting (Dstv), sale of prepaid mobile phones and advertising and announcement services.





Picture 8: Library and Conference / Multi-purpose Hall at the St Francis Makeni MCT

Emerging issues

1. A number of the MCTs visited did not show readiness (in terms of additional equipment and personnel) to provide ICT skills training.
2. At the project inception it was also envisage that additional enhanced services such as e-health services, e-education, gender based programs, e-governance, agricultural information tools, applications for the vulnerable groups among others would be provided with support from NATCOM and would be incorporated within the services of the MCT. This was not evident as the centres are not yet operational.

Recommendations

3. Training of trainers, administrators and users is a key component to the success and sustainability of the MCT projects. NATCOM should ensure that each MCT has in place provisions to train and assist the local community on ICT usage.
4. NATCOM should also consider facilitating the provisioning of enhanced services and content development- a clear framework to achieve this should be drawn as soon as possible.

2.5 Administrative Structure

2.5.1 Management Model – Steering Committee

In line with the community based theme, local government administrative councils have been central to the ownership, leadership and management of all MCTs. Under this model, the leadership of the MCT is spearheaded by either the local area Member of Parliament, the Mayor or the Local Council Chairpersons. The Mile 91 MCT for instance is headed by the Area MP Hon. Dr. Mathew M. T. Teambo, in Makeni it is the mayor while in Pujehun, Mr. Sadiq Silla the local area chairperson is the chairman.

The Chairpersons are supported by other local community members who constitute the steering committee composed of i) Vice Chairperson, ii) Secretary General, iii) Finance/ treasurer, iv) Public Relations/ Marketing, v) Auditor , among others. Some of the MCTs have also identified members from the business community (the case of Kambia, Pujehun and Mile 91), religious community and education institutes to be part of the steering committee. A List of Steering Committee Members for each MCT is contained in Annex 2.



Picture 9: The Management and Administrative Team of the Makeni MCT

Emerging Issue

1. Whereas it is important that the local administration is key in enhancing community ownership and awareness, the functions and responsibilities for the steering committees should be clearly defined including the procedure for election of members, the term of office for member and remuneration if any to avoid political and ownership related clashes.

2.5.2 Recruitment of staff and qualifications

Together with overseeing the activities of the MCTs, the steering Committee is required to recruit staff in charge of the day to day running of the MCT. It is envisaged that each centre shall have at least;

1. Technician
2. Business Manager
3. An Administrative Manager and
4. Cleaner

By the time of the visit, technician for the MCTs had been enrolled to oversee the installation of the PCs and setting up of the LANs. Other recruitments were yet to be completed.

2.6 Training and capacity development

The training and capacity development program envisaged at the start of the project involved :

- i. Training of MCT staff
- ii. Training of trainers
- iii. Training of end users

CTO with support from NATCOM was required to provide access to education content, training materials, including the development and customisation of ICT services and application suitable for particular needs of the community and train staff and end-users.



Picture 10: Community Members from Mile 91 Eager to Access and Learn Computers

Emerging issue

1. The development of training material and actual training had not been conducted by the time of the visit.

Recommendation

1. A clear training program including materials should be developed and agreed upon with all stakeholders involved immediately as this is key for the future viability and sustainability of the project.

2.7 Sustainability

At the start of the project, each MCT was expected to provide basic services including internet, printing and photocopying and desktop publishing. Each centre was also to provide satellite television broadcasting and phone charging as complimentary services. The table below provides the anticipated fees to be charged per service;

Items	Cost in Leone
Internet – per hour	4000
Printing- Per page	2000
Photocopying	300
Desktop publishing	2000-5000
TV Shows- per person per show	100
Phone charging	1000

Table 2: Proposed Prices for MCT Services

Source: Natcom- UADF- April 2012

In terms of expenses, it is estimated that on average, each MCT will be required to spend on a least 1774 USD. This includes internet connectivity for 1 year which will be provided by NATCOM as shown in table below.

Breakdown of estimated Monthly Recurrent Expenditure-		
ITEMS	Costs in Leones	Costs in USD
**Internet Bandwidth Costs	4350000	1000
Generator fuel	1260000	290
Generator Oils and maintenance	126,000	29
Emoluments		
1. Technician	300,000	69
2. Business Manager	400,000	92
3. Administrative Manager	400,000	92
4. Cleaner	200,000	46
Stationery		
Paper	80,000	18
Tonner	600,000	138
TOTAL	7,716,000	1,774

Table 3: Breakdown of Estimated Monthly Recurrent Expenditure

*** to be paid by NATCOM during the 1st year of operation. Source: Natcom- UADF- March 2012*



Picture 11: A sample of the pay phone booth given to each MCT.

Expenditure costs are high compared to other MCTs that have been supported by ITU largely due to the full reliance on generator energy. On a positive note, none of the MCTs

shall bare any rental charges as these are provided for by the local government or the school administration in the case of Makeni.

An attempt to estimate the number of users or units sold based on optimistic and pessimistic scenarios as assumed in the table below indicate that the MCTs may be required to boost sales /thump up demand in order to generate enough revenues to sustain their operations.

Items	Cost in Leone	Est. Users, hours, units Pessimistic	Est. Users, hrs Optimistic	Revenue per day - Pessimistic/ideal	Revenue per day- Optimistic
Internet – per hour	4000	35 hrs	65hrs	140,000	260,000
Printing- Per page	2000	25 pgs	50 pgs	50,000	100,000
Photocopying	300	40 pgs	120 pgs	12,000	36,000
Desktop publishing	2000	1	5	2,000	10,000
TV Shows- per person per show	100	20	75	2,000	7,500
Phone charging	1000	15	30	15,000	30,000
Total in Leones				221,000	443,500
Totals Daily revenues in USD				51	102
Estimated Recurrent Expenditures					
Expenditure Monthly	7,716,000				
Expenditure Daily (25days)	308640				
Daily expenditure in USD	71				

Table 4: Expenditure and Revenue Analysis for the MCT

Under the optimistic scenario, an MCT may on average earn close to 100 US dollars per day and only USD 51 in a pessimistic scenario. In case of the later, **the sustainability of the MCTs may be an issue of concern to all stakeholders involved** as expenses based on the analysis above are projected to be close to USD 71 per day



Picture 12: The Administrator for the Pujehun MCT demonstrating Connectivity using the ITU web page

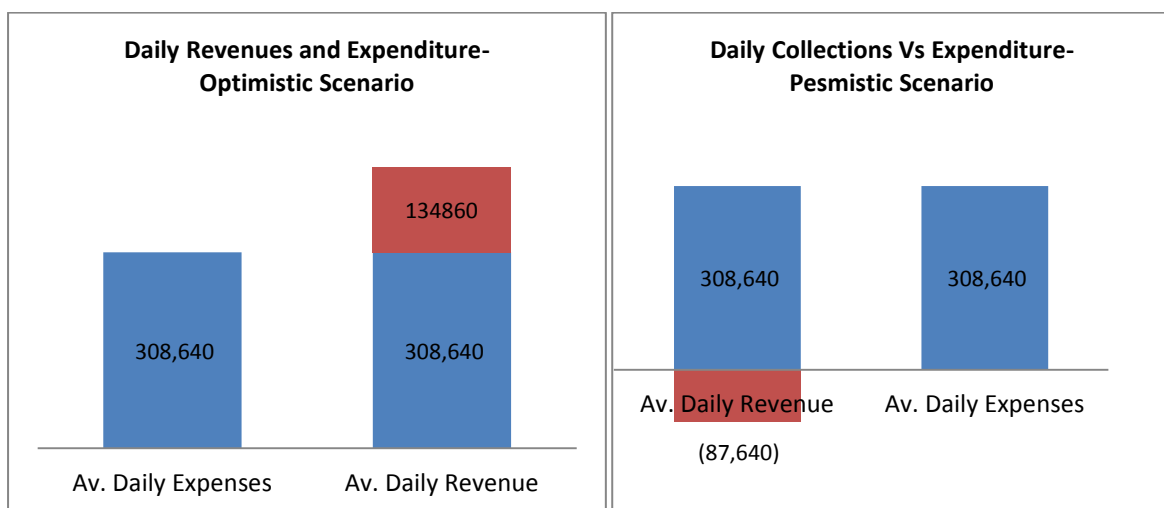


Figure 1: Daily Expenses and Revenue Scenarios

Recommendations

1. Alternative energy solutions – low powered computers and solar energy should be explored in addition to increasing the scope of services offered by the MCTs.
2. Additional services that may be provided include, photography, binding and large and medium scale photocopying (current photocopies are purely

domestic/ low scale), video, among others. Based on the performance of ITU supported MCTs in Malawi and Zambia, revenues collected from photocopying and similar services contribute more than 50% of the MCTs revenue.

3. At some MCTs, it may be desirable to price internet access in slots of 15 or 30 minutes as it may be more affordable and may encourage more access. This practise is common in low cost communities. Internet speed should however be sufficient for such a model to be effective.
4. MCTs should consider starting by offering promotional offers for internet services for instance to the youth where demand is not sufficient or there is a need to build more awareness.



Picture 13: Future Users- Pupils of * School and the MCT**

business promotion.

5. To reduce on the recurrent expenses, MCTs should consider reviewing the number of personnel in the interim until they generate more demand and revenues for the services. The IT Technician for instance should be responsible for some of the administrative functions of the center supervised by the Manager who should also be in charge of

2.8 Monitoring and Evaluation

An operational requirement schedule should be drawn and signed by the administrators of the MCTs before NATCOM handover/exit from the project. The requirement should include monthly and annual report sheets as well as the basic requirements to operate the MCTs. A memorandum of Understanding should be signed between the two parties. *A proposal for the official launch of the project should be drawn in consultation with the ITU.*

2.9 Project Funds Disbursements

The International Telecommunications Union pledged to provide in cash CHF 107,208 (equivalent to approximately US\$118,000), while the CTO and NATCOM pledged contribution was CHF 74,946 and CHF 152,055 respectively.

By the time of the visit, the ITU had disbursed fully disbursed this amount and slightly exceeding the budget by CHF 371. NATCOMs was to contribute in-kind about CHF152,055 to cover furnished accommodation for the MCTs, internet connection, training of managers, power and local staff including technicians to operationalize the MCTs. While these activities have been accomplished, it was not possible verify the exact amount spent on the project during the evaluation. The CTO were yet to meet their in-kind contribution of CHF 74,974 in form of on-line educational content, training material and courses for MCT managers and operations staff and this was expected to take place once the MCTs have better internet connection by end of June.

Chapter 3

Conclusion

Enough evidence shows the significance of using the MCTs as a tool and a business catalyst for social and economic develops. Through these centres, communities can transform small informal business communities into formal and professional businesses by having affordable and reliable access to markets and financing sources globally.

This is may come true for the rural communities in Sierra Leone who for the first time are getting internet connectivity under the MCT project. Government of Sierra Leone's together with NatCom has shown great dedication to the project and has invested amass resources to the project. The communities as well as their leaders have also shown great interest in project. It is therefore paramount for NatCom to Commission and fully make the MCTs operational. It is also important that the issues identified, especially those related to the sustainability such as identifying alternative energy and internet solutions should be addressed for the long term viability of the project.

Annex 1

List of equipment and Technical Specification- Project 7/GLO/07/065 MCTs

Item	Specifications	Quantity
1	Computer and software • Processing type- Intel Pentium D HT technology • Processor Speed- 1.80GHz Bur 800MHz Cache 2MB 1.2 catch • Memory: 1GB • Hard Disk: SATA 16- GB HDD • USB Flash disk: at least 4 ports • Network card: Integrated Broad room 10/100 • Power supply; 220V, 50Hz power supply, shako cable • Operating system: Microsoft Windows 7/XP professional SP2 • DVD/CD-RW Combo drive with software • Integrated SoundMax AC97 audio card • Full Multimedia with speakers • Integrated modem card • Integrated wireless Mini PCI card • Keyboard with USB optical mouse • Preloaded with Microsoft XP professional • Preloaded with latest Microsoft office • 19 inch wide screen color monitor • Preloaded with anti virus	50
2	Kaskersky Anti Virus Software	50
3	Microsoft Office Application Package	5
4	Local Access Network Equipment with router and WiFi	5
5	Internet Cafe software for management, billing , remote monitoring reporting	5
6	HP colour Laserjet CP1215 printer • Printer type: Moni printing • Printing speed: 26ppm • Resolution:2400/600 • Tray capacity: 550 sheets • Duplex printing: Yes • Memory: 16MB • Operating system: Win 98, se, Me, XP, Vista	5
7	Telephone Booths- Phones not purchased	
8	VSAT equipment and routers	5
9	Flat Screen 36" TV and DSTV decoder	5
10	Generator- 5KVA capacity	5

Annex 2: Summary of findings at the MCTs visited				
Name of site	Date visited	Readiness Assessment and inventory of resources	Leadership/ Members of the Management Team	Remarks
The Kambia Resource centre; Managed by the Kambia District Council Located 220km from Free Town	6 th March 2012	1. MCT set up in a suitable room of 6.4*6.6 meters 2. Available room for telephone and 6 booths in place 3. 4 *13 A socket points 4. 10 PCs, monitors and printer installed 5. A Vsat installed and connected- 6. A generator (5 KVA generator) 7. Flat screen TV and decoder-connected 8. 3 staff recruited; A cafe Manager & 2 Administrators Other facilities 1. Town Hall for conferences, meetings, wedding etc 2. Bar and Restaurant	1. Chairperson - Victor Kalie Kamara 2. Co Chairman - Mr. Ibrahim N'jai 3. Secretary General - Mr. Mohammed Mansaray 4. Assistant Secretary General - Mrs. Aminata Conteh 5. Financial Secretary - Luseni J R Magbie 6. Auditor - Mr. Martin C Massaquoi 7. Public Relations Officer - PRO- Mr. Mohammed Swaray	1. Good cafe set-up and infrastructure in place 2. Centre has a generator in place (5KVA) and provided and maintained by the council. The generator supplied for the MCT shall only be used a back-up 3. Management Team is composed of members from the business community such as the Paramount area chief, Landmark construction chief who are independent of the local Administrative Council. This diversity should enhance community ownership and participation. 4. The separation of the books of accounts from the MCT activities and other activities of the district council may be desirable.
Makeni MCT-located at The Saint Francis Secondary School Resource Center	7 th March 2012	1. Very modern newly constructed resource center with a cafe space of 8m*7m. 2. Internet cafe fully loaded with modern furniture, complete set up of the LAN 3. 10 PCs, monitors and printer installed 4. A Vsat installed and connected- 5. A generator (5KVA generator)	1. Mayor – Makeni City Council 2. Chairman – Bombali District Council 3. Chairman - Civil Society 4. Chairman – Traders Union 5. Chairman – CPSS 6. Mr. Alpha Bangura 7. Mr. Mohamed Dumbuya 8. Mrs. Esther F. Bangura 9. Mr. M. A. Sesay 10. Mr. Joseph Lansana	1. Structure and set-up excellent 2. Cafe is within the school compound outside the central business/ community area. Whereas there may be sufficient demand from the student population, the isolation from the community may deter participation from the general public, thus a need for greater community awareness 3. Sole reliance on the generator

		6. Flat screen TV and decoder-connected 7. Resource Centre Manager / School librarian in charge of the administrative function of centre supported by the IT teachers and voluntaries from the community Other facilities 1. Library- 2. Conference and meeting rooms 3. ICT training lab	11. Mr. Andrew R. Kanu	provided by for the cafe. Resource centres generator was not functioning. 4. Need to define administrative structure and remuneration model that fit in the school and community/council framework. The reliance of the school to run and operationalise the MCTs sorely may not be sustainable.
Pujehun MCT located at the Sierra Library Board building owned by the Pujehun District Council	7 th March 2012	1. A newly constructed library center sufficient space 2. Internet cafe set up including furniture and LAN 3. 10 PCs, monitors and printer installed 4. A Vsat installed and connected- 5. A generator (5KVA generator) 6. Flat screen TV and decoder-connected 7. Full time employees of the Local Council Administration- The IT Manager and Administrators as well as the librarian have been engaged to run the MCT. Other facilities 4. Library- 5. Conference and meeting room	1. Sadiq Silla- Local Council Chairman 2. John I. Swarray-Local Council 3. Sam S. Abu- Broader Community 4. Cecil Marculay- Local Business Sector 5. S. B. M. Swarray- Education Committee 6. J. M. D. Samba- Law Enforcement 7. Shika Bahuru Jalloh- Religious Sector 8. Josephine Sowa 9. Benjamin Passion- Rokel Commercial Bank 10. Wundu Passay -MCT Operator 11. Magdalene Jattu Momoh- MCT Operator	1. There is clear and strong commitment from Management to make the MCT successful- 2. The Council is aware of the sustainability concerns of the MCTs especially in the initial stage . Staff with relevant IT and administrative skill within the Council have been given additional roles to run the cafe . Additional remuneration/ overtime may be given to them- This approach should be explored by other local council members especially at inception while more capacity and resources are gained. 3. The MCT has also incorporated members from the business , religious and local community in general on the steering / management committee which should enhance community

		6. Space of ICT lab 7. Movie / TV room		ownership.
Mile 91 MCT Located at the Local Administrative Council hall.	7 th March 2012	1. MCT set up in a small room of 6*5 meters not so conducive 2. 10 PCs, monitors and printer installed 3. A Vsat installed and connected- 4. A generator (5 KVA generator) 5. Flat screen TV and decoder-connected 6. 1 staff recruited; An Administrator, IT personnel not on board yet. Other facilities 3. Town Hall for conferences, meetings, wedding etc	1. Hon. Dr. Mathew M. T. Teambo Chairman 2. Mr. James Sanfa Kamara Vice Chairman 3. Councilor Joseph S. K. Hallowell Adviser 4. Pa Roke Kondor Sesay Regent Chief 5. Rev. Alfred M. Kargbo Secretary General 6. Mr. Ernest S. Bangura Asst. Secretary General 7. Pa Sullay Kondor Kamara Adviser 8. Pa Alhaji Ibrahim A. Koroma 9. Pa Alimamy Korom 10. Mr. Yusuf M. Kamara Financial Secretary 11. Mr. John M. Koroma 12. Mrs. Isatu A. A. R. Koroma Auditor 1 13. Mrs. Fatmata H. Sesay Adviser 14. Mrs. Kadie Gbasipo Treasurer 15. Mr. Ahmed Muckson Sesay Adviser 16. Mr. Alhassan Bangura Traders Chairman 17. Mr. Osman R. Bangura 18. Mr. Rashid A. Kabia 19. Mr. Mohamed A. Kamara	1. Another room has identified to move at least 4 PCs and create more space 2. The centre is open to the general public and there was visible excitement for the MCT services and a strong sense of community ownership – We were met by close to 30 people from the community who convened in the hall to give us ideals and their perception of the MCT 3. Commitment from the leadership was also evident with the Area MP and council chairman ready to receive us 4. Need to recruit IT administrator and trainers. Many of the community members expressed desire to use PC but needed trainers to support them 5. The MCT Management/ steering committee is the largest. This may be good in building ownership. The functions and responsibilities of members should be defined. It should also be made clear that Members shall not be remunerated



Bridging the Divide



Mrs. Getrude Kamphambe, Manager at Nkhotakota MCT

EVALUATION REPORT FOR THE MALAWI MULTI-PURPOSE
COMMUNITY TELECENTRES PROJECT - 7GLO07062

February 2012

Acknowledgements

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Executive Summary

In December 2009, the International Telecommunications Union (ITU), together with Malawi Communications Regulatory Authority, initiated a project called the Malawi Multi-purpose Community Telecenter (MCTs) Project aimed at supporting the efforts of the Government of Malawi to extend ICT access and services to rural communities by providing basic sets of accessible ICT equipment and facilities such as Braille printers and other assistive technologies to enhance of ICT for all.

The project cost of USD 140,000 was met by the ITU and the US State Department for equipment and personnel. MACRA's in-kind contribution was USD 279,554. The project was to be extended to 12 rural districts of Malawi.

The field visit which was conducted between 19th and 23rd September aimed at assessing the level of implementation of the project and to make recommendations on how to improve future MCT operations.

Key Findings

I. Operational Status

Of the twelve (12) planned MCTs, seven (7) are operational namely; Balaka, Chikhwawa, Nkhatabay, Nkhotakota, Mulanje, Salima and Mzimba.

Buildings at Nsanje, Ntchisi, Dowa and Chitipa MCTs required substantial renovations which were on-going at the time of the visit. It was planned that these MCTs shall open by end of April 2012.

In Mchinji, a new building had to be constructed as the existing MPC building was not adequately equipped for MCT services.

II. Location

All MCTs are within a radius of 5 km of the town or district centre and there was evidence of availability of electricity, telecommunication infrastructure and sufficient demand.

III. Project Partners and Beneficiaries

Six Community based organisations (CBOs) were selected to operate the MCTs following evidence of experience and community participation, backed up with a strong leadership team. MACRA also partnered with Malawi Postal Corporation (MPC) to establish MCTs in six district postal offices.

IV. Equipment Supplied

Nearly all the equipment pledged by the ITU and MACRA was procured except for the 6 fixed telephone booths where only one fixed telephone set was given to each centre to serve as both the fax and telephone and assistive technologies. With the prevalence of mobile phone services in most of the location visited, the business case for fixed pay phones is no longer as strong. MACRA also did not procure assistive technologies for PwDs. This money has been warehoused and MACRA is in a process of identifying specific institutions working with persons with disabilities to benefit.

All the procured equipment is satisfactory and operational except for some printers and computers that require minor repairs.

Although the billing software had been installed some of the administrators were not fully averse with the new system as were the users. Some of the centres did not have up to date antivirus software.

V. Funds Disbursements

By the time of the mission in August 2011, MACRA had disbursed close to USD 253,116 (91%) of USD 279,554 pleaded. The ITU's contribution on the other hand was USD 139,350 with a balance of approximately 650 to cater for exchange rate fluctuations.

VI. Services offered

All MCTs visited provided basic MCT services such as internet, photocopying, fax, laminating, binding and printing services. To complement their revenues, some MCTs have set up stationary and soft drink stalls, design and print wedding and invitation cards, post advertisements on MCT notice boards and produce mass posters for the community.

Most of the MCTs visited do not provide ICT training as a main stream service. Lack of qualified personnel to conduct the training, limited facilities and space were cited to be some of the reasons for not offering this service.

Furthermore, none of the MCTs visited provided specific programs for the community and/ or women, except for the Nkhotakota Women led MCT where they have designed a special rate for the youth who access internet at a reduced rate during holidays and after class hours.

VII. Appropriateness and delivery of services

Internet reliability, speed and cost (ranges from 128kbp to 256kbp at a cost of USD 120-300 per month) were highlighted as a major hindrance by all MCTs visited as most believe that they actually receive much lower capacity than what has actually been paid for by MACRA.

Unstable electricity characterised by frequent power rationing and surges means that on average cafés run for less than 5 hours a day.

Photocopying and related services such as printing of cards and posters generate most of the revenues for all MCTs visited. Power reliability, breakdown of equipment and the fact that most of the MCT administrators have limited capacity to carry out basic maintenance and troubleshooting, means that this service is still below its maximum potential.

MACRA is required to provide routine service maintenance for the MCTs it directly supervises; however there is no routine schedule for this.

VIII. Administrative Structure

MCTs managed by Malawi Postal Corporation are incorporated within the postal mainstream based on a centralised structure where budgets are managed at the General Post Office.

The CBO run MCTs independently control their budgets through their respective board committees and are required to send monthly operational reports to MACRA.

IX. Technical capacity to run the MCTs

With regard to technical capacity, all MCTs visited employed at least one person or more with some knowledge in computers and ICTs.

X. Training Conducted

At the start of the project, MACRA conducted training for all MCT owners, managers and administrators. No refresher courses have been conducted since.

XI. Project Sustainability

An analysis of revenues and expenditures over a 12 months period shows that most of the MCTs can meet their operational expenses and therefore can be sustainable in the long-run except for Mulanje. This situation may however change when the MCTs begin to pay for their own internet connectivity.

XII. Social and economic benefits of the project

In most of the areas visited, one or more commercial MCTs have opened since the launch of the project. This on its own means that the existence of the seed MCTs has generated awareness, which in turn has created employment and income for the new MCT providers.

Interviews held with some of the users of the MCTs cited improved operational efficiency, reduced transport costs and improved communication and social networking as some of the benefits for the MCTs. Internet according to them has brought them closer to Blantyre and the rest of the world.

Recommendations

1. The ITU should follow-up and ensure that the MCTs that are not operational are running and are fully equipped.
2. All equipment and where possible premises for the MCT should be insured
3. An ITU logo should be placed on all the equipment purchased by ITU & MACRA and a list of inventory created.
4. Training on the billing software should be conducted for all administrators and up to date antivirus software provided for all MCTs.
5. MACRA should ensure that there are defined programs with specific actions for persons with special needs and that they are incorporated in the current and future activities for all MCTs. The ITU should ensure a commitment from MACRA when the assistive software and equipment for the Project shall be procured and implemented. Ramps should also be built at all MCTs.
6. MCTs should diversify their products and services in order to generate more revenues and improve their sustainability.
7. Special promotions for the youth, women and the targeting of local events should be encouraged to enhance revenues and generate awareness. None of the MPCs visited had a clear marketing plan for their services.
8. MCTs should also design special training programs for health, schools within the community. The training component was inadequate for all the MCTs visited, yet training is one of the key avenues for generating awareness and demand for MCT services.
9. All administrators should regularly be trained in basic trouble shooting. It is also recommended that in future, suppliers of all equipment should provide maintenance support and training for at least a period of 6 months as part of their contracts.
10. MACRA should arrange annual knowledge sharing sessions and workshops so that MCT operators can share experience and learn from each other.
11. The use of alternative power supply and alternative energy enabled ICT equipment such as solar computers should be explored.
12. Post masters at each MCT should be given the authority of managing or running a petty cash to replenish consumables such as paper and toner needed for the day to day operation.
13. Operational reporting especially for the Individual operated MCTs supervised by MACRA should be regularised and books of accounts and records made easily accessible.

Lessons

1. The use of existing institutions and infrastructure such as the Postal Corporation which are ideally located near the “incumbent’s” telecommunications infrastructure and have defined administrative/ operational structure is much faster and efficient to roll out rural MCTs than the pure start up approach.
2. For MCT start-ups run by CBOs, a local champion and a steering committee composed of the local community should be established to enhance ownership and community participation.
3. The model to incorporate ICT services within main stream postal services means that internet has been transformed from a competitive to a complimentary service thus improving this sector’s sustainability.

4. Energy efficient solutions such as solar, inverter power and low energy equipment should be explored for future projects.

Conclusion

The significance of using the MCTs as a tool and a business catalyst to create an impact in the social and economic developments of Malawi communities cannot be overemphasized. It goes without saying that, ICT services through the MCTs will enhance their participation in economic activities and raise their incomes and social status. Through these centres, communities can transform small informal business communities into formal and professional businesses by having affordable and reliable access to markets and financing sources not only in Malawi but globally. As a result, they will be better informed on important issues which affect their daily lives, business and any other social and cultural activities thereby leading to poverty reduction in their communities.

1. Introduction

In December 2009, the International Telecommunications Union (ITU), together with Malawi Communications Regulatory Authority (MACRA), initiated a project called the Malawi Multi-purpose Community Telecenter (MCTs) Project aimed at supporting the efforts of Government of Malawi to extend ICT access and services to rural communities by providing basic sets of accessible ICT equipment and facilities such as Braille printers and other assistive technologies to enhance of ICT for all.

This report which marks the conclusion of project implementation contains the technical and economic evaluation of the project following its successful implementation.

1.1 Background

The Government of Malawi recognizes that access to ICT services is a key ingredient in its national and community development efforts. With an agricultural based economy, people need information on prices and sources of agricultural inputs as well as markets and prices to sell their products. Unfortunately, the bulk of the ICT infrastructure in Malawi like in many African countries is located in urban areas, where only 15% of the population live. The need to reach the remaining 85% producing the bulk of its Gross National Income is clearly an important prerogative for the government.

This project sought to sustain and empower the rural communities in an environment where communication facilities are non-existent in order to use ICTs as a leverage to bolster their activities and sustain the fabric of the Malawi economy. It is against this background that the Government of Malawi through the Malawi Communications Regulatory Authority (MACRA) in partnership with the ITU launched the Malawi MCTs project. The project objectives included:

- I. To facilitate establishment of MCT infrastructure in rural locations through provision of ICT equipment and facilities to identified sites in Malawi;
- II. To provide affordable and accessible ICTs including assistive technologies such as Braille printers and FM system and hearing aids to people with visual and hearing impairments to ensure equal ICT opportunities enabling them to participate in the information society;

Intended output of the project included:

1. Improved ICT services, applications and local content based on local needs to be provided to the identified rural communities;
2. Increased use of ICT for social and economic activities by rural based communities as participants in the global information society village and narrowing of the global digital divide and between urban and rural areas in their respective countries;

3. Improved standards of living and enhanced security for the respective rural communities leading to higher productivity in their social and economic activities and income.

The following were the identified performance Indicators:

- I. Affordable and accessible ICT equipment, facilities and services to be purchased and installed at twelve rural locations;
- II. Established Multi-purpose Community MCTs at twelve locations equipped to deliver products and services tailored to local needs and phased in accordance with evolving needs of the communities.
- III. At least 30% of the adult population from the surrounding community in the twelve rural communities trained in ICTs one year after commencement of operations.
- IV. Application and relevant software developed to meet local needs and content by the end of at least one year from date of commencement.

The project cost of USD 140,000 was met by the ITU and the US State Department for equipment and personnel. MACRA's in-kind contribution was USD 279,554. The targeted districts for the project included:

- i. Nkhotakota- the beneficiaries are a group of business women who own a Building for the MCT.
- ii. Balaka- A new commercial district with no internet facilities
- iii. Nkhata Bay- A tourist location
- iv. Salima- A lake district in the central region of Malawi with high economic activities
- v. Chikhwawa- A major agricultural district producing cotton and beef products
- vi. Nsanje – A major agricultural and fishing district
- vii. Chitipa- A fast growing trading centre bordering Tanzania & Zambia and next to a uranium mine.
- viii. Mchinji- Is a busy border post open twenty four hours and is Malawi's major producer of groundnuts and maize.
- ix. Ntchisi- A maize, soya beans and vegetable producer.
- x. Dowa- Agricultural district producing maize, peas and vegetables.
- xi. Mulanje- An agricultural district
- xii. Mzimba- A growing trading centre and agricultural producer

The map below shows the location of project MCTs within the country



1.2 Scope of the Assignment

The field visit which was conducted between 19th and 23rd September aimed at assessing the level of implementation of the project and mainly focused on examining:

- i. The procurement and suitability of the equipment deployed in the centre
- ii. The level and relevance of services provided to the targeted beneficiaries
- iii. The technical and administrative capacity of the project implementers as well as an assessment of the experts providing training to trainers and users.
- iv. The ability of the project to sustain its operations and thus continued rendering of services to the public and target community.
- v. Programs conducted by the centre to build awareness of the projects and promote access and use of ICTs by disadvantaged members of the community such as women and persons with disabilities.
- vi. The social and economic impact of the project to the target population and to draw lessons and experiences so far gained.
- vii. Identifying ways and means of making ICTs more accessible and relevant to local information and communications needs of the target community.
- viii. Drawing lessons and challenges being faced by the centres in their day to day operations and to come up with recommendations on how to better and sustain their operations for continued service provision.

Eight (8) out of the twelve (12) MCTs namely; Mulanje MCT, Balaka MCT, Salima MCT, Nkhotakota Business MCT, Nkhatabay MCT, Mzuzu MCT, Ntchisi and Mchinji were randomly selected for the visit.

Chapter 2

2. Findings

2.1 Project Locations

In determining the location, consideration was given to rural communities that showed readiness:- economic versatility, demand for ICT services and evidence of existing prerequisites for setting up an MCT such as electricity and presences of telecommunication infrastructure. The project locations were pre-selected by MACRA prior to the project launch.

All MCTs visited were within the radius of 5 km of the town or district centre. The Nkhatabay MCT for instance was close to a busy waterfront and in Mulanje the MCT was right within a busy taxi/ bus park. The locations ensured that there was relative demand for MCT services.



Picture 1; The Nkhata Bay Easy Communication Centre located at the Shores of Lake Malawi



Picture 2: Outside the Nkhata Bay MCT- at the Shores of Lake Malawi

In the typical African context however, the location identified can be classified as semi –urban and not purely rural. The strategy to initially extend the MCTs at district town centre was appropriate as the readiness for the deeper rural communities is still partial given the inexistence of infrastructure, power and low awareness. It is hoped that the growth demand at the core town centres should be a catalyst in advancing awareness and improving readiness in the deeper rural communities.

2.2 Project Partners and Beneficiaries

MACRA used both the pure start up approach (building from scratch), while the second model considered presence of existing infrastructure and systems in identifying partners and beneficiaries. Under the pure start up approach, MACRA sent out expressions of interest to business institutions and individuals to run the MCT in the selected location. Individuals or firms needed to be: i) registered and operating a business within the community and ii) show evidence of experience in running ICT related business and or knowledge of ICTs, iii) strong leadership with a sound business plan. The beneficiaries also needed to show how their activities would positively impact their community

In the second approach, MACRA partnered with Malawi Postal Corporation (MPC) to establish the MCTs on the premise that MPC already had the relevant organisational capacity and infrastructure such as offices, telecommunication facilities among others to facilitate the operation of MCTs. The partnership also aimed at supporting MPC to integrate and enhance its revenues by incorporating ICT facilities within their business model.

Table 1 Beneficiaries and Rationale for their Selection

	Name and Rational for selection	Beneficiaries/ Project Administrator	Rationale
	Nkhotakota-	Women based community organisation	Existing administrative and operational structure within the community- Building structure in place to run MCT
	Balaka- A new commercial district with no internet facilities	Malawi Postal Corporation	Existing infrastructure
	Nkhatabay- A tourist location	Community based run by individual with previous experience in ICT related businesses	Previously providing stationary and photocopying services. Administrators previous run a stationary and photocopying centre.

	Salima- A lake district in the central region of Malawi with high economic activities	MPC Managed	Newly renovated MCT with a tram to cater for PwD.
	Mchinji	MPC	New Building set up by MACRA- located within the centre of Mchinji
	Mulanje	MPC	Existing infrastructure and centrally located
	Mzimba	MPC	Existing infrastructure
	Ntchisi	MACRA	Renovations Underway- Not operational

Emerging issues 1

The incorporation of ICT services with main stream postal services means that internet has been transformed from a competitive to a complimentary service. Secondly, because Malawi Postal Corporation had existing premises, was ideally located near the “incumbent’s” telecommunications infrastructure and had defined administrative/ operational structure, it was easier to start- up the MCTs, thus making this model much more efficient.

2.3 Equipment supplied and suitability

The table below shows the list of equipment that was planned and supplied by the time of the visit. MACRA did not provide a list of items procured- it may be possible that some of the items such as computers for the MCTs that are not yet operational are already procured and await distribution.

In terms of operational status, the following were noted:

1. Of the 12 planned MCTs, 7 are operational namely; Balaka, Chikhwawa, Nkhatabay, Nkhotakota, Mulanje, Salima and Mzimba. These were opened between the months of June and August 2010.
2. The Nsanje, Ntchisi, Dowa and Chitipa MCTs required substantial renovations which were on-going at the time of the visit. It was planned that these MCTs would open by end of April 2012.
3. In Mchinji, a new building had to be constructed as the existing MPC building was not adequately equipped for MCT services. The construction was fully funded by MACRA.



Picture 3 MACRA's Newly Constructed Building at Mchinji MPC

Some items were not procured as shown in table ** below. They included;

1. Telephones – One fixed telephone set was given to each centre to serve as both the fax and telephone. The telephone management software and telephone booths as such were also not procured- With the prevalence of mobile phone services in most of the location visited, the business case for fixed pay phones is no longer as strong.
2. The hearing aid and software as well as the software for the visually impaired person to be procured by the MACRA were also not procured. This money has been warehoused and MACRA is in a process of identifying specific institutions that support People with Special needs to be assisted. It is believed that targeting such institutions will yield more benefits because they are more concentrated users, trainers among others compared to public cafes. In Mulanje a ramp to enable persons with disabilities to access the MCT was constructed as shown below.



Picture 4- Newly Constructed ramp at the Mulanje MCT

In terms of suitability, most of the equipment procured including computers, printers, scanners as shown in table above was satisfactory and mostly still operational. Minor repair maintenances were required for some of the printers and computers for instance in Mulanje and Salima MCTs.

Some concerns were however raised on the new billing software, Cybera which according to users was presumed to be over charging and in some instances the administrators were not fully averse with the new system.

It is also worth noting that all equipment supplied is neither insured nor labelled posing a risk to the project.

A list of equipment supplied including the specification for each item is attached.

Recommendations

1. All equipment and if possible premises for the MCT should be insured.
2. All equipment should be labelled. An ITU logo should be placed on all the equipment purchased by ITU & MACRA.
3. Most of the premises visited also did not bare any labels of the sponsors. This is more so for the MPC run MCTs which did not bare any external label of ITU. MCTs that have benefited from the ITU support program should bare an ITU logo within and outside the MCT premises.
4. MACRA should ensure that defined programs with specific actions for persons with special needs are incorporated in the current and future activities for all MCTs.

2.4 Funds Disbursed

The ITU and the US State Department contributed a combined total of USD 140,000 for procurement of equipment and services to the project. MACRA on the other hand contributed in-kind a total of USD 279,554 as per the revised project document of March 2010. The development of local content was the key item incorporated in the project activities.

The table below shows the disbursement of funds from each entity. By the time of the mission in August 2011, MACRA had disbursed close to USD 253,116, equivalent to 91%. The value of equipment and services supplied by the ITU on the other hand was USD 139,350 with a balance of approximately USD 650 to meet for exchange rate fluctuations.

Table 2- Funds Pledged by MACRA for the Project

Items	Planned amount in USD
Monitoring and Evaluation	3000
Mission Costs	2000
Development of Local Content	107,142.85
Training of MCT Staff	13,144.29
Internet Connection for 1 year	9,308.50
Digital Camera	5,940
Paper Puncher	1,140
Staplers	300
Scanners	2,520
Telephone Management software	9,540
Braille Printers	19,980
Air conditioners	34,284
Furniture	35,714
Billing software	26,438
Sundries	5000
Reporting	2000
Contingencies	2100
Project Personnel	90,000
Equipment	90,000
Misc., Contingency and AOS	20,000

The table below shows reported expenses by MACRA as of February 2010

Table 3 Funds Disbursed by MACRA as of February 2010

Digital cameras	5,940
Paper puncher	1,140
Staplers	300
Scanners	2,520
Telephone management software	9,540
Braille printers	19,980
Tuition fees & DSA for MCT staff	13,144.29
Internet connection & 1 year subscription for 12 MCTs	9,308.52
Develop local content	107,142.85
Air conditioners (12)	34,285.71
Furniture	35,714.28
TOTAL	253,115.65

TABLE 4: Equipment Supplied per MCT.

List of Equipment	No	Entity	TOTAL	MCT Visited								Others Not Visited			
				Mulanje	Balaka	Salima	Nkhotakota	Nkhatabay	Mzimba	Ntchisi*	Mchinji*	Dowa**	Chitipa**	Nsanje**	Chikhwawa
PC Cubicles	48	MACRA	42	6	6	7	6	6	5	NO	NO	NO	NO	NO	6
Telephone cubicles	48	MACRA	0	0	0	0	0	0	0	NO	NO	NO	NO	NO	0
Chairs	96	MACRA	56	8	8	8	8	8	8	NO	NO	NO	NO	NO	8
Computers	48	ITU	43	7	6	7	6	6	5	NO	NO	NO	NO	NO	6
Tables	24	MACRA	14	2	2	2	2	2	2	NO	NO	NO	NO	NO	2
Display Shelf	12	MACRA	7	1	1	1	1	1	1	NO	NO	NO	NO	NO	1
UPS	48	ITU	43	7	6	7	6	6	5	NO	NO	NO	NO	NO	6
Photocopiers	8	ITU	7	1	1	1	1	1	1	NO	NO	NO	NO	NO	1
Printer/ B/W	12	ITU	7	1	1	1	1	1	1	NO	NO	NO	NO	NO	1
Scanner	12	MACRA	7	1	1	1	1	1	1	NO	NO	NO	NO	NO	1
Fax	12	ITU	7	1	1	1	1	1	1	NO	NO	NO	NO	NO	1
Telephone	36	MACRA	7	1	1	1	1	1	1	NO	NO	NO	NO	NO	1
LAN & Power cables	12	MACRA	7	Y	Y	Y	Y	Y	Y	NO	NO	NO	NO	NO	Y
Laminating Machine	12	ITU	7	1	1	1	1	1	1	NO	NO	NO	NO	NO	1
Binding Machine	12	ITU	7	1	1	1	1	1	1	NO	NO	NO	NO	NO	1
Paper Cutter	12	ITU	7	1	1	1	1	1	1	NO	NO	NO	NO	NO	1
Paper Puncher	12	MACRA	7	1	1	1	1	1	1	NO	NO	NO	NO	NO	1
Stapler	12	MACRA	7	1	1	1	1	1	1	NO	NO	NO	NO	NO	1
Air Conditioning	12	MACRA	7	1	1	1	1	1	1	NO	NO	NO	NO	NO	1
ISP	12	MACRA	7	Y	Y	Y	Y	Y	Y	NO	NO	NO	NO	NO	Y
Telephone Management Software	12	MACRA	N	N	N	N	N	N	N	NO	NO	NO	NO	NO	N
Telephone Meter	12	ITU	N	N	N	N	N	N	N	NO	NO	NO	NO	NO	N
Braille Printer	2	MACRA	N	N	N	N	N	N	N	NO	NO	NO	NO	NO	N
Hearing Aid (ITU)	4	ITU	N	N	N	N	N	N	N	NO	NO	NO	NO	NO	N

Software for visually Impaired	4	ITU	N	N	N	N	N	N	N	NO	NO	NO	NO	NO	N
Digital Camera	12	MACRA	7	1	1	1	1	1	1	NO	NO	NO	NO	NO	1
MS & Billing software	48	MACRA	7	1	1	1	1	1	1	NO	NO	NO	NO	NO	1
* New Building under construction															
** Renovations underway to be opened end of April															

Table 4 List of Equipment Supplied to Each MCT

2.5 Services offered

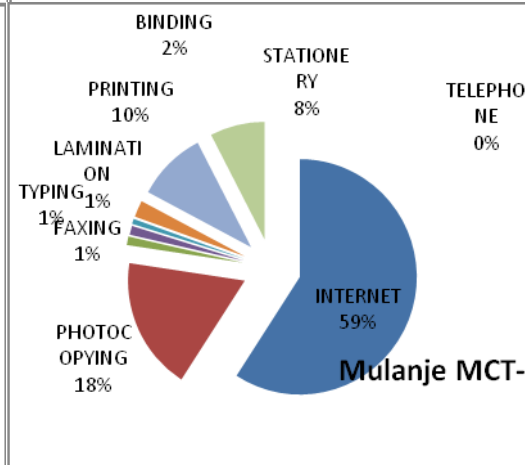
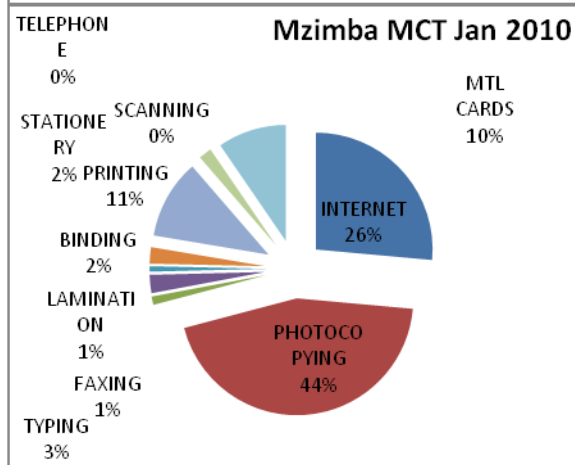
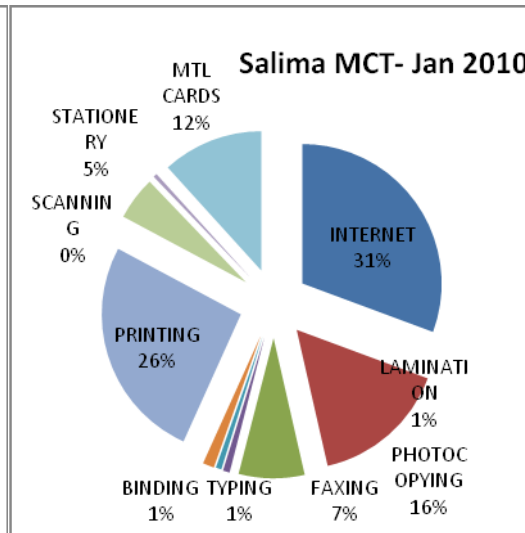
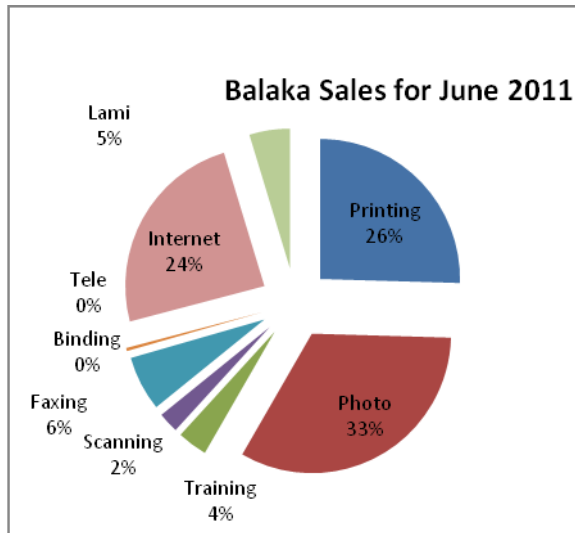
All MCTs visited provided basic MCT services such as internet, photocopying, the fax, laminating, binding and printing services printing.

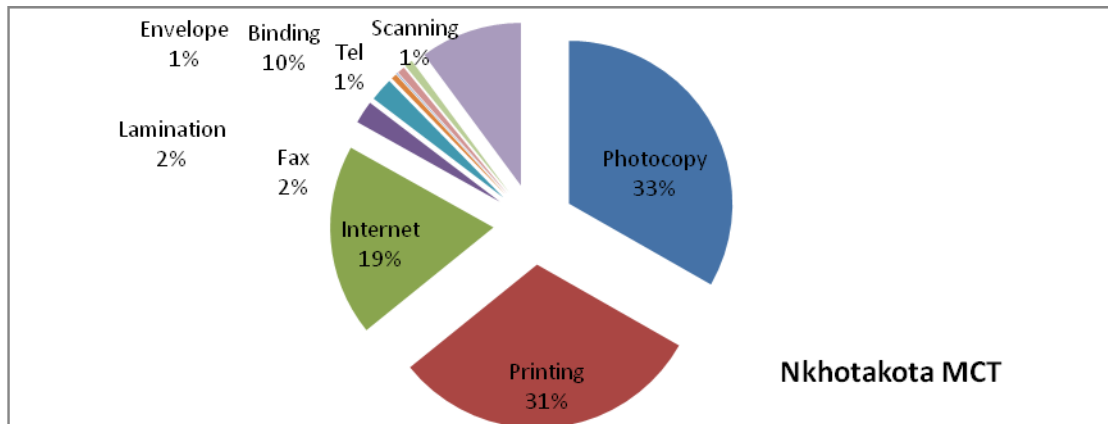
To complement their revenues, some MCTs such as the Nkhotakota women led MCT and Nkhatabay have set up a stationary and soft drink stalls, design and print wedding and invitation cards and produces mass posters for the community.

Most of the MCTs visited do not provide ICT training as a main stream service except for the Nkhatabay MCT. Lack of qualified personnel to conduct the training, limited facilities and space were cited to be some of the reasons for not offering this service. The provisioning of telephone services and fax is also limited as shown in figure 1 below:

Furthermore, none of the MCTs visited provided specific programs for the community and/ or women, except for the Nkhotakota Women led MCT where they have designed a special rate for the youth who access internet at a reduced rate during holidays and after class hours.

Figure 1: Services Provided and their Contribution to Revenue





In terms of appropriateness and delivery of services; the following were observed:

- i. **Internet services:** This is one of the core businesses for all MCTs. Connectivity ranges from 128kbp to 256kbp shared. Monthly connectivity ranges from 19,000K– 49,500K. (US\$120 to US\$300). MACRA paid the annual cost of connectivity as agreed in the project document. All MCTs visited charge on a minute basis, ranges from 7-5 k per minute, equivalent to US\$0.04

Reliability and low speed were highlighted as a major hindrance by all MCTs visited as most believe that they actually receive much lower capacity than what has actually been paid for by MACRA. The service is also disrupted by **unreliable electricity**. Although all the MCTs visited are connected to the grid, frequent power rationing and surges mean on average cafés run for less than 5 hours a day. Power outages also affect the other core business of the MCTs, impinging on revenues and sustainability.

- ii. **Photocopying and printing services:** Photocopying and related service such as printing of cards and posters generate the most revenues for all MCTs visited. This service generates more than 50% of revenues for most of the MCTs visited as shown in the figures above.

Power reliability, breakdown of equipment and the fact that most of the MCT administrators have limited capacity to carryout basic maintenance and troubleshooting, means that this service is still below its maximum potential.

MACRA is required to provide routine service maintenance for the MCTs it directly supervises; however there is no routine schedule for this. For the MCTs run by MPC, an IT technician from the GPO is required to carry out routine maintenance and support with trouble shooting. This is not regularly done. In Mzimba for instance, the photocopy machine had broken down by the time of the visit. The drivers had been un-installed and a simple re-installation by the IT personnel we were travelling with got the machine running. **All Administrators should be trained to run basic troubleshooting.**

Recommendation:

1. It is desirable that MPC diversify their products and services in order to generate more revenues and improve their sustainability. MACRA should for instance arrange an annual knowledge sharing sessions and training workshop so that MCT operators can share experience and learn lessons from each other.
2. Special promotions for the youth, women and the targeting of local event should be encouraged to enhance revenues and generate awareness. None of the MPCs visited had a clear marketing plan for their services.
3. MCTs should also design special training programs for health, schools within the community. The training component was inadequate for all the MCTs visited, yet training is one of the key avenues for generating awareness and demand for MCT services.
4. All administrators should regularly be trained in basic trouble shooting. It is also recommended that in future, suppliers of all equipment should provide maintenance support and training for at least a period of 6 months as part of their contracts.
5. The use of alternative power supply and alternative energy enabled ICT equipment such as solar computers should be explored.

2.6 Administrative and Technical Capacity

In terms of the administrative structure, MCT managed by Malawi Postal Corporation are centralised within the postal mainstream. The regional Post Master, supported by designated officers is charged with overseeing the operations of the centre and reports to a designated project manager at the General Post Office. All collections are channelled to the GPO and all expenditures including stationary, tonner is approved at the GPO and distributed on a monthly basis.

On the other hand, the MCTs run by individuals or associations such as the Nkhatabay and Balaka are run independently by the owners who manage all collections and expenditures. These MCTs are required to send monthly operational reports to MACRA. MACRA on its part monitors performance and also provides technical and maintenance support to these MCTs.

With regard to technical capacity, all telecentres visited employed at least one person or more with some knowledge in computer and ICTs as shown in the table below. Except in Nkhotakota where the Manager (seen in the caption below) has a bachelor in computer science, most of the administrator's knowledge is purely basic and therefore require additional training.

ACTIVITY/ NAME	Responsible Institution/ Administrator	Date opened	Persons Responsible on Ground & Email	Qualifications of administrators and training received
Mulanje MCT	MPC	Aug-10	Esther Kamyango - kamyangoesther@yahoo.com	Diploma in Information Technology - 2007
Balaka located in Balaka bus/ taxi park	MCRA	May-10	2 Entrepreneurs; Steven Kayinga and Lugero Leo- Ownership and 2 administrator; Grey Chitsonga	Diploma in computer operation -
Salima MCT	MPC	May 2010	2 elecentre officers-Kezia & Olivia Mshali	- Certificate in Computer operations
Nkhotakota Business Telecom	MACRA and Women LED CBO	Aug 2010	5 Women entrepreneurs and employs a Manager , 2 Administrators and a	Manager-Mrs. Getrude Kamphambe

Centre			watchman;	has a BSC in computer and administrator Shave ICT diplomas
Nkhatabay MCT	Nkhatabay Easy Communication centre- MACRA	30th May 2010	Owned by 2 entrepreneurs Gift Chongwe & Wanangwa Mwalughali	Gift Chongwe has a Certificate in Computer operations
Mzimba MCT	MPC	12th August 2010	2 MCT Officer- Elias Mbale and Patricia Mijoni (nyasuluprisca@hotmail.com)	Certificate in computer programming and certificate in secretarial services
Ntchisi MCT	MACRA	Not Opened	Not Open	
Mchinji MCT	MPC	Not Open	Mercy Kawenda is the Post Master-	

Table 5 Names of Administrators and their Qualifications



Picture 5: Interview with the Post master Elias Mbale and Telecentre officer MsPatrica Mijole at the Mzimba MCT

Recommendations

1. Whereas the decentralisation of operations may be desirable in some instances, Post masters at each MCT should be given the responsibility of managing or running a petty cash to replenish consumables such as paper and toner required for the day to day operation. In some areas visited, delays to supply daily consumables such as paper and toner from the GPO were cited as some of the challenges and affecting the operations of the MCTs.
2. More training should be conducted specifically in troubleshooting to improve service delivery.
3. Operational reporting especially for the Individual operated MCTs supervised by MACRA should be regularised and books of accounts and records made easily accessible.

2.7 Training

At the start of the project, MACRA carried out a training workshop for all MCT owners, managers and administrators.

- a. Training of telecentre staff was successfully conducted at Malawi College of Accountancy early in December 2009 where 26 telecentre staff participated. The training which was for two weeks involved the following courses: Basic Computer skills
- b. Book keeping

2.8 Project Sustainability

In measuring sustainability, a review of the daily sales and expenses (cash flows and outflows) was done for the MCTs visited that had proper records in place. Figure 2 below shows revenues collected and expenditure in January 2011 for the 6 MCTs namely Salima, Mulanje, Mzimba, Nkhata Bay and Nkhotakota. Revenues did not match operational expenses in three of the 6 centres reviewed. This was however in the early days of the projects as most of the MCTs had been operational for less than 3 months.

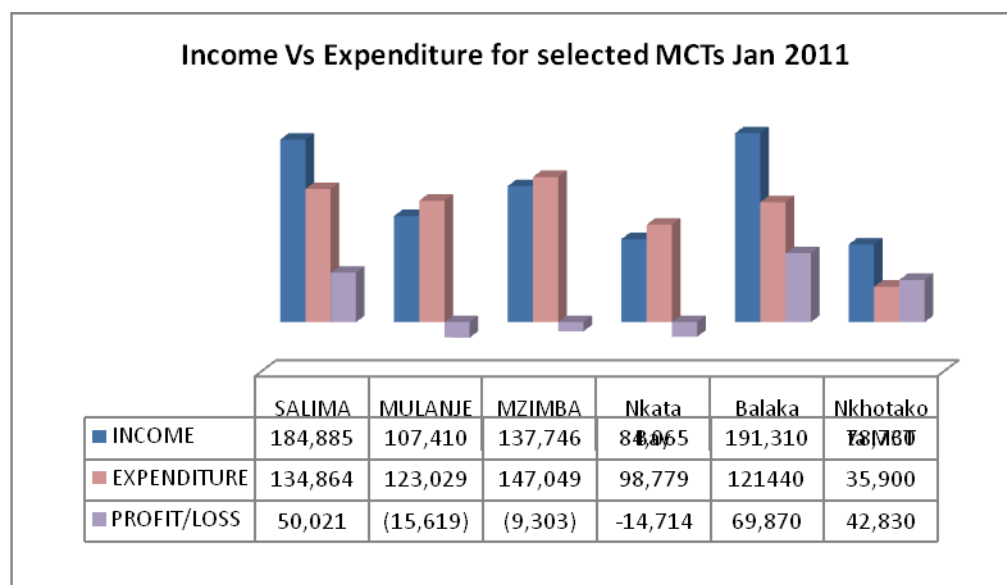


Figure 2 Income Vs Expenditure

An analysis of revenue and expenditures over a 12 months period shows that most of the MCTs can meet their operational expenses and therefore can be sustainable in the long-run. It is only Mulanje whose expenses exceeded its revenues. However Mulanje collects nearly the same volume of revenue as Nkhotakota and maybe a review of their expenses may be desirable in order for them to be profitable.

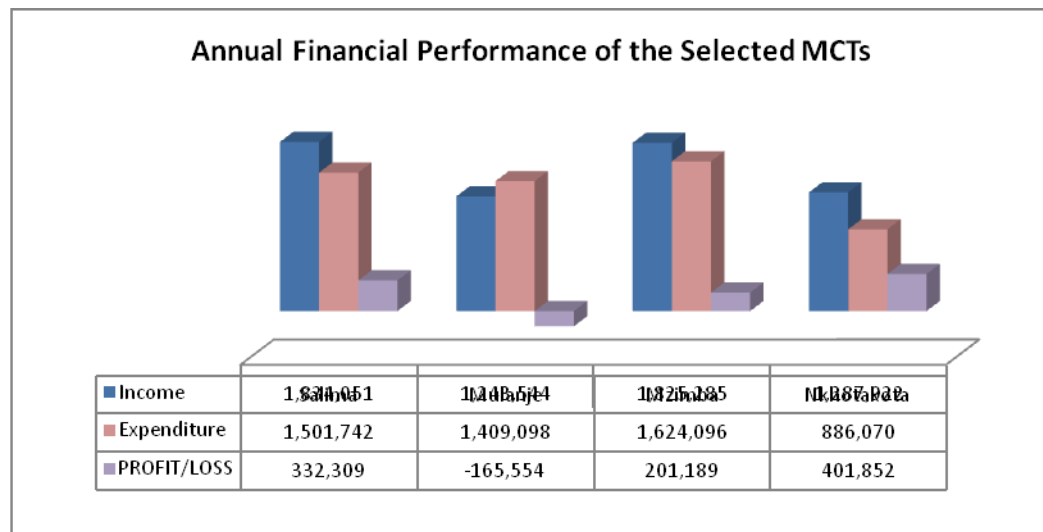


Figure 3: Financial Performance of Selected MCTs

2.9 Social and economic benefits of the project

In most of the areas visited, one or more commercial MCTs have opened since the launch of the project. This on its own means that, the existence of the seed MCTs has generated awareness, which and in turn has created employment and income for the new MCT providers.

A number of interviews were held with some of the users of the MCTs and some of the benefits cited were improved operational efficiencies, reduced transport costs and improved communication and social networking. Internet according to them has brought them closer to Blantyre and the rest of the world.



Figure 4- Interview with Ms Prisca Nyasulu-- a frequent user of the Mzimba MCT

Chapter 3

3 Lessons Learnt

Some of the lessons learnt from the Malawi project to be taken forward include;

- I. The use of existing institutions and infrastructure such as the Postal Corporation which are ideally located near the “incumbent’s” telecommunications infrastructure and have defined administrative/ operational structure is much faster and efficient to roll out rural MCTs than the pure start up approach.
- II. For MCT start-ups run by CBOs, a local champion and a steering committee composed of the local community should be established to enhance ownership and community participation.
- III. The model to incorporate ICT services within main stream postal services means that internet has been transformed from a competitive to a complimentary service thus improving this sector’s sustainability.
- IV. Energy efficient solutions such as solar, inverter power and low energy equipment should be explored for future projects.

4 Conclusion

Provision of MCTs and associated internet access to the rural communities in Malawi has for the first time provided these communities with a tool not only for social networking but also to improve their social and economic performance through access to global markets and various information relevant to their lives.

Most of the challenges highlighted such as the insurance of equipment, labeling, installation of anti- virus and training of administrative staff can be remedied by MACRA in the short and medium term. In the long term however, solutions to address the shortage and reliability of power should be explored. The use of low voltage equipment and PC alternative power solutions such as solar, inverters among others should be explored for projects in rural communities for these projects to be sustainable.

The ITU and its partners should draw from the lessons of this pilot project as they extend connectivity and access these underserved communities in other countries.

RAPPORT D'EXPERTISE DES INSTALLATIONS A L'EIHD

(Emploi et Intégration des Personnes Handicapées pour le Développement)

Introduction

Ce rapport d'expertise consiste à procéder à une évaluation permettant d'apprécier le niveau de mise en œuvre du projet en mettant l'accent sur tous les points indiqués dans le « Job description » n°1815.

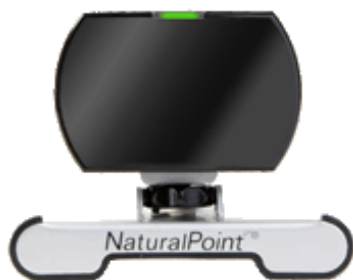
La mise en œuvre du projet se traduit dans les activités suivantes:

- La livraison, l'installation et le test de fonctionnement de tous les matériels indiqués dans les deux commandes n°306119 et n°306120 du 20/04/2011;
- La fourniture, l'installation et la configuration d'un réseau local pour assurer l'interconnexion des ordinateurs.
- La connexion de tous les ordinateurs sur Internet à travers le réseau local.
- La formation des formateurs qui doivent former les autres.

L'essentiel des équipements est installé dans une salle dénommée « salle informatique » climatisée (climatiseur 2CV), et ventilée.

La salle informatique comporte 10 ordinateurs repartis comme suit :

1. Deux ordinateurs équipés chacun d'un Plage Braille 12 et 24 caractères, d'un clavier AZERTY gros caractères, d'un casque et micro casque, d'un écran plat S1922 et en d'un NaturalPoint SmartNav 144630. Chaque ordinateur est alimenté par un onduleur UPS 650 Vesta. Ces deux ordinateurs sont destinés aux handicapés non voyants.



Plage braille 12-24



Plage braille 40



Clavier Gros caractères



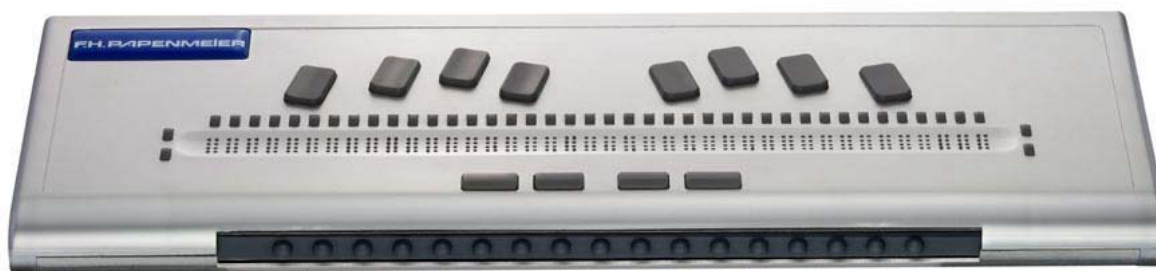
Casque et micro-casque



Ordinateur PC HP Compaq 500 MT



PAC MATE vocal + clavier azerty



Pack Braillex Standard N°12



Trackball Suppleance



Intellikeys

2. Un ordinateur HP Compaq 500B MT équipé et utilisé par des personnes handicapées « Sourds muets ».
3. Sept ordinateurs installés avec accessoires (clavier AZERTY, souris et écran) utilisés par des personnes handicapées capables de manipuler le clavier. Chaque ordinateur est alimenté par un onduleur UPS 650 Vesta, et comporte une licence Windows 7 Edition Starter et Microsoft Office 2007. Tous les sept ordinateurs sont équipés d'un camera IMEXX.
4. Parmi les équipements on note aussi une imprimante INDEX BRAILLE BASIC-D V4 matricielle et un Scanner HP Scanjet G2710.

Les dix ordinateurs sont reliés dans un réseau local, dont les éléments sont les suivants.

1. Un coffret ORTRONICS 19'', profondeur 600, équipé d'un panneau de brassage 24 ports et un switch CISCO Catalyst 2960 Série SI
2. Un chemin de câble permettant de passer le câble de chaque prise du panneau de brassage au module de la prise murale.
3. Du câble Ethernet Catégorie 6.
4. Un router LinkSys pour relier le réseau à Internet.

Deux autres ordinateurs installés dans des bureaux distincts sont également connectés au réseau local.

Une Photocopieuse Canon 2318 Image RUNNER est installée et fonctionnelle dans un autre bureau autre que la salle informatique.

**TABLEAU RECAPITULATIF DES MATERIELS INSTALLES DANS LA
SALLE INFORMATIQUE SERVANT DE « CYBERESPACE »**

QTE	DESIGNATION	SPECIFICATION	UTILISATEURS
2	Ordinateurs HP Compaq 500B MT	P 2,80 Ghz, Ram 2 Go, DD 320 Go, Ecran TFT 22, DVDRW, Windows 7 Pro, camera NaturalPoint SmartNav 144630, Plaque Braille 12 et 24 caractères, clavier AZERTY gros caractères, casque et micro casque, Onduleur UPS 650 Vesta.	Personnes Handicapées non voyants
1	Ordinateurs HP Compaq 500B MT	P 2,80 Ghz, Ram 2 Go, DD 320 Go, Ecran TFT 22, DVDRW, Windows 7 Pro, Onduleur UPS 650 Vesta.	Personnes Handicapées sourds muets
7	Ordinateurs HP Compaq 500B MT	P 2,80 Ghz, Ram 2 Go, DD 320 Go, Ecran TFT 22, DVDRW, Windows 7 Pro, Onduleur UPS 650 Vesta.	Personnes Handicapées physiques capables de manipuler le clavier

2	Ordinateurs portables	TOSHIBA Satellite L450 Disque Dur 5 00Go, Ram 4Go, CPU 2,6 Ghz, Ecran 15,5	1 affecté au président 1 affecté au coordinateur
1	Imprimante INDEX BRAILLE BASIC-D V4 matricielle	Imprimante INDEX BRAILLE BASIC-D V4 matricielle	Impression de texte pour personnes handicapées non voyants
1	Scanner HP Scanjet G2710	Scanner HP Scanjet G2710	
1	Photocopieuse	Canon 2318 Image RUNNER	
1	Réseau local	Un coffret ORTRONICS profondeur 600, équipé d'un panneau de brassage 24 ports et un switch CISCO Catalyst 2960 (24 ports) Série SI. Un chemin de câble (goulotte) permettant de passer le câble de chaque prise du panneau de brassage au module de la prise murale. Du câble Ethernet Catégorie 6. Un router LinkSys pour relier le réseau à Internet.	

Les marchés publics et les qualités des équipements installés dans le centre.

Le marché a été passé par appel d'offre restreinte conformément au code des marchés publics au Mali. Pour ce qui est de la qualité des équipements fournis, elle est conforme aux spécifications techniques indiquées dans le dossier d'appel d'offre.

Le marché a été attribué à la société MS-Distribution commerce général sise à Hamdallaye ACI 2000 avenue Cheick Zayed – BP 772 – Bamako.

Les références des commandes sont les suivantes :

Commande d'achat

Désignation PROC-AB-7288-11-BDT

N° de commande : 306119

Date : 20-04-2011

Contact : Patrice Dumoulin

Téléphone : 022 730 5140

Email patrice.dumoulin@itu.int

ET

Commande d'achat

Désignation PROC-AB-7288-11-BDT

N° de commande : 306120

Date : 20-04-2011

Contact : Karima Benkirane - Demlek

Téléphone : 022 730 5140

Email karima.benkirane@itu.int

**TABLEAU COMPARATIF DES SPECIFICATIONS TECHNIQUES SUIVANT BON DE COMMANDE
N°306119 DU 20/04/2011:**

QTE	SPECIFICATIONS DEMANDEES	QTE	SPECIFICATIONS FOURNIES
10	Ordinateurs PC+ Accessoires	2	HP Compaq 500B MT Disque Dur 320Go Ram 1Go CPU 2 ,6 Dual Core Ecran 18.5, clavier AZERTY, souris, plage Braille 24, plage Braille 40, NaturalPoint. clavier AZERTY gros caractères, casque et micro casque, pour personnes handicapés non voyants
		1	HP Compaq 500B MT Disque Dur 320Go Ram 1Go CPU 2 ,6 Dual Core Ecran 18.5, clavier AZERTY, souris, pour personnes handicapées « sourds muets »
		7	HP Compaq 500B MT Disque Dur 320Go Ram 1Go CPU 2 ,6 Dual Core Ecran 18.5, clavier AZERTY, souris, webcam, pour personnes handicapés physiques capables de manipuler le clavier
1	Imprimante laser jet HP P2055d Resto verso 33	1	Imprimante laser jet HP P2055d' Resto verso 33 impression par minutes laser monochrome

	impression par minutes laser monochrome		
10	Onduleurs réseau	10	Onduleurs UPS 650 Vesta / INPUT 230Vac, 50/60H z

1	Scanner	1	SCANNER HP G2410 La numérisation simple abordable et polyvalente capture photos. Documents objets 3D et plus encore.
5	Webcam	1	Webcam
1	Imprimante Braille	1	BRAILLE BASIC-D V4
3	Pacmate vocal AZERTY	3	Pacmate vocal AZERTY
2	Ordinateurs portables TOSHIBA ou HP Pro Book L450 Disque Dur 5 00Go Ram 4Go, CPU 2,6 Ghz, Ecran 15,5	2	Ordinateurs portables TOSHIBA Satellite L450 Disque Dur 5 00Go, Ram 4Go, CPU 2,6 Ghz, Ecran 15,5
1	Pack Braille standard	1	Pack Braille standard
1	Scanner de résolution	1	Scanner HP Scanjet G2710
1	Switch (Cisco Catalyst 2960 -24 ports)	1	Switch Cisco Catalyst 2960 24 ports
1	Linksys weariless-N Access point	1	Linksys weariless-N access point with power over Ethernet wap 4400N Borne d'accès sans fils
100	Goulotte de protection câble	100	Goulotte 60x40
900	Câble Ethernet	900	Câble Ethernet Catégorie 6
100	Connecteur RJ-45	100	Connecteur RJ-45
2	32 Port Patch Panale	2	Panneau de brassage 32 ports
1	Coffret 19"	1	Un coffret ORTRONICS 19 "
35	Prise Murale Ethernet complet	35	Prise murale avec module catégorie 6
100	Cheville N° 10	100	Cheville N° 10
100	Vise N°10	100	Vise N°10
2	Clavier CHERRY	2	Clavier CHERRY
1	Pack Braillex Standard N°12	1	Pack Braillex Standard N°12
2	Trackball Sppleance	2	Trackball Sppleance
2	Intellikeys	2	Intellikeys
2	Track-Lr	2	Track-Lr
2	Claviers gros caractères	2	clavier AZERTY gros caractères

TABLEAU COMPARATIF DES SPECIFICATIONS TECHNIQUES SUIVANT
BON DE COMMANDE N°306120 DU 20/04/2011:

1	1	Appareil fax	1	FAX PANASONIC KX FP 711CX Plain Paper Fax with copier
2	1	Photocopieuse	1	PHOTOCOPIEUSE CANON IR 2318 : 23 copies et impression par minutes impression en réseau /carte PCL/ fonction numérisation en couleur chargeur de document recto verso (50 feuilles) Nbre.de feuilles sur la cassette 250.
3	2	Reconnaissance vocal	2	Reconnaissance vocal
4	2	Clavier affiché sur écran	2	Clavier affiché sur écran
5	1	Installation et test	1	Installation effectuée et opérationnelle
6		Formation sur site et session spéciale		En cours

Le niveau et la pertinence des services fournis aux bénéficiaires.

La liste des matériels livrés et installés est conforme à la liste des deux bons de commande cités ci-dessus. Tous ont été livrés, installés et opérationnels.

Le matériel livré dans le cadre de ce projet à l'EIHD a été fortement apprécié d'une part, par le bureau de la coordination des associations des personnes handicapées et d'autre part, par les hautes autorités du Mali à travers le ministère en charge des nouvelles technologies. Les discours tenus lors de la cérémonie d'inauguration du Centre multifonctionnel en faveur des personnes handicapées (physique, visuel et auditif) témoignent de la qualité des équipements fournis. Chacun des intervenants lors de la cérémonie inaugurale ont insisté non seulement sur la nécessité de doter toutes les antennes de l'EIHD en équipements similaires à travers le pays, mais aussi sur le déficit de la rentabilité du cyber en faisant en sorte que le centre puisse continuer à fonctionner en toute indépendance.

La pertinence des services fournis réside dans le fait que la maîtrise des Tics est devenue aujourd'hui un critère de performance dans les dossiers de candidature à l'emploi.

La maîtrise de l'outil informatique est un atout majeur dans la recherche d'emploi au Mali. Tous les dossiers d'appel d'offre à la candidature pour le recrutement demandent ou exigent des connaissances dans l'utilisation de l'outil informatique. La personne handicapée peut renforcer ses chances sur le marché du travail en maîtrisant les Tics et l'utilisation de l'outil informatique comme moyen de communication et de traitement des informations.

La capacité technique et administrative de la mise en œuvre du projet.

L'Association compte en son sein des compétences multiples et variées.

- des diplômes d'écoles supérieures et universités du Mali, d'Afrique et d'ailleurs.
- des ingénieurs et techniciens supérieurs en TIC.

Deux formateurs spécialisés s'occupent de la formation des autres sur différents logiciels pour personnes handicapées.

L'association compte aujourd'hui 1907 membres hommes et femmes confondus et regroupe toutes les catégories de personnes en situation d'handicape.

L'organe exécutif de l'association est le bureau de la coordination qui travail à plain temps.

L'EIHD possède son propre siège à Bamako et a des représentations dans cinq régions du pays dont : Kayes, Koulikoro, Sikasso, Mopti et Gao. Le centre, depuis sa création, a déjà mis en œuvre plusieurs projets d'insertion professionnelle des personnes handicapées grâce à des partenaires techniques.

De 2008 à 2011 le centre a mis en œuvre 45 microprojets grâce à un financement du Fond de Solidarité Nationale.

Un autre projet intitulé « Insertion Professionnelle des Personnes Handicapées » est en cours dans sa deuxième phase, grâce à un partenariat stratégique avec Handicap International.

Un autre partenariat stratégique avec le Fonds de Solidarité Nationale a permis à l'EIHD de former 40 filles et garçons en logiciel Word par la mairie du District de Bamako en 2005. Le Fonds de Solidarité Nationale est d'ailleurs le premier partenaire de l'EIHD. La construction du siège du centre à hauteur de 40 000 000 FCFA est le fruit de ce partenariat.

De 2009 à 2011 le Fond de Solidarité Nationale a mis à la disposition de L'EIHD plus de 50.000 000 FCFA qui a permis de créer plus de 30 emplois pour les membres de l'association.

L'association organise des cours d'alphabétisation pour les membres qui ne sont pas instruits, et avec beaucoup de réussites.

L'évaluation des experts ayant reçu une formation afin de former les utilisateurs.

Le centre utilise les services de deux formateurs très expérimentés en matière de formation des handicapés à l'exploitation de l'outil informatique dans les Tics. Ces formateurs sont sollicités par plusieurs pays voisins pour assurer la formation des personnes handicapées.

CURRICULUM VITAE DES FORMATEURS :

FORMATEUR 1: Youssouf Diakité

Nom : DIAKITE

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Etudes fondamentales 1986 – 1989 : Diplôme d'études fondamentales à l'Institut National des Aveugles du Mali (INAM).

- 1981 – 1986 : Certificat d'Etude Primaire à l'Institut National des Aveugles du Mali (INAM).

Expériences professionnelles

1. Du travail dans le domaine du Handicap :
 - Du 27 avril au 1^{er} mai 2004 : Participation au séminaire de formation en leadership à l'intention des jeunes futures dirigeants des Association des Personnes Handicapées au Centre Jean de Mvoli à Yaoundé (Cameroun).

- Depuis 1991 : participation active à la vie sociopolitique de l'Union Malienne des Aveugles (UMAV) et de la Fédération Malienne des Associations des Personnes Handicapées (FEMAPH).
- Du 6 au 10 octobre 2008, participation au séminaire international sur le thème : quelle approche pour une éducation intégratrice et inclusive de qualité, à Lomé.
- Du 15 au 18 décembre 2008 : participation à l'atelier de formation sur les industries artisanales au profit des structures accueillant les personnes dans les pays du sahel à Nouakchott.
- Du 22 au 26 décembre 2008 : participation à la troisième Assemblée Générale du Comité des Femmes de l'Union Africaine des Aveugles et à la sixième Assemblée Générale de l'Union Africaine des Aveugles à Casablanca au Maroc.
- Du 26 au 29 mai : participation à Québec au Canada, au colloque International du Millénaire et à l'Assemblée Générale de l'Union Francophone des Aveugles.

La capacité du projet à soutenir ses opérations et donc continuer à rendre des services au public et à la communauté cible. Les actions menées par le centre afin de sensibiliser et promouvoir les droits des personnes handicapées d'accéder aux Tics.

Au Mali, beaucoup de cyber café ont fermé leur porte après seulement quelques années de fonctionnement faute de ne pouvoir assurer leur la continuité des services. Cela est intervenu à cause de la baisse de la fréquentation des cybers café, due à la vulgarisation de la connexion par les opérateurs de téléphonie mobile. L'EIHD entend rentabiliser son cyberspace par la création d'un secrétariat public nécessitant l'acquisition de nouveaux matériels tels que:

- un appareil de reliure;
- une imprimante à grande vitesse d'impression;
- une armoire de rangement
- un disque dur externe pour le stockage des informations ;
- l'acquisition d'un local adapté et d'accès facile ;
- le recrutement d'un personnel réduit (un secrétaire, un gérant) pour le fonctionnement quotidien du centre.

Le centre entend mettre aussi l'accent sur la formation des personnes seines en langue des signes. Beaucoup de sensibilisations ont été faites et sont en cours pour amener les entreprises publiques et privées à nous envoyer des cadres en formation. Il s'agit de faire en sorte que les handicapés sourds et muets puissent trouver des interlocuteurs dans les entreprises et services.

Le centre a besoin également d'un minimum de personnel permanent salarier pour assurer continuer à rendre des services au public et à la communauté cible.

L'EIHD compte de part son action à travers les projets financés par l'UIT et d'autres partenaires, réduire l'exclusion socio-économique des personnes handicapées en ce qui concerne l'accès de ces personnes aux Tics.

Pour l'opérationnalisation et le fonctionnement du centre, l'EIHD, en raison de ses moyens limités, a besoin d'appuis techniques et financiers. C'est ainsi qu'avec l'appui d'Handicap International, des démarches sont entreprises pour favoriser l'intervention d'acteurs nationaux et internationaux dont : l'APEJ (Agence de Promotion de l'Emploi des Jeunes), l'ANPE (Agence National pour la Promotion de l'Emploi), le FAFPA, Sightsavers, NYESIGISO (Un réseau de caisse d'épargne), la DNFP (la Direction Nationale de la Formation Professionnelle), le FSN (le Fond de Solidarité Nationale) etc.

L'impact socio-économique du projet sur la population concernées et mesure de l'expérience capitalisée.

L'impact socio-économique de ce projet s'évalue en terme de :

- Renforcement du cursus des handicapés qui ont reçu la formation pour être mieux outillés sur le marché du travail.
- Facilité l'insertion socio-économique des personnes handicapées à travers un emploi décent.
- Lutter contre l'exclusion des personnes handicapées dans les domaines des technologies de l'information et de la communication.
- Permettre une amélioration des conditions de vie des personnes handicapées sans aucune dépendance.

A la fin de chaque année le centre procède à une évaluation des performances du projet en vu de ressortir des indicateurs de performances en terme de nombre de personnes formées et l'amélioration de la qualité de vie des personnes handicapées ayant reçu la formation.

Les entreprises dans leur grande majorité sont réticentes quand il s'agit de recruter des personnes diplômées en situation d'handicape. Mais lorsqu'elles arrivent à prendre le risque de les recruter, la qualité est généralement bonne et le résultat est très satisfaisant.

Identifier les moyens de rendre les Tics plus accessibles et leur pertinence sur les besoins locaux des populations cibles en information et communication.

L'EIHD fort de ses 1907 membres tout type d'handicap confondu et représenté dans la majorité des capitales régionales du Mali, a mis en œuvre plusieurs projets d'insertion professionnelle des personnes handicapées grâce à des partenaires techniques et financiers.

Grâce à un partenariat stratégique avec « Handicap International », un projet dénommé « Insertion Professionnelle des personnes handicapées » est mis en œuvre avec comme objectif principal d'insérer professionnellement et de façon durable les personnes en situation d'handicap. Pour la première phase de ce projet les résultats suivants ont été atteints :

- 65 personnes ont eu accès à un crédit pour mettre en œuvre une activité génératrice de revenu ;
- 64 jeunes formés en divers corps de métiers ;
- 14 jeunes diplômés placés en stage de qualification dans le cadre du volontariat de l'APEJ ;
- 38 jeunes diplômés formés en technique de recherche d'emploi ;
- Plus de 100 personnes alphabétisées et formés en gestion simplifiée ;
- 6 structures rendues accessibles (construction de rampes, aménagement de toilettes, de portes signalétiques, et dons de fauteuils roulants)
- 12 acteurs de l'emploi et agents de Nyèsigiso formés en langage de signe ;

Grâce à ces projets, de plus en plus de personnes vivant avec un handicap retrouvent le sourire de pouvoir communiquer avec les autres grâce à l'utilisation des Tics.

En vu de rendre les Tics plus accessibles aux handicapés, l'EIHD a entrepris plusieurs démarches dont:

- l'organisation de rencontres en vu de créer un espace d'échange entre les personnes handicapées.
- L'organisation de débat autour de l'offre de services du centre et la capacité technique des personnes handicapées à occuper certains postes dans l'administration ou dans les entreprises privés qui leurs sont souvent refusés à cause de leur handicap.
- La sensibilisation à partir des canaux traditionnels de publicité (la télévision, la radio, la presse écrite) pour inciter les personnes handicapées à fréquenter le Cyberspace de l'EIHD.

- Les associations des différentes catégories d'handicap sont aussi mises à contribution pour mieux informer les personnes handicapées de l'existence du cyberspace et des services rendus par le centre.
- Des dépliants de présentation des services du centre seront déposés dans les écoles de formation de personnes handicapées.

Défis et perspectives du centre en termes d'opérations journalières et futures.

Les défis majeurs que le centre compte relevé à court et moyen terme sont entre autres :

- Rendre accessible les TIC au maximum de personnes handicapées.
- Rendre les handicapés plus compétitifs sur le marché du travail.
- Lutter contre l'exclusion sociale des personnes handicapées à l'échelle nationale.
- Amener l'Etat à prendre en compte dans les différents plans et programmes, l'accessibilité des personnes handicapées aux TIC.
- Le centre s'est fixé comme objectif, la formation de plusieurs cadres des services et entreprises publiques et privées en langue des signes. Certaines personnes handicapées ont du mal à trouver des interlocuteurs, lorsqu'ils se rendent dans les services et entreprises pour y chercher du travail ou même un stage.
- Dans la perspective des défis à relever c'est la création d'une plateforme « Hand-Emploi » qui se veut un espace d'accueil, d'information, d'orientation et d'accompagnement des Personnes Handicapées désireuses de mettre en œuvre un projet professionnel ou ayant tout autre besoin disponible sur la plateforme. Le cyber espace pour personnes handicapées qui vient d'être offert par l'UIT à l'EIHD est un élément essentiel dans l'atteinte de cet objectif.

Recommandations pour un appui meilleur du centre en terme prestation et de services.

Le Cyberspace est logé dans les locaux de l'EIHD et dans une salle quelque peu exigüe. La construction d'un local plus adapté pour accueillir le projet de secrétariat public permettra de rendre plus rentable les services du cyberspace.

Dans le cadre de l'extension de ses services et le renforcement des capacités d'intervention du centre, les appuis suivants seront souhaitables :

- Doter quelques antennes régionales en matériels informatiques similaires, afin de rendre effective l'accessibilité des personnes handicapées aux Tics à l'échelle nationale.

- Apporter une assistance technique dans la mise à niveau des formateurs.
- Faciliter le réseautage avec d'autres structures similaires en Afrique et dans le monde.
- Appui financier pour la prise en charge des permanents (personnes handicapées) du centre durant la période de démarrage du projet.

Bamako, le 04 mai 2012

Samuel Diarra

"CONNECT A SCHOOL, CONNECT A COMMUNITY"

Connecting Rural Schools in Southern Sri Lanka



"CONNECT ALL PRIMARY, SECONDARY, AND TERTIARY SCHOOLS TO ICTs by 2015"

(WSIS, 2003)

'Connect a School, Connect a Community' is a public-private partnership launched by ITU to promote broadband school connectivity to serve as community ICT centers for people in rural, marginal urban and isolated areas.



AKURESSA PROJECT

In May 2011, computers and mobile broadband connectivity have been provided to 25 schools in Akuressa, the Southern province of Sri Lanka. Under the framework of a Public-Private-People's Partnership (4P) model, ITU created a dynamic partnership between ITU, TRC, Dialog & Mobitel, Intel Teach, NGOs, school teachers, and community members and ITU TELECOM Youth Alumni.

ITU also took a holistic approach, addressing not only low-cost devices and connectivity, but also a long-term, sustainable

utilization of ICTs via training programs, awareness sessions, and local repair and maintenance funds.



PROJECT IMPACT

The project has been a successful catalyst to generate additional commitments from partners such as Minister of Education for southern province for enhancing school connectivity and bring about considerable positive changes to rural schools, as well as enhancing awareness amongst communities and local government in Sri Lanka.

- **Changing Schools:** Over 80% of the students saw computers for the first time in their life through the ITU initiative. ICT class has been created in most schools, and curious students are eager to learn how to use computers and Internet.
- **Enhancing awareness:** The ITU project has increased awareness of the importance of ICTs in schools. After the project, the Ministry of Education in Sri Lanka announced to quadruple its investment in connecting schools.
- **Fostering Future Partnerships:** Based on successful implementation of 4P collaboration model that was demonstrated by this pilot project, ITU and TRC jointly call for partners/ donor agencies who would could contribute to replicate the success on larger scale in other provinces of Sri Lanka for realising knowledge and creative society.





Beyond Boundaries



**Computer Room/ Library at the Department of Special Education at
University of Zambia**

EVALUATION OF THE MCTs PROJECT NO. 7GLO0764 IN ZAMBIA

Acknowledgements

This report has been prepared by ITU expert Ms. Ann Rita Ssemboga under the direction of the ITU Regional Office for Africa, and the kind support of the Ministry of Communications & Transport through the Zambia Information & Communications Technology Authority (ZICTA) as well as various institutions in Zambia who facilitated this evaluation through discussions and visits which provided invaluable inputs for the report.

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Executive Summary

The International Telecommunications Union (ITU), together with the Ministry of Communications and Transport under the Zambia Information Communications & Technology Agency (ZICTA) initiated a project called the Zambia Multi-purpose Community Telecentre (MCT) in April 2010.

The project aimed at supporting the efforts of the Government of Zambia to extend ICT access and services to rural communities by providing accessible ICT equipment, facilities and training in rural areas.

The International Telecommunications Union pledged to provide a total of CHF 99,680 (equivalent to US\$ 91,956) while the Zambia Information Communications Authority pledged an in kind contribution of CHF 157,180.

KEY FINDINGS

1. Initially, the project was to benefit 5 districts of Mumbwa, Mongu, Serenje, Mporokonso and Mpulungu each equipped with ICT and assistive technologies. Following a review of the locations, ZICTA in consultation with ITU decided to send the assistive technologies and equipment to three major education institutions responsible for providing special education to persons with disabilities. These included:

- I. **The University of Zambia (UNZA) Department of Special Education** which offers degrees in special education running for a period of 3- 4 years. The department has close to 15 students pursuing degrees and various post graduate diplomas.
- II. **The Zambian Institute of Special Education** specialises in training of trainers involved in providing education to persons with disabilities. With a student population of 90, this is the biggest such institution in Zambia.
- III. **The National Vocational Rehabilitation Centre of Zambia** which provides vocational training for persons with disabilities. The school has currently has than 150 students.

2. Immediate benefit of the project

Bringing technologies closer to the users has been of great benefit as more trainers and students have had an opportunity to access these facilities compared to providing these at general MCTs. This has enabled:

- I. Better access to learning materials and equipment- Through the assistive technologies, students are able to access electronic and e-library resources.

- II. The creation of a community and improved social networking- the students at UNZA for instances are able to network with students from other universities through using internet.
- III. Improved teaching and learning experience--, the automated Braille embossers for instance were found to be very useful specifically during examination period, enabling students to complete their courses and assignments in time. Previous embossers were manually operated.

3. Usage and appropriateness of assistive equipment delivered

- I. Only 3 out of the 5 Braille embossers and 2 out of 5 FM Radio transmitters / receivers were delivered. The actual price of the equipment at the time of implementation had exceeded the budget and therefore less equipment was purchased.
- II. The software (F-123) had not been tested fully both at UNZA and at the Zambia Institute of Special Education. There had been internet restrictions at UNZA and in the later, students had been on a school break. A technician had just been posted to support the centre and coach students on how to use the software_at the time of the visit.
- III. The assistive equipment and technologies were supplied without computers as these were not included when the decision to provide the assistive equipment to the three centres was made. There were only 3 PCs at UNZA thus limiting the use of the facilities.
- IV. Internet connectivity was also limited at both institutions visited.
- V. All equipment provided was neither insured nor labelled.

4. Recommendations

- 1. Additional computers should be provided by Zambia to the three institutions to improve access and the usability of the assistive technologies.
- 2. Along with the increase in number of access devices, the computer rooms at all the institutes such as UNZA should be equipped with reliable internet connectivity to enable better access and use of the assistive devices and software.
- 3. Complimentary resources such as an electronic library should be encouraged as well as the sharing of resources with other universities and related institutions.
- 4. Training on software installation and after sales support should be conducted at all institutions.
- 5. It is also desirable to hold annual users' reviews and workshops for the institutions and colleges in order to share experiences and resources. UNZA's IT expert for instance can be used to support the other training institutions.

6. ITU labels should be placed on all equipment to enhance ITU visibility.
7. More acoustic equipment and software that can translate Braille into print for teachers to mark /assess students should be provided by ZICTA.

5. Evaluation for the MCTs at Serenje and Mumbwa district

5.1 Suitability of equipment supplied

- I. Most of the items pledged to be supplied by ZICTA for the MCTs were procured and delivered at the two MCTs visited. All the equipment delivered was in good working condition.
- II. ZICTA provides internet connectivity to all the MCTs
- III. Instead of a GSM community phone, ZICTA provided a mobile phone to each of the MCTs administrator. The Administrators ensure that the mobile phone is provided on request and also that incoming messages are recorded and delivered to intended members of the community.

5.2 Social and economic impact

- I. The MCTs at Serenje and Mumbwa are the **first and only public access point that offers internet services in the district**. The MCT at Serenje serves on average 50 customers a day while Mumbwa serves about 20 customers.
- II. The MCT in Mumbwa offers basic computer training for beginners and a number of customized programs. More than 20 students have been trained since the centre opened and plans are underway to partner with neighboring schools and public administration to extend this service.
- III. Internet is largely used for social networking and access to agricultural prices and market. The availability of internet in these communities has enabled them to join the global market be part of the information society.

5.3 Financial sustainability

- I. The Serenje MCT generates revenues averaging USD1,000 per month with expenses ranging between USD 400 – 600 It thus makes a profit of close to USD 500 a month. The MCT in Mumbwa generates on average USD 500 per month. This is below its monthly expenditure of USD 800 therefore raising concerns of sustainability.

There were delays in starting the project in Mumbwa attributable to a lengthy procurement process which ZICTA had to comply. The association was forced to pay rent for one year prior to the resumption of services and this slow startup has impacted on the MCTs financial performance.

5.4 Challenges:

1. Constant power outages and surges were reported in both districts
2. Space limitations – the space is not sufficient to conduct both ICT training and to provide internet and other café services especially in Serenje.
3. The billing software provided for both MCTs usage is was not functioning at both MCTs. Bills were estimated which affects revenue collection and monitoring.
4. Unreliable and not up todate anti-virus software was reported at both MCTs
5. The labeling of computers and all other equipment hashad not been done.
6. Insurance cover for the equipment will expire at the end of the project- it was not evident that the centre will be in position to insure the equipment moving forward.
7. Computer maintenance iswas also not regular and neither sales support nor training has been extended to the administrators.

6. Recommendations;

1. The purchase of antivirus software and labeling of computers should be undertaken by the beneficiaries immediately.
2. The requirement to have the equipment insured for at least 2 years by the MCT owners should be included in an MoU which should be agreed by parties prior to the termination of the contract with ZICTA.
3. ZICTA should ensure that all billing software provided is functioning properly.
4. ZICTA should facilitate the training of all MCT administrators on trouble shooting. The supplier of equipment should provide after sales and maintenance support for at least one year. This should be a condition for future projects.
5. ZICTA should organize annual workshops to allow for benchmark, exchange of knowledge and resources. The Southern African Telecentre Network of which ZICTA is affiliated can be used as a platform sharing of knowledge and networking between MCT operators in Zambia and the Southern Africa Region.
6. There is need to broaden the scope of services provided. The MCTs should explore the possibility of extending ICT training to primary and secondary schools within the district as well as generate awareness for the MCT within the districts to enhance revenues and improve sustainability.

In conclusion, whereas operations of these pilot projects is still in early stages, it is clear that the provision of assistive technologies to the key education institutions in Zambia is enabling the community of persons with disabilities to access better education and improve networking which will ultimately result in improved social

wellbeing for this community. The extension of internet connectivity to the rural communities in Zambia has opened global market and provided an opportunity for them to improve their social and economic conditions.

Most of the challenges highlighted such as insurance of equipment, labeling, installation of anti-virus and training of administrative staff can be remedied in the short and medium terms. In the long term however, solutions to address the shortage and reliability of power should be explored. Use of low voltage equipment and PCs as well as alternative power solutions such as solar, inverters among others should be explored for projects in rural communities for these projects to be sustainable. The ITU and its partners should draw lessons of these pilot projects as they extend connectivity and access the underserved communities in other countries.

CHAPTER 1

1. INTRODUCTION

The International Telecommunications Union (ITU), together with the Government of Zambia, under the Zambia Information & Communications Technology Authority (ZICTA) initiated a project called the Zambia Multi-purpose Community Telecentre (MCT) Project (No.7GL00764), in April 2010. The project aimed at supporting the efforts of Government of Zambia to extend ICT access and services to rural communities by providing basic sets of accessible ICT equipment, facilities and training in rural areas.

The project was to be extended to eight rural communities in Zambia. ITU was to support five of the nine MCT by providing accessible ICT services and applications to rural communities. The equipment to be provided by ITU included assistive and specific technologies (such as Braille printers, software for visually impaired person, hearing aids software) to enhance accessibility ICTs for all, including persons with disabilities. Other ICT equipment facilities were to be provided by ZICTA through its universal service funds.

1.2 BACKGROUND TO THE PROJECT

The Government of Zambia in recognition that access to ICT services is a key ingredient to national and community development initiated the MCT joint project with the ITU in 2010. With an agricultural based economy, it was realised that people need information on prices and sources of agricultural inputs as well as markets and prices to sell their products. Unfortunately, the bulk of the ICT infrastructure in Zambia like in many African countries is located in urban areas with a population of more than 65%.

The project therefore sought to sustain and empower the rural communities in an environment where communication facilities are non-existent. The incorporation of ICTs would thus be used as a bolster that sustains the fabric of the Zambia economy. The districts of Serenje, Mporokoso, Mumbwa, Mazabuka, Kabwe, Mongu and Mpulungu were to benefit from the project. Figure 1 shows the locations of the MCTs.

Figure 1- Map of Zambia



The project objectives included:

- I. To facilitate establishment of MCT infrastructure in seven districts through provision of ICT equipment and facilities (including five centres with assistive technologies and devices).
- II. To build and enhance human capacity for local communities and individuals to use the power of ICT to improve their quality of lives and to create employment.

Intended output of the project included:

- I. The establishment of MCT in 5 identified rural areas
- II. Provision of affordable and accessible ICT equipment, facilities and services purchased and installed in the identified locations including assistive technologies
- III. Use and creation of awareness of ICT services and applications enhanced by capacity building and by delivery of suitable services and applications taking into account the particular needs of each community
- IV. Training in operation and maintenance of equipment.

1.3 SCOPE OF ASSIGNMENT

The field visit which was conducted between 14th and 18th November aimed at assessing the level of implementation of the project and mainly focused on examining:

- i. The procurement and suitability of the equipment deployed in the centres
- ii. The level and relevance of services provided to the targeted beneficiaries
- iii. The technical and administrative capacity of the project implementers as well as an assessment of the experts providing training to trainers and users
- iv. The ability of the project to sustain its operations and thus continued rendering of services to the public and target community.
- v. Programs conducted by the centre to build awareness of the projects and promote access to ICTs use by disadvantaged members of the community such as women and persons with disabilities.
- vi. The social and economic impact of the project to the target population and to draw lessons and experiences so far gained.
- vii. Identifying ways and means of making ICTs more accessible and relevant to local information and communications needs of the target communities
- viii. Drawing lessons and challenges being faced by the centres in their day to day operations and to come up with recommendations on how to better and sustain their operations for continued service provision.

The following visit /plan program was adopted:

- I. 14th November; 9.30 Brief meeting with officials from ZICTA to review the work plan and tools
- II. 14th November 1:30 Visit the University of Zambia– Department of Special Education
- III. 15th November;; Visit Serenje MCT in Serenje District - 450 Kilometres from Lusaka
- IV. 16th November: Visit the Zambia Institute of Special in Education in Lusaka and the National Vocational Rehabilitation Centre-Ndola, Zambia
- V. 17th November: Visit Mumbwa MCT in Mubwa District – 165 Kilometres from Lusaka
- VI. 18th November: Wind-up discussions with ZICTA and meeting with ZICTA Chairperson

CHAPTER 2

2. FINDINGS

2.1 Selection of the Project Locations

At the inception of the project, the 5 MCTs were required to offer both MCT services and assistive technologies. The locations were said to have the necessary infrastructure (internet coverage) and demand of the MCT services included:

1. **Mumbwa District-** located in the central province of Zambia, 170Km from Lusaka.
2. **Mongu District-** Located in the Western Province, mainly known for its agriculture, timber exploitation, fishing, livestock and trade.
3. **Serenje District-** A town lying off the Great North Road and Tazara railway is one of the smallest towns in Zambia, 460km from Zambia
4. **Mporokoso District-** Situate in the Northern Province near the border with Tanzania and
5. **Mpulungu District-** Also in the Northern Province, the only port in Zambia and used as an export route to the Great Lake Region.

Following a re-assessment of the locations earlier identified for the project, ZICTA in consultation with ITU made a strategic decision to review the project scope and beneficiaries. It was decided that rather than placing all equipment in a public MCT, the assistive technologies and equipment be given to the major education institutions responsible for providing special education to persons with disabilities. Providing training materials for teachers and the actual training of students on the use of these technologies, according to ZICTA, would have a greater impact in building ICT skills among persons with disabilities, who in turn would train others users creating a much greater multiplier impact to their community.

Three institutions that provide training courses for students with special needs were identified to receive the equipment. These included:

- I. **The University of Zambia (UNZA) Department of Special Education** which offers degrees in special education running for a period of 4 years. The department has more than 15 students, 6 of whom are visually impaired, the rest have other forms of disabilities such as hearing.

The university has a special computer room which also doubles as a library and examination room. The room is equipped with 3 computers connected to the internet (provided by the University); video magnifier equipment for the visually impaired, an embosser and a Braille embosser with acoustic hood

donated by the ITU. The ITU also donated one copy of the F123 software for visually impaired persons.



Picture 1 Mrs Asenath Mpatwa, a Senior Advisor at the ITU Regional Office for Africa and Dr. Beatrice Matafwali, Head of the Special Education Department at the University of Zambia discussing the centre's activities.

There is a full time lecturer who coordinates the activities of department and the university has provided an IT technician to support the centre.

- II. **The Zambian Institute of Special Education** specialises in training of trainers for persons with disabilities. The institute offers a Diploma programme in Special Education. It currently has more than 90 teacher trainees most of whom have some sort of disability.

The institute received one (01) Braille embosser with acoustic hood, and five (05) personal FM transmitters/receivers from this project.



Picture 2: A student taking exams at the Zambia Institute of Special Education

- III. **The National Vocational Rehabilitation Centre of Zambia** which also provides vocational training for persons with disabilities. The centre which is located in Ndola, 320 kilometres from Lusaka currently has 150 students (of whom 22 are visually impaired) and 16 teachers. This centre received one (01) Braille embosser with acoustic hood and one (01) copy of F123 software from the project.

2.1.1 *Emerging issues:*

Findings indicates that it was a good decision to give the assistive technologies to teacher training institutions as more users (trainers and students) have benefited from the project. This may not have been the case had the equipment been sent to a regular MCTs. It is recommended that once the critical number of trainers and awareness is reached in the urban and peri-urban centres, assistive equipment and software should also be provided to institutions in rural settings.

2.2 Usage and appropriateness of assistive equipment delivered

Annex 1 contains a list of all equipment that was pledged for the project. On its part, ITU pledged to provide the following equipment;

- i) 5 Braille Embossers
- ii) FM transmitters/receivers for 5 MCTs
- iii) Software for the visually impaired in 5 MCTs.

Table 1 shows the list of equipment and technology delivered to the special education institutions:

I. The University of Zambia (UNZA) Department of Special Education	• 1 Braille embosser and Acoustic hood • Software for the visually impaired- F-123- 1unit.
II. The Zambian Institute of Social Education	• 1 Braille embosser and Acoustic Box • 5 sets of FM transmitters and receivers
II. The National Vocational Rehabilitation Centre-Lusaka, Zambia	• 1 Braille embosser and Acoustic box • Software for the visually impaired- F-123- 1unit.



Picture 3: A Computer Room/ Library at the Department of Special Education at University of Zambia

2.2.1 Emerging issues

- 1 Only 3 out of the 5 Braille embossers and hood pledged by the ITU were supplied and Only 2 out of 5 copies/ sets of software for the visually impaired was supplied. At the time of procuring the equipment, the cost had shot up and less of the planned equipment could be procured.
- 2 The software (F-123) had only been recently uploaded on computers at the UNZA and as such had neither been fully been tested nor used. There

were delays in installation of the software due to a download restriction policy at the university. This problem had just been solved at the time of the evaluation and a technician had been posted to support the centre and coach students how to use the said software.

- 3 The equipment at the Zambia Institute of social education had just been delivered in September 2011, during the holiday break and as such neither the equipment nor the software had been installed by the time of the visit. The Administration however expressed gratitude for having the equipment and software in place and once set- up, they believe it will improve their processes and service delivery. The new Braille printer for instance has a much higher capacity as it is automated and uses roll paper unlike the previous machine that needs to be fed manually.
- 4 There were only 3 computers at the UNZA which limited access and use of the facilities and equipment. Internet connectivity was also limited.
- 5 At the Zambia special institute, only 3 sets of acoustic equipment were supplied which are not enough compared to the number of users.
- 6 In terms of effectiveness, the Braille embosser was timely and has been useful specifically during examination periods which shall enable students to complete their courses and assignment in time.
- 7 All equipment provided is neither insured nor labelled.

2.2.2 Recommendations

1. Additional Computers should be provided to the institutions that received the assistive technologies and software. ZICTA was requested to review the allocation of computers to MCTs and re-allocate some to the three institutions to ensure greater access and usage of the assistive technologies provided.
2. Along with the increase in number of access devices, computer rooms at all the institutes such as UNZA should be equipped with reliable internet connectivity to enable better use of the assistive access devices and software. The current UNZA policy on internet has restrictions on access to most browsers. This provision should be lifted given the special circumstances of the users with disabilities who require accessing most of their reading materials electronically.
3. Additional resources such as electronic library should be facilitated through partnerships. The sharing of resources such as electronic material with other universities and related institutions should also be encouraged.
4. Training on software installation and after sale support should be conducted for all institutions. Up to the time of the visit, ZICTA had not yet sent experts to assist the institutions.
5. It is also desirable to hold annual users' reviews and workshops for the institutions and colleges in order to share experience and resources. UNZA's IT expert for instance can be used to support the other training institutions.
6. ITU labels should be placed on all equipment to enhance ITU visibility.

7. More acoustic equipment and software that can translate Braille into print for teachers to mark /assess students should be provided.



Picture 4: A Braille Embosser and Box donated to the Zambia Institute of Special Education

2.3 Usage and appropriateness of MCT equipment and Services

Annex 1 extracted from the Project document signed between ZICTA and the ITU.

Findings indicate that all items pledged by ZICTA for the MCTs were procured and delivered and verified in the two MCTs visited. All the equipment delivered was in good working condition.

Instead of a GSM community phone, ZICTA provided a mobile phone to each of the MCTs administrator. The Administrators ensure that the mobile phone is provided at request and also that incoming messages are recorded and delivered.

Billing software was not being used in the MCTs visited although the software was provided by ZICTA in all the MCTs. It was reported that some MCTs have had problems with installation of the software and ZICTA was requested to find a solution in order to control records of revenue generation.

Projectors were also provided in all MCTs.

2.4 The following is the assessment of each of the MCTs visited:

2.4.1 Serenje Multipurpose MCT

The Serenje Multipurpose MCT is located in Serenje district, 450 kms from Lusaka. The district has a population of about 100,000 people. The tele-centre is located in the middle of the local district administration area and has entered into partnership with the district council and other institutions to provide them with ICT services. For instance the District Commissioner has an MOU with the MCT to assist the district with their record keeping and photocopying services. This was found to be a good example of how MCTs not only can support the day to day work of the government but also to ensure a steady flow of revenue from such customers.

The centre is run by an association of business men and women called the Serenje Business Association, a member of the Zambia Chamber of Small and Medium **Business Associations** (ZCSMBA). The association has more than 50 members, most of whom are farmers. The District Committee oversees the day to day activities of the centre led by Mr. Benson Ndhlovu, the Chairman of the Association Mr. Ndhlovu also acts as a full time Director of the centre.



Picture 5: Mr. Bensom Ndhlovu, Manager of the Serenje MCT sharing information with Mr. Bwalya Mwango, a ZICTA official.

There are currently 4 people employed at the centre, of which two are in the administration section and the other 2 in the IT section. All employees have basic knowledge in computer. They however have not had any official training from ZICTA.

Serenje MCT offers a number of services including internet, photocopying, telephony, fax, laminating, binding, video and editing, stationary and word processing among others. It is also the only public internet access facility in the district. It serves on average 50 customers a day, out of which 20 use the internet.

The centre generates an average of 200,000 kwacha (approximately USD 50) per day enabling the centre to make close to USD1000 per month.

The monthly expenses range between USD 400 – 600, thus giving them an average monthly profit of about USD 500 . A detailed review of the revenue and expenditure should be conducted once the books of accounts are obtained

ZICTA currently meets the cost of Internet connectivity which is at USD 500 per month for a 64kbps dedicated ADSL connection .According to the MCT's Administrators, connectivity is reliable and the speed relatively adequate. The centre

will assume this responsibility when ZICTA's support ends in March 2012 but could also opt for low service level to sustain Internet connectivity.

The centre has also conducted some marketing programs for the Zambia National Information Service (ZANIS), a government body in charge of building awareness and spreading government information within the country.-

2.4.1.1 Achievements of the MCT include:

1. It is the first internet facility in the region and has managed to connect the rural community to Lusaka and the rest of the world. Farmers use the café to get information on prices, produce and for other businesses. One of the users interviewed said he uses the cafes regularly and has successfully ordered 4 cars online for import and trade within the district.
2. Most of the government institutions around the community use the MCT and it has also become an electronic and physical information portal for the government. There is a notice board at the MCT which is used to display government information and any important news and events.

2.4.1.2 Challenges have included:

3. Constant power outages which disrupts services and has a negative effect on revenues and the general performance of the MCT.
4. Space limitations – the space is not sufficient to conduct both ICT training and to provide internet and other café services. The 16 computers provided by ZICTA are cramped up in the room not providing a conducive environment for training.
5. The MCT does not have a billing software- usage is estimated which affects revenue collection and monitoring.
6. The initial anti-virus software provided expired and the new version is not as reliable. A new antivirus software is being sourced.
7. Labeling of computers and all other equipment has not been done.
8. Insurance cover for the equipment shall expire at the end of the project- it is not evident that the MCT will be in position to insure the equipment moving forward.
9. Computer maintenance is also not regular and neither sales support nor training has been extended to the administrators.



Picture 6: A Notice Board at Serenje MCT

2.4.1.3 Recommendations:

1. Purchase of antivirus software and labeling of computers should be undertaken immediately.
2. The requirement to have the equipment insured for at least 2 years by the MCT owners should be included prior to the termination of the contract with ZICTA.
3. ZICTA should ensure that the billing software provided at each centre is working properly before the conclusion of the project as per the project requirement.
4. As part of the sales conditions, the supplier of equipment should provide after sales and maintenance support for at least 1 year for the current and any other future projects.
5. ZICTA should train administrators on basic MCT management and hold annual workshops to benchmark, exchange knowledge and resources. The Southern African Telecenter Network Network for instance may be one way of extending and sharing of knowledge.

2.4.2 Mumbwa MCT

Opened in March 2010, Mumbwa MCT is located in Mumbwa district in the central province of Zambia, 170Km from Lusaka. Some of the key features in the district include proximity to the Zambia Air force base and Kafue National Park. The area is known for its cotton growing. The MCT is located right at the centre of the local administration for the district.

Just like Serenje, Mumbwa MCT is managed by an association of business men and women called the Mumbwa Business Association, a member of the Zambia Chamber of Small and Medium **Business Associations** (ZCSMBA). Led by Ms Ruth Michelo, there is a committee of seven members in charge of overseeing the management of the centre and two IT Administrators (David Phiri and Christopher Chinyanta) employed on a full time basis. They each have basic training in IT. The Management team received training in basic business management and book keeping by the Zambian Chamber of Commerce.

Mumbwa MCT offers basic IT business services including internet, photocopying, telephony, fax, laminating, binding, video and editing, stationary, typing among others. In addition, the MCT carries out training in basic computers for beginners and a number of customized programs. More than 20 students have been trained since the centre opened and plans are underway to partner with neighboring schools and public administration to extend this service.

Whereas the centre earns on average 2 million kwacha per month (USD 500), these revenues are not sufficient to meet its day to day operations. The highest expenditure goes to rent at 1.3 million Kwacha and staff at 1.2 million. The Association using revenues from its other sources has been subsidizing the operations of the centre including the rent payments made in the 1st year prior to the commencement of services.

The cost of internet connectivity was USD 500 per month for a 64 kbps- ADSL connection link is met by ZICTA. The MCT will be required to meet its internet connection costs once the project is terminated in December. In terms of capacity, the speed is said to be sufficient and relatively reliable.

2.4.2.1 Achievements of the MCT include:

1. Mumbwa MCT is the sole community internet access point in Mumbwa district bringing the people closer to Lusaka and the world at large. Some of the users interviewed including Rev. Alfred Siyila and Maxwell and Simakumba, a student say that they use the MCT nearly every day.

2.4.2.2 Challenges include:

1. Delays in starting of the project due to late arrival of the MCT equipment. The delay was attributable to the procurement process ZICTA had to comply with. The association was forced to pay rent for one year without generating revenues, as they had acquired the current premises in anticipation.

2. The district is characterized by very low and unreliable power supply. It was reported that many times, the power goes too low to run computers which at times occurs for more than 6 hours a day affecting the operations and cash-flow of the MCT..
3. The maintenance and software update of computers is not regular. No after sales and maintenance support was given to the MCT since delivery of equipment. Whereas the IT Administration staff can carry out the day to day trouble shooting, they are not yet competent enough to provide the full maintenance services.
4. The training was yet to be conducted for both the Administrative and Management staff by ZICTA as had been proposed.
5. The general structure of premises is relatively below the required standard. There was evidence of water leakages in some parts of the roof and no air conditioning among others. This may affect the durability of the electronic equipment at the MCT.
6. Given the start-up challenges, the relatively low awareness of the centre, the MCT operational expenses exceeds their income, something that may challenge its sustainability.

2.4.2.3 Recommendation

1. There is need to broaden the scope of services provided; the MCT should explore the possibility of extending training to primary and secondary schools within the district and also identify special programs for public sector workers in the region. This would generate more revenue and improve sustainability.
2. There is need to create awareness of the MCT within the district to include members of the local district administration organs and the whole community in general. The experience of Serenje MCT could be used. The MCT for instance should get involved in some of the community activities and events as part of creating awareness and publicity for the MCT.
3. Immediate repair and renovation of the premises is recommended starting with the leakages on the .roof.
4. Training of staff on IT maintenance should be conducted and regularized.

In terms of outlook, there are newly discovered minerals in Mumbwa district. A number of international corporations are setting up mines and this influx is said to transform the district. This will generate demand for the MCT services and probably improve its sustainability. The MCT should therefore take advantage of this influx of newcomers to the district to expand its customer base.

2.5 Project Funds Disbursements

The International Telecommunications Union pledged to provide a contribution valued at CHF 99,680 (equivalent to US\$ 91,956) financed by ICT-Development Funds specifically for the procurement of assistive technologies as well as in-kind human resources for project management and evaluation to ensure the success of the project.

Zambia Information Communications Authority on its part pledged in an in-kind contribution amounting to CHF 157,180 for the following items:

1. Equipment and software	CHF	70460
2. Human Resources	CHF	30,352
3. Internet Connection	CHF	32,520
4. Training	CHF	16,260
5. Communication services	CHF	6,504
6. Miscellaneous and Contingency	CHF	1,084

By the time of the visit in November, a total of t CHF 73,400 of the ITU contribution had been disbursed while, ZICTA had disbursed ZMK 38.5 million (USD 216,800) for equipment and approximately USD 48,000 will be spent on internet connectivity.

CHAPTER 3

3. Conclusion

In conclusion, whereas the implementation of these pilot projects is still in early stages, it is clear that the provisioning of assistive technologies to the key education institutions in Zambia is enabling the community of PwDs to better education and improved networking which shall ultimately result in improved social wellbeing for this community.

The extension of internet connectivity to the rural communities in Zambia has opened these communities to the global market, providing an opportunity for them to improve their social and economic conditions.

Most of the challenges highlighted such as the insurance of equipment, labeling, installation of anti- virus and the training of administrative staff can be remedied by ZICTA in the short and medium term. In the long term however, solutions to address the shortage and reliability of power should be explored. The use of low voltage equipment and PC alternative power solutions such as solar, inventors among others should be explored for projects in rural communities for these projects to be sustainable.

The ITU and its implementations partners should draw from the lessons of the pilot project as they extend connectivity and access these underserved communities in other countries.

PLANNED ICT EQUIPMENT AND RESPONSIBLE PARTY

Item	Institution	Mumbwa	Mongu	Mporokoso	Mpulungu	Serenje
PCs	ZICTA	16	16	16	16	16
UPS	ZICTA	16	16	16	16	16
Photocopiers	ZICTA	1	1	1	1	1
Printers	ZICTA	3	3	3	3	3
Dig. Video Camera	ZICTA	1	1	1	1	1
Dig. Camera	ZICTA	1	1	1	1	1
Fax machine	ZICTA	1	1	1	1	1
Scanner	ZICTA	1	1	1	1	1
Binding m/c	ZICTA	1	1	1	1	1
Laminating machine	ZICTA	1	1	1	1	1
Paper puncher	ZICTA	1	1	1	1	1
Stapler	ZICTA	1	1	1	1	1
Overhead Projectors	ZICTA	1	1	1	1	1
Braille printer	ITU	1	1	1	1	1
Hearing aids software	ITU	1	1	1	1	1
Software for visually impaired person	ITU	1	1	1	1	1
Internet Billing Software	ZICTA	1	1	1	1	1
GSM Community Telephone	ZICTA	1	1	1	1	1
Shredding Machine	ZICTA	1	1	1	1	1

