



Weapons Threat in the Future Operational Environment

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Key Take Aways



Adversaries reserves the right to adapt... the threat will evolve when the enemy determines it has to

In the future, adversaries will have access to increasingly advanced technologies (devices and materials)

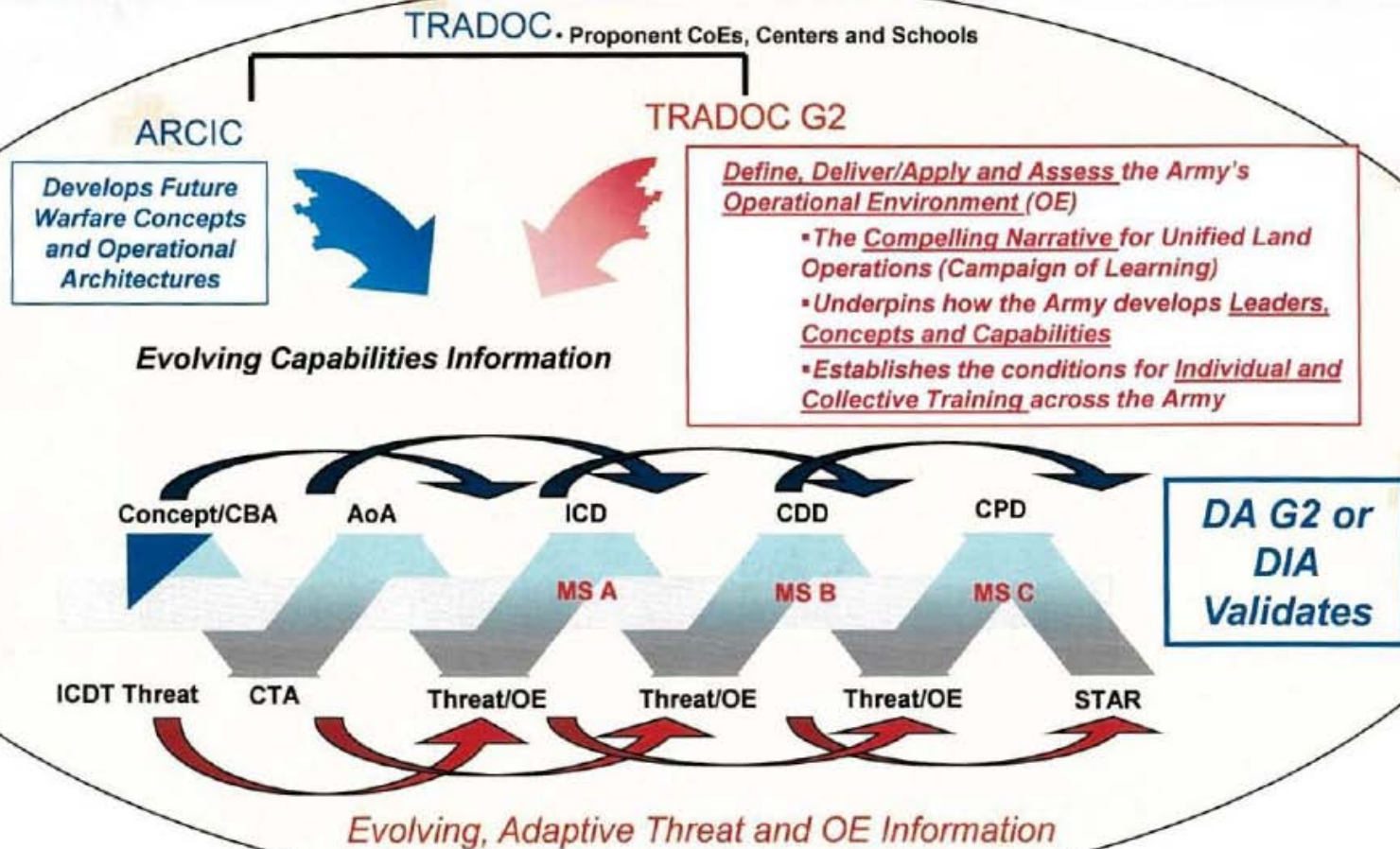
Current improvised weapons are a step in the evolution timeline...in correlation with the enemy's perception of countermeasures being employed

"The most important failure (concerning 9/11) was one of imagination"



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OE/Threat Role in Capabilities Development



TRADOC Threat Managers (TM) and TRADOC G2 support Combat Developers (Requirements)

-Produce initial System Threat Assessment Report (STAR)

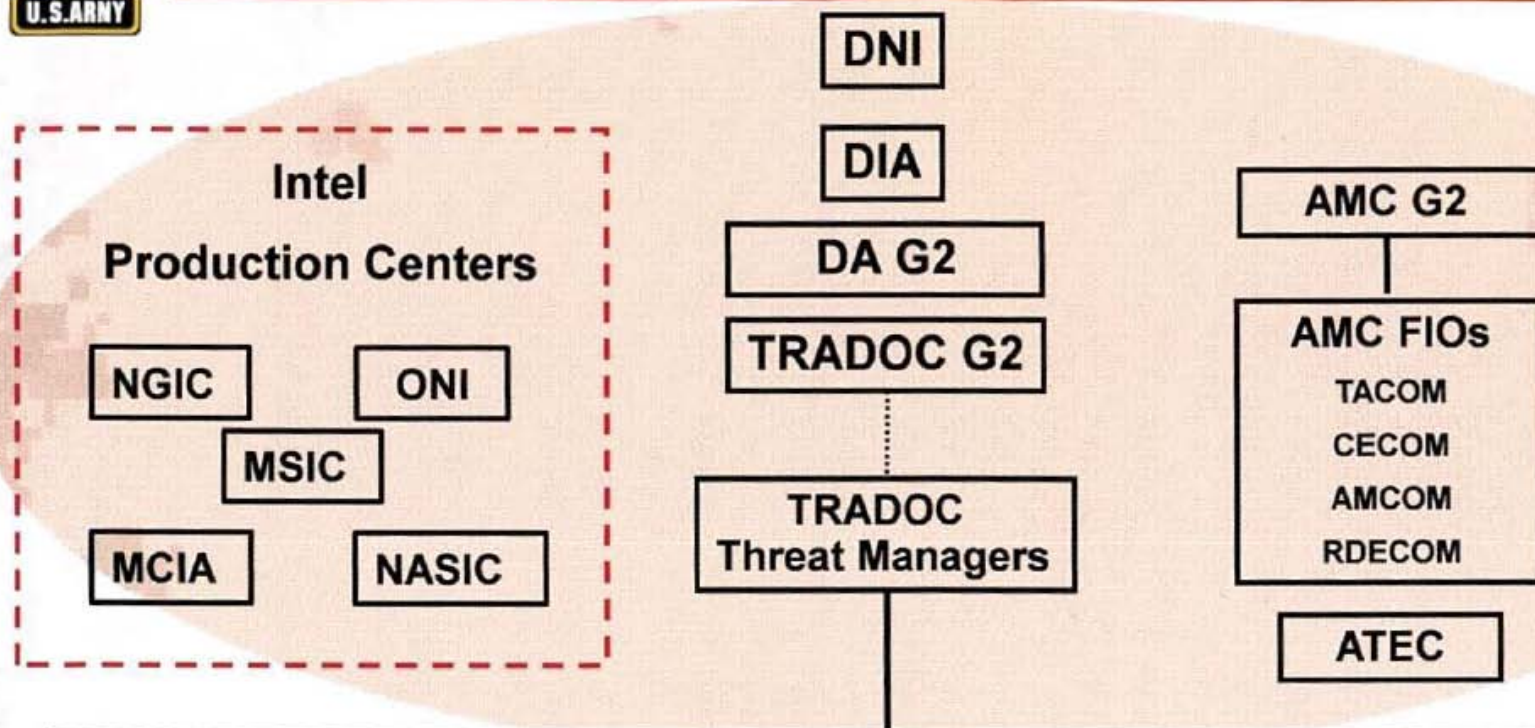
- TRADOC G2, Army G2 and DIA DOD 5000 Requirement

-Report and OT Threat Test Support Package



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TRADOC G2 Threat Support to U.S. Army Training & Acquisition



- Fires Center of Excellence; Fort Sill, OK
- Army Medical Department; Fort Sam Houston, TX
- Aviation Center of Excellence; Fort Rucker, AL
- Brigade Modernization Command; Fort Bliss, TX
- Maneuver Center of Excellence; Fort Benning, GA
- Maneuver Support Center of Excellence; Fort Leonard Wood, MO
- Signal Center of Excellence; Fort Gordon, GA
- Intelligence Center of Excellence; Fort Huachuca, AZ
- Cyber Center of Excellence; Fort Gordon, GA



Threat Source Documents



***Threat Statements and Assessments are based on DIA
approved documents***

**NGIC
Land Warfare
CTA**



**NASIC
Air Warfare
CTA**



**DIA
Information
Operations
CTA**



**ONI
Surface
Combatants**



**MSIC
ATGM
Worldwide
Handbook**



***Capstone Threat Assessments serve as baseline
reference for STARS and JCIDS***

JCIDS / STARS



Traditional and Non Traditional Weapons Threat





Potential for Conflict – Through 2030



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Colors Indicate Regional Groupings with Shared Factors



Many Crises Are Unfolding Now



What the Trends Tell Us

Increased Speed of Action



Outliers = Unpredictable



Transition of the Physical Domain

Adaptive, responsive, scalable landforces



Strategic Equilibrium



Technological Surprise Offshore



Changing Alliances and Partners



... the adversary will improvise and adapt; ubiquitous improvisation...signatures is key to understanding and neutralizing the threat.



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Ubiquitous Improvisation



PIRA Projector Recoilless Inertia Grenade Northern Ireland



Free Syrian Army fighters use an iPad during preparations to fire a homemade mortar in Damascus 2013



US citizen plotted to fill remote-controlled model aircraft with explosives for an attack in US



Colombian military recreation of a recovered FARC chemical dispersal device



Boko Haram Grenade Nigeria





What lies ahead...

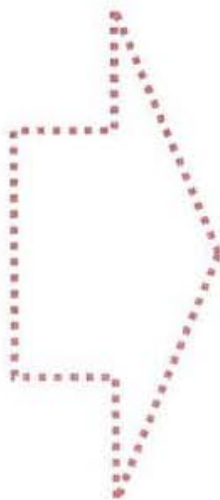


...Threat networks, personnel, weapons and TTPs are a global, transnational problem which will remain for years to come

- Constantly evolving capabilities to deploy, employ
- Will remain tactical weapon with strategic impacts
- Effective use will accelerate proliferation

Commonalities of Future Improvised Weapons

- Ubiquity of components
- Ease of threat networks to easily spread Improvised weapons technology. (i.e. Social media, internet, etc)...transnational influence
- Easy access to commercially available dual-use technology will promote the continued use and proliferation of current IED trends. Potential IEDs may use sensor technologies to improve targeting in the future



(U) Fiber optic-laced thread can be woven into fabric



- *Advanced RC- Random Frequency/Freq Hopping capabilities*
- *Optical (Laser) initiated*
- *Surgically implanted*
- *IEDs utilizing CBRNE materials.*
- *Nanotechnology- Advances in non-metallic power source; increasing yield; miniaturized, Flexible electronics, built into fabric/facilities*
- *Waterborne/Airborne delivered*
- *Hydrogen-based explosives*
- *Camouflage, Cover, Concealment and Denial and Deception (C3D2) technologies will aide advanced placement (shrouding)*



LAND POWER CHALLENGES



Area Denial

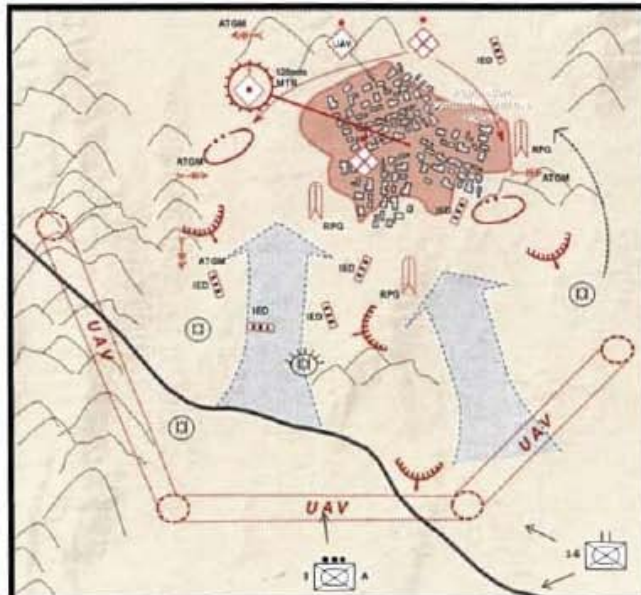


Maritime
 - 2x45 Gallon drums with main charge (Carliford Lough, NI 1980s)
 - Remote and Suicide Boats

Land
 - EFP (Iran 1980-88)
 - PP IED (Helmand Province)

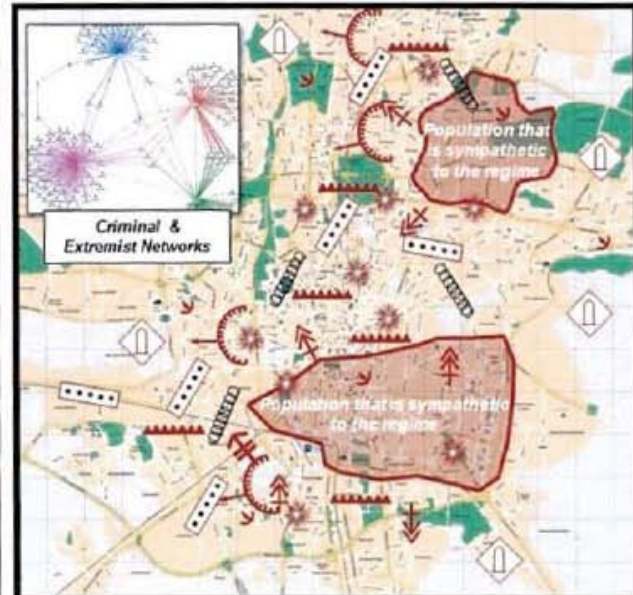


Passive Defense



Ground forces mosaic defense
 -complete range of improvised weapons by defenders (Syria)

Preserve the Regime



Ground forces melt into population centers, pursuing irregular actions
 Iraqi Army 2003 harbinger of future...
 develop and utilize a full range of improvised weapons





Conclusion



Organizational threat assessments reflect their mission

Future improvisation of weapons is only limited by imagination

***Threat networks built on intent/opportunity/capability
...do not underestimate the personal weapon***

Enhanced designs will improve accuracy (selection and effect), lethality, and concealment

Adversaries will watch, assess, identify weakness in order to target our vulnerabilities and attempt to negate our strengths