



# Tomorrow's War

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Capt Lindsay Cronin

Capt Lloyd Hutton

Capt Christine Kistler

Capt Brad Koehler

Capt Tahichi Richardson

Capt Kayla Raisor

Capt John McCashland

Capt Andrew Morton

Capt Collin Stevenson

Capt Shannon Velasquez

Capt Jared Bruff

Capt Will Miller



# Scope



- Based on Adm. James Winnefeld's six national security priorities:
  - **WHAT** does Tomorrow's War look like?
  - **HOW** will the AF organize, train, equip over the next 30 yrs?
  - **WHY** are these the focus areas?
- The future and its challenges as we see it
- Our proposed course of action to meet these challenges



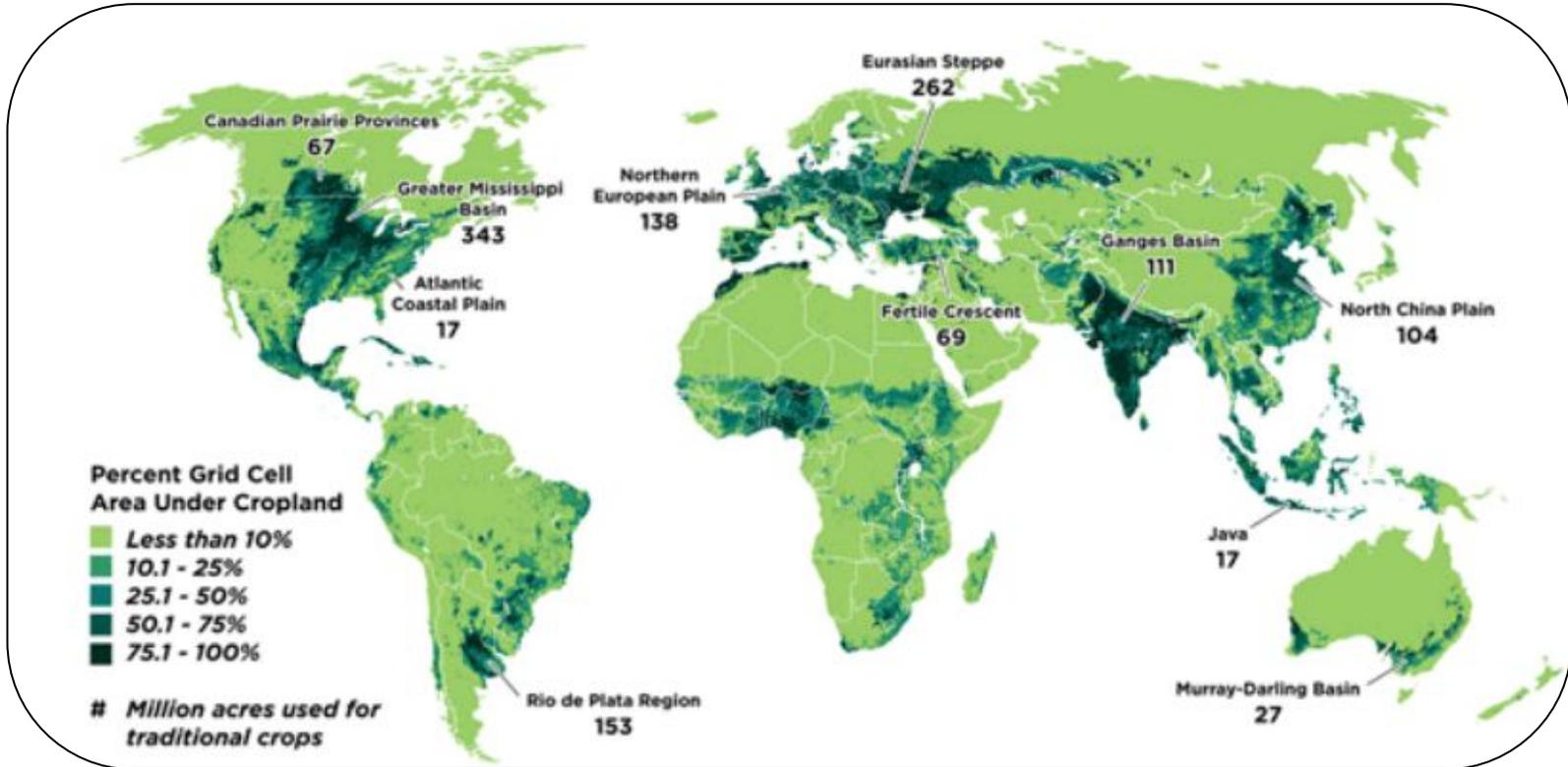
# Tomorrow's War



**Tomorrow's War** will stem from increasing populations and decreasing **resources** and will present the Air Force with a problem of **effectively enforcing air superiority** in both **high-intensity conflicts** against near--peer superpowers and against **growing low-intensity conflicts**.

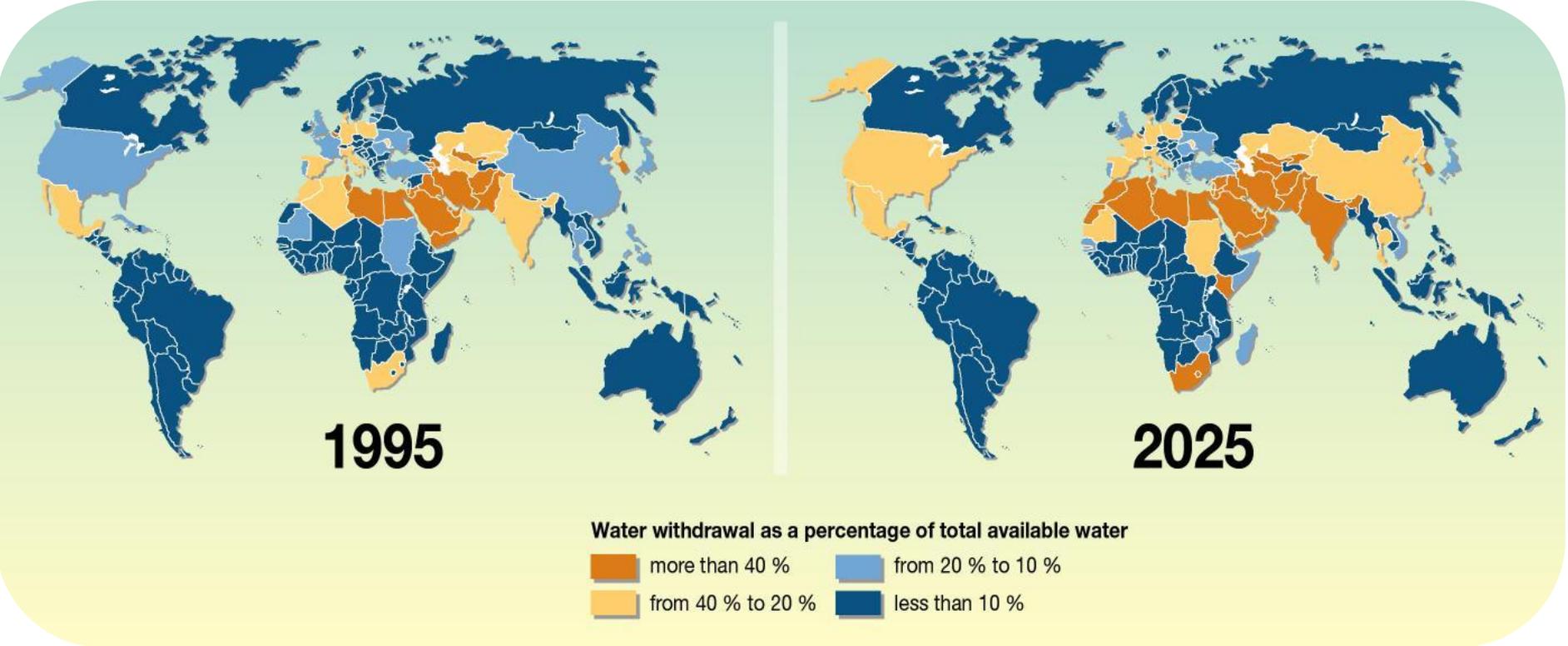


# Diminishing Resources - Arable Land





# Diminishing Resources - Projection



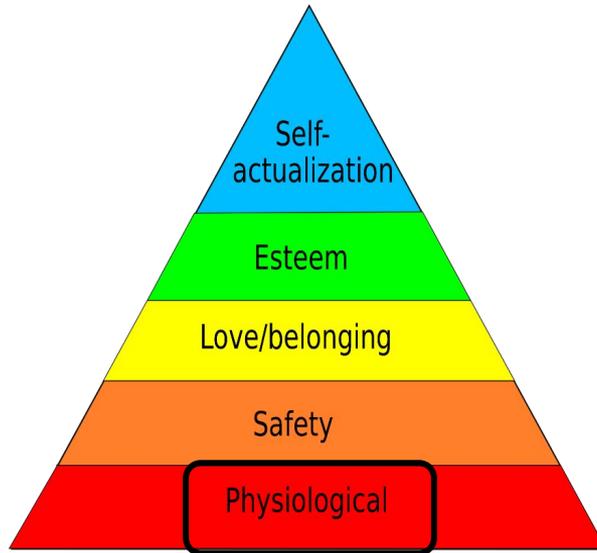


# When Is War Necessary?



- Diminishing resources threaten the survival of the nation

(Adm. Winnefeld's 1st Priority)





# Air Force Role



- Maintaining **Superior Capability** to deter Tomorrow's War
- Preparing to enforce **Air Superiority** in high-intensity conflict
- More **effectively address** growing low-intensity conflicts
- ***Bottom Line: Organize, Train, Equip our PEOPLE so they can answer the challenges of tomorrow***



# Organize Overview



- Increase Regional Advising Efforts
- Revamp HUMINT and Recruiting Programs
- Separate Cyberspace Branch



# Increase Advising Efforts



- Bolstering allies frees resources, decreases footprint
- Develop, track, and employ expanded corps of advisors
- Fuse tactical & strategic engagements
- Synchronize with other global players





# Revamp HUMINT and Recruiting Programs



- Value emotional intelligence (EI), cultural competence
  - Make EI a factor in the assignment processes
  - Recruiting, training, exchanges, career tracks, compensation
- Grow USAF human intelligence capacity
  - SIGINT, ELINT, etc. is more effective when fused with other INT
  - Adversaries resort to alternate communication methods

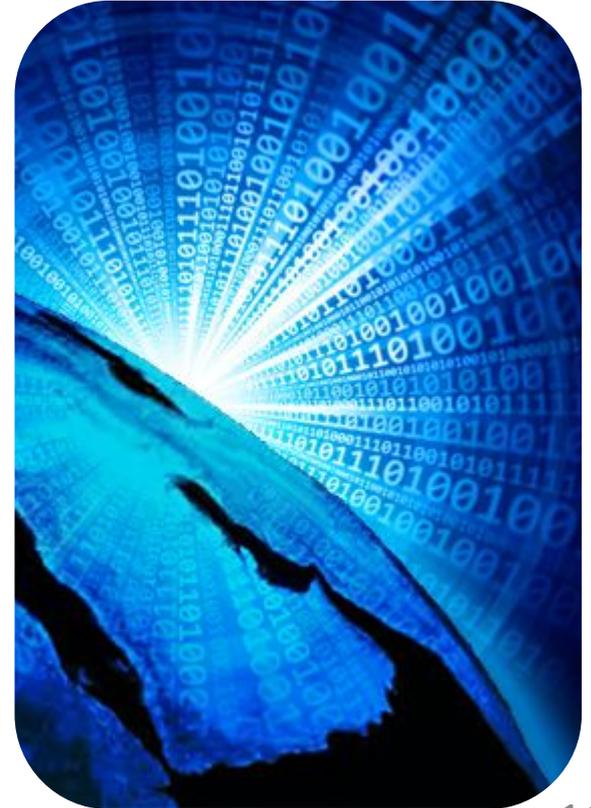




# Separate Cyberspace Branch



- Promote cyber-mindedness while securing air-mindedness
- Build off and utilize individuals' strengths
- Appealing mission set will recruit appropriate members





# Train Overview



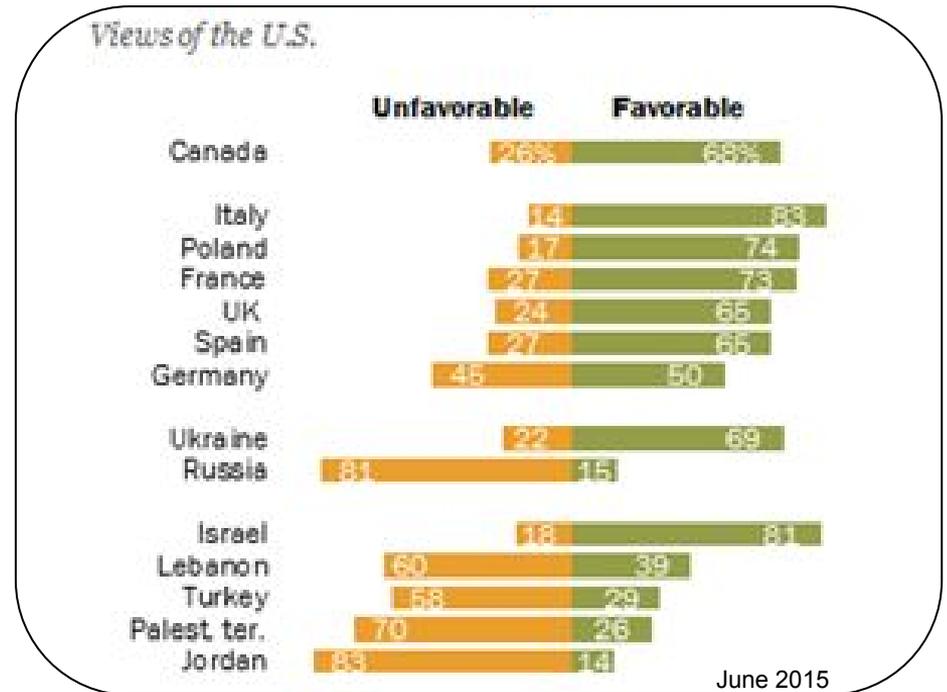
- Increase Cultural and Emotional Training
- A Whole Nation Approach
- Restructure Joint Training Efforts Across Services



# Enhance Cultural and Emotional Intelligence



- Evoke empathy within personnel toward foreign civilians to create positive worldview of US
- Face-to-Face Acclimation Training
- Face-to-Face Assessment

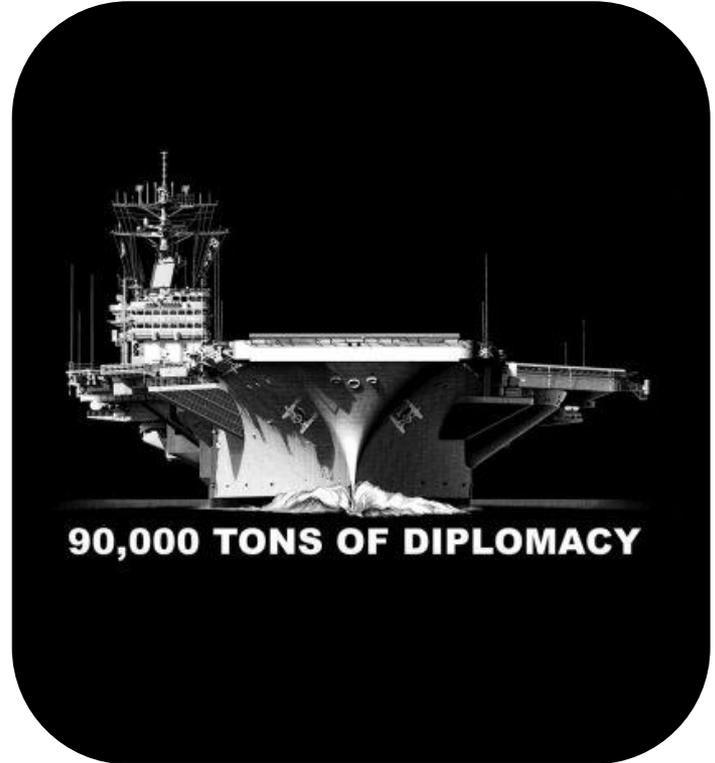




# A Whole Nation Approach



- **Current Status:**
  - Exchange program between DOS & DOD
  - USAID training for DOD
  - 3D Planning Group
- **Future Needs:**
  - DOS, USAID, etc. training w/ USAF during exercises
  - Blue Flag/Silver Flag





# Restructure Joint Training Efforts



- Refocus Desired Learning Objectives
  - Limited Resource Flag Exercises (Red Flag, etc.)
    - \$20-60 million per exercise (avg \$120 million yearly)
    - 4 times a year
    - Limit the scope to reduce cost/resources: about half
  - Increase Local Large Force Exercises
    - \$6-8 million per exercise (use remaining \$60 million)
      - ~5 exercises to reach same number of people
      - 10-12 possible
  - Distributed Mission Operations (DMO)
    - 12 events weekly with \$2.5 million YEARLY budget
    - Single Live Fly ~\$20 million





# Equip



- Adversaries develop technologies by understanding our capabilities, studying our 3rd offset strategy, and exploiting our slower acquisition cycles
- Core research areas: Hypersonics, Nanotechnology, Directed Energy, Unmanned Systems, Autonomy
- Focus on rapid distribution to warfighter





# Re-hack



- Tomorrow's war will be a conflict over resources
- Organize, Train, and Equip to deter high-intensity conflicts and better manage low-intensity conflicts
- Invest in our people



# Questions?



- **Background**

- Capt John McCashland, Capt Christine Kistler, Capt Tahichi Richardson

- **Organize**

- Capt Collin Stevenson, Capt Shannon Velasquez, Capt Kayla Raisor

- **Train**

- Capt Andrew Morton, Capt Christine Kistler, Capt Lindsay Cronin, Capt Jared Bruff

- **Equip**

- Capt Brad Koehler, Capt Lloyd Hutton, Capt Will Miller



# LFE Data



- Red Flag Exercises since 1978
  - 28 countries
  - All 4 military branches
  - 440,00 military personnel (~12,900 yearly)
    - MX
    - SARM
    - INTEL
    - Cyber
    - AFE
  - 145,000 aircrew (~4,200 yearly)
    - Fighters
    - Bombers
    - Tankers
    - Airlift
  - 385,000 sorties (~11,300 yearly)
  - 660,000 flying hours (~19,400 yearly)
- \$80-180 Million per year (\$120M)
  - \$20-60 Million per exercise
  - 4 times a year



# LFE Data



- Realign Red Flag Exercise

## Priorities

- DLO change
  - Near-peer vs unlimited resources
  - Peer vs LIMITED resources
- 12,900 military personnel
- 4,200 aircrew
- 11,300 sorties
- 19,400 flying hours
- \$80-180 Million per year (average \$120M)

- Cut exercises in half

- Military personnel: 6,400
- Aircrew: 2,100
- Sorties: 5,600
- Hours: 9,700
- On average ~\$60 Million per year



# LFE Data



- Redistribute funds CONUS for local LFEs (remaining \$60 Million)
  - Use the same DLOs
    - Near-peer vs unlimited resources
    - Peer vs LIMITED resources
  - Allow hosting units to use funds A/R
    - LNOs
    - Lodging
    - Rental Cars
- “Local” training sorties
- Reduced costs
  - \$6-8 Million (average \$7M)
- Increased exposure
  - Military Personnel: 1,400 (5)
  - Aircrew: 650 (4)
  - Sorties: 150 (not including AAR)
  - Flight Hours: ~2000 hrs (5)



# LFE Data



## TUESDAY, Nov 3 1st Go DEAD / AI VUL



### COALITION FORCES:

- 4x 389<sup>th</sup> F-15E – Dest. DEAD
- 4x 428<sup>th</sup> F-15SG – Dest. DEAD
- 4x 123<sup>rd</sup> F-15C – OCA
- 4x 190<sup>th</sup> A-10C – SCAR/DT
- 1x C-17 – Air Drop
- 1x C-5 – Air Drop
- 1x E-3 – TAC C2
- 1x KC-10 – Air Refuel
- 1x RQ-4 – ISR

### JUNIPER FORCES:

- 4x 389<sup>th</sup> F-15E
- 2x 428<sup>th</sup> F-15SG
- 4x SA-2
- 2x SA-8
- 3 x 3 Vehicle TBM Convoys

### DLOs:

- GPS JAMMING
- Pre-Planned DEAD
- BOMBER/MAF ESCORT

### Integration DLOs:

- IADs role back for MAF/A-10 support
- C2 battle tracking of DT/OSEAD
- Real Time ISR
- MSN CC package retrograde decision process





# Equip



- USAF R&D Budget for 2014: \$25.7B

Research Area	Systems	Characteristics
<b>Hypersonics</b>	Cruise Missiles, Re-entry Vehicles	Suite of sensor/weapons at hypersonic speeds
<b>Nanotechnology</b>	Metamaterials, Replicators	Visible light cloaking Shape shifting materials
<b>Directed Energy</b>	Lasers RF Weapon	Multi-domain Reuseable
<b>Unmanned Systems</b>	Autonomous Swarming Unmanned 6th Gen Fighter	Low cost, en mass Dispersed suites of sensors
<b>Autonomy</b>	Quantum Computing Artificial Intelligence	Real time data fusion of multi-domain ISR info



# Equip



- USAF R&D Budget for 2014: \$25.7B

Research Area	Systems	Characteristics
Hypersonics	Cruise Missiles, Re-entry Vehicles	Suite of sensor/weapons at hypersonic speeds

- R&D will continue
- Technical dominance must be maintained to ensure air superiority
  - **HOWEVER** funnelling <1/1000 of funding to training Airmen provides a larger impact for an uncertain future in terms of:
    - Increasing cost and complexity to develop a system
    - Decreasing lifespan to provide technological edge
    - Unforeseen adversary asymmetrical capability