



Operational Environment and Threat

A Complex World and Evolving Threats



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Agenda



- ***Global Hotspots***
- ***Current Threats***
- ***12 Trends***
- ***Future Operational Environment***
- ***Emerging Threats***



Bottom Line Up Front



- ***DoD Personnel (Military and Civilians) Face Diverse Threats across the Globe***
- ***Security Environment Challenges Expanding ... Will Be Harder To Support Allies and Partners***
- ***The Army Faces Significant Challenges in Niche Capabilities Overmatch***
- ***The Next Deployment will be in a Different Operational Environment than the Last 15 Years***



OE Threats Video



Current Threats



The Islamic State



- The Islamic State evolved from al-Qaeda in Iraq
- Controlled large swaths of territory in Iraq and Syria... territory is shrinking
- Conversely, terrorist operations and affiliates are expanding globally
- Islamic State attacks have occurred in 23 countries across Europe, Asia, North America, and the Middle East
- The Islamic State continues to evolve and transform as an organization



- TTPs include:
 - IEDs (vehicle-borne, suicide, etc)
 - Chemical attacks
 - Hostage taking/kidnapping
 - Beheadings
 - Indirect Fire
 - Anti-Air
 - Deception

The Islamic State will likely persist in some form or fashion



Network-Inspired Terrorist Attacks



- Recently inspired by Islamic State but potential for numerous other groups/causes
- Difficult to get early indications and warning of impending attacks
- Islamic State and other terrorist organizations & ideological causes get credit for attacks with no cost
- ISIL has previously released sensitive information on U.S. military personnel as “kill list”
- Media coverage and social media coverage of network-inspired attacks can encourage copycats



- In addition to conventional terrorist attacks, network-inspired actors or contracted highly empowered individuals (cyber mercenaries) could launch cyber attacks against DoD systems, sites, and personnel

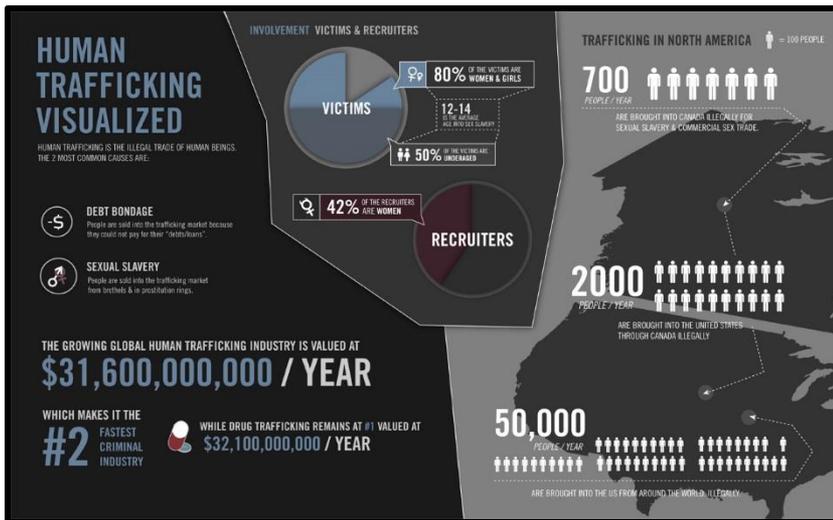




Transnational Criminal Organizations



- Transnational drug trafficking poses a strong threat to the U.S. at home and to U.S. security interests abroad
- Mexican drug traffickers have rapidly increased production of heroin and methamphetamine
- Human trafficking is highly profitable for TCOs and opens the door to potential smuggling of terrorist/criminal operatives
- TCOs focused almost exclusively on profit not ideology

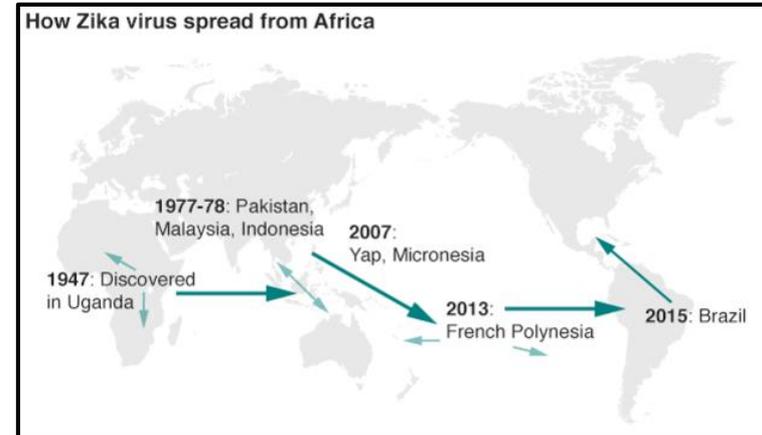




Diseases/Epidemics



- Diseases and epidemics are threatening to DoD personnel and families' health... also can potentially cause internal conflict & crises in numerous countries
- Zika virus is currently biggest disease threat... identified in Brazil in May 2015
- Zika is spreading rapidly... it can be sexually transmitted or contracted from *Ae aegypti* mosquitos or through blood donations
- Currently no vaccine available
- Large population of *Ae aegypti* mosquitos exist in FL, TX/LA Gulf Coast, PR, U.S. Virgin Islands, HI, and portions of AZ & CA
- Pregnant women at very high risk





Looking at the Future: Emerging Threats



12 Trends We Are Watching

Climate Change/ Resource Competition



Increase level of Human Performance



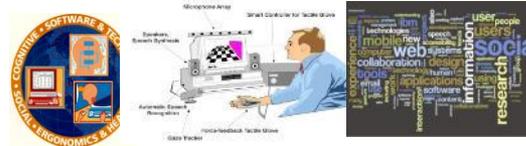
Cyber & Space



Economic Rebalancing



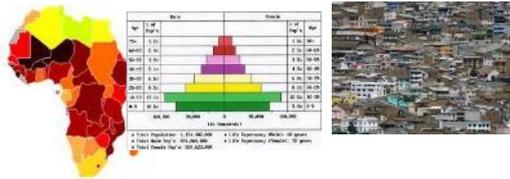
Human Computer Interaction



Artificial Intelligence



Demographics and Urbanization



Technology, Engineering & Manufacturing



Big Data



Collective Intelligence



Robotics



Power Generation & Storage





The Complex Environment



Actions by an adversary that are short of armed conflict

Technology transfer
Ubiquitous media
Operations among populations
Hybrid Strategies
Non-state actors



Hide in complex urban terrain



Area Access/Area Denial strategies



Steal, copy, and adapt technology



Employ proxies and criminal networks

Capability overmatch

WMD

Cyber

Space

Urban Complex Terrain

Increased momentum of human interaction



Threat Investments



...Direct Fire



...Protection



...Indirect Fire



...Air and Missile Defense



...Counter-precision



***...Mobility/
Counter-mobility***



***...Intelligence, Surveillance
& Reconnaissance***



... Cyber



***...Weapons of Mass
Destruction***



Unpacking the Potential for Overmatch

Current & Emerging (through 2025)

Cannon / Rocket Artillery



The Battle of Agincourt

Missiles



Robotics / UAV



Shape Charges



Active Protection



IADS & Manpads



Computing / Big Data



Armor (anti armor)



C3 / Deception



Future (2025 - 2050)



Pearl Harbor

Contested over Time



Siege of Yorktown

Laser Weapons



Chem / Bio Weapons



EDKEW (rail guns)

RF Weapons



Cyber



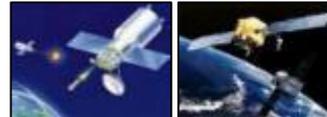
Internet of Things



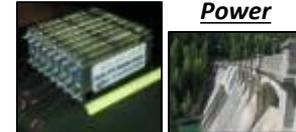
Synthetic Bio



Space



Power



Energetics



- Combat Vehicle
- Cyber Electromagnetic
- Expeditionary Mission Command
- Cross Domain Fires
- Advanced Protection
- Future Vertical Lift
- Robotics & Autonomous Systems
- Soldier Team Performance



Win in a Complex World

Questions?