

The Africa Radio Astronomy Programme

Our Partner Countries



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Our Vision



Build sustainable African science & technology networks



Develop skills and grow capacity in radio astronomy



Create opportunities that inspire, connect, and empower

Programme Details

The Africa Programme is the portfolio managed by SARAO to implement, collaborate and coordinate the efforts in the SKA Africa Partner countries relating to radio astronomy activities.



Programme Pillars

Human Capital

Bursaries, training, mentorship

Research & Technology

Cutting-edge instruments, data science

Infrastructure

Training telescopes, computing labs

Partnerships

Collaboration across Africa and the world



Our Impact



Ghana's Kuntunse Observatory



Online learning platforms
reaching the continent

160+ bursaries to the Africa partner countries
funded by SARAQ (plus 71 via DARA) 



Training telescopes rolled out across Africa



Big Data schools and High-Performance
Computing labs established

High Performance Computing And Big Data

The program, adopted in 2016, aims to build HPC capabilities in SKA African Partner countries.

The Centre for High Performance Computing (CHPC) has provided computer racks and training workshops, while DARA supplied PC clusters and runs annual Big Data Challenge workshops.

Training includes Linux and Python, delivered through a hybrid model by the CHPC and local tutors.



Flagship Projects



The Transient Array Radio Telescope (TART)

Making radio astronomy accessible

TART instruments were installed in Mauritius and Kenya in 2024. They were also installed in Botswana, Zambia and Ghana in 2025. Installations are being scheduled for Mozambique, Madagascar and Namibia.



HartRAO (South Africa)

Training and workshops

HartRAO is diversifying its role to be a premier African training facility for space sciences and technology. It is also positioned as a geodesy center that plans to become accredited to provide wider professional certifications.



Interferometer Training Telescopes

Building local expertise

Its purpose is to provide training in various fields, including single dish science, interferometry, maintenance, and operations. The plan is to install two 3-metre dishes in each partner country. The dishes are being designed internally at SARAO. A key goal of the project is to implement a skills transfer program with the partner countries. *SARAO is actively seeking collaboration* for the manufacturing and installation of the dishes.



Africa F.I.R.S.T.

(Africa Forefront Initiative for Resilience Science and Technology)

CHALLENGE

Achieving the 17 Sustainable Development Goals (SDG's) in Africa.

The key to unlocking the 17 SDGs is information

1 Environment

Data measuring the state of the environment. Collected by people or devices on the ground, in the ocean and atmosphere

2 Space

Space sciences data and Earth observation data Satellites and space based infrastructure

3 Society

Societal data from individuals and communities Quantitative and Qualitative research and surveys



DATA

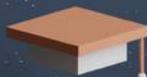
Data is the basic raw material to build the tools for our resilience tomorrow

SUPER COMPUTER

Made up of interconnects, input and output systems, memory and processor cores. Augmenting capabilities of existing facilities through partnership.

OPEN SOURCE DATA PLATFORM

The first cloud-based data analytics platform with open access to data.



ACADEMIA

Fundamental research and research products



GOVERNMENT

Social, environmental and geospatial information for decision making solutions and information for decision making



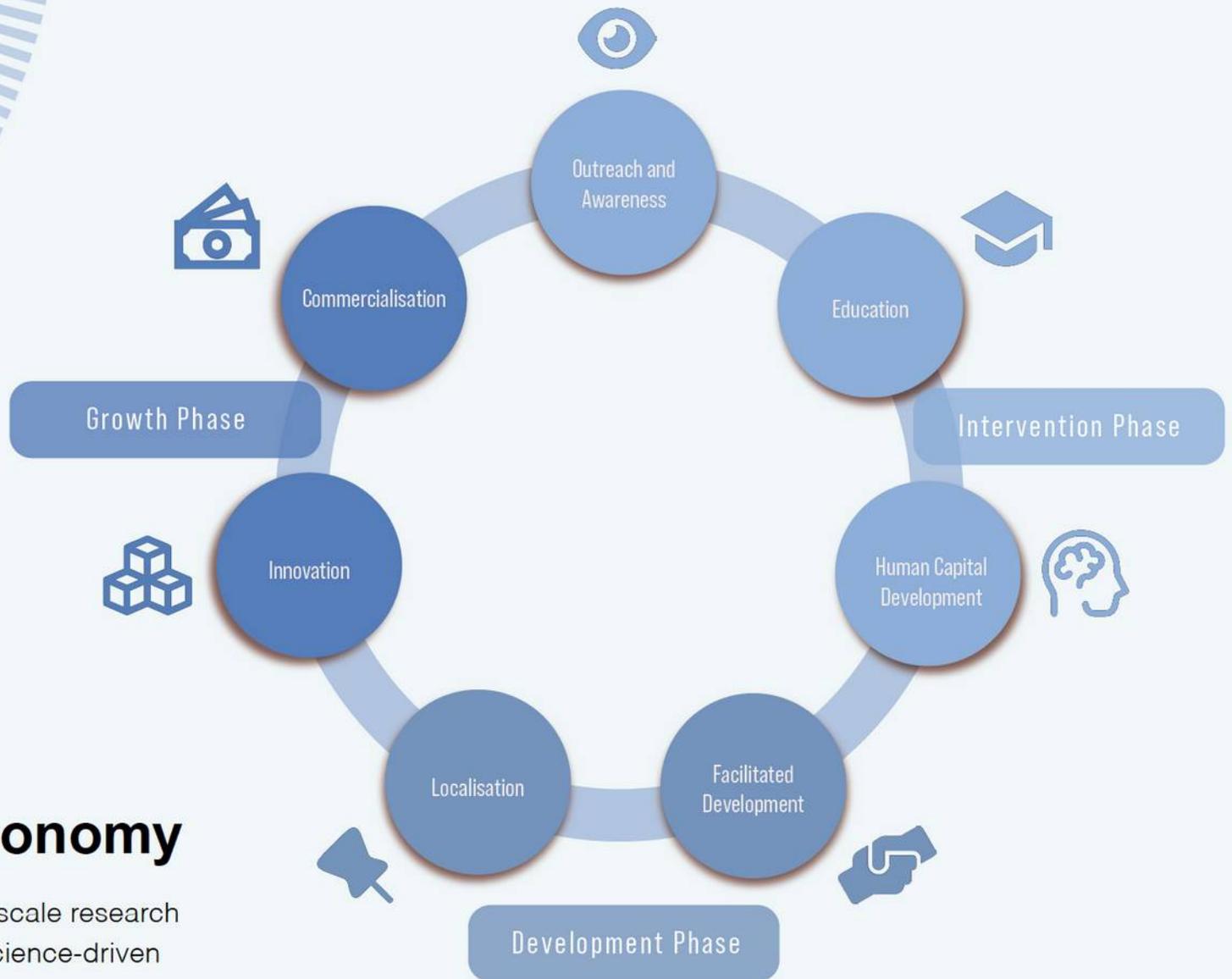
INDUSTRY

Value added services Digital Entrepreneurs and the Digital Economy



Science Driven Economy

The MeerKAT sustainability as a large-scale research infrastructure is rooted in following a science-driven economic benefit (SDEB) model.



Africa2moon

This project aims to implement a low-frequency radio telescope designed and built in Africa, to be deployed on the far side of the Moon.

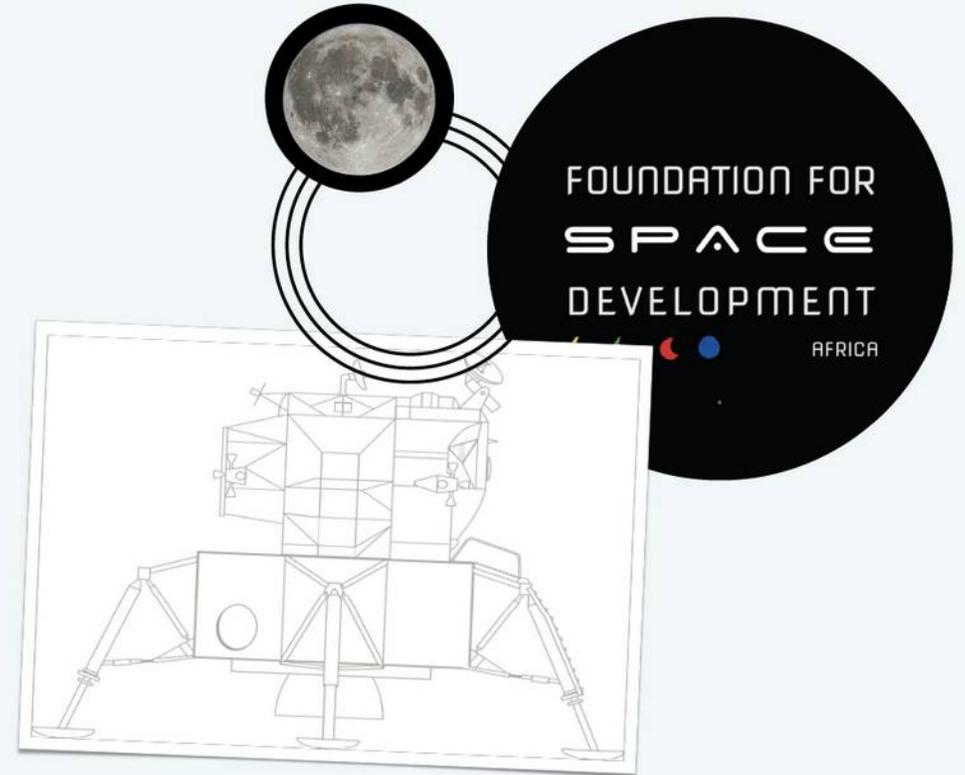
Key Objective

Over several years, the program will engage the public and scientists, culminating in the deployment of 55 "Moon Balls" on the lunar surface. Each "Moon Ball" will represent a nation in Africa. The technology demonstrated will be launched to the lunar South Pole in 2029.



Goals

- Conduct groundbreaking radio astronomy science in low-frequency on the moon.
- Inspire future generations in developing nations and raise space awareness across Africa.
- Demonstrate that diverse collaboration can overcome any challenge.





Thank you

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