

Your Excellency, President of the Republic of Uganda, Dr. Yoweri Kaguta Museveni, Honourable Members of the Cabinet and Parliament, Prof. George Mondo Kagonyera – Chancellor of Makerere University, Eng. Dr. Charles Wana-Etyem – Chairman of Makerere University Council, Members of Makerere University Management, Delegates from the Private Sector, Staff and Students of Makerere University, Ladies and Gentlemen; I am glad to have this singular honor to welcome you to this historic event when Uganda celebrates Kiira Electric Vehicle Innovation.

Your Excellency, Kiira EV is a brain child of Makerere University's Centre for Research in Transportation Technologies (CRTT). (*Kiira EV was designed and built by staff and students of Makerere University*). The Centre was established in 2009, to champion Research and Development of eco-friendly transportation solutions for Uganda in particular, and Africa at large. Your Excellency, the Centre is leading the way with technological interventions aimed at enhancing environmental stewardship and transportation sustainability.

Your Excellency, Makerere University conceived the idea of setting up the CRTT after several global experiences through collaborations and best practices benchmarking.

- Makerere University's participation in the Vehicle Design Summit 2.0 - a collaborative project bringing together 31 premier engineering universities led by Massachusetts Institute of Technology (MIT), USA, was the key inspiration. This student-led consortium designed and built a 5-passenger plug-in Hybrid Electric Vehicle, **Vision 200**, which was exhibited in Torino Italy, towards the end of 2008. The Team from Makerere University designed the Power Train and the in-Vehicle Communication Network.
- Your Excellency, in early 2009, the Centre was visited by Prof. Hiroshi Shimizu from the KEIO University,

Tokyo, Japan. Prof. Hiroshi Shimizu, an environmental scientist at the time, had been working on Electric Vehicles for 30 yrs. Prof Hiroshi Shimizu presented his works to us, the most outstanding of which was the Electric Lithium Ion Car (Elica) which was launched in 2004 as the first electric vehicle, with Eight-wheel drive and a maximum practical speed of 370 Km/hr.

- Your Excellency, our hearts were further stirred by your colleague, His Excellency. Barack Obama. In his state of the Union address of January 2011, President Obama called for putting 1.2 Million Electric Vehicles on American roads by 2015 – affirming and highlighting a goal aimed at building US leadership in technologies enhancing environmental stewardship and promoting transportation sustainability, while creating high quality jobs and economic growth.

Against that background Your Excellency, Makerere University's Centre for Research in Transportation Technologies formulated a Research and Development agenda of four items:

1. ***The Proof of Concept:*** We undertook to design and build a 2-seater Electric Vehicle to demonstrate that Makerere University has the talent, discipline, and, with your support, the financial muscle to contribute meaningfully toward the development of high-tech Transportation Solutions. Your Excellency, today, you have witnessed Kiira EV, named after River Nile, as you suggested, on the road. KIIRA EV is a Two-Seater Car with a Maximum Speed of 100Km/hr, a Range of 80Km, Dry Weight of 1000kg, Right-Hand Steering, Three Doors, Front-Wheel Drive, Powered by a 26HP AC Induction Motor, with Zero Tail Pipe Emissions, Insignificant Power Train Noise. Kiira EV runs on a Primary Energy Bank consisting of 64 Lithium Ion Cells connected in series. To charge fully, KIIRA EV requires 15 kWh estimated at UGX 6,000 (USD 2.3) and this takes 5 Hours when using a domestic power outlet with

13A/220V/50HZ, and about 1 hour only when using an outlet with 50Amp. Kiira EV body was made out of Fiber Glass reinforced with wire mesh and supported by Chassis and Frame fabricated out of steel.

2. **Public Transport:** The Centre has embarked on designing and building a 28-seater electric bus using solar energy for charging. The bus has been named KAYOOLA to emphasize her target community, the Public. The prototype of the bus is expected to be test driven in June 2013.

3. **The CRTT Infrastructure:** Your Excellency, as already witnessed in the presentation earlier, the Centre needs a home on about 50 acres of land where the research workshops, offices, a mini-assembly plant and testing tracks can be constructed. We have had discussions with the Uganda Police Force to explore the possibility of the Centre to house and support a state-of-the-art Inspectorate of Vehicles. Our students and staff would offer technical support in the Inspectorate of Vehicles. This could go a long way in supporting technical skills development as well as generating some income to support the operations of the Centre.

4. **Capacity Development:** Your Excellency, unique amongst the contributions of the Centre to-date is the paradigm shift in training Uganda's Engineers. Your excellency, today I can gladly retire to my home in the Village of Oduluba, five kilometers east of Arua Municipality, with the satisfaction that the engineers I have trained are a unique breed of engineers who can work anywhere in the world. Your Excellency, the Centre needs to create opportunities for specialized training for our young people who will eventually sustain the operations of the Centre and other related spin-offs (PhD and Masters). We hope that when fully operational, the Center in its several departments will offer employment opportunities for over 1, 000 youths right from the grassroots, leveraging the capabilities and skills of those who did not make it to University.

Gradually, feeder training Centers will be established in all major regions of the country to enhance capacity development and instilment of entrepreneurship skills amongst the youth and contribute to the alleviation of unemployment.

Your Excellency, this meticulous agenda for Makerere University's Centre for Research in Transportation Technologies requires key essential inputs from government and the private sector to make it a reality.

Your Excellency, allow me to take a moment before this august gathering and recognize the visionary men and women who have worked tirelessly toward achieving Kiira EV milestone.

S	Name	Designation
1.	Paul Isaac Musasizi	Project Manager and Principal Systems Analyst. Mechanical Engineer experienced in Systems Analysis, Design, and Project Management
2.	Richard Madanda	Lead Researcher, Electrical Systems. Graduate of Electrical Engineering
3.	Gerald Baguma	Lead Researcher, Communication and Embedded Systems: Graduate of Telecommunications Engineering
4.	Mourice Wandera	Lead Researcher Mechanical Systems: Graduate of Mechanical Engineering.
5.	Fred Matovu	Member, Electrical Systems Team. Graduate of Electrical Engineering.
6.	Nancy Senabulya	Member, Electrical Systems Team: Graduate of Electrical Engineering
7.	Moses Muyanja	Member, Electrical Systems Team: A graduate of Mechanical Engineering
8.	Pauline Korukundo	Member Communication and Embedded Systems Team: Graduate of Telecommunication Engineering
9.	Patricia Atungire	Member Communication and Embedded System Teams: Graduate of
10.	Diana Kagimba	Member Communication and Embedded Systems Team. Graduate of
11.	Nasser Gyagenda	Member Mechanical Systems Team. Graduate of Mechanical Engineering.
12.	Kenneth Ndyabawe	Member Mechanical Systems Team Graduate of Agricultural Engineering
13.	Africa Junior	Member Electrical Systems Team. Student of Electrical Engineering.
14.	Edgar Mugabi	Member Electrical Systems Team: Student of Electrical Engineering.
15.	Rosette Namazzi	Member Electrical Systems Team. Student of Electrical Engineering
16.	Arnold Magezi	Member Electrical Systems Team. Student of Electrical Engineering
17.	Victor Tumwine	Member Electrical Systems Team. Student of Electrical Engineering
18.	Richard Muhumuza	Member Electrical Systems Team. Student of Electrical Engineering

19.	Margret Nanyonga	Member Communication and Embedded Systems Team. Student of Electrical Engineering
20.	Fahad Muyanja	Member Communication and Embedded Systems Team. Student of
21.	Brian Kaweesa	Member Mechanical Systems Team. Student of Mechanical Engineering
22.	Betty Maraka	Member Mechanical Systems Team. Student of Mechanical Engineering
23.	Philly Kintu	Member Interior and Exterior Design Team: Student of Architecture.
24.	James Byansi	Member Interior and Exterior Design Team: Student of Architecture

Support Teams

1	CEDAT Mechanical Workshop	Welding and Machining , Andrew Wabwire Chief Technician and His Team
2	Gatsby Automotive Garage	Assoc. Prof Joseph Byaruhanga and Eng. Peter Luyima and their Team
3	Jonathan Kasumba	Graduate of Fine Art - Supported Exterior and Interior Design Team.

As I conclude my remarks, allow me, Your Excellency, to extend my utmost gratitude to the Chancellor of Makerere University for his personal support, to Management, Staff and Students of College of Engineering Design, Art and Technology, for having provided a conducive environment and supporting us in every way during the design and building of the Kiira EV. A vote of thanks goes to the University Management and the University Community for the strategic direction, administrative and moral support rendered to the Kiira EV Project Team. Your Excellency, the media, both local and international have generally affirmed our faith in our cause by the wonderful commentaries and articles that have kept flowing since the inception of the project. Your Excellency, the support that you extended to the project to build the car has been invaluable to realizing the Kiira EV. On behalf of Makerere University, we are very grateful for the presidential support toward Science and Technology Innovations. We pledge to work closely with your Office and Government in churning more Science and Technology Innovations relevant to Uganda's needs.

FOR GOD AND MY COUNTRY