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Capability Needs Near and Far

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What are we hearing about the next war?



The **Faulty** Narrative

Easy War

- Leverage advanced technology and precision-guided munitions from Air and Sea to neutralize or compel adversary
- Avoid costly commitment of ground forces and loss of life – “no more ground combat”
- Maintain global commons (economy) and achieve National Security through deterrence, coercion, and punitive/preemptive strikes
- Cheap, quick, bloodless

“Every attempt to make war easy and safe will result in humiliation and disaster.”

General T. Sherman

The Reality

War is Complex

- Ignores lessons from past (WWII, Vietnam, Kosovo, Post DS/DS, OIF, OEF)
 - munitions alone do not achieve results
- Strike alone not decisive – best maintains status quo (instability), worst escalates situation
- Unrealistic Operational Environment
 - No guarantee adversary will be compelled by strikes and no guarantee enemy can be effectively targeted
- Collateral damage and impact on populace (negative media)
- No shaping before or stability after
 - Fails to address cause of instability

“Look askance at idealized, triumphalist, or ethnocentric notions of future conflict that aspire to upend the immutable principles of war: where the enemy is killed, but our troops and innocent civilians are spared. Where adversaries can be cowed, shocked, or awed into submission, instead of being tracked down, hilltop by hilltop, house by house, block by bloody block.”

SECDEF Robert Gates, National Defense University (NDU), 29 SEP 2008



The Complex Environment



Essential Elements of the Complex Environment

- A multitude of Independent Actors with No Central Control.
- Sometimes a strategy – w/strategic lever to deny US freedom
- Threat, Malicious, and Neutral/Friendly Actors -variable
- Technology Enables Effective Action – Violent and Nonviolent – and Rapid Adaptation
- Lack of Governance or Rule of Law



Characteristics

Lethal

- Well Armed
- Technology Proliferates to Many
- Non-linear Relationship between Economic and Military Power

Durable

- Victory Ill Defined
- Blurred Transitions, e.g. Conflict to Post Conflict.
- Unexpected Friction

Asymmetric

- Sidestep US Preferred “Way of War”(Lever)
- Deny ISR & Strike Options
- Exploit Cyber
- Unforeseen Effects from Actions

Ends

- Wealth
- Resources
- Political authority
- Influence
- Sovereignty
- Identity
- Legitimacy

Ways

- Competition
- Cooperation
- Conflict

Means

- Attack the “will”
- Complexity – Chaotic Conditions – Anti-access
- Asymmetry





FY14 and Beyond Warfighter Needs



NEAR TERM

- Replicate complex operational environments
- On-demand virtual training and rehearsal
- Virtual human (combatants, non-combatants, personal)

- Standard and shareable geospatial data
- Highly mobile and scalable Command Post
- Dismounted mission command away from vehicles

- Standoff CBRN/Explosive detection
- Standoff CBRN/Explosive mitigation

- Lightweight, improved vehicle protection
- Scalable soldier power solutions (72 hours)
- Enemy detection (buildings/underground)

- Extended range precision fires (>220 KM)

- Control non-compressible bleeding
- Rapid characterizations of pathogens

- Standoff and reliable personnel identification

Training

Mission Command

Protection

Maneuver

Fires

Sustainment

Intelligence



FY14 and Beyond Warfighter Needs



FAR TERM

Training

- Adaptable, learner-centric, networked tactical trainer
- Rapid capability for synchronized live training

Mission Command

- Airspace control in unified actions
- Location and navigation in complex environments

Protection

- Standoff route clearance and threat detection
- Enhanced situational enemy awareness and enemy capabilities

Maneuver

- Detect, recognize, and identify targets for lethality overmatch
- Acquire and identify targets beyond enemy direct fire ranges

Fires

- “Electric fires”

Sustainment

- Rapidly and inexpensively construct permanent and expeditionary facilities
- Rapidly assess, upgrade, establish airports and seaports of debarkation

Intelligence

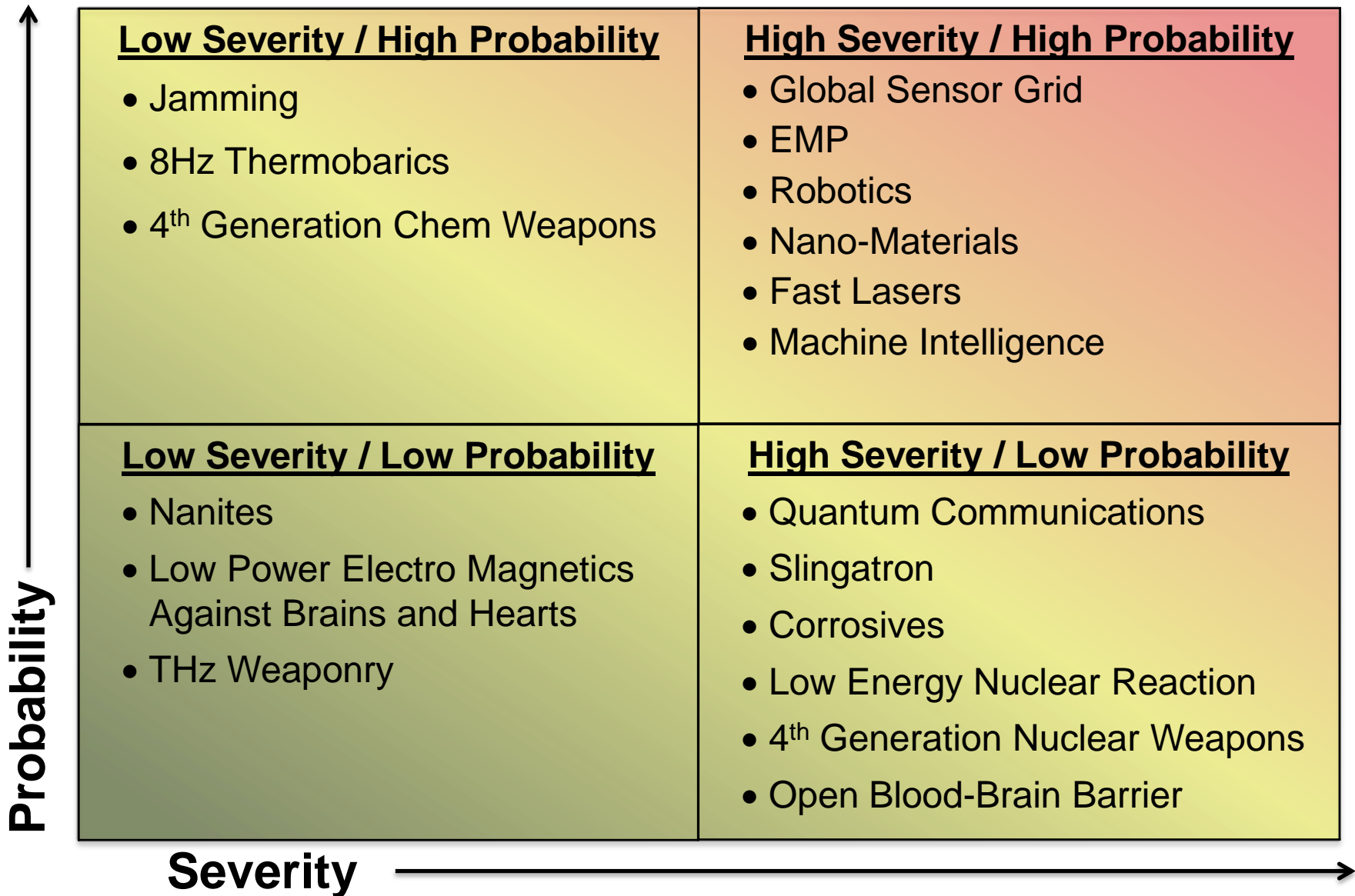
- Near real-time data processing and exploitation
- Fully integrated human terrain planning tools

Deep Futures:

- **Advanced Materials** – “bullet proof soda can”
- **Biological Sciences** – human performance enhancement
- **Quantum Computing** – hyper speed processing



Technological “Wildcards” that could alter the Gaps





Questions?