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## **KEYNOTE 1: Resurrecting an Elephant Migration Route**

*Tuesday, 5 December 2023 09:10 (40 minutes)*

This research and development project led by Marc Sherratt, Sustainability Architects (MSSA) and the Rory Hensman Conservation and Research Unit (RHCRU) restores the extinct ability of the African Savanna Elephant (*Loxodonta africana*) to migrate across the Limpopo Province of South Africa. This approximately 1000 km wildlife migration corridor links existing, fenced conservation areas that already house over-populated herds of African Elephant. This route uses an elephant's sophisticated infrasonic communication as a method to "call" the animal along this route. This project has been designed to support rural communities by increasing food security and economic resilience while at the same time reversing global warming. South Africa has an overpopulation of the IUCN classified, Endangered, African Savanna Elephant (*Loxodonta Africana*) within its large, fenced conservation areas. This leads to unnatural population control including culling (as seen in Kruger National Park) and contraception (as seen in Addo Elephant National Park) of an endangered species. However these areas are usually surrounded by smaller reserves that can accommodate temporary elephant movement, if managed correctly. The tested solution presented allows for the return to the large-scale act of seasonal wildlife movement between grazing lands but now along man-made wildlife corridors that utilize smaller parcels of mainly private land. This system allows for mixed-use land use including cattle farming, wildlife breeding, tourism and staple crop farming, allowing only elephants to move but keeping other high value game / livestock secured. The proof of concept has been implemented in the Limpopo province of South Africa and consists of an Artificial Intelligence (AI) driven, automatic gate system and an infrasonic elephant communication tower (sounding tower). In combination this system allows wild elephants to transverse between electrified wildlife and farming land without direct human interference using a uniquely developed, ecologically sensitive, infrasonic "language". This project harnesses the collective intelligence of a diversely skilled professional team, from musicians to AI specialists, from zoologists to engineers. The long term vision for this project would be to connect both private and public land with wildlife corridors that could allow elephant movement in a fully connected, provincially scaled, adequately protected migration route.

### **Student or Postdoc?**

No. Not a student nor Postdoc.

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