Youths In Technology and Development-Uganda (YITEDEV)

NPO. Reg. No.: 214843

Our Ref:……1312018…….

Your Ref:……...

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What is YITEDEV-Uganda?

Youths in Technology and Development Uganda Ltd is nonprofit charitable organization registered with the government of Uganda as a company limited by guarantee (NPO Reg. No. 214843). YITEDEV is a Community-Youth driven, Volunteer-run, independent, nonprofit organization registered by the government of Uganda dedicated to deliver inclusive, innovative, sustainable programs and services to support the use of sustainable Technologies in our communities as well as promoting ICT4 Rural development, Open data in Agriculture and nutrition plus Youth empowerment and community development. It started in July 2015 and officially registered later in January 2016.

We are Committed to develop human potential through day to day applied technology, active hands on learning and research promotion and promotion of human rights, better Agricultural methods for social-economic and educational development. This organization is a human service organization that identifies the approach of effective means to involve young people in local development decision-making, giving them voice and influencing power, with benefits for themselves and their communities.

Indented to nurturing human potential, the capacity-building organization is made up of vibrant youths who exist to help youths and communities to access the skills, tools, and information they need to get going and do what they do best. We're about building effective and lasting relationships with people and organizations from all sectors so that together we can lend a helping hand and allow the thousands of Youths in localities across Uganda and East Africa Region to reach their full potential.

OUR MISSION

To create tech communities of practice where appropriate use of technology creates opportunities for the youths leading to sustainable community development with a focus at integrating technology in day-to-day community development interventions for the wellbeing of the youths.

OUR FOCUS

Digitizing Agriculture, ICT4 Rural Development, Open Data in Agriculture and Nutrition, Youth Empowerment and Community Development

MAIN OBJECTIVES

- Promote ICT applications and utilization in: Agriculture, health, rural development, education, Environment, gender mainstreaming, water and sanitation among other key community development programs
- Promote and support the use of ICTs by women, youth and children so to take advantage of the opportunities presented by ICTs in order to effectively address continental, regional, national and local problems hindering sustainable community development.

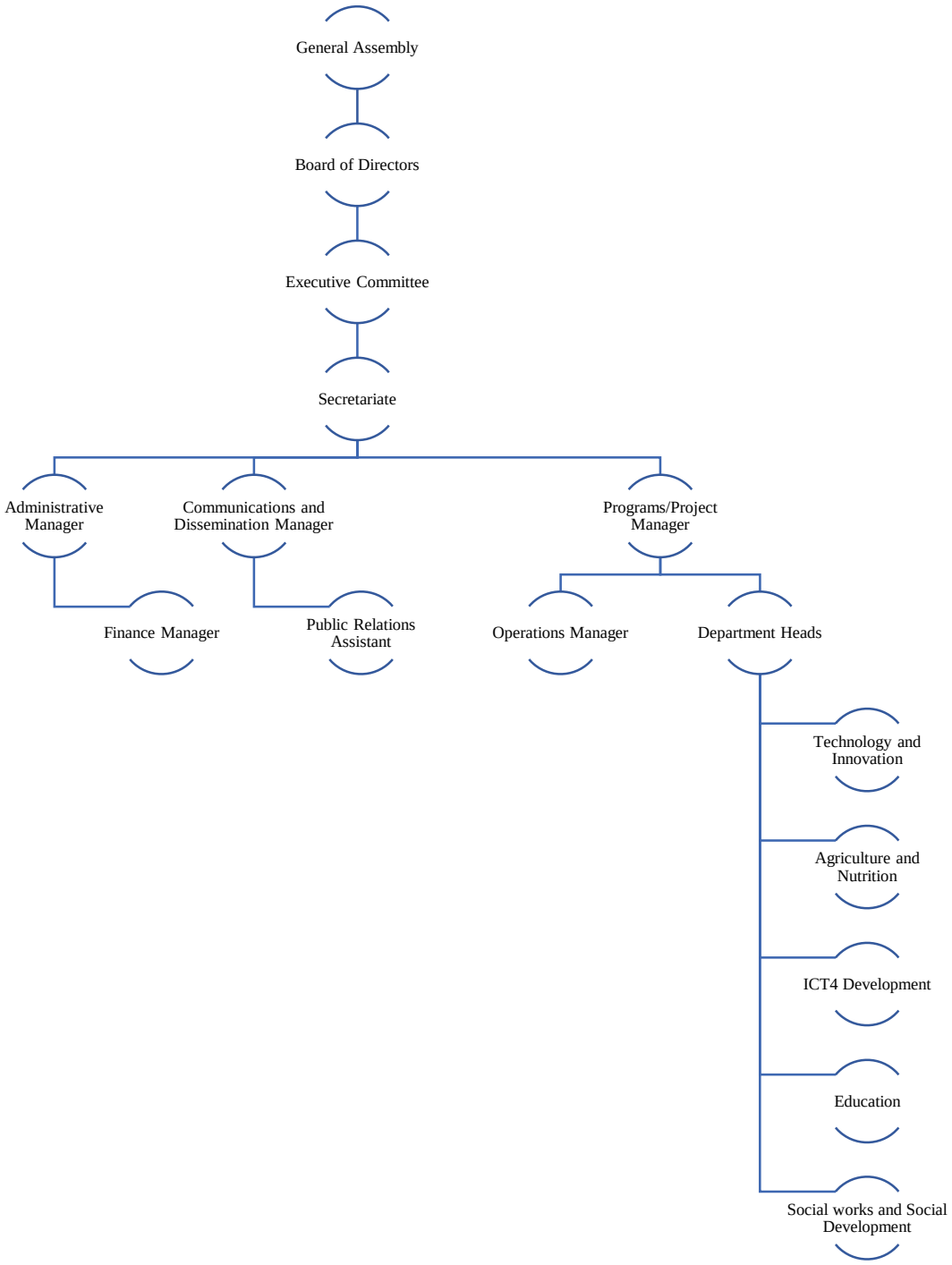
- Complement on the existing education system by making computers available to people of all ages, providing customized training, encouraging and supporting the formulation of Information Communication Technology business.

SPECIFIC OBJECTIVES OF THE COMPANY

- To provide technical training services with the aim of developing additional skills as well as creating employment for the youth in communities.
- Setup, Manage and operate Community Information Communication and Technology Centers for promoting computer education.
- To conduct and manage software and hardware technologies training and development programs.
- To conduct trainings on behalf of clients on such aspects in connection to information management, and other training services aiming at increasing open information accessibility in communities.
- To carryout research and any other related consultancy work in line with Information and Communication.
- To setup, manage and operate mobile computer training caravans in places of low computer literacy and accessibility.
- Solicit for resources and extend affordable information technology hardware and Software to communities where Information and Communication Technologies (ICTs) are hard to access.
- Participate in any kind of surveys, policy processes or activities related to Computer and Mobile technologies at national, regional and international level.
- Carryout activities in and manage as well as disseminate information on Environment Protection, or any other Environment-related activity with the purpose of protecting and promoting good environment.
- Empower poor and disadvantaged communities through application of ICTs and to provide affordable and environmentally sustainable ICT solutions.
- Extend training in ICT equipment repairs, servicing and upgrading personal computers in poor communities especially in rural government-aided schools.
- Conduct, setup and manage consultancy activities in computer services data and any other related services.
- Serve low-income people by providing hands-on work experience, and assisting community-based service organizations to use computers in their work with the aim of eradicating poverty.
- Help Schools, Universities, Organizations, Communities and individuals acquire up to date genuine Information and Communication Technologies (ICTs) and services suiting their work environments.

- Promote ICT applications and utilization in: agriculture, health, rural development, education, environment, gender mainstreaming, water and sanitation among other key community development programs.
- Encourage the development and sharing of open learning and distance education knowledge, resources and technologies.
- Enable rural young people to use the internet and other new technologies to engage in collaborative educational projects that both enhance learning and make a difference in the world.
- Contribute to poverty eradication, food security and conservation of the natural resource base by providing scientific knowledge that will be used to ensure increased and sustainable food production and utilization, a healthy and productive water environment, and people-centered policies for increased and sustainable food production.
- Encourage and promote information on new agricultural methods and practices in rural areas for economical and human potential development influenced by technology.
- Enter into partnership with other Organizations, institutions or companies with the same objects and mission to advance sustainable development.
- Establish, identify and create a more professional network of ICT like-minded people the world over with a focus at educating the communities on how they can innovatively, productively and sustainably benefit from or put to use the massive information on the internet.
- Promote and support the use of ICTs by women, youth and children, so that they can take advantage of the opportunities presented by ICTs in order to effectively address continental, regional, national and local problems of sustainable development.
- Provide relevant information to urban and rural community people and sharing of experiences for purposes of improving quality of lives.
- Complement the existing education system by making computers available to people of all ages, providing customized training, and encouraging and supporting the formation of Information Communication Technology businesses.
- Helping build a productive computer services industry in East Africa, connecting people and information using the latest Internet technologies, and thereby increasing personal

Organizational Structure.



OUR NETWORKS

Youths in Technology and Development Uganda has partnership with a number of organizations both at a local and international level with efforts geared to achieving social good and some of them are given below

MAIN INTERNATIONAL PARTNERS

- **GODAN:** Global Open data in Agriculture and Nutrition, UK. Focuses on using key open data to better agriculture and Nutrition in the world with over 600 partner organizations.
- **GFAR**: Global forum on Agricultural Research. It advocates for collective actions that strengthen and transform agri-food research and innovations systems.
- **BOSCH**: Focus is on designing customized IoT devices for transforming farming in Africa

OTHER INTERNATIONAL ASSOCIATES

- **CHIFA**: Transforming lives for the better and sharing health information
- **Net squared**, an organization that deals in technologies for social change
- **Agrigroomers,** South Africa: Creating an ecosystem to transform farming into a business in Africa.
- **Sun24**: a nonprofit that works with Catholic dioceses in Africa, distributing solar lights to families without electricity.

LOCAL ORGANIZATIONS

- **KIRUCODO**: Kikandwa Rural Communities Development Organization: Connecting the disadvantaged groups to the center of mind set changing towards empowerment in agriculture, health, education and social life.
- **Mukono NGO Forum:** Connecting and monitoring all the NGOs in Mukono District with over 200 NGOs.
- **Bliss Africa Foundation** a nonprofit that deals with youth empowerment and community development.

ONGOING PROJECTS

Project One: Towards narrowing the global rich-poor gap using artificial intelligence September/2017 to Date

Partners: BOSCH

Goal: To help ensuring food security and basic education in "greater Africa"
Responsibilities

BOSCH: Funding organization and designing the sensors for Agricultural farming activities, Data analysis and visualization, Monitoring and Evaluation

YITEDEV: Project implementation in Africa, carrying out the baseline surveys to identify the challenges of the small holder farmers in the food value chain and this is a stepping stone towards developing specific sensor modules and value proposition canvases that are specific to farmer's needs, Designing the prototype using the sensors availed, Data Analysis and Visualization.

Project background

In recent years, the global rich-poor gap has widened dramatically. Climatic change, increasing world population and shortage of resources result in decreasing life quality and global hunger crisis, especially in the less and least developed world ("greater Africa").

While globalization and technical progress is increasing the quality of life in the industrialized countries, the introduction of smartphones and other modern technical devices is making the global rich-poor gap more and more visible to everybody in the less developed world. As a result, we are going to be faced with huge migration waves and armed conflicts, expanding to "our" world. Fighting the root causes of these problems is the only way to tackle their tremendous effects sustainably. If we act now we stand a chance to solve these problems before they outrun us.

As YITEDEV and BOSCH, our ambition is to "enhance the quality of life with solutions that are both innovative and beneficial". Therefore, we believe the time has come for BOSCH and YITEDEV to use our capabilities to help narrowing the global rich-poor gap by innovative measures. The two possible action fields "food security" (general prerequisite) and "basic education" (basic requirement for future perspectives) have been identified as key impact action fields that will be covered.

Current Situation (Inception stage**)**

Activity one: Two baseline surveys to find out the challenges in the food value chain. ***(Done)***
Here we intend to cover both UX and ethnographic study. The objective is to gain insights into how these small holder farmers interact with things in their natural environment and to find out the main struggles these small holder farmers face in the entire food chain. This involved face to face discussions, working with them in their farms just to get the look and feel. The survey was carried out in Mukono district – Katosi - Bunakijja, Village.

Activity Two: Developing a sensor based system for monitoring soil and weather properties ***(In progress)***
We designed a prototype using various soil sensors and microprocessors and so far the parameters that are accurately confirmed include: Soil moisture and humidity. This was achieved in early January, 2018.

The project team at BOSCH sent some sensors and development boards for us to explorer the accuracy of the new sensors and how they respond with the soil and weather changes. The design process is moving on and we hope to accomplish it in May, 2018 and this prototype in some farms to see if they give accurate pH, soil moisture, humidity, soil temperature and light intensity.

Other project activities under this

Designing micro-weather sensor based system to help in designing cropping.

We shall have to design soil testing kits and smart micro weather sensor based systems that farmer's groups can own and use. This is meant to help farmers monitor the growth of the plants, monitor NPK soil status, record rainfall values which is an input into the projection function of the cropping calendar.

Designing mobile application that is meant to crowd source market data and any relevant information from FMIS

The mobile application we anticipate to build first depending on the survey results project 1 is the Farmer's planning tool or Agri-E-Calculator it involves cropping calendar, crop planning tool which outputs net profits and estimated yields, record keeping tool, market projections and prices from the regional, national and international markets.

The Agric-eCalculator as a smart application meant to help the smart farmer to choose the most suitable crop and affordability based on several dependency factors. The farmer can use the smart calculator and just choose the desired crop to be cultivated over his preferred coverage area of farm. Then all other required inputs based on various dependency factors are automatically identified and taken by the e-calculator and provides the estimation results.

Project Two: Caged poultry kuroiler project for youths Jan/2016 - Jan/2019.
Partners: KIRUCODO

The overall goal

To reduce on the current youth unemployment and income security improvements of 1000 young small-holder farmers in Mukono villages and town councils by 2019, with our entry points of reaching our targeted beneficiaries being agriculture, sports and education. Our proposed project activities are the caged poultry farming, with an ICT value addition integration.

This project is a replicable caged poultry farming activity where the project beneficiaries are given at-least 100 chicks. After 5-6 months of maturity the eggs are taken to the hatchery and the new chicks will be passed to another identified youth group.

Responsibilities

KIRUCODO: Donated 500 birds and we distributed them to youth groups. Each group has an average of 10 to 15 youths and each group received 100 birds.

YITEDEV: Data collection and information dissemination on best poultry farming practices, crowdsourcing key data to help these uses make informed decisions, Community trainings and workshops, monitoring and evaluation.

Current situation

Since January, 2016 to date majority of youths have joined the project and it has reached 13 communities in Mukono district. The number of youths joining this project increases every day due to its productive results and the shift in wellbeing of youths. We now have an average of 400 youths in from different communities in Mukono. We have also extended the project in the far east of Uganda in Busia district with 100 birds distributed and we have extended it in rural schools in Mukono district to provide income for the youths to attain quality education.

Project Three: Mobile solar powered computer labs as a teaching aid in schools - To emphasize STEM learning and quality education in more than 1000 communities **(On going)**

Key beneficiaries: *Rural women and Men in Agriculture and Youths in Rural Schools*

Responsibilities:

Partners: Techsoup with Netsquared

About the project

To increase the pipeline of African young girls entering into Science and Technology fields and ensure they are engaged in Technology Innovation and Entrepreneurship to benefit Africa, we thought of having an innovation hub where we shall be training them in the STEM technologies, in doing this, we shall be empowering the young to become impactful leaders to benefit Africa through STEM Education, Leadership and Entrepreneurship Training.

We also hope to integrate leadership and entrepreneurial sessions where they will be taught about the various components of leadership and entrepreneurship. After every training, they will be assigned with a mentor who will be encouraging and monitoring performances, and help in shaping each to become mature entrepreneurs.

We also thought of having innovation hubs where we shall be training them in the STEM technologies. We at YITEDEV we believe that if we train graphical programming modules like; Scratch Programming; this can help them program their own interactive stories, games, and animations and share their creations with others in the online community. This being a graphical programming language, they can easily use it to create animations which portray awareness concerning environment protections, stories that warn families that are practicing violence and child labor, animations that indicate modern ways of farming, games that can engage them into critical thinking to mention but a few. This can help them learn to think creatively, reason systematically, and work collaboratively thus gaining essential skills for life in the 21st century.

We also thought of training them in open source technologies like MIT Application Development; this is an innovative beginner's introduction to programming and app creation that transforms the complex language of text-based coding into visual, drag-and-drop building blocks. The simple graphical interface grants even an inexperienced novice the ability to create a basic, fully functional app within an hour or less. Here in our labs we think they can develop custom, often hyper-local apps in response to natural disasters and community-based needs for government, civic employees and volunteers. They can use MIT App Inventor to create custom apps that can process their data collection and analysis requirements in a wide variety of fields from Agricultural, Health, and Education to social

We shall also involve blog designing with WordPress where they be able to create, manage and post their articles, advertise some of their projects in both agriculture, health and education. We intend also to engage them in Web2.0 tools for development among other Technologies

Web2.0 tools will also benefit the rural women and men in outsourcing important information in nutrition and health. These labs will also be used for capacity development like for pregnant mothers in rural communities who need information concerning their pregnancy like immunization, nutrition and drugs. We hope to use these labs for capacity development of the youths especially in agriculture, education and health. We shall involve in health workers, innovators especially the youths from various universities and this can inspire the young to value education and start with humble opportunities.

Current situation:
We have implemented it in three communities in Mukono district and we hope to expand it to other communities to advance the agenda of promoting quality education.

Project Four: Rocket stove project (1st, January 2018 to date)

Responsibilities: Funded by Sun24 and Implemented by YITEDEV-Uganda

Role: Protect the environment by creating a thriving global market for clean and efficient household cooking solutions for rural community dwellers.

AWARDS / PRESENTATIONS / CONFERENCES

- Global Forum for Innovation in Agriculture, Abu Dhabi – United Arab Emirates. Representative: Stephen Kalyesubula, Position Hosted Scientist from YITEDEV-Uganda, 20th – 21st March,2017
- Linked Open data conference – Berlin, Germany: Representative: Paul Kasoma. Presentation Title: Making Livestock smart and Sustainable, September 2017
- Farmer's Access to Data Symposium and Workshop. Representative: Stephen Kalyesubula Responsibility: Trainer and White Paper Writing. Representative Geoffrey Wandera – as a

farmer. Funded by Global Forum for Agricultural Researcher, CTA, GODAN and organized ITOCA-South Africa, November 2017

- Global Forum for Innovation in Agriculture, Dubai – United Arab Emirates. Representative: Paul Kasoma, Position Hosted Scientist from YITEDEV-Uganda, 5-6, February 2018
- URSB Innovation Expo Overall winners, (LabTech Innovations + YITEDEV-Uganda), Imagine cup Microsoft online winners from Uganda, 2017. This was achieved after developing a prototype called: UriSAF which is does autonomous diagnosis of urine parameter. The project is ongoing and we are currently writing a claim report for patenting, testing the device in Lubaga Hospital and we hope to rollout it out probably in December, 2018.

WORKSHOPS ORGANIZED

- Adobe spark story telling workshop sponsored by NetSquared-Techsoup, USA. This project was attended by over 62 people in which we trained them how to use adobe sparks to create great stories for themselves for social and economic development. Date: September, 17th 2017.
- Distribution of Scholastic materials to New Hope primary school. We distributed scholarship materials to over 500 children as a way of promoting quality education in schools with law resource settings and this project was funded by Blubonet Hills.

CORE TEAM PROFILE

Mr. Robert Kibaya
Chief Executive Officer for YITEDEV-Uganda, Chairman Mukono District NGO Forum
Executive Director for KIRUCODO, 2015 NetSquared Regional Ambassador for East Africa and NetSquared-Uganda Lead Tech Meetups Local organizer. He is a highly regarded professional business growth strategist with over 30 years of experience. His focus is on the poultry project, mobile solar lab project, ICT4Development, Biotechnologist, Social and Community Activism.
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Mr. Godfrey Hatejeka
Assistant CEO and Finance Manager at YITEDEV-Uganda
He is a professional Civil Engineer and Agri-prenuer with a focus on roads development, His key focus is also on setting up business strategies, offering technical advice and mentorship to the youth team. He helps to accelerate the adoption of precision farming practices and improve the use of digital agricultural technologies.
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Mr. Stephen Kalyesubula.
Director and projects manager. He is a computer engineer and Agri-prenuer with a focus on embedded systems design and data science. He is also part of the GODAN Action Network of trainees and Capacity Development Group.
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Phone: +256 751 241 079

Mr. Paul Kasoma
He is a researcher dealing in developing data driven systems in agriculture and health to promote sustainable development in Uganda. his key technological interests include; Data science, Artificial intelligence, and Internet of things, he is also a director for Youths in Technology and Development Uganda. My key responsibilities include; Promoting Agri-technology, Software Developer and a Poultry Farmer
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Other Members
Mrs. Getrude Naluyma and Mrs. Kayaga Claire Florence
They are directors and also social and community activists with a clear focus on fostering the advancement of science technology mathematics and engineering innovations among women. They are social activists and responsible for empowering youths with business skills in agriculture.

Mrs. Kayaga Claire Florence
She has a degree in Medicine and a director of YITEDEV UGANDA

Mr. Geoffrey Wandera
He heads the Passion fruit youth farmers group (PAFYOFAG) in Mukono District-Uganda and Operations manager at YITEDEV-Uganda
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