



The Nelson Mandela African Institution of Science and Technology (NM-AIST)
Hosts

3rd African Grand Challenge (AGC)
January 25th – 28th, 2018



***Healthcare, Animal Sciences, and Wildlife Management:
Innovations in Products and Services enabled by the Emerging Drone and
Internet of Things (IoT) Technologies***

Objectives

The objectives of the NM-AIST African Grand Challenge are to innovate for Africa, to collaborate and learn together, and to foster multi-level partnerships for sustainable futures. We seek to bring together students who are interested in the application of science and technology research to critical problems in Africa. We hope that this event can be one of many such events that stimulate **creative problem solving** in a way that leads to **increases in product and service innovations**; innovations that **foster new companies, new jobs**, and ultimately enhance the **quality of life in Africa**. The African Grand Challenge is designed to promote a collaborative learning experience in which participating students, universities, as well as local and international companies collaborate and learn from each other.

One important and lasting impact of the AGC will be a **network of public and private partnerships** that provides a **foundation for a community of researchers and entrepreneurs** that work towards sustainable **solutions to pressing social problems**.

Venue

The third annual African Grand Challenge is scheduled to be held at NM-AIST, Arusha, Tanzania technology

Dates

Between 25-28 January, 2018.

Themes

The NM-AIST / AGC 2018 will focus on two themes namely;-

- Healthcare and
- Animal Sciences & Wildlife Management.

The challenge therefore will be focused on two questions namely;-

- (1) How do you use a combination of Drone and IoT technologies to develop new products and or services that will improve health care in Africa?
- (2) How do you use a combination of Drone and IoT technologies to develop new products and or services that will improve animal sciences and wildlife management in Africa?

The competing teams of students have option of choosing between the two above mentioned questions and come up with innovations in products and services which are enabled by **the combination of emerging Drone Technology and the Internet of Things (IoT) technology.**

Competition Layout

- Student teams (of 4 members each) will present **well-developed product or service concepts** to a panel of expert judges.
- The Grand Challenge will have two sessions, the first to identify the 4 finalists and the second to award 1st, 2nd, 3rd, and 4th place winners.
- To ensure fairness during the competition, different judges will be participating in the two sessions and all student teams will be anonymous.
- Participating student teams will be selected by their university and will **submit their profiles and one page description of their product or service concept** to the AGC coordination committee no later than **January 8, 2018**. This information will be used to organize presentation sessions. It will be held confidential and not shared prior to the team presentation.
- The judges will use four criteria to evaluate the team presentations;
 - **Originality:** the extent to which the proposed product or service concept is distinctive and new to the market.
 - **Value proposition:** the extent to which the target customer is clearly identified and the value to that customer and to the community is clearly presented.
 - **Achievable:** the extent to which it is clear that the product or service can be developed and deployed in African markets in a cost effective manner.
 - **Sustainability:** the extent to which the product or service concept can be implemented and scaled over time in a manner that is practical and sustainable.

Participants

- A team of four students will be selected by the participating universities to include the skills required to address the Gran Challenge theme described above.
- All students should plan to **arrive at the NM-AIST** campus in Arusha, Tanzania **not later than mid-day 25th January, 2017**.
- Housing, return tickets and all the Grand Challenge event expenses will be provided by NM-AIST.

- The visiting student teams may plan to depart on Sunday, January 28, 2017.
- All participating students will receive a **participation award of USD \$250** in addition to team score-awards ranked as 1st, 2nd, 3rd and 4th place on the final day of the event.
- 8 Student teams from the following Universities will participate in this event:
 1. Tanzania - Nelson Mandela African Institute for Science and Technology (NM-AIST)
 2. Tanzania- Sokoine University of Agriculture (SUA)
 3. Tanzania- States University of Zanzibar (SUZA)
 4. Kenya - Strathmore University
 5. Uganda - Uganda Technology and Management University (UTAMU)
 6. Rwanda – Carnegie Mellon University - Rwanda
 7. Burundi – International University of Equator (IUE)
 8. Nigeria- Abuja University of Science and Technology (AUST)

Sessions of 2018 AGC

The African Grand Challenge is comprised of three separate but related sessions.

- **The first session** will begin Thursday evening, January 25, 2018 with an orientation for all participating student teams followed by a tour of the NM-AIST campus and dinner
- **The second session** will begin Friday morning, January 26, 2018 and will run from 08:00am to late in the night. Three main activities will feature in this session namely as **official opening**; and **workshop on supply chain management** in the areas of Water and Energy up to the lunch time. In the afternoon, the students will attend **discussion session about the use of drone and IoT technologies** to develop innovative products and services in Africa and around the world.. This discussion session is designed to foster innovation and collaboration so that the participants can work with their peers and share ideas about how emerging drone and IoT technologies can enable exciting new product/service innovation. During the late afternoon and night hours all teams will be working on their ideas ready for presentation on the next day.
- **The third session** will begin Saturday morning, January 27, 2018 and will run from 09:00 am to 07:00 pm. This session has two parts. The morning session **each team will present their product/service concept** to a panel of judges. Two parallel sessions will be run to enable all presentation to be complete by 11:30 am. The judges in each of the parallel session will select two teams to compete in the afternoon. This session is the actual competition described above and in this session students will present the product or service concept that they submitted to the AGC coordinating committee. Student teams are free to refine or adapt their presentation on Friday night but the final presentation must be delivered to the AGC faculty coordinator on a thumb drive provided by the AGC no later than 08:30 am Saturday, January 27, 2018. Presentations will be 15 minutes with 5 minutes of questions from the panel of judges. After lunch the finalist will present their presentation to a new set of judges. The finalist teams will follow the same presentation rules used in the morning session, of which judges will then determine the 1st, 2nd, 3rd, and 4th place winners.

Recognition and Awards

The panel of judges will award prizes as follows:

- (i) First Prize: USD 5,000.00 (five thousand only)
- (ii) Second Prize: USD 3,000.00 (three thousand only),
- (iii) Third Prize: USD 2,000.00 (two thousand only)
- (iv) Fourth Prize: USD 1,000.00 (one thousand only)

In addition to the awards given for the winning presentations, all student team members will receive a participation award of USD \$250.

Following the presentations at approximately at around 5:00 pm an awards session will be held to recognize all participants and to announce the winners. A reception will be held following the awards session.

- ❖ The afternoon presentation session and the awards session will be open to the public.
- ❖ The recognition and award ceremony will be followed by cocktail dinner for all participants and invited guests

Partners and Collaborators

- NM AIST
- MSD, Inc.
- Washington States University
- Penn State University
- Prof. John Henderson- International Advisor

YOU ARE CORDIALLY WELCOME

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