



# Operational Environment and Threat

## A Complex World and Evolving Threats



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# Agenda

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



# ***Bottom Line Up Front***

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- ***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





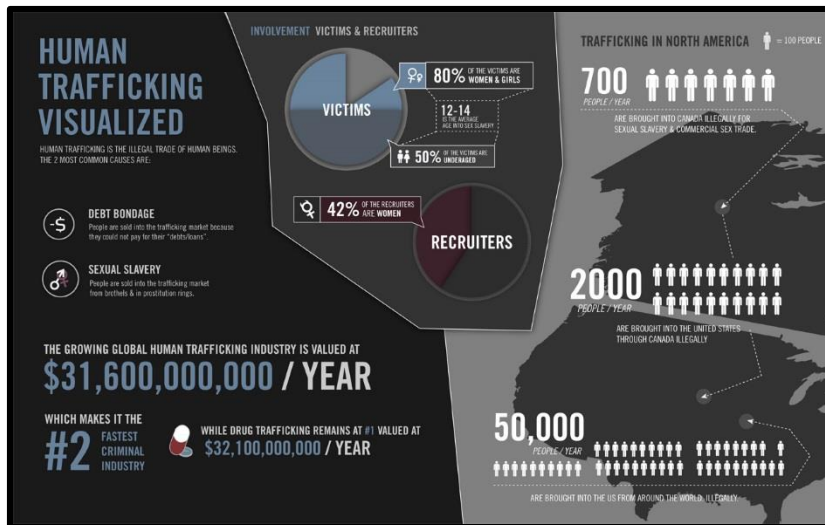


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# Transnational Criminal Organizations



- 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

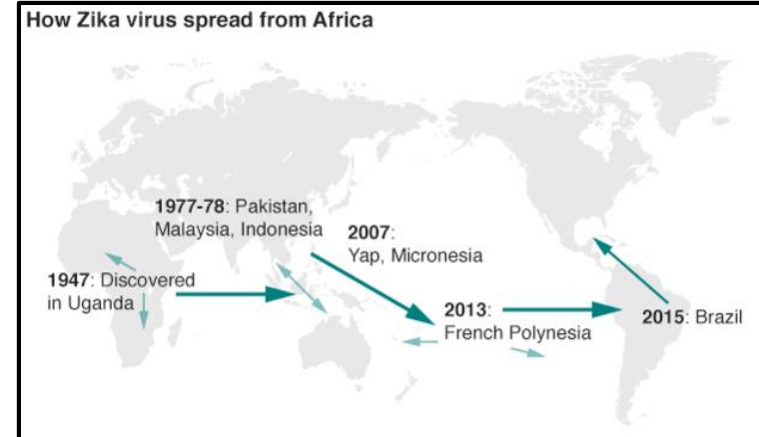






# Diseases/Epidemics

- 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***



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# 12 Trends We Are Watching

## Climate Change/ Resource Competition



## Increase level of Human Performance



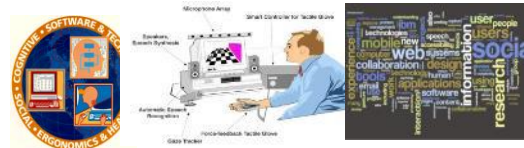
## Cyber & Space



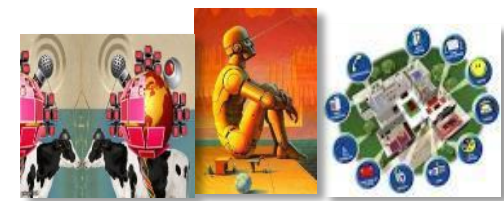
## Economic Rebalancing



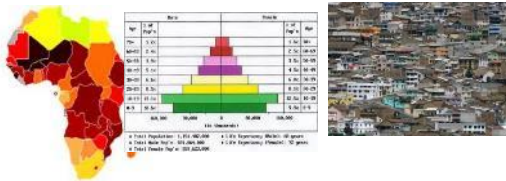
## Human Computer Interaction



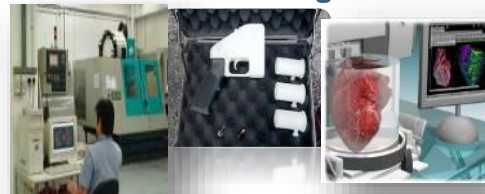
## Artificial Intelligence



## Demographics and Urbanization



## Technology, Engineering & Manufacturing



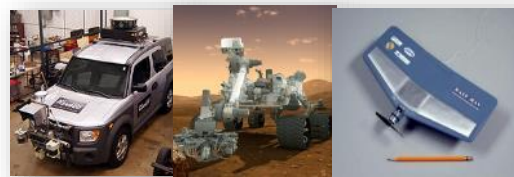
## Big Data



## 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





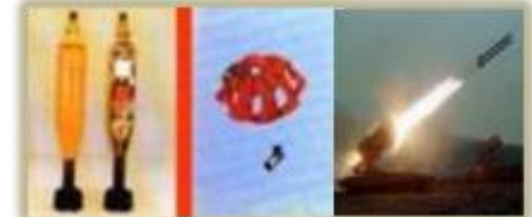
# Threat Investments



***...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



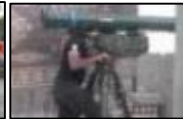
IADS &  
Manpads



Computing / Big Data



Armor  
(anti armor)



C3 /  
Deception



## Future (2025 - 2050)



*Pearl Harbor*

Laser  
Weapons



Chem / Bio  
Weapons



EDKEW (rail guns)



*Siege of Yorktown*

## Contested over Time

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?