



UNITED STATES AFRICA COMMAND

Science and Technology Priorities

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Africa – A Complex Continent

- Violent Extremism
- Piracy
- Democratization
- Trafficking
- Population Growth
- Strife and Instability
- Growing Economy and Trade
- World's Newest Country – S. Sudan
- Pandemic Disease – HIV/AIDS and Malaria



Large
Diverse
Complex

11.7 million square miles
3-1/2 times the Continental United States
54 Nations, 1 Billion people
Expected to double by 2050
Over 800 ethnic groups and 1000 languages



UNITED STATES AFRICA COMMAND

Guiding Principles

Long Term Investment – Effective and Focused

A Safe, Secure and Stable Africa is in our National Interest



Africans are best able to address African challenges

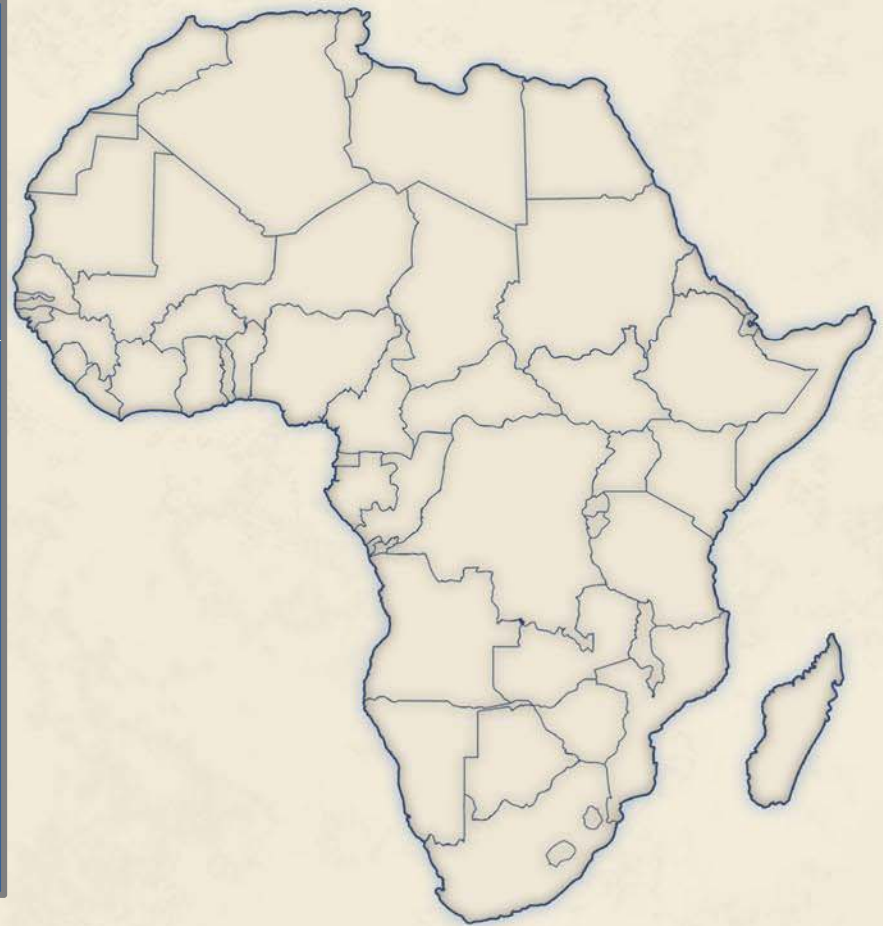
End States We Seek:

- America, Americans and American interests are protected from threats emanating from Africa
- African militaries contribute to the safety, security, and stability of their nations and their regions
- Africa is not a safe haven for al Qaeda or other violent extremists
- Africans are protected from the threat of mass atrocities



Our Mission

Africa Command protects and defends the national security interests of the United States by strengthening the defense capabilities of African States and regional organizations and, when directed, conducts military operations, in order to deter and defeat transnational threats and to provide a security environment conducive to good governance and development.



S&T Focus Areas

S&T focus areas:

- **Intelligence, Surveillance, and Reconnaissance (ISR)**
- **Joint Personnel Recovery**
- **Identity Resolution**
- **Medical Security**
- **Reduce Logistics Footprint**
- **Automated Language Translation**



Intelligence, Surveillance, & Reconnaissance (ISR)

Requirement: Improved ISR for the AFRICOM Area of Responsibility

- Improved persistence and range
- Improved multi-intelligence sensor capabilities to include Processing, Exploitation, Dissemination (PED) and communications – End-to End Architecture
- Integrate government and commercial systems for improved Maritime Domain Awareness
- Small logistics footprint



Joint Personnel Recovery (JPR)

Requirement: Improve JPR on the Africa Continent

- **Improved one/two-way messenger system that:**
 - Is Global Positioning System (GPS) enabled, satellite and Global system for Mobile Communications (GSM) based
 - Provides continuous tracking of individual transmitters
 - Has user activated Operational Functions
 - Is non-descript and attachable to military and civilian clothing
 - Includes Friendly Force Tracking



Identity Resolution

Requirement: Improved capability to identify persons of interest

- Improved capacity and information sharing capabilities to include a community web interface
- Cross discipline tool for case management of materiel from tactical to strategic level
- Improved data archiving system that supports metadata and documents in spoken languages (e.g Swahili, French, Arabic, Portuguese, Hausa)



Medical Security

Requirement: Enhance partner nation's militaries in developing medical screening and surveillance, education and training, and treatment capacity for epidemics and epidemic prone diseases with an emphasis on malaria

- **Prevention**

- Improved physical barrier control
- Improved vaccine development

- **Early detection**

- Improved infectious disease surveillance
- Enhanced diagnostics
- Globally linked Global Emerging Infections Surveillance (GEIS)
- Improvements in technology to increase laboratory capacity



Reduce Logistics Footprint

Requirement: Develop innovative, low cost, and small-footprint approaches to achieve command objectives in support of operations, exercises, and engagements.

- **Mobile/portable water and energy capabilities**
- **Long Range >1500nm “Smart” Unmanned Aerial System**
- **Advanced thermo reactive material for Containerized Living Units (CLU’s)**
- **Portable, light, deployable power (re)generation**
- **Cargo tracking mechanisms relying on existing infrastructure or carrier operated solutions that feed DoD systems of record**



Automated Language Translation (ALT)

Requirement: Ability to translate written and spoken language for individual communication and sources of unclassified information

- Improved tools for ALT of files in multiple document and internet formats to include real-time chat
- Improved machine language translation capability for spoken languages
- Rugged portable (Personal Digital Assistant size) for tactical data collection with ALT
- Target languages are French, Portuguese, Swahili, Amharic, Arabic, Arabic-Sudanese, Hausa, Somali



Summary

- **US Africa Command S&T requirements are focused on Command Priorities, Theater Strategic Objectives and desired End States**

