

Research and Education for Sustainable Energy in Africa

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CMU-Africa: Brief History

- ❑ 2007 Government of Rwanda (GoR) contacts CMU
- ❑ 2011 CMU and GoR sign an agreement for CMU to open a branch of the College of Engineering in Kigali delivering two MS degrees
- ❑ First set of Master's in Information Technology (MSIT) students started in Fall 2012 and graduated in 2014
- ❑ Master's in electrical and Computer Engineering (MSECE) program started in Fall 2014

In the first six years, CMU-Africa graduated 191 students



CMU-Africa Vision

To educate and empower the next generation of African leaders and innovators by delivering a world-class educational experience, thereby having an impact on the economic transformation of the region

CMU-Africa Mission

To produce creative and technically strong engineers, who have been trained in the unique context of Africa, and are therefore capable of having an impact on the development of the region

“Educating Africans in Africa for Africa”

CMU-Africa Core Principles

- ❑ CMU-Africa adheres to the same quality standards used for education at all of CMU's campuses and locations
- ❑ Courses are taught by CMU faculty
- ❑ Degrees granted are CMU degrees, not CMU-Africa degrees
- ❑ CMU- Africa delivers programs that are linked with economic development of the region

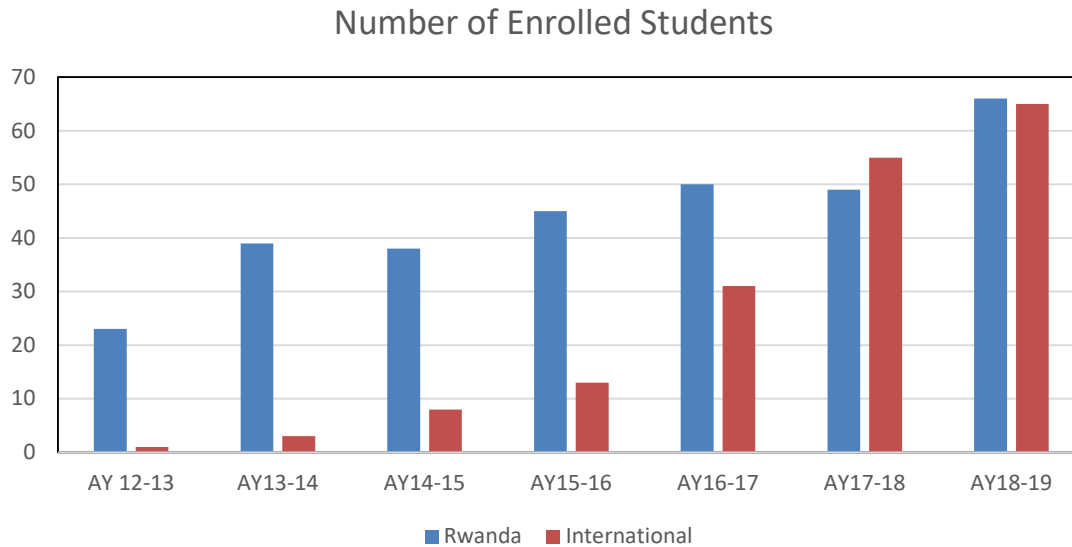
Experiences beyond Classroom

- Practicums
- Internships (required for MSIT)
- Research projects
- Semester in Pittsburgh (limited slots)
- Student guild & clubs
- Hackathons & competitions
- Community service



In January 2017, four Carnegie Mellon University Africa (CMU-Africa) students won first prize in the Nelson Mandela African Institute of Science and Technology's Africa Grand Challenge competition.

Student Enrollment



- 2018-19 enrollment 131
- 33% women
- 92 MSIT, 39 MSECE
- 66 Rwandan, 65 Intl.

Benin

Burundi

Cameroon

Eritrea

Ethiopia

Ghana

Kenya

Lesotho

Nigeria

Rwanda

Somalia

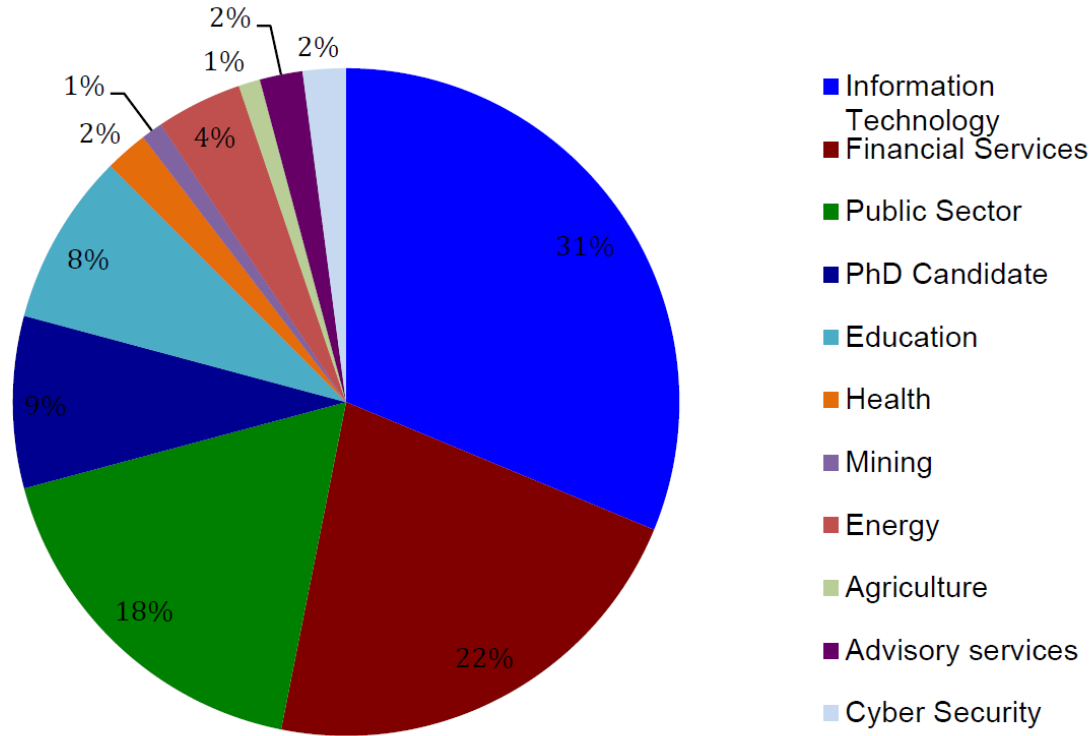
Tanzania

Togo

Uganda

Zambia

What CMU-Africa Graduates Are Doing: Employment Sectors



Kigali Collaborative Research Center (KCRC)

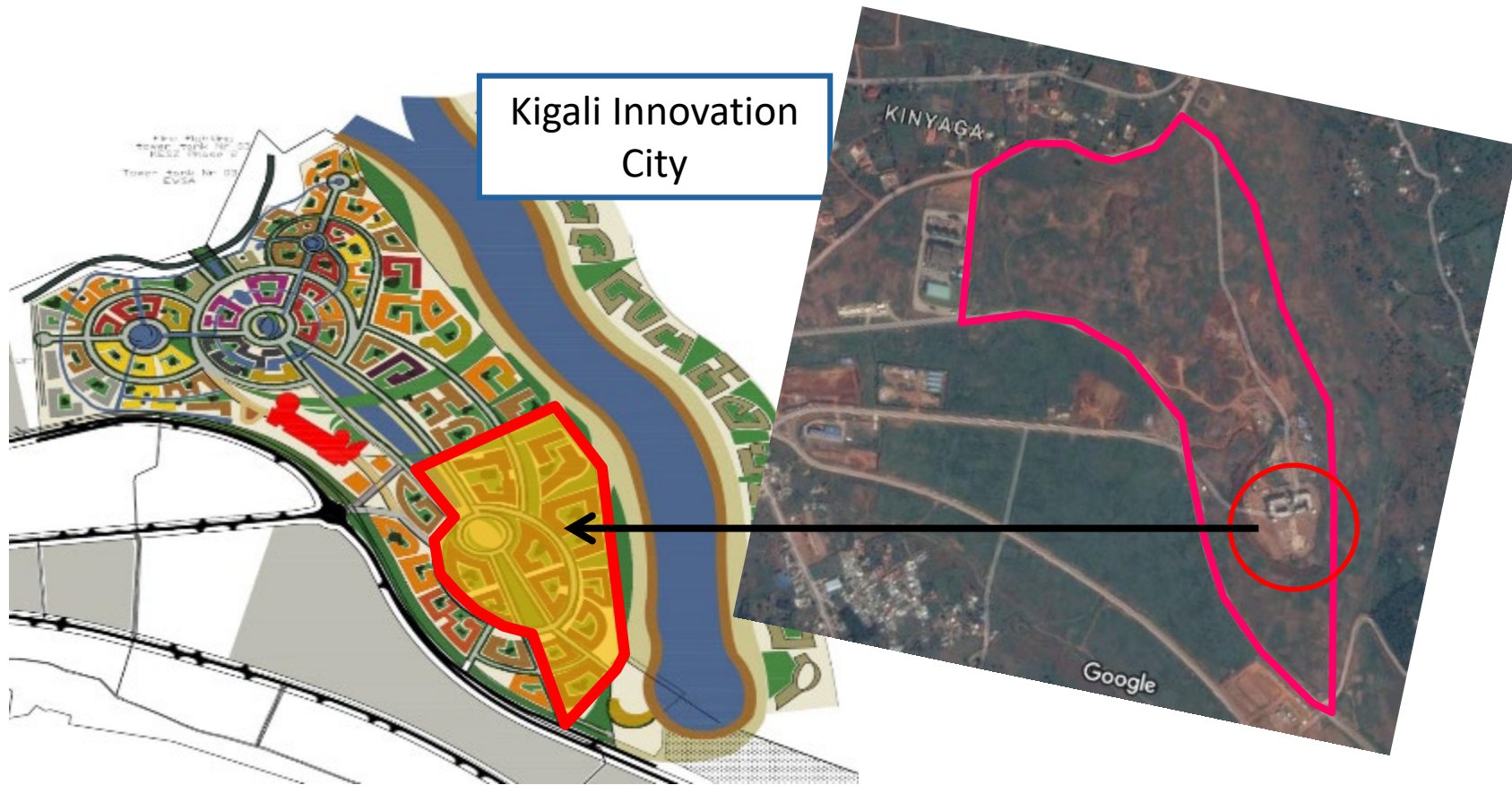
- Facilitate research collaboration among researchers, industry, public sector and non-governmental organizations
- Connect researchers to various research and funding networks locally and internationally
- Promote projects and innovative solutions through collaborative research
- Impact higher education through instructors and scholars training
- One proposal funded through KCRC already; another progressing



Aminata Garba
Director

<http://www.kcrc.rw/>

Located in the Technology Park



New Campus



Funding Partners



Government of Rwanda



African Development Bank



Over \$12M in scholarship
and program support



Mandela Institute for
Development Studies



*Innovators Forward
Fellowship Fund*



Education Challenges

- We need to educate students that come from and understand the communities we seek to serve
- Inflexible education systems with regards to discipline
- Need for interdisciplinary skills to address policy challenges that require technical knowledge
- Students lack exposure
- Finding *paying* internships
- Better support for African researchers in Africa

Research Needs

- Data collection and analysis
- Understanding the demand side
- Nexus issues to ensure impact
- Engagement with industry and government