PROJECT REPORT

SCHOOL CONNECTIVITY PHASE II

PREPARED BY: PROJECT DEPARTMENT

Table of Contents

Table of Contents

EXECUTIVE SUMMARY

Based on the success of the "sustainability pilot for School Connectivity", where the focus was on a sustainable OPEX of less than TZS 35,000, the scale up envisaged through this School Connectivity Scale-Up ("SchoolConnect") project aims at connecting schools to internet and establishing the path towards a nation-wide sustainable models for school connectivity in Tanzania. The project was designed to contribute to the worldwide effort for school connectivity, mapping of all schools and had to answer the demands in resource constrained environments. Contribute in achieving the 5th Government connectivity target that aimed in delivering connectivity to some primary schools and to ALL secondary schools to benefit digital education. It was designed to be a multi-stakeholder project that had to engage the Government of Tanzania (GoT), Ministry of Education, President's Office Regional Administration and Local Government, Mobile Network Operators (MNO), Non-Governmental Organization (NGO), Universal Communication Service Access Fund (UCSAF), Academic Institutions, Public and Private Organization. Furthermore, the School Connectivity Scale-Up has been brought up as a successful path to the international community, involving a.o. Project GIGA from UNICEF & ITU, UNESCO Global Education Coalition, GSMA.

About the Organization

"We focus on changing narratives about the African continent by building bridges between Africa and the world and telling transformative stories from our communities."

Mission

"Bridging the digital divide and
bringing Internet access to communities
in Tanzania
by building digital societies."

Special Message

Dear Edu-Tech enthusiasts

It is our hope that when you finish reading this report your key takeaways will be education and technology are inseparable that one cannot exist without the other, also over the years we have spoken of innovation in Education but it is our hope that we can now have a paradigm shift to innovation with education.

This report presents the activity implementation progress which cuts across schools selection, installation, device distribution, stakeholders engagement and training of teachers and students: not only that but also what you will see is the great passion everyone has put in bringing this project to life starting from our partners Vodacom Tanzania Foundation, Basic Internet Foundation, Digital Friends on the ground, Regional Competence Centers (University of Dar es salaam and Dar es salaam Institute of Technology), African Child Projects field team, ICT teachers, District Education Officers, Regional Education Officers and all government agencies.

In the end, We hope to bring about equality on the quality of education given in our urban schools vs rural schools, and address the issue of sustainability and affordability for all.

Catherine R Kimambo
Executive Director
African Child Projects.

About the Project.

The School Connectivity Scale-Up ("SchoolConnectivity") project aims at scaling up the success from providing access to educational information through the Internet to schools. Installing the internet in schools addresses both capabilities of students to get access to educational content, providing teachers with additional information on the syllabus and performing their administrative tasks. SchoolConnectivity aims at connecting 50 new schools in 2021/2022, contributes to the national framework for connecting all schools, establishes guidelines and KPIs for an affordable access to information on the Internet, and last but not least contribute to the digital transformation of the educational sector in Tanzania. An initial work is the mapping of all schools and evaluate sustainable models for school connectivity. Given the success of the pilot project In connecting 10 schools across the country, the scale-up to 50 schools has the potential to become the showcase for international visibility.

Project Partners

Project GOAL

## "Increase students' performance by 5% annually"

This will open doorways to a wealth of information, knowledge and educational resources, increasing opportunities for learning in and beyond the classroom. Teachers will use online materials to prepare lessons for their students to extend their range of learning.

This milestone involves e-content delivery provided either on-site through a school server or centrally through the cloud. Access of content for Teachers which addresses the ability of teachers looking for educational content, and include the content into their teaching also sustainability models on access & content creation.

Intervention ONE

EASY ACCESS TO EDUCATIONAL CONTENTS.
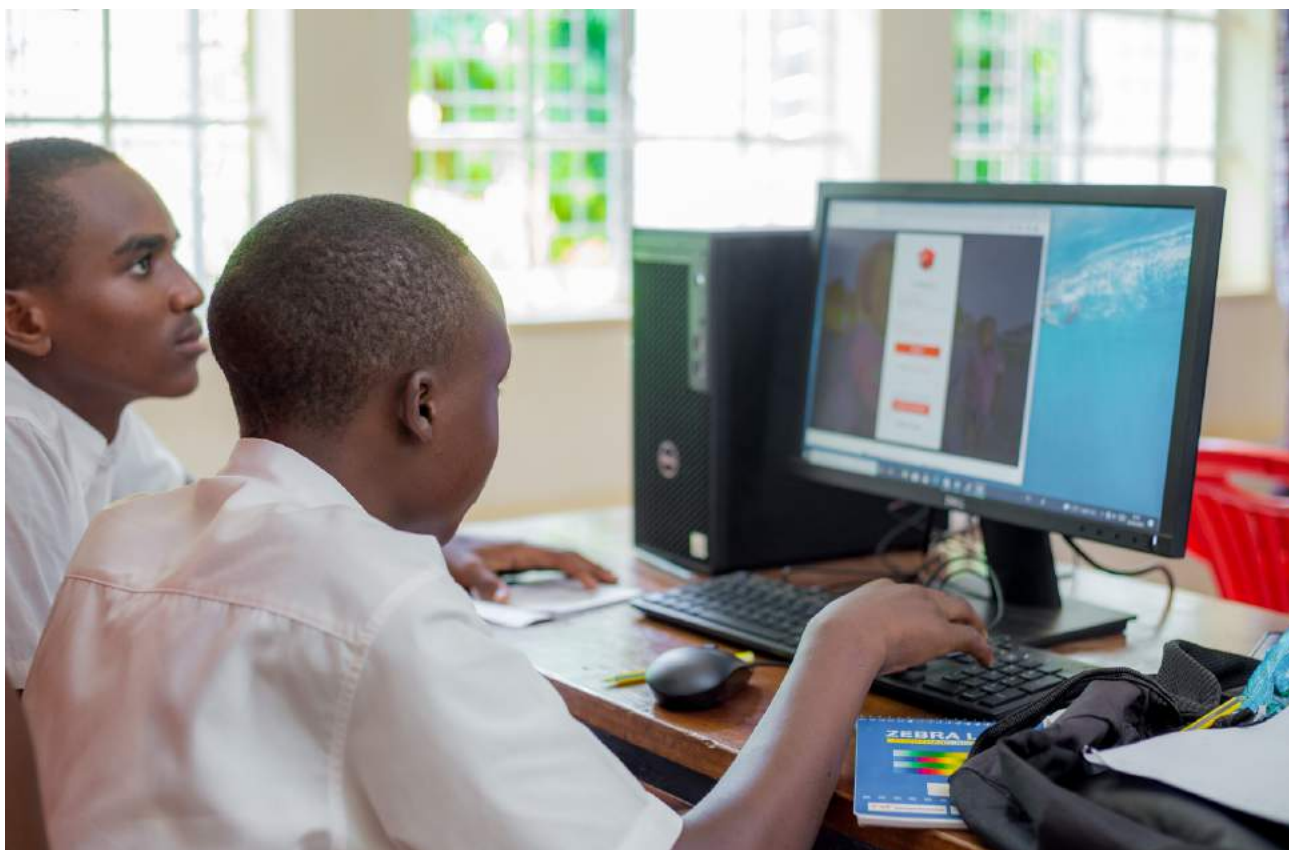
In photo: Students creating user accounts in E-fahamu learning platform

Easy access to Educational Contents

E- learning through the use of computers and the Internet forms as enabled the network transfer of skills and knowledge, hence making the delivery of education made to a large number of recipients at the same or different times. Earlier, it was not accepted wholeheartedly as it was assumed that this system lacked the human element required in learning.

However, with the increased school connectivity, advocacy and the advanced learning systems, it gets embraced by the masses. Currently, computers and tablets etc, now have an importance place in the classrooms for learning

The process towards creating access to ICT learning platforms involved device distribution instalation and trainings to both teachers and students as the preer steps thus built a grand foundation to Educational contents like E-fahamu.

"Access to ICT learning platforms in poor rural."

Considering the need assessment conducted by the African Child Project team that showed the need to advertise and introduce E- learning in rural schools to increase more acess to learning contents where they are needed the most. This therefore, got more than 30 rural schools in the run connected to the internet and accessed to the E-Fahamu Learning platform with ease.

Intervention TWO

CONNECTING SCHOOLS TO INTERNET

Interactive teaching methods, supported by the Internet, enabled teachers to give more attention to individual students' needs and support shared learning. This helped to rectify inequalities in education experienced by students. Access to the Internet helped educational administrators to reduce the costs incurred by purchasing books and improve the quality of education in schools with constant supply of e-learning materials and teaching aid. Access to Internet is not, of course, the answer to every challenge posed by education but a step towards quality education for all.

Connecting Schools To Internet

In photo: Checking signal strength of the SXT LTE KIT during installation

Technology used

SXT LTE kit

is a device for remote locations that are within cellular network coverage. However, due to it's professional LTE chip design and high gain antenna, it can provide connectivity for your building even where cell phones can't.

hAP ac lite TC

The hAP ac lite is a Dual-concurrent Access Point, that provides WiFi coverage for 2.4GHz and 5GHz frequencies at the same time

Monitoring and Troubleshooting

In monitoring and troubleshooting we have connected all devices in the main core router for easy tracking and troubleshooting remotely

Safe guarding

On the safe guarding our users especially students using our internet and devices, we have filtered unwanted contents and allowing the contents which are educational to be accessed only using whitelist and walled garden.

Device Capability.

Since we can have access to our devices remotely then our device have capabilities of adding other websites on the whitelist without disturbing the network.

Freemium and Premium Model

This is the voucher system that generate vouchers in term of code, purposely to allow users to have free access to the website that can not be accessed in zero rated mode

Intervention THREE

IMPROVING TEACHERS AND STUDENTS DIGITAL CAPABILITIES.

We do not believe access to Internet is the only solution to the digital divide that exists, that is why it is our goal to ensure that digital skills training go alongside access to internet, accredited contents and divices (computer and tablets) donated to schools through our parners. In this milestone we explored how digital skills has created great opportunities to improve the quality of education for students and teachers hence contribute to national economic and social welfare. New ways of teaching and learning, better access to a much wider range of information and resources and new skills for the digital age.

IMPROVE TEACHERS AND STUDENTS DIGITAL CAPABILITIES

150 ICT Teachers who were trained who were taught how to use the E-Fahamu platform in their teaching and learning for their students plus how to search for education sites integrated in E-Fahamu, reported that the trainings offered in the process of connecting schools to the internet have helped to improve the teachers' digital capabilities to create capacity and efficiency in learning using ICT tools. For example the TIE Library integrated in the E-fahamu platform has given them access to softcopy books and made teaching even easier.

in photo: Basic Computer Skills training to students

How do we achieve a common voice around matters related to connectivity of schools and communities

Stakeholders engagement is key in enriching the project. We believe in the diversity brought by each individual partner in the project, above all we believe that for this project to succeed key partners such as Central and local government, Mobile Network Operators, International communities, Civil Society Organisation, Academic institutions, Private and Public sectors have to be involved. For us to achieve a common voice when it comes to connectivity of schools and communities in rural Tanzania partnership is paramount.

Intervention FOUR

DRIVE THE DIALOGUES AROUND MEANINGFUL CONNECTIVITY

In photo: School Connectivity project launch in Kilimanjaro Prof Adold Mkenda (Minister of Education)

Stakeholders Engagement

This interaction involves different stakeholders who performed mult roles to meet a single objective of getting schools connected as explained:-

PARTNERS ENGAGEMENT

African Child Projects works in partnership with; Basic Internet Foundation (Oslo, Norway) which donated antennas and LNCCs used to connect schools with the internet. Also foresees the technicalities of the devices including mentoring the team from the Regional Competence Centers; Dares Salaam Institute of Technology (DIT) (UDSM COICT) and University of Dar es Salaam College of Information and Communication Technology, which offered its students and teachers to assist on the technical side of the project.

GOVERNMENT ENGAGEMENT

The government authorities was engaged in the project activities to enrich project goals since ACP believes in the diversity brought by each individual government authority from all levels. For example, the Ministry of Education is engaged in the project through giving all necessary collaboration via Regional and district Education officers and all the permits needed to access the listed schools and the Minister of Information Communication and Technology through giving assistance in the construction of teaching manuals on ICT digital connectivity, regulating and managing the tasks of empowering public schools with ICT and internet systems and contributing in dialogues for meaningful connectivity.

DIGITAL FRIENDS

These are project local supervisors from the NGOs with jurisdiction to operate in the ten regions where the project is implemented. They are engaged in coordinating the practical implementation of numerous education and technology components including, monitoring the project activities progress in schools within their respective regions of operations

Priority SDGs

There are 2 SDGs outlined on the project targets.

This section identifies the specific SDGs and targets African Child Project priorities, and how they align with its strategy and goals.

Priority SDG

SDG 4: Quality education: Overall, the programme ensures quality and inclusive access to education so that no one is left behind.
Specifically, School Connectivity has met the following SDG4 targets:

4.1 Universal primary and secondary education making educational information available and facilitating digital learning during disruptions such as pandemics.

4.3 Equal access to technical/vocational and higher education through access to information and digital literacy training

4.5 Gender equality and inclusion, by balancing access and training between boys and girls, male and female teachers.

4.6 Universal youth literacy through digital literacy training.

Priority SDG
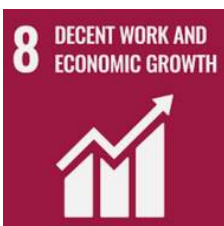
SDG 8: Decent work and economic growth: provision of the internet and digital capabilities has triggered acess to information and economic opportunities to communities on the ground, the project has created decent work by providing employment to youth and women

Achievements

The project aimed to connect schools to the internet by establishing internet access, providing capacity building to the teachers, establishing digital learning in platforms in 50 schools and driving dialogues around meaningful connectivity in Tanzania. The success of this project phase provided the following achievements.

01 We managed to conduct 50 Training sessions on digital skills to teachers and students in 50 schools. In total we have trained 150 ICT teachers and 5000 students directly. This has contributed to the increase in performance due to the introduced new ways of teaching and learning, better access of a much wider range of information and resources that transformed education for all and other Sustainable Development Goals.

02 We managed to install 50 Mikrotik routers, distribute and assemble 186 computers and 246 tablets to 50 schools to assist in learning and technology uptakes hence the penetration of ICT to schools in rural Tanzania.

03 The ACP field team managed to strengthen co-operation with regional and local government authorities alongside out digital friends to ensure smooth operations and project ownership.

Achievements

04

We managed to created easy access to educational contents through introduction of zero rated platforms like E-fahamu. Now both students and teachers have one stop center to curricular and extra-curricular contents.

05

We have launched over 40 new ICT labs in the most hard to reach communities, therefore, creating accountability and efficiency in learning and teaching using ICT tools.

06

We maaged to get schools to register I.C.S subjects to help students receive basic computer skills which aided the easy adoption of digital learning.

07

Advocacy for policy change around the involvement of ICT In teaching and learning in our secondary schools, through engagement of the Ministry of Education and Ministry of ICT.

Best practices

Digital Friends Engagement

- Working with other stakeholders like Digital Friends to monitor the progress of the project activities has helped to increase the effectiveness and efficiency in the project activity implementation

Engaging the Government

- Government engagement at all levels from the grassroots was a best practice since it made the local government officials and heads of the government schools own the project.,

Community Engagement

- Engaging community members in the launching of the project was a best practice since it helped in community sensitization and mobilization about the application of technology in improving the performance of their children in `schools.

Lesson learnt

ADVANCING THE EDUCATION SYSTEM

There is still a lot that needs to be done in advancing Education system in Tanzania and all teachers, not only ICT teachers, need to be equipped with ICT knowledge on teaching and learning of students so as to be competent in taking the students through using ICT in learning. Still ICS subjects are treated as optional subjects but this is also due to lack of ICT devices such as (computers, TV screen, Projectors) and electricity in most schools located around rural Tanzania.

SUSTAINABILITY AND PROJECT OWNERSHIP

If schools are not informed on how they can make the project sustainable then at the end of the day the beneficiaries still become dependent on donors and in the end most projects do not reach their full potential. During selection of schools it is very important to select schools in the same district and later expand gradually, so as to ensure smooth project operations and easy way to conduct M&E activities by digital friends. In doing so we will reduce the travel costs. When conducting a need assessment or baseline survey it's important to collect informative data on the schools location, type of computers available in the school and network available in the school premises.

Lesson learnt

STAKEHOLDERS ENGAGEMENT

There is a need to create awareness starting from the Education ministry offices about the positive impact of digitizing education platform. Importance of telling the head of school about the free period of the project which help them to find a way on the sustainability plan to handle the project after the free period. Asking the Head of school to participate fully in the project by inviting other stakeholders to invest in ICT. This was seen as an impact in Morogoro where Tamisemi provided another ten computers to two schools that were provided with internet Connectivity.

Challenges

There were several encounters that were confronted during the project implementation in the second phase and these include:-

Insufficient computers;
The number of computers that were distributed to school were not enough to support all students since the student to computer ratio is 1:50. Inadequate equipped computer labs; most schools that were mostly located in rural areas lacked full furnished computer Labs due to lack of sufficient funds from the government to renovate the room designated.

Digital Illiteracy on non-ICT teachers;
This was observed in many schools where only ICT teachers had basic computer skills and non-ICT teachers had no computer skills. The project aims to use computer in teaching and learning where all subject teachers need to have computer skills to take students through the learning journey.

Little or no budget designated from the government, to promote and sustain digital education and Teachers (including ICT teachers) being unaware of sufficient technology connectivity in schools.

Schools didn't have ICT as a registered subject hence students don't have any background knowledge of computer usage.

Phase II Project Report 2022

Measuring Progress
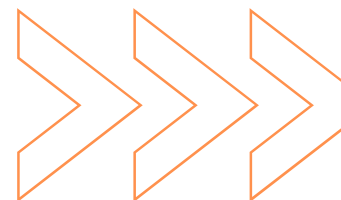
Performance goals are a good way to monitor and measure progress.

This reporting performance includes details such as indicators identified, data collected and project-related activities accomplished. These clear and concrete performance goals made it easier to generate relevant, consistent and comparable data over time.

Key Indicator	Activity / Project	Data / Outcome
50 schools receiving internet devices	To distribute ICT devices to schools	50 Schools connected to internet
150 ICT Teachers and 5000+ students directly trained on Digital skills with over 43,000+ indirect beneficiaries	To train teacher and students on digital skills	Teachers and student retrieving academic material through the E-fahamu Platform
8 meetings and Dialogues Conducted with national and international Stakeholders/ partners around meaningful connectivity	To conduct Meetings and Dialogues Conducted with national and international Stakeholders/ partners around meaningful connectivity	Achieve Common Voice when it comes to connecting the Unconnected

22

OUR IMPACT IN NUMBERS

40000+

Student beneficiaries reached by the project in the 50 schools connected.

150

ICT Teachers Trained on the use of ICT in teaching and learning for their students.

50

Schools reached in over 12 Regions Countrywise

482

Devices donated including 246 tablets, 50 Mikrotik routers, 186 Desktop computers

Planned Activities

01

Documentation of project implementation status

02

Field visit for tracking and verification for activities done schools as per project activities to all project areas

03

Follow up and facilitating data collection and uploading exercise on project activities into M&E System

04

Conduct quarter visits, annual and final project evaluation

05

Write and Submit project quarterly/annual and final reports

Partners in Connectivity

Below are our partners in Connectivity who have implemented Intervention 1,2 and 3 together with us.

Basic Internet has the vision to improve the life of every human through free access to information on the Internet. Our solution is two-fold; First, we reach out to areas with no Internet. Second, we promote and provide Internet Lite, the freemium model for access. The distributed BasicInternet architecture opens for quick deployment of a cost-effective wireless information spot ("InfoSpot") practically everywhere.

UCSAF was established with the key objective to extend communication service in rural and urban underserved areas. UCSAF contributed to the School Connectivity project by identifying schools supporting engagement with Government entities to enable access to schools as well as connecting a number of secondary schools with the internet as well as provision of ICT equipment.

Vodacom Tanzania Foundation is the CSR arm of Vodacom Tanzania PLC through its philosophy to use more technology to address the most pressing problems in communities by contributing to the promotion of inclusive education, promotion of inclusive climate action, promotion of maternal health and disaster management to bring out social impact. For instance, the e-learning program, e-fahamu has reached the lives of more 200,000 learners by providing access to digital learning materials for Free that are accessed via a mobile phone and a computer desktop. Addressing the gap in pupil/teacher ratio (1:42) in classrooms and shortage of books in traditional school settings.
Vodacom Foundation contributes in working with non-profit organisations as implementing organisations to bring about social change, and supplies tablets and bundles for education.

Partners in Connectivity

University partners part of our Regional Competence Centers

The oldest and top university in Tanzania, with a grand vision of becoming "a leading centre of intellectual wealth spearheading the quest for sustainable and inclusive development" by 2061. UDSM is the Regional Competence Center and provides IT expertise and space for device configuration, installation and on ground training to beneficiaries.

With a vision to become a leading technical education institution in addressing societal needs. DIT has provided open access to the networking lab, expertise, and knowledge sharing. Furthermore, DIT faculties and students participate in configuration of network devices and establishment of connectivity in the rural areas.

Norway's oldest institution for research and higher education. UiO is part of School Connectivity through knowledge building on communications and configuration together with UDSM and DIT, as well as establishing the information base on the envisaged school platform.

Partners in Connectivity

Partners in Connectivity.

UK registered charity that has been supporting education projects in rural Tanzania since 1975, particularly on girls' hostels, teacher training via Zoom and access to connectivity.
TDT contributed with support by their local schools and school teachers, as well as mapping schools.

A chapter non-profit registered in Tanzania, under the flagship of ISOC Foundation. We support and promote the Internet as a global technical infrastructure, resource to enrich peoples' lives and a force for good in society.

Our Mission is to Bridging the digital divide and bringing Internet access to communities in Tanzania by building digital societies."

Partners in Connectivity

Partners in Connectivity.

Sheisconnected is an organization which is dedicated to the highest quality of digital literacy, training community delivered with strength, energy and boldness. The Organization is highly committing itself to enriching the youth with the right to digital skills. It is focused on Secondary school girls and created a lot of impacts since the Organization put much energy to young girls to the access of digital learning platforms, for instant on the implementation of digital clubs to some of schools along with the provision of different devices.

Working with African Child Project in school connectivity project has helped much in the expanding of the organization and a lot of scholars have been reached easily and most of the schools are now using different digital platforms to access learning materials with the aim of adding 5% of the students passing to their exams.

YOUTH RELIEF FOUNDATION

ORGANIZATION FOCUS AREAS
1-EDUCATION. 2-AGRICULTURE. 3-ENVIRONMENT. 4-WATER AND SANITATION. 5-HEALTH. 6-ECONOMIC. 7-INFORMATION AND TECHNOLOGY.

IMPACT CREATED
Improved Basic Skills in Literacy and Numeracy for children aged 5 – 13 years. The our Organization focuses on supporting reforms in education system with emphasis on lower grades as foundation for higher ones and Increased community participation and engagement in promoting literacy and Numeracy
ABOUT SCHOOL CONNECTIVITY.
The project helps teachers with the best way of teaching and access to materials, Past Papers. Simplifying school activities that require internet receiving information and working on time.

Partners in Connectivity

Partners in Connectivity.

Organization for Human Investment and Development (OHIDE) the founder of Buha FM Radio, the umbrella organization of the Kasulu digital community network (KACONECOS)

2. Our priority area is Education, entrepreneurship, good governance and public communication through digital systems and media (Radio and social networks).

3. The impact created is the increase in community demand for digital communication services, the establishment of a digital communication cooperative in Kigoma region and the increase in students interested in learning computers and using online communication tools.

4. OHIDE through its Radio BUHA FM station has been providing education and inspiration to the community to love ICT studies and use digital communication tools productively. In addition, through the ACP-DF program, we have helped a lot to motivate teachers and schools to learn and teach ICT to students starting from the form One to the fourth form, 8 secondary schools have been equipped with ICT tools and materials.

5. This valuable project for rural communities, especially for secondary schools, has inspired the teachers who do not have computer skills to learn and also the enthusiasm of children to study online has increased, it is the expectation of our organization that ACP, VODACOM, UCSAF and other stakeholders will increase efforts to deliver communication tools to all schools, especially in peripheral regions.

OHIDE, BUHA FM RADIO and KACONEKOS are proud to be part of this project and we will continue to provide cooperation and support to our partners

The Mushrooming Legal, Economic and Environmental Aid for Communities is a Non-Governmental and Non-profit sharing organization that was established and registered as a nongovernmental organization on October 4th, 2012 under the non-Governmental Act of 2002 under section 12(2) of Act NO.24 of 2002with a registration No. ooNGO/00005844. The head office of MLEEACO is in Tabora municipality at Zimamoto road in Kitete ward plot No.20-30 Block "A". The MLEEACO works with community in Tanzania and may establish region or district branch offices wherever and whenever need arises.As for now we are working with African Child Project in our Morogoro office.

IMPACT CREATED
Our organisation has created and continue to create great impact to the society through the areas of our focus,not only in morogoro region but also in different regions of Tanzania mainland. To mention the few , in stoping the infection of HIV, we have an ongoing project to Sinohydro company worker at mbagala /Kariakoo Daresalaam where by conduct seminars ,distribute fliers and do checkup every month this has brought a-lot of awareness to the workers and the society around the company hence the reduction of HIV infection in the area.

 Not only that but also through African Child project ,we were able to provide six school with internet installation system (mafiga ,kihonda ,mjimpya,Kingolwira,Sua,Tushikamane) and among them two (mafiga 6 tablets and kihonda 2 computers) has been provide with devices, we have also conducted baseline survey and find 23 schools which are also qualified for the project these schools are Kola Hill , Nanene,Lupanga,Sumaye,Mazimbu,Gairo,Sekwao,AMShabiby,Kingalu,Morogoro,Kilakaala,Dakawa,Dumila,Kimamba,Mgugu,majembwe,Mkuyuni, mji mkuu,Mikumi,Vifunda,Kibaoni,Kqashungu,Mlabani chools Morogoro which The se schools are real in need of the project and are eagerly waiting for the implementation of the project hope the will soon be provided with the service cause we continually receive calls from them asking about when they will be considered.

So, Education and technology is among our focus areas as an organization so we are full involved in this making sure that our goals are achieved , we cooperate well with education stakeholders from region to wardans school level to make sure that our project runs smoothly .

ACP
Team

AN INTRODUCTION TO OUR IN-HOUSE TEAM

Executive Director
Catherine R Kimambo

Grants and Partnerships
Pious Sylvester

Project Manager
Josephine Kokwongeza

Monitoring Evaluation and Learning
Athumani Msangi

Communications
Magreth Juae

Finance
Jovina Theobard

IT and Training
Albert Misilimbo