

# J8 Resources

## J80 Strategic Capabilities

### J804 Science, Technology & Innovation (ST&I)





# 2016 USAFRICOM Posture Statement Highlights

**TCP African Partners**

**Political Instability and Terrorism Threat Level**

**The True Size of Africa**

**AFRICA'S ISLAMIST TERROR**  
 23 dead  
 37 dead  
 187 dead

**COALITION MARITIME CAPABILITY**

**Need Based WiFi Formula**

**Oil Theft Piracy**

**Main Operating Areas**  
 Areas of influence or Transit  
 Foreign Fighter Movement  
 Criminal Network and Illicit Trafficking  
 ISIL Presence

**Labels on Map:** AQIM, Al-Murabitun (MBM), AAS, ANF, ISIL, MSG, AGAP, Boko Haram, LRA, Al-Shabaab

**Other Text in Collage:**  
 African Partner Outbreak Response Alliance  
 THE POSITION  
 YOU  
 UNCLASSIFIED 2016



# A Complex and Challenging Environment

- Population estimate of 1 billion (2010) with predicted growth to 1.6 billion by 2030... already struggling with wide-spread unemployment and disenfranchisement
- Many Africans have an understandable fear and distrust of non-African governments and security forces
- Criminal and terrorist networks exploit marginalized masses and take advantage of ungoverned and under governed areas
- Requirements ↑ Resources ↓ (FY14 → FY15)
  - 68 → 75 Joint Operations
  - 11 → 12 Joint Exercises
  - 363 → 400 Security Cooperation Activities





# Science, Technology & Innovation

## Role, Mission, Vision, Services

### ROLE

- Lead Command's S&T activities.

### MISSION

- Lead, plan, coordinate and manage Command's support for and participation in S&T activities *aligned to Command-validated S&T requirements.*

### VISION

- A world-class professional team that supports and **leverages the resources of the DoD S&T enterprise to minimize the Command's capability gaps.**

### SERVICES (S&T activities)

- Sponsorship
- Endorsement
- Program Management
- Project Management
- Staffing

DoD Account	FY14 Enacted	FY15 Enacted	FY16 Enacted	FY15→16
RDT&E	63.5	64.0	70.0	9.4%
S&T	12.0	12.3	13.3	8.2%
6.1 BR	2.2	2.3	2.3	1.4%
6.2 AR	4.6	4.6	5.0	7.7%
6.3 ATD	5.2	5.3	5.9	11.5%
<b>TOTAL</b>	<b>75.5</b>	<b>76.3</b>	<b>83.3</b>	<b>9.0%</b>

**FY16 Appropriation: \$83.3B, 202 line items, 126 labs, 9.0% increase year previous. DoD employs the largest amount of scientists and engineers (150K) in the world.\***

\* National Science Foundation (NSF) Science and Engineering Indicators 2014 Arlington, VA (NSB 14-01) | February 2014



# What are AFRICOM S&T Activities?

## Currently, PROCESSES and PRODUCTS related to:

- S&T Integrated Priority List (STIPL), Requirements, Focus Areas
- S&T Demonstrations, Experiments and Capability Transitions
- S&T supporting Engagements, Exercises or Operations
- Joint Concept Development & Experimentation (JCD&E)
- Joint Capabilities Technology Demonstrations (JCTD)
- Advanced Technology Demonstration (ATD)
- Technical Assessment Panels (TAP)
- Technical Interchange Meeting (TIM)
- Coalition Warfare Program (CWP)
- Rapid Innovation Fund (RIF)
- Quick Reaction Test (QRT)
- Enabling Technology (ET)
- Defense Information Technical Center (DTIC) Reading Room
- Long-Range Research and Development Planning Program (LRRDPP)
- USTRANSCOM Joint Deployment & Distribution Enterprise (JDDE) Research, Development, Testing & Engineering (RDT&E) Calls
- Industry, Government and University S&T DV Visits / Office Calls
- MOA-designated LNO responsibilities
- Quick Reaction Capability Task Force (QRC-TF) SVTC (monthly)
- ASD(R&E) Combatant Command (CCMD) S&T Committee SVTC (quarterly)
- Joint Concepts Working Group (JCWG) SVTC (bi-monthly)
- Defense, Diplomacy, Development (D3) Innovation Summit Challenge
- United Nations (UN) Peacekeeping Operations (PKO) Technology Sub-Working Group
- Joint Concepts (JC) General Officer Steering Committee (GOSC) SVTC (semi-annual)
- United States – South Africa Acquisition & Technology Working Group (ATWG) (annual)
- Defense Security Enterprise CCMD Information Sharing All Threat Indicator and Warning Stakeholder Group





# USAFRICOM ST&I Focus Areas



## ISR

- Long-Range / Long Endurance, Persistent Collection, Radio Frequency Direction Finding (RFDF), Fused Multi-Int Airborne / Full Motion Video (FMV), Light Detection and Ranging (LIDAR), Foliage Penetration (FOPEN), Coalition / Airborne / Autonomy-enabled Processing, Exploitation, Dissemination (PED), Machine Language Translation



## IDENTITY ACTIVITIES:

- Biometrics, Forensics, Documentation and Media Exploitation (DOMEX), Denial of Anonymity, Repository, Interoperability



## MARITIME DOMAIN AWARENESS:

- Beyond Line-of-Sight, Reporting, Sensor Interoperability, Automated Anomaly Detection, Common Maritime Picture (CMP)



## PERSONNEL RECOVERY:

- Personnel Recovery / Combat Search and Rescue-enablers, Drone-assisted, Modeling & Simulation (M&S).



## COMMUNICATIONS:

- C4ISR for Multi-national / Coalition / Joint Operations, Expeditionary / Scalable "Blackberry to Joint Network Node"



## COUNTER-IED:

- Defeat the Device / Attack the Network / Train the Force-enablers



## MEDICAL:

- Disease Prevention, Immunization, Detection, Diagnosis, Treatment, Biosurveillance, Modeling, Informatics, Telemedicine, Remote / Austere Trauma Medicine



## OPERATIONAL ENERGY:

- Reduced Expeditionary Footprint, Alternative Energy, Waste-to-Energy Disposal, Water Purification, Energy Efficient Housing, Power Distribution, Force Protection



## NON-LETHAL SYSTEMS:

- Mobile Counter-Personnel (Sound, Light, Munition), Counter-Materiel (Vehicle, Vessel, Radio-Frequency), Active Denial



# AFRICOM ST&I Process: from Requirements to Projects

	Technology Requirements	Vignettes	Focus Areas	Projects	Projects Report
<b>Description</b>	Characteristics of each Technology Requirement is captured on slide.	Multiple Technology Requirements may be illustrated within a Vignette to provide additional context.	Technology Requirements that share common attributes or application will bin within a Focus Area with a Directorate designated as OPR.	Cross-walk of Projects aligned to Tech Requirements, Focus Areas, IPL, Lines of Effort (LOE), Intermediate Military Objectives (IMOs) or other requirements.	Annually send a status report on projects by Focus Area to OPRs. Details who is doing what to reduce capability gaps.
<b>Example</b>	Reduce our reliance on fossil fuels in the Base Operating Support (BOS) of Cooperative Security Locations (CSLs).	CSL X requires N diesel tanker truck deliveries a month; cost can be captured in \$, force protection, OPSEC, risk to mission, etc.	Operational Energy (J4)	List of Alternative Energy Projects related to solar, wind, geothermal, waste-to-energy, etc.	A status on alternative energy projects within DoD of interest to J4 allows for additional support or redirection.



# Focus Areas, Key Take Away, POCs

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- ISR, PR, C-IED, OE, IDRES, MDA, Comm, Medical, Non-Lethal.
- ST&I Office (ACJ804) manages USAFRICOM's **novel materiel** and **non-material** solution responsibilities.
- USAFRICOM S&T POCs:

Mr C. Van Anderson

DSN 314-421-7921

COMM +49 711-729-7921

NIPR [christen.v.anderson4.civ@mail.mil](mailto:christen.v.anderson4.civ@mail.mil)

SIPR [christen.v.anderson4.civ@mail.smil.mil](mailto:christen.v.anderson4.civ@mail.smil.mil)

COL Richard Gulley

DSN 314-421-2702

COMM +49 711-729-2702

NIPR: [richard.g.gulley.mil@mail.mil](mailto:richard.g.gulley.mil@mail.mil)

SIPR: [richard.g.gulley.mil@mail.smil.mil](mailto:richard.g.gulley.mil@mail.smil.mil)

Mr Ricardo Arias

DSN 314-421-3245

COMM +49 711-729-3245

NIPR [ricardo.arias.civ@mail.mil](mailto:ricardo.arias.civ@mail.mil)

SIPR [ricardo.arias.civ@mail.smil.mil](mailto:ricardo.arias.civ@mail.smil.mil)

MAJ Brian Hannah, PHD

DSN 314-421-4752

COMM +49 711-729-4752

NIPR [brian.p.hannah.mil@mail.mil](mailto:brian.p.hannah.mil@mail.mil)

SIPR [brian.p.hannah.mil@mail.smil.mil](mailto:brian.p.hannah.mil@mail.smil.mil)



# Questions?

