Winners Profile on the African Science Technology and Innovation Forum 2020 Innovation in Action Competition

1. Name: Shermar Stuart (South Africa)  
   Project Title: Prime Technologies

We have developed the Prime, which is the future of the way we connect to each other and the world around us but more important than that. It is changing the way that we imagine and define what connection is. The device allows users to stream and access content for free - without the traditional use of ISP data - Dataless Streaming. It is our foundation for an African Internet, smart cities, digital education and the digital informal economy. We have developed this device through a need to solve African issues from an African Context by creating markets and solutions, with an Africa first approach, that are catered to our environment and to address our challenges as opposed to the traditional approach of “Plagiarism” - Copying and pasting first world solutions or expertise while crossing our fingers. The Future is African.

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Project video: https://drive.google.com/file/d/1dYz-g6NjhqVx92uwTx79_X4hZ5kOAm8J/view?usp=drive_web
2. **Name: Kutlwano Ngwarati (South Africa)**  
   **Project: Paper less receipt (UN Amrue)**

Over 145 million trees are used every year to produce the global consumption of paper receipts and with over 85% of receipts being thrown in the bin, this produces 10 million tons of waste every year. Amrue is an intelligent receipt that combats this waste. Our technology allows customers to view their receipt directly in their banking app, thus doing away with paper. We partner with banks and retailers to integrate our solution to the customer’s banking app and the retailer’s point of sale devices. This way, when a customer makes a purchase with their bank card their receipt is automatically delivered to their banking app, enabling opportunities for banks and retailers to gain insights and engage the consumer post purchase. Customers can stay organized with easy access to their receipts but more importantly, using our technology reduces the need for deforestation, protecting our planet from further global warming.

**Contact:**

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Video: Submitted/attached
3. Names: Mrs. Odette BAHATI (Rwanda)
   Project title: Drycard

DryCard is an affordable device that enables small scale farmers to measure the moisture content of their produce and therefore prevent mold growth and post-harvest losses. We have distributed more 10,000 Drycards to smallholder farmers in Rwanda.

Retailing at below $1, DryCard is an inexpensive device, for determining if dried food is dry enough to prevent mold growth during storage. The tool is intended for smallholder farmers who cannot afford the expensive moisture meters in the market.

The farmer simply places the DryCard and a sample of the dried product in an airtight contained such as a sealed plastic bag or jar and after a few minutes the card's indicator will display a measure of the equilibrium relative humidity.

The farmer then matches the colour of the strip with the scale on the card. A pink colour on the strip means the product is too wet for safe storage, while blue or grey means it is adequately dried.

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4. Name: **Dr. Pulane Nkhabutlane (Lesotho)**  
   Project: **Superfoods (Trade names Bohlokoa and Bohlale) Sorghum Production**

The potential of agro-processing in Lesotho, using sorghum, pumpkin and pumpkin seeds to produce sorghum muesli and sorghum baked products is not fully exploited. Bohlokoa and Bohlale are startups incubated in the Innovation Hub of the National University of Lesotho. Their mandate is to process sorghum to manufacture and market healthy, nutritious and convenient products for the health conscious and people on-the-go within and outside Lesotho. The project has final products or technology prototypes developed and tested over a period of time and has established a strong management team in place to execute on the plan. The team has experience with the manufacture, testing and optimization of quality and shelf life of Sorghum products and has identified market segments which already show signs of a good customer base and clear signs of revenue growth and obvious pathway to profitability. The female graduates seeking entrepreneurial opportunities in food manufacture and product research have been engaged.

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**Project Video:**  
https://onedrive.live.com/?authkey=%21ACXMQomEqhT1rYo&cid=652EEFD5BDD4FF77%21196&parId=652EEFD5BDD4FF77%21196&o=OneUp
According to the United Nations, Nigeria is one of the most dangerous countries in the world to give birth. The country accounts for 19% of all maternal deaths on the Planet. UNICEF makes it much clearer by stating that “Every single day, Nigeria loses about 2,300 children under five and 145 women of childbearing age. This makes the country the second largest contributor to the under–five and maternal mortality rate in the world.”

**NATAL CARES**

Natal Cares is a social enterprise which leverages on the power of mobile technology and low cost innovation to combat maternal and infant mortality in Nigeria. Primarily focusing on providing healthcare, medical monitoring and emergency services to at-risk pregnant women and nursing mothers reaching them in their hometowns and villages and advocating for better access to healthcare at primary healthcare centers especially in Under-served communities and IDP Camps.

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6. Name: Emeka Joseph Nwagboso  (Nigeria)
   Project: Project PINK BLUE

Nigeria is a major contributor to the overall cancer burden in Africa with 115,950 new cases of cancer and 70,327 cancer deaths in 2018. Breast cancer kills over 31 Nigerian women every day, cervical cancer is 99% preventable, but over 29 women die of cervical cancer every day and prostate cancer kill about 15 Nigerian men every day (WHO, 2019). This increasing deaths is as result of late detection of cancer.

To reduce these cancer deaths, Project PINK BLUE established a Patient Navigation Programme, using technology-driven web-based application, telephone and trained nurses to help women find cancer on time and have access to treatment.

Every month, we receive over 513 calls from people, looking for the best place to have cancer screenings, the working radiotherapy machine, the best cancer doctor, and where to find localized nutrition for cancer care. Over 2,000 women have benefitted from our innovation in 2018/2019.

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The mobile App, Ncediso™ originated from the need for community healthcare workers including nurses and clinic practitioners to be upskilled in locations where access to basic healthcare, First Aid skills and clinics are scarce. The application allows for the early detection of various disabilities and diseases among children, child nutrition, chronic disease management, information on infectious and non-infectious diseases, First Aid and various other conditions. The App is also used to assist the ordinary person who has limited access to healthcare facilities to make an easy assessment of specific symptoms. Health workers have information to more accurately diagnose chronic health conditions such as diabetes, tuberculosis and acute malnutrition in children. The App is unique as it contains ailments and medications relevant to the African continent only. Given the connectivity constraints, it can be used in offline mode, requiring no data whilst not storing any personal information.

Project video: https://drive.google.com/file/d/1Ho1CTZPJY7Sj-E9wKPZrgj-8CQir9erc/view?usp=sharing

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The current and future global population growth is driving up and our demands for protein required to feed humanity has to place livestock producers under pressure to increase production, yet accurate industry information, disease outbreaks and readily available markets devastate the economies of millions of farmers especially rural women and youths who are mostly small flock owners to remain poor despite being in farming for decades because no easy way existed in bringing together Livestock Producers, merchants (middlemen), Veterinary professionals and final consumers.

We are using (ICT) to bridge this necessity with our PFMS platform, an all in one-stop SMS, USSD, web and a mobile app build with the fourth industrial revolution technologies where users buy and sell livestock; instantly diagnosed Livestock on their phones or consult an expert Veterinarian in real-time to, increase farmers production plus revenue, connect consumers sustainably for Economic, social and environmental development.

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9. Name: Esabu Anthony  (Uganda)  
Project Title: Conservation agriculture for climate change mitigation and enhancement of food security in Uganda.

Climate change is impacting agriculture productivity in Uganda. Smallholder farmers, who supply 80% of the produce in the country, are among the most vulnerable to its effect.

Conservation agriculture can offer smallholder farmers a way to better absorb climate shocks and suitably increase crop yield and income. However, lack of information and high costs of implementing CA practices limit smallholder farmers in Uganda from adopting CA. Our company addresses the main barriers preventing smallholders in Uganda from widely adopting CA practices by providing investment needed to implement CA practices in smallholdings through a partnership agreement, with production shared between the smallholder and the company. Secondly engaging smallholders in implementation, providing them with an additional inputs from the start, and as such train them in CA practices so they can expand such practices beyond the scope of the partnership and finally developing markets to sell the shared production.

The benefits from CA include; Storage of at least ten times more carbon over the next 15 years than the current vegetation in degraded pastures and lastly Increase in smallholders’ income by at least 52% if implemented in 1 hectare, and by 156% if expanded in 3 hectares.

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10. Name: Roza Alemayehu (Ethiopia)  
Project Title: Walelgn (body electrolyte analyzer)

According to 2018 data, more than 40% of Ethiopian are affected by kidney failure, hypertension and different type of heart disease in every year and currently in Ethiopia, most health care facilities give treat and medication without considering the amount of body salt level. As result, it increases mortality patients come with kidney failure, diabetes, cardiovascular diseases, diarrhea, electrolyte abnormality and blood lose. For example, many research shows that more than 61% of hospitalized patients are affected by kidney failure, neurological disorder up to death due to improper IV fluid management. But the reason behind those millions of life killer problems are lack of body electrolyte analyzer, even the existing device does not consider the economic potential of many health care facilities. But walelgn used to analyze and interpret the amount of body salt level. It can access with any health care facilities with affordable price and enough spare part.

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