

**EDUCATING-THROUGH-TECHNOLOGY
NATIONAL EXPANSION PROJECT PROPOSAL**

to

**PRIME MINISTER'S OFFICE --
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT**



by

POWERING POTENTIAL



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PROJECT TITLE	EDUCATING-THROUGH-TECHNOLOGY NATIONAL EXPANSION
PROJECT SUPERVISOR	POWERING POTENTIAL
PROJECT PARTNERS	PMO-RALG, MoEVT
PROJECT ADVISOR	MINISTRY OF EDUCATION TANZANIA
SUBJECT AREA	SECONDARY SCHOOL EDUCATION
AREA	ONE ZONE
TOTAL NUMBER OF SCHOOLS	54 SCHOOLS
PROJECT DURATION	THREE YEARS
TOTAL PROJECT BUDGET	Year 1 \$368,000 Year 2 \$556,000 Year 3 \$593,000 Total \$1,517,000
PROPOSAL AUTHORS	 ALBIN MATHIAS COUNTRY DIRECTOR POWERING POTENTIAL  JANICE LATHEN FOUNDING EXECUTIVE DIRECTOR POWERING POTENTIAL  V. ENA HAINES MANAGEMENT TEAM POWERING POTENTIAL

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LIST OF ABBREVIATIONS/ACRONYMS

DICOTA	Diaspora Council of Tanzanians in America
ICS	Information and Computer Studies
ICT	Information and Communication Technology
MoEVT	Ministry of Education and Vocational Training
PMO-RALG	Prime Minister's Office-Regional Administration and Local Government
RACHEL	Remote Areas Community Hotspot for Education and Learning
REA	Rural Energy Agency
SEDP	Secondary Education Development Plan
TZS	Tanzanian Shilling
UNESCO	United Nations Educational, Scientific, and Cultural Organization
USD	US Dollar

EXECUTIVE SUMMARY

Powering Potential proposes to continue the national expansion of its successful *Educating-Through-Technology* program for rural secondary schools in Tanzania by implementing it in 54 additional schools in nine districts over a three-year period in collaboration with PMO-RALG, Ministry of Education and Vocational Training, district governments and schools. The program will deliver a solar-powered computer lab, libraries of digital educational content which do not require Internet access, and teacher training to each school. This technology infrastructure enables schools to offer the national curriculum for Information and Computer Studies.

The government of the United Republic of Tanzania under the Ministry of Education's Secondary Education Development Plan (SEDP II) is working to improve education, including specific goals for increasing access to ICT equipment, teacher training, and the number of schools in which the elective sequence of ICT courses is offered. Incorporating technology is part of the nation's strategy to improve the equity, quality and relevance of education, so more children can benefit from and contribute to the country's development in the information age. Recognizing the need for electrification, SEDP II has a stated goal of installing solar power in schools which are not served by hydroelectric. Powering Potential's *Educating-Through-Technology* program brings solar power, affordable ICT infrastructure, energy-efficient hardware, sustainable technology and training.

Powering Potential took the initiative by designing, funding and implementing a pilot project in one rural district in the Arusha region starting in 2007. Based on the popularity of the program among students, parents, schools and district officials, we replicated it at more schools in the pilot district and also expanded to the Ngorongoro and Serengeti Districts. An external evaluation conducted by a Tanzanian educational professional in 2013 noted that the program was effective and operated efficiently (see enclosed "Evaluation Report of the Powering Potential *Educating-Through-Technology* Program" report). The program is being sustained in all of the 10 schools in which it has been introduced.

Powering Potential is uniquely qualified to perform this national rollout because of the expertise of its management, staff and advisers, its proven results, and its success working together (*bega kwa bega*) with Tanzanians.

1. INTRODUCTION TO POWERING POTENTIAL ORGANIZATION

1.1 Background

Powering Potential was founded by Janice Lathen, an American entrepreneur, in 2006. During a safari to Tanzania, she introduced herself to students in Swahili, saying "Jina langu ni Janice, mimi ni mwalimu, ninafundisha elimu ya kompyuta." Their exuberant response inspired her to bring the joys of technology to their school, and when she learned about the dramatic increase in the number of students requesting a transfer to that school, she initiated an effort and mobilized resources to bring the joys of technology to other secondary schools in the district. In 2010 she gave up her US-based computer consulting business to focus full-time on that effort. Powering Potential now has 91 computers in 10 schools in three districts, a management team with various expertise, a committed group of advisors, highly qualified volunteers, dedicated staff, funding

from government, corporate, foundation and individual sources in Tanzania and the US, and a long list of requests for its *Educating-Through-Technology* program from across the country. The headquarters in Karatu, Tanzania, is staffed full-time by Albin Mathias, Country Director, and Neema Lyimo, ICT Manager, with part-time staff in Dar es Salaam and additional staff being hired as needed. See Annex 1, page 15, for details of the Powering Potential Team. Since 2008 Powering Potential has been working under the umbrella of ICSEE (International Collaborative for Science, Education and the Environment) which is registered in Tanzania and the US. We are in the process of establishing our separate entity in both countries.

1.2 Mission, Vision, Approach and Objectives

Vision: All students in Tanzania experiencing the joys of technology: efficient production, easy access to information, and communication with others.

Mission: Use technology to enhance education and stimulate imaginations of students in Tanzania while respecting and incorporating values of the local culture – especially cooperation over competition, community over the individual, modesty over pride, and spirituality over materiality.

Approach: Powering Potential takes an incremental approach to introducing technology, collaborates closely with local authorities at the school and district level, and works in harmony with government policies and plans.

Educating-Through-Technology is Powering Potential's core program. Working with government secondary schools in rural Tanzania, we put a world of knowledge in the hands of teachers and students by installing energy-efficient, solar-powered computer labs with digital libraries including math and science educational videos.

Objectives

After working with 10 rural schools in three districts, our current objective is to expand nationally in collaboration with PMO-RALG and MoEVT to make progress toward the technology goals of SEDP II.

1.3 Educating-Through-Technology Program

Powering Potential's *Educating-Through-Technology* program has three main goals:

1. providing secondary schools with technology infrastructure (computers and solar power) so that they can offer the national curriculum for Information and Computer Studies
2. installing extensive digital libraries of educational resources (no Internet required)
3. training teachers and students in how to use the technology

Collaborating with government officials and heads of schools, we implement our program in two phases.

Phase 1

Phase 1 consists of the installation of a solar power system, an energy-efficient computer network with five desktops using open source software, locally stored digital educational

content, and technology training. We install Internet-ready equipment for a mobile broadband connection which can be accessed from some schools depending on signal strength. For the educational content, we use RACHEL (Remote Areas Community Hotspot for Education and Learning) from World Possible. This includes selected Wikipedia entries, math and science instructional videos from Khan Academy, medical reference books, UNESCO teacher resources, and e-books of world literature from Project Gutenberg. See Annex 2, page 17, for the complete list of RACHEL content. Also included in Phase 1 is the Pi-oneer. The Pi-oneer is an innovative teaching tool consisting of a Raspberry Pi computer (with RACHEL) paired with a mobile projector and screen. Teachers can take the Pi-oneer into their classrooms to display videos and pictures that vividly illustrate concepts being taught.

Powering Potential collaborates with school officials to identify one or two permanent teachers at each secondary school who have some computer experience and are committed to managing the computer lab and delivering technology instruction to teachers and students as part of their teaching workload. It is expected that these teachers would be invited by the Ministry of Education and Vocational Training to participate in the Information and Communication Technology Program for Secondary School Teachers, a comprehensive program for integration of ICT in teaching and learning. If there is no permanent teacher available at a school, we will work with the school and the District Education Officer to find a teacher or qualified trainer from VETA (Vocational Education and Training Authority). Each partnering school also contributes a secure room with tables and chairs, as well as a budget for solar and computer maintenance, and monthly Internet access fees if applicable. With the Phase 1 installation, Powering Potential offers a three-week specialized Train-the-Trainer course to prepare these teachers to teach the Powering Potential computer basics course.

Phase 2

In the second year, after the district assigns a permanent computer teacher to the school, and after the school meets the requirements, Powering Potential will implement Phase 2. The capacity of the computer lab is increased to 20 computers accommodating 40 students and the solar energy system is expanded. The school can then offer the national curriculum for Information and Computer Studies, a four-year sequence. To further the professional development of teachers, we suggest that the district organize an annual ICT subject panel devoted to integrating technology in all subject areas.

2. ACCOMPLISHMENTS THROUGH JANUARY 2014

2.1 Implementations – 10 schools

Karatu District – 6 Secondary Schools

Banjika

Phase 1 - 2008

Phase 2 - 2011

ICS national curriculum - Jan. 2012

WelWel

Phase 1 - 2011

Phase 2 - 2013

ICS national curriculum - Jan. 2014



WelWel Sec. School, Karatu, 2013

Florian (O level and A level)
Phase 1 - 2011
Phase 2 - 2013
ICS national curriculum - Jan. 2013
Baray, Endallah, Slahhamo
Phase 1 – 2012

Ngorongoro District – 3 Secondary Schools
Soit Sambu, Lake Natron, Nainokanoka
Phase 1 - 2014

Serengeti District – 1 Secondary School
Righicha
Pi-oneer (computer/projector) - 2014

2.2 Training and Conferences

In 2011 Powering Potential held a five-month Train-the-Trainer course to develop trainers as we expanded to more schools. Conferences for heads of schools, computer teachers, and district officials were held in November 2012 and July 2013. Bringing people together to share ideas and questions is very important to the program success, and informs development for the future.

2.3 Impact

Highlights of the *Educating-Through-Technology* program:

- 91 computers installed in 10 schools in 3 districts
- 5,500+ teachers and students have been exposed to RACHEL learning materials
- 2,000+ hours of technology training delivered
- 1,500+ teachers and students have completed an extensive training course
- 500% increase in one year in the number of students transferring into our pilot school
- 331% increase in students qualifying for Form V at three schools
- 10 program beneficiaries employed as technology trainers
- 4 people enrolled in college to earn Bachelor degrees related to Computer Science

2.4 External Evaluation

The Powering Potential *Educating-Through-Technology* Program was evaluated in 2013 by Muhwela Kalinga, former Principal Education Officer of MoEVT responsible for monitoring and evaluation. Mr. Kalinga visited all six schools in which computers had been installed by that time. His report, enclosed with the printed submission of this proposal or available by email request to info@poweringpotential.org, concluded that the program was “noted to operate efficiently by using systematic plans and procedures” and “provided support to the schools effectively.”

2.5 Alliances

Powering Potential personnel (Janice Lathen, Albin Mathias, Ena Haines, Rich Segal) have met with and briefed the following officials, seeking their advice. In many cases there have been multiple meetings and Powering Potential was encouraged to expand nationally. We have incorporated their advice and guidance in this proposal.

President of the United Republic of Tanzania, H.E. Dr. Jakaya Mrisho Kikwete
Prime Minister, Hon. Mizengo Pinda
Minister of State, Hon. Stephen Wasira
Minister of State, Hon. Hawa A. Ghasia
Deputy Minister of State, Hon. Majaliwa K. Majaliwa
Deputy Permanent Secretary of Education in PMO-RALG, Zuberi M. Samataba
Minister of Education and Vocational Training, Hon. Dr. Shukuru Kawambwa
Permanent Secretary of MoEVT, Prof. Sifuni Mchome
Commissioner of Education, Prof. Eustella Bhalalusesa
Commissioner of TZ Institute of Education, Prof. Idris S. Kikula
Dir. General, Commission for Science and Technology (COSTECH), Dr. Hassan Mshinda
Ambassador Tuvako Manongi (TZ Ambassador to the UN)
Ambassador Liberata Mulamula (TZ Ambassador to the US)
Ambassador Modest Mero (TZ Ambassador to the UN-Geneva)
Ambassador Mwanaidi Maajar (former TZ Ambassador to the US)
Ambassador Bertha Semu-Somi
District Officials, DEDs, DEOs (Karatu, Ngorongoro, Serengeti, Bunda)

Funders

Tanzania Rural Energy Agency (REA)
US Embassy (Dar es Salaam)
Bunda District Council
Karatu District Council
Serena Hotels
TZ Postal Bank
US Foundations (Segal Family Fndn, Newman's Own Fndn, IEEE Fndn, others)
US Corporations
TZ Individuals
US Individuals

Project Participants

Rural Energy Agency (REA)
Ensol Tanzania Ltd. (solar vendor, Dar es Salaam)
Hassan Maajar Trust
JR Acharya Polytechnic (staff recruitment, Arusha)
World Possible (RACHEL educational content, US)
Bunda District Council
Ngorongoro District Council
Karatu District Council

3. PROPOSAL FOR A NATIONAL EXPANSION

3.1 Proposal Overview

Powering Potential has successfully piloted this program in the Karatu District and expanded to the Ngorongoro and Serengeti Districts. We have plans to expand to three schools in the Bunda District in early 2015. This implementation is being facilitated by Hon. Stephen Wasira.

We are now offering this three-year proposal to secure the necessary resources to accelerate a national rollout of the *Educating-Through-Technology* program. This proposal would provide solar-powered computers labs, with digital educational resources, to 54 rural schools.

In the first year, we propose implementing Phase 1 of the program (solar, five computers with educational content and training, see pages 2-3) in 18 schools in three districts (six schools per district). The table below details the rollout plan. After this initial three-year plan, we will continue expanding the program if the government approves and funding is available.

Year 1	Phase 1 in 18 schools (schools #1-18; districts A, B, C)
Year 2	Phase 1 in 18 schools (schools #19-36; districts D, E, F) Phase 2 in 18 schools (schools #1-18; districts A, B, C)
Year 3	Phase 1 in 18 schools (schools #37-54; districts G, H, I) Phase 2 in 18 schools (schools #19-36; districts D, E, F)

3.2 Program Benefits and Impact

Context

Tanzania has more than 4,500 registered secondary schools as of 2013. The majority of these schools are in remote areas without access to the national electrical grid and little or no access to technology. Schools face shortages of books, libraries, science laboratories, and teachers, especially in science and mathematics. This has led to poor performances in many secondary schools, and a decrease in science students.

The few schools which have received computers from government, non-government or individual sources, have faced many challenges: the computers are not in use because they are not maintained, or because of the absence of trained instructors, or because of insufficient electrical power sources.

Benefits

The main objective of this *Educating-Through-Technology* National Expansion plan is to increase access to information, technology, and training in remote schools which are not connected to the national electrical grid and lack access to educational resources. Powering Potential's approach overcomes the challenges of integrating technology in rural schools by:

- using sustainable energy from solar
- using open source materials which are freely licensed and maintained

- providing technology training to teachers/trainers who become instructors at schools, ensuring efficient utilization of computer lab resources
- providing a wide range of offline educational material (no Internet required) which enables teachers to incorporate technology across all subject areas which increases the frequency of use

In the Karatu District only four of the 31 secondary schools offer the ICT national curriculum. Three of these schools received computers and training from Powering Potential and the fourth is a private school. Powering Potential collaborates with Tanzanians (bega kwa bega) to fulfill their desire to integrate ICT into secondary schools, thereby providing new educational and economic opportunities.

The program has been well received in the local communities:

- *“It is unhidden truth that is going to have unmeasurable impact to youth and all the people in rural areas, as they are going to be exposed to the world of Technology where they could meet plenty of social, economic, academic and political opportunities. I have trust in...Powering Potential team. I believe it is the team that will be mentioned in History of Tanzania in Coming days.”* Elitumaini Rweyemamu, program beneficiary/college graduate, 2014
- *“It is the truth which can not be hidden that, Technology Tent [original name of program] has been like a light to the Kids at Banjika. It makes the kids feel that, they are able to face the challenges which are being brought by science and technology. Before Janice came to our school, no one knew anything about the Computer. They did not know even how it looked like. It is amazing that, now the kids are able to type some thing in the Computer and print with their own hands. These are great Changes.”* Meshack Muyinga, teacher, 2009
- *“how are you doing with your daily activities that brought good fruits to Tanzania. I'm studying computer science application, and it is very interesting. i remember the cause of interest is the knowledge that i got from you through technological tent [original name of program], now i know computer language. which is codes we use in information interchange...i hope one of my promise to you is to help you in facilitating your dreams into reality. i have seen when you trained people through technology he/she can go so far on impacting the societies. Am ready to support the plans which brings development to many communities...”* Emanuel Sylvester, program beneficiary/college student, 2012

Powering Potential has been recognized by government and business leaders:

- *“President of the United Republic of Tanzania Jakaya Mrisho Kikwete and I met Janice Lathen and Walter Minja at DICOTA...Powering Potential is working to realize President Kikwete’s vision to connect rural and underserved urban areas with information and communication technologies (ICT’s)... I am impressed with all that they have already accomplished.”* Ambassador Mwanaidi Sinare Maajar, 2011
- *“As the district government, we do support this organization and we appreciate what they do to our community.”* Matthew Sedoyeka, District Commissioner, Karatu, 2010
- *“Your efforts are of great value to the Tanzanians in the schools you are engaged on. Need be in future, I will continue to support your initiatives.”* Alu-mbwage Mtituh, Hardware and Data Communication Manager, Tanzania Postal Bank, 2013
- *“I just really trust what Janice and the Powering Potential team are doing. They’re doing it the right way with local support, community engagement, and blending learning. The on the ground team in Tanzania does great work...We’ve worked with Powering Potential for about 5 years now, having watched them do some truly special work in amazingly difficult conditions.”* Jeremy Schwartz, Executive Director, World Possible (RACHEL), 2014



H.E. Dr. Jakaya Kikwete,
President of Tanzania and
Janice Lathen,
Powering Potential
State House, 2012

The proposed plan will benefit the education system and communities by:

- providing an extensive library in digital format to each school (see Annex 2, page 17)
- initiating computer literacy for communities
- motivating teachers
- enhancing teaching methodology with ICT as a teaching tool
- improving education quality by providing up-to-date resources to teachers and students
- motivating more students to take science subjects as a result of simulated science videos
- increasing performance in science and mathematics
- increasing teacher and student attendance
- increasing employment and advanced education opportunities

We expect this plan will plant potent seeds in fertile ground and yield a bountiful harvest of informed and engaged young people.

Impact

This project will provide nine districts with a practical model for district officials, community leaders and heads of schools who wish to integrate technology in their secondary schools.

Results of implementing this three-year plan will include:

- 810 computers in 54 schools in three districts
- 54 solar energy systems
- 54 Pi-oneers (computer/projector) with RACHEL digital educational content
- 800+ teachers with an opportunity for enhanced professional satisfaction
- 22,000+ students with access to a world of knowledge
- students motivated to pursue math and science subjects
- employment opportunities for ICT graduates as Powering Potential managers and trainers

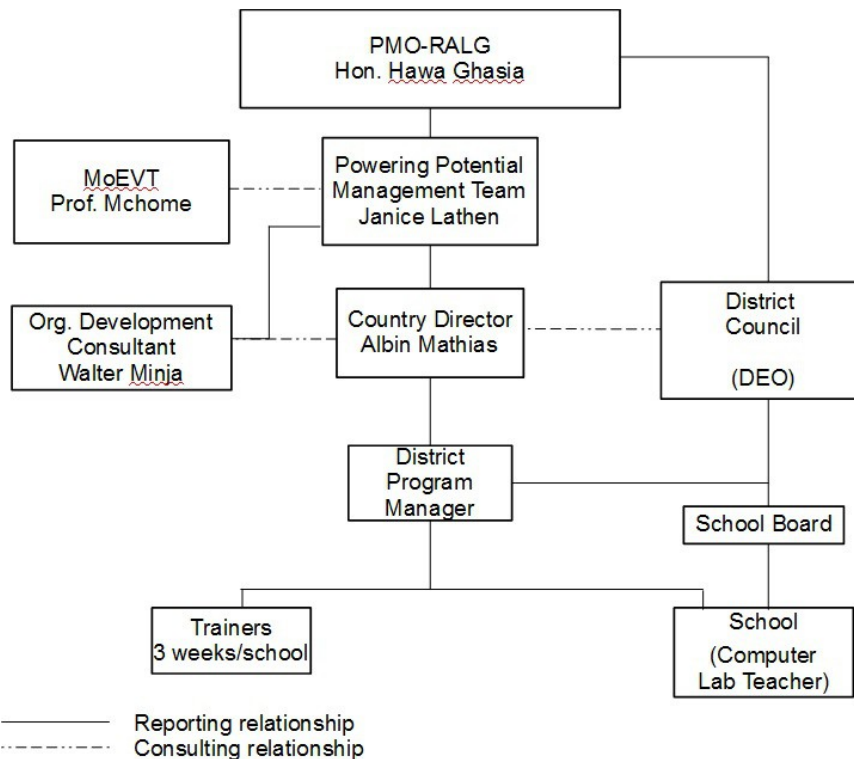
3.3 Project Plan

Year 1/Phase 1

In the first year, Powering Potential proposes implementing Phase 1 at 18 schools, six schools in each of three districts in one zone. Since we have experience working in rural schools, we suggest choosing a zone that does not already have many development projects. We envision that PMO-RALG will choose the districts and the district administration will choose the schools. REA (Rural Energy Agency) has funded 90% of the solar expense for our recent implementations and may continue to do so if the schools meet their criteria.

We present below our recommendations and possible options for organization, planning, timing, staffing and budget. We welcome your feedback and ideas, or other options you would like us to consider.

Proposed organizational structure:



The District Education Officer will work with schools to ensure that preparations for the program are complete including a secure classroom with tables and chairs. Powering Potential will provide a classroom design. Powering Potential will work with district officials to select and train an *Educating-Through-Technology* program manager in the district. This part-time responsibility may be assigned to a current staff person with computer experience or a new position could be created. The program manager will be responsible for collecting and submitting monthly data reports from each school and making quarterly visits to each school. They will work with Powering Potential to solve technical problems, and also be prepared to visit a school when necessary for repairs or problems. They will receive financial compensation from this program for their work.

Powering Potential will train 15 staff. In addition to the three district program managers, we will also train nine trainers and three alternates. We will recruit candidates for these positions in each district. We will conduct interviews, in conjunction with the District Education Officer, to select the 12 trainer candidates and three ICT program managers. These potential trainers and three program managers will be given two weeks of training. We also suggest that the District Computer System Analysts attend the training. Dr. Idris Kikula, Vice-Chancellor of the University of Dodoma has offered a computer classroom at the University of Dodoma for this two-week training course. After the training is completed, nine trainers will be selected. These nine people will deliver the three-week training sessions in the 18 schools. (See Annex 3, page 18, for the training course schedule.)

The 18 school installations (six schools in three districts) will be conducted by Powering Potential staff: Albin Mathias, Country Director; and Neema Lyimo, ICT Manager; and an additional Tanzanian technician. The program managers will also participate in the installations. We suggest that the District Computer System Analyst attend the installations in their respective districts to become familiar with the Powering Potential equipment and program.

When the team finishes one installation and moves to the next school, one trainer will begin a three-week training course for teachers and students. We expect that the schools will provide room and board for the Powering Potential installers during the installations, and for one trainer during the three-week in-school training course. Powering Potential guarantees the equipment for the first three months, thereafter the districts or schools will be responsible for buying any equipment that needs replacing.

If this proposal is accepted, the first step toward implementation would be to identify the Year 1 districts because of the lead time involved for preparations and procuring equipment. We suggest, at least in the first year of the expansion, that the selected districts be in one zone to ease transportation for the installations and facilitate collaboration among schools.

See Annex 4, page 18, for a timetable of Year 1 implementations.

Year 2/Phase 1

Year 2/Phase 1 installations will follow the same process as the Year 1 installations. Our installation team will install Phase 1 at 18 schools, schools #19-36, in districts D, E, F (six schools per district). One trainer will stay at each of the 18 schools for a three-week in-school training session (see Annex 3, page 18, for the training course schedule).

Year 2/Phase 2

Powering Potential will review each school's monthly reports to confirm that the school is ready to receive Phase 2. We want to see that the computers are being used, that complete and accurate data is being recorded, that the equipment is secure and being well maintained, and that there is good cooperation with Powering Potential. A Powering Potential Manager will visit each school to determine, with the DEO and head of school, if it is ready for Phase 2.

After confirming that the schools are ready, we will begin Phase 2 implementations at the original 18 schools, schools #1-18 in districts A, B, C.

After Phase 2 is installed, the school can offer the four-year national curriculum for Information and Computer Studies.

After the Phase 2 implementations, the responsibility of the program will transition from Powering Potential to the district. Powering Potential will continue to be available for periodic support.

Year 3

Year 3 implementations will follow the same process as Year 2. Phase 1 will be implemented in schools #37-54, thereafter Phase 2 will be implemented in schools #19-36.

3.4 Evaluation

The project will be evaluated in Years 2 and 3, producing a thorough assessment report similar to the one prepared in 2013 by Muhwela Kalinga (see enclosed report). We will consult with MoEVT to identify a similarly qualified Tanzanian education evaluation professional. The evaluation expense for each year is based on the following plan:

Year 1: review and revise our data collection templates and teacher survey forms. These will comprise the basis of data collection from the first installation and ongoing, ensuring that consistent, appropriate material is available to the evaluators in Years 2 and 3.

Year 2: visit three Year 1 district headquarters (districts A, B, C) and assess the program based on input from the Powering Potential District Program Managers, school data and interviews with district officials.

Year 3: cover in detail at least two districts with Phase 2 and three districts with Phase 1.

3.5 Funding

Powering Potential will finalize the design, procure and install the equipment, hire and train the staff, manage the finances for the project, and supervise and implement the program in collaboration with PMO-RALG, the district officials and the local communities. We will be accountable for the financial transactions of the program and reporting on the results. We propose that the Tanzanian government choose the districts and the schools, provide transportation for the installations and fund the project.

3.6 Budgets (based on prices in December 2014 and an exchange rate of 1,660 TZS/USD)

Year 1 (18 schools)

Equipment	Year 1
Solar Energy System	\$61,000
Computer/Projector/Network Equip.	47,000
Int'l Shipping	3,600
Customs Clearance	3,000
Subtotal	\$114,600
Personnel	
Management Team (Lathen, Mathias, Minja, Haines, Segal)	\$131,500
Executive Assistant-US	20,000
ICT Manager-TZ	3,610
Administrator-TZ	4,300
Trainers (9 for 12 weeks)-TZ	4,880
District Program Managers part-time (3)	4,430
Evaluation Consultant (inc. exp)-TZ	450
Procurement Manager-US	2,000
Accountant US & TZ	10,110
Publicity Director-TZ	3,610
Subtotal	\$184,890
Training Course (2 weeks)	
Lodging for 14	\$5,000
Meals for 14	5,000
Local Travel	175
Subtotal	\$10,175
Pre and Post Installation District Visits	
Local Transport	\$420
Lodging for 2 for 3 days/district	540
Meals for 2 for 3 days/district	540
Subtotal	\$1,500
Administration	
Advertising/Publicity exp.	\$600
Financial reporting fees	1,000
Staff benefits	3,000
Office rent US & TZ	18,720
Office technology equipment	2,500
Airfare-International (3 trips)	5,700
Local Travel	4,500
Supplies, Phone, Internet	3,000
Subtotal	\$39,020
Contingency (5%)	\$17,509
Total – Year 1	\$367,694
Per school	\$20,427
Per district	\$122,565

Budgets Year 2 and Year 3

The program plan and budgets for Year 2 and 3 will be reviewed and revised with PMO-RALG after the Year 1 report.

Category	Year 2	Year 3
Equipment	\$260,400	\$273,400
Personnel	212,660	232,000
Training Course	11,190	11,750
Pre and Post Installation Visits	2,260	2,370
Administration	43,200	45,360
Contingency (5%)	26,485	28,244
Total	\$556,195	\$593,124

ANNEXES

Annex 1. POWERING POTENTIAL MANAGEMENT TEAM

Janice Lathen, Founding Executive Director, earned a B.A. in Communications and Theater at the College of St. Benedict in Minnesota, USA. For 23 years she managed her computer consulting business in New York specializing in training. During a safari to Tanzania in 2006 she became inspired by students in Karatu and organized an effort to bring technology to their school. In 2010 she gave up her business to focus full-time on developing Powering Potential. In her youth, she was active in Junior Achievement programs on the local, regional and national levels and served as treasurer for the Minnesota Assoc. of the National Honor Society.

Albin Mathias, Country Director, graduated from St. Joseph University in Tanzania with a Bachelor of Engineering degree in Information Systems and Network Engineering. He has served as Powering Potential's Country Director since 2010. He was born and grew up in Arusha in the north of Tanzania. He went to Tanga Technical Secondary School in 2002 and to Old Moshi High School in 2006. After graduation he worked as the physics and chemistry teacher at Banjika Secondary School where he was able to get more practice working with computers, and he conducted technology training courses at Banjika, Noonkodin and Oltoroto Secondary Schools introducing computers to secondary and high school students.

Walter Minja is a Tanzanian who grew up in Dar es Salaam where he acquired his early education. Mr. Minja received his first degree, a B.S. in Computer Science from Mysore University in India. He returned home after finishing his degree and began his professional career working at Tansoft System and General Tyre (T). In 2001, Mr. Minja joined Tanzania Commission for Science and Technology (COSTECH) where he worked on bringing technology to rural areas within the country. After spending four years on ICT for rural development projects, he moved to the US for further studies and opportunities. Mr. Minja continues with his passion of giving back to his country; in 2010 he joined Powering Potential. He brings valuable cultural, government and technical knowledge to the team.

V. Ena Haines is retired from the position of Director of Information Technology at Teachers College, Columbia University, New York. She led the IT department of 45 staff who handle faculty and student computing, administrative systems, the data network, desktop support, telephony and cable TV in the dorms. Her interest is in making technology work for people, particularly enabling activities that are not really feasible otherwise. She holds a B.A. from Smith College in Biochemistry (summa cum laude) and a Master's in Library Science. Ena first visited Tanzania in 2009 and found the engaging people as unforgettable as the majesty of the Serengeti. Seeing the work that Powering Potential had begun at Banjika Secondary School, she and her husband Michael were inspired to support its growth.

Rich Segal earned his Ph.D in Computer Science from the University of Washington, Washington, USA. He is a member of the research staff at the IBM Thomas J. Watson Research Center where he researches the application of artificial-intelligence and machine-learning techniques to real-world business problems. Rich's charitable interests include Africa, children with special needs, and epilepsy. He also serves as a board member of the Segal Family Foundation, a strong supporter of Powering Potential since its inception.

Denis Petrov brings over 25 years of experience in computer systems, networks, software design and development, and Web and Internet technologies. Interested in computers and electronics since childhood, he started getting summer internships at a local data center with access to a mainframe and a minicomputer. After college he developed geophysical data processing software, and helped several non-government organizations in Moscow with their technology needs. Since coming to the United States, he continued advancing his information technology career working at Human Rights Watch and Public Interest Law Initiative. He currently serves as a Senior Software Engineer at LearnVest in New York.

Steve Wasira, Jr. is involved with the Power Africa initiative in Tanzania working as a transaction adviser for TetraTech, a US consulting, engineering and technical services firm. Steve is also an active member of AngelAfrica (www.angelafrica.org), a not-for-profit organization whose mission is to promote entrepreneurship and private sector as a way for sustainable economic development in Africa. Steve is a native of Tanzania and a graduate of University of Maryland Baltimore County, Maryland, USA with a B.S. degree in Information Management Systems.

Matt Cohen is a partner at Curcio, Wieselthier & Cohen, CPAs PC in New York. Matthew joined the firm in 1995. He specializes in auditing and financial statement preparation, planning and tax services for corporations, partnerships and individuals, handling traditional attest functions, due diligence examinations for banking institutions and special non-attest engagements. Internally, Matthew heads the firm's peer review committee and internal monitoring program. Matthew is a member of the American Institute of Certified Public Accountants and the New York State Society of Certified Public Accountants. He is a graduate of Brooklyn College in New York.

Surya Ganguly is the Director of Global Information Services at The Asia Foundation, a 60 yr old nonprofit that promotes peace, prosperity and a just and open society. Surya has worked as an international eRider, consulted for nonprofits, NGOs and the US Government, leading technology strategy, training and project management. Surya holds MCSD and CISSP certifications and attended Whitman College for a B.A. in Mathematics, and received his J.D. from NYU in 2009.

Annex 2. RACHEL CONTENT

RACHEL is an acronym for Remote Areas Community Hotspot for Education and Learning, and is a curated collection of educational materials for primary and secondary schools compiled by World Possible (worldpossible.org). Their stated goal is to provide “the World's best educational resources, neatly packaged together for download and distribution in places without internet.”

The collection includes:

Wikipedia for Schools (a subset of Wikipedia selected for relevance to students)

Khan Academy math and science classes (in the KA-Lite version, which is an interactive Khan Academy school, complete with videos, exercises, tests, and student tracking)

MedLine Medical Encyclopedia

Hesperian Health Guides

Khan Academy (health videos)

CK-12 STEM (Science, Technology, Engineering and Mathematics) Textbooks

Practical Action

Infonet-Biovision

Great Books of the World from Project Gutenberg

OLPC Educational Games/ Lessons (One Laptop Per Child)

UNESCO Primary School Resources

MathExpression Math Videos

Learn to Type "Power Typing"

Music Theory

MIT Scratch (Massachusetts Institute of Technology)

The RACHEL content is fully searchable and is updated on a periodic basis. The content is in English. Many of the Khan Academy videos have English subtitles which are helpful for students studying the material.

Annex 3. TRAINING COURSE SCHEDULE (In-School Three-Week Course)

Districts A, D, G

Week 1	School 1	Trainer 1
Week 1	School 2	Trainer 2
Week 1	School 3	Trainer 3
Week 2	School 4	Trainer 4
Week 2	School 5	Trainer 5
Week 2	School 6	Trainer 6

Districts B, E, H

Week 4	School 7	Trainer 7
Week 4	School 8	Trainer 8
Week 4	School 9	Trainer 9
Week 5	School 10	Trainer 1
Week 5	School 11	Trainer 2
Week 5	School 12	Trainer 3

Districts C, F, I

Week 7	School 13	Trainer 4
Week 7	School 14	Trainer 5
Week 7	School 15	Trainer 6
Week 8	School 16	Trainer 7
Week 8	School 17	Trainer 8
Week 8	School 18	Trainer 9

Annex 4. TIMETABLE FOR YEAR 1 IMPLEMENTATIONS

Week 1-8	Project preparation with PMO-RALG
Week 9	Post job opportunities
Week 10	Review resumes
Week 11	Pre-installation visit to District A, review resumes and interview candidates for program trainers and district manager
Week 12	Pre-installation visit to District B, review resumes and interview candidates for program trainers and district manager
Week 13	Pre-installation visit to District C, review resumes and interview candidates for program trainers and district manager
Week 14-15	Review plans with PMO-RALG and revise as necessary
Week 16	Prepare training course for program trainers and district program managers

Week 17	Select 3 district managers; confirm 12 candidates for trainer positions for two-week training course in Dodoma
Week 18	Finalize preparations for training course for trainers and managers
Week 19-20	Two-week training course at University of Dodoma; select 9 program trainers
Week 21-22	Review plans with PMO-RALG and revise as necessary
Week 23	Travel to district A
Week 24	Install three schools #1-3 in district A
Week 25	Install three schools #4-6 in district A
Week 26	Review installation procedures and travel to district B
Week 27	Install three schools #7-9 in district B
Week 28	Install three schools #10-12 in district B
Week 29	Review installation procedures and travel to district C
Week 30	Install three schools #13-15 in district C
Week 31	Install three schools #16-18 in district C
Week 32-33	Review program installation procedures
Week 34-36	Review project progress with PMO-RALG
Week 37	Support district managers, collect reports and analyze data
Week 38	Support district managers, collect reports and analyze data
Week 39	Support district managers, collect reports and analyze data
Week 40	Support district managers, collect reports and analyze data
Week 41	Support district managers, collect reports and analyze data
Week 42	Support district managers, collect reports and analyze data
Week 43	Data analysis and Year 1 final report preparation
Week 44	Data analysis and Year 1 final report preparation
Week 45-46	Review Year 1 project progress with PMO-RALG
Week 47-48	Complete Year 1 project final report
Week 49	Submit final report to PMO-RALG