

The Nelson Mandela African Institute of Science and Technology, Arusha (AIST-Arusha)

By

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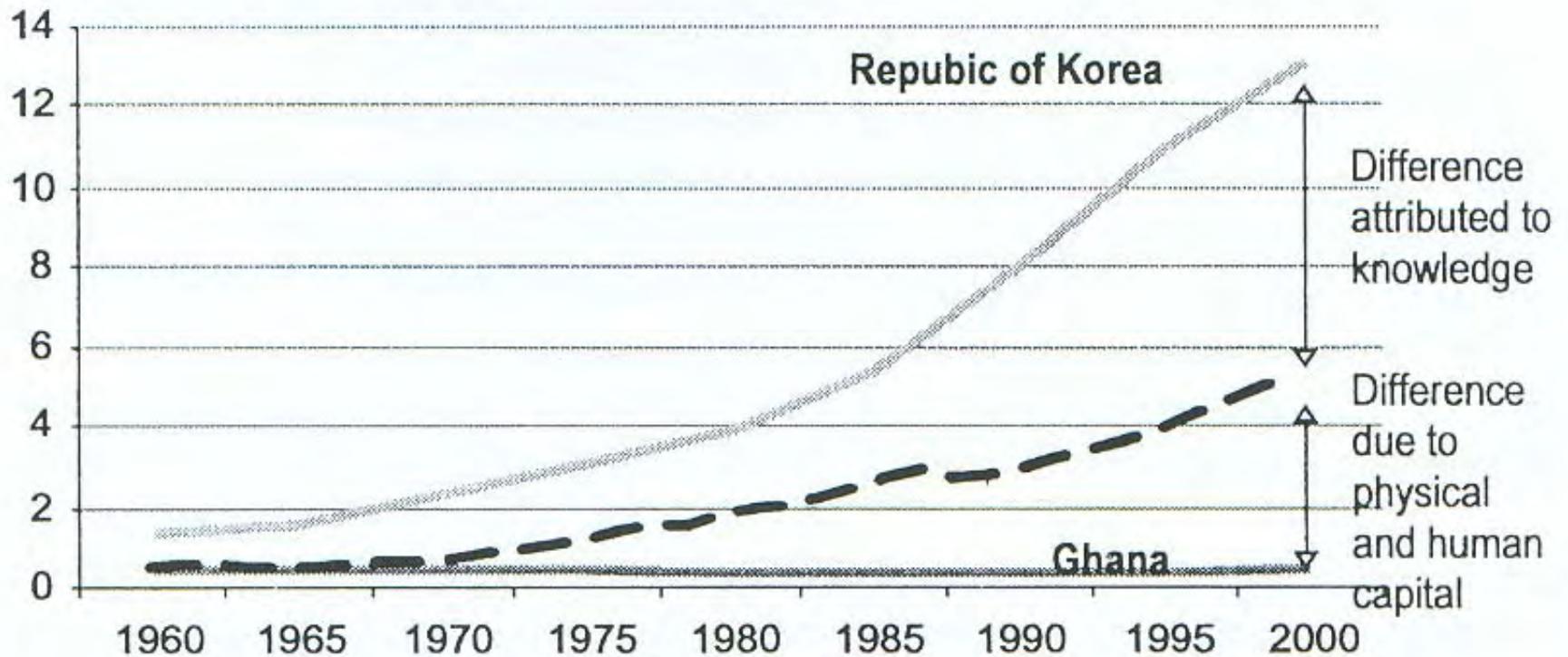
Acknowledgements

- Government of Tanzania
- AIST-Arusha Task Force
- East African Community Secretariat in Arusha
- Wole Soboyejo and Nosa Egiebor of ASC & ARIST
- Philip Griffiths and Arlen Hastings SIG and ISAB
- Arlen Hastings of ISAB, ASC & ARIST
- Colleagues at NM AIST-Arusha, Alfonse Dubi and Dunstan Shemweta NMI Board

Introduction

Knowledge makes the difference between Poverty and Wealth

Thousands of constant
1995 U.S. dollars



Source: World Bank, K4D program.

The Origin of the Concept

- Jim Wolfensohn meeting with African leaders (including Nelson Mandela), around 2001/02
- Nelson Mandela suggested to Jim that world class African Institutes of Science & Technology (AISTs) in sub-Saharan Africa are perhaps Africa's greatest need:
 - Similar to the Indian Institutes of Science and Technology (IITs)
 - Other comparable institutions include MIT, Cal Tech, Cambridge, Stanford, Princeton, etc
- Frannie Leautier, Vice President of the World Bank, was given the task of making this happen

The Origin (contd)

- Hippolyte Fofack, an African WBI official, was charged with developing the concept in collaboration with some African in the diaspora;
- The AISTs are being developed into a network world-class institutions, to promote excellence through a **competitive process**;
- The AISTs are expected to play a leading role in the promotion of sciences within the continent, **through strong linkages with existing national universities, and research institutions**;
- Heads of African States met in Abuja in January 2005 and agreed to establish 4 AISTs - **for Western, Eastern, Central and Southern Africa.**

Strategic Issues and Direction

- Knowledge creation; and
- Application of knowledge for economic growth and diversification.

Objectives of the AIST

- ❑ To catalyze the development of world class science and technology in Africa in ways that can stimulate economic growth and generate employment, and turn brain drain into brain gain;
- ❑ To provide the best facilities for graduate and post-doc studies and research;
- ❑ To bridge between research and industrial development through:
 - ❑ strong link with industry for technology transfer; and
 - ❑ the establishment of technology parks around the AISTs for seeding innovations, with technology-cum-business incubators for spin-off technological firms

NM AIST-Arushu

NM AIST-Arusha for the Eastern African Region

- Arusha was selected as one of 4 early AISTs
- Government of Tanzania quickly responded by offering 3285 acres of at Karangai, in the outskirts of Arusha
- Former CAMARTEC premises (ca 199 acres) were also handed over to serve as start-up campus for NM AIST-Arusha on October 31, 2008

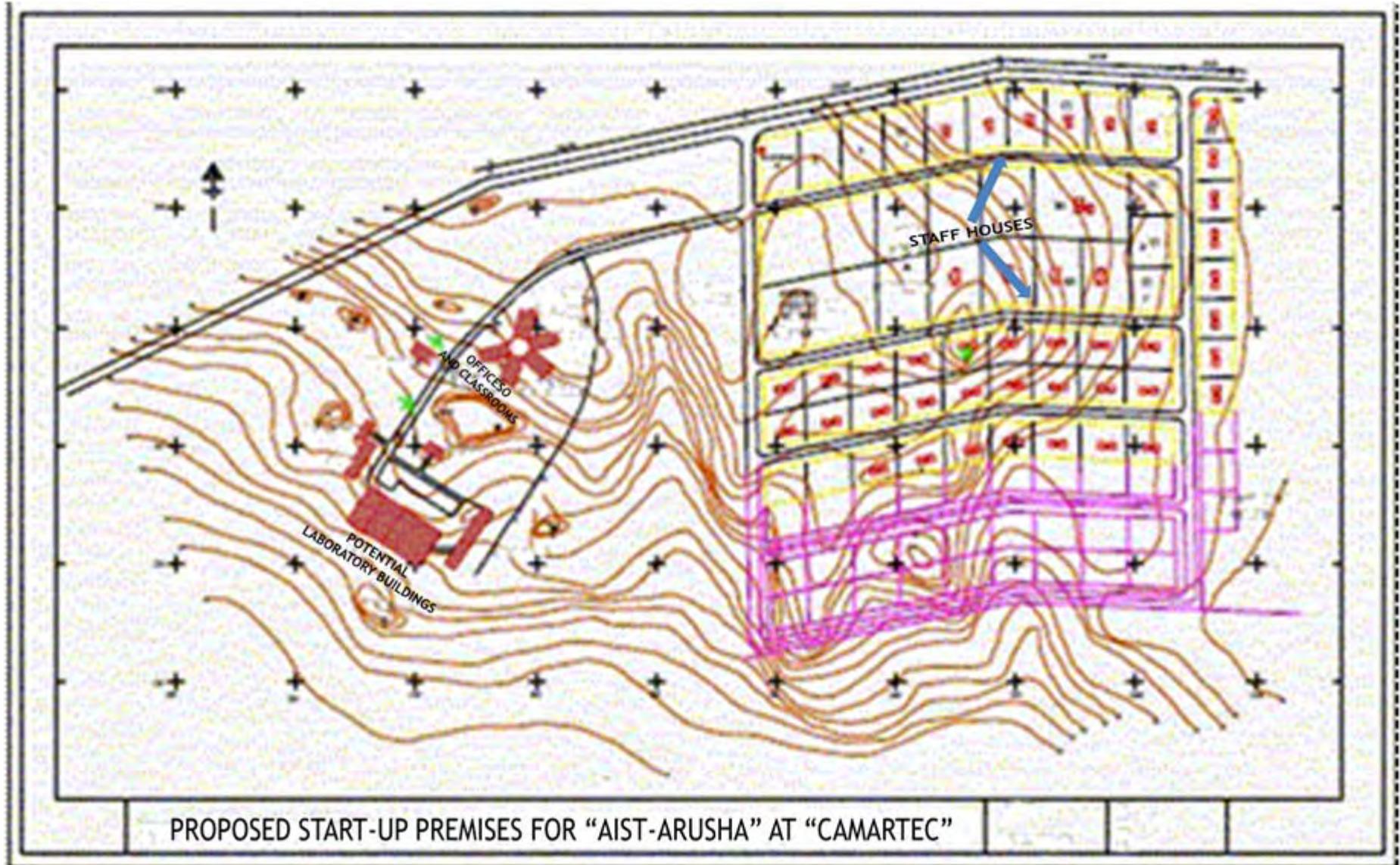
The United Republic of Tanzania



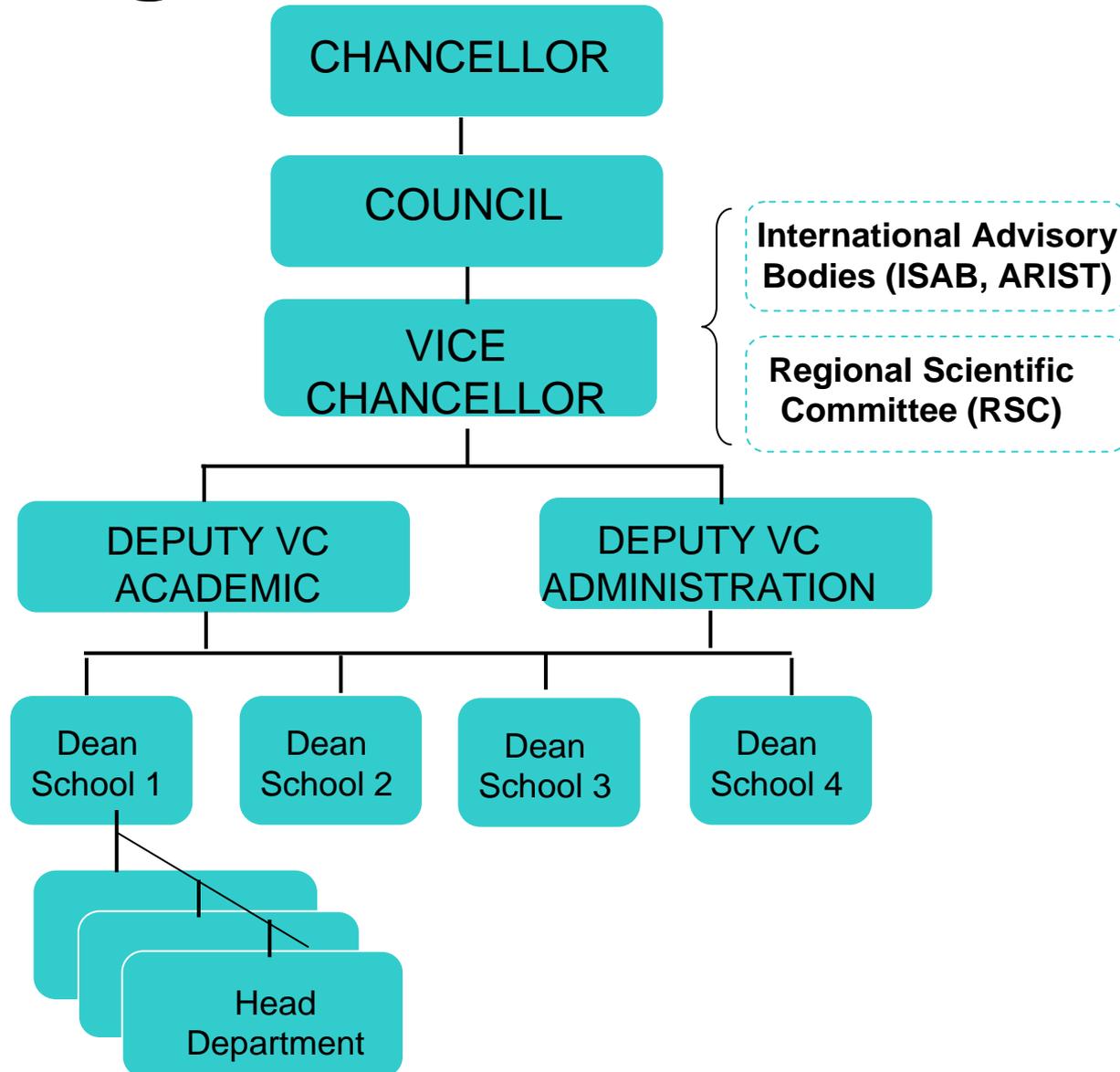
Size and Location of Former CAMARTEC and Karangai Sites

- Former CAMARTEC Site
 - Size: 199 acres of land
 - Distance from Arusha City Centre, 16 km
 - Distance to Kilimanjaro Airport (KIA), 35 km
 - Distance to main road, 5 km
 - Distance to Karangai, 20 km
- Karangai Site
 - Size: 3,285 acres of land
 - Distance from Arusha City Centre, 36 km
 - Distance to KIA, 55 km via former CAMARTEC

Former CAMARTEC (199 Acres)



Organization Structure



VISION of NM AIST-Arusha

To become a world-class institution of higher learning dedicated to the pursuit and promotion of excellence in science and engineering and their applications for economic growth and sustainable development in Africa.

MISSION Statement

To deliver and promote high quality and internationally competitive teaching and learning, research and innovation, and public service in science, engineering and technology for enhanced value addition to people and natural resources, and entrepreneurship to stimulate and catalyze economic growth and sustainable development in Africa.

The Thrust of NM AIST-Arusha

NM AIST-Arusha will:

- Seek to stimulate and catalyze intensification of agricultural production, and value addition to natural products.
- Emphasize linkage to society and the local industry, and scientific and technological response to local needs.
- Strive for a combination of strong local connections and strong global connections.

Key Features of the Curricula

- Four main fields of training
 - Basic Sciences
 - Engineering and Technology
 - Life Sciences and Bio-Engineering
 - Business and Humanities as service courses
- Focus on postgraduate training and post-doctoral research

Initial Programme Clusters

- Materials Science & Engineering
- Bio-Sciences & Engineering (*life sciences*)
- Water and Environmental Science & Engineering
- Mathematics and Computational Science & Engineering (*incl. ICT*)
- Humanities and Business
 - Management and Entrepreneurship
 - Innovation Management and Competitiveness (*incl. IPR*)
 - Law, Philosophy and Ethics
 - Communication Skills

Staffing and Students

- Core permanent and contract faculty recruited competitively from within and outside EA Region
- Pool of visiting faculty from the Diaspora coordinated by ARIST
- Students to be admitted from the EA Region, and SSA generally.

Financing Mechanism

- Capital development funds from:
 - Government of Tanzania
 - Multilateral sources in form of grants/soft loans
 - Bilateral sources in form of grants/soft loans
- Operational funds from student fees
- Research funds sought through winning proposals
- An Endowment Fund for Excellence
- Buy-in contributions by EA member states

Sustainability

- Endowment Fund for Excellence established through contributions from public and private sources world-wide to:
 - Allow dual funding, and hence mitigate over-dependence on one country
 - Sustain high quality education
 - Ensure long-term financial sustainability;
- Student Fees;
- Student loans managed by Bank.

Key Proponents and Supporters of AIST-Arushu

- World Bank initially through the World Bank Institute
- African Development Bank
- University of California System
- Princeton University System
- State University of New Jersey (RUTGERS)
- ISAB Chaired by Phillip Griffiths
- ASC/ARIST Chaired by Wole Soboyejo

Some Important Timelines

Activity	Date	Remarks
Submission of request to World Bank	Dec '08	WB reaffirmed commitment to support AIST-Arusha
Registration of AIST-Arusha	April '09	Registration granted by TCU
Appointment of Management of AIST-Arusha	July '09	Rehabilitation and operationalization
Rehabilitation and face-lifting of start-up campus	Oct '09	To be managed by PPL
Development of infrastructure to the two campus sites	In progress	Coordinated by Inter-Ministerial Committee (IMC)
Curriculum development	- ditto-	Supported by ARIST
Staff and faculty recruitment	Soon	ARIST & ISAB to assist
Launching of AIST-Arusha	Early 2010	
Commencement of training	Early 2010	

Conclusion

- RISE and NM AIST Arusha have a lot in common.
- Collaboration between them has the potential of benefitting Sub-sahara Africa a great deal



Thank you very much !
Asanteni Sana !

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