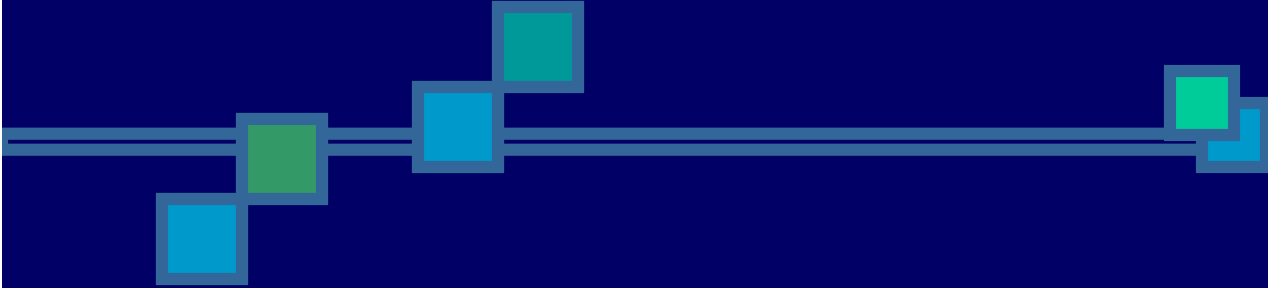


Combating Weapons of Mass Destruction:
Translating Strategic Guidance into Actionable Solutions




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Use of WMD is just the another turning in “maneuver warfare”

- n Maneuver is action to gain advantage over the enemy
 - n Pivot points in military history often occur with successful application of new technologies
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Battles are won by slaughter and maneuver....the greater the general, the more he contributes in maneuver, the less he demands in slaughter.


Winston Churchill



Maneuver (Revisited)



n History

- n Call of the wild, old as recorded history
 - n Man's pursuit to gain advantage through application of technology
 - n Standoff range: from spear to virus
 - n Speed: from mechanization to decision-making
 - n Lines of communication: from resupply to global presence
- 

n Dimensional Maneuver

- n As technologies are invented, the combatants who successfully applied them gained dimensional advantage
- n WMD is no different than any other turning of history



Today's Situation




n DNI

- n Greatest concern is proliferation of technology and ease of access
- n 8th Century worldviews with 21st century technology

n Invention rate is at all time high

- n Moore's Law is making the battlespace flatter and less predictable
- n Internet allows open collaboration for application/innovation
- n Nuclear components, designer viruses, info ops,



n Cultural study of highly innovative companies point to interesting conclusions in relation to military culture




11 Cultural Lessons on Innovation

from Apple, Google, IBM case studies



n People:

- n Recruit the best people you can possibly afford, and avoid the worst at all costs
 - n Establish a culture of seeing problems to be solved
 - n Direct a sizable and conscious amount of work-time effort to foster the creative
 - n Organize around small work groups: 3-4 people foster the highest level of innovation.
 - n Greatest leadership trait is credibility - technically skilled and perceived as such.
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Lessons (Cont'd)



n Thinking:

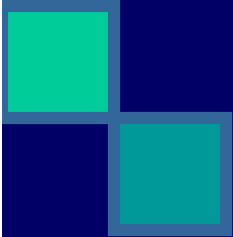

- n Commitment at all levels to “radical honesty”
- n The starting point of all relevant innovation is solving a real problem
- n The very essence of creative, innovative thinking is accomplished by individuals

n Action:

- 
- n Disciplined, rational, but audacious movement at all levels
 - n Vision and raison d'être are internalized by all levels and members of the organization
 - n Everyone must have hands-on skills related to the work they are leading or involved with.



For Successful Counter-proliferation


- 
- n Doctrine -
 - n Recognize Innovation as Principle of War
 - n Organization -
 - n Establish numerous 3-4 person teams vs large
 - n Reduced levels of bureaucracy
 - n Training
 - n E-1 to O-9
 - n Emphasize in LRCs to “How to Challenge the Status Quo”
 - n Begin in Boot Camp, continue through CAPSTONE/Executive level
 - n Education
 - n Emphasize & reward technical education/scholarships
- 



Applications Continued



n Materiel

- n Requirements process - think less about invention, more about application
 - n Begin process by solving problems, not a passion for “toys”
 - n Consider strengthening ties to graduate schools
 - n Direct 10% towards peer reviewed individual research
- 

n Leadership

- n Reward/incentivize innovative thought
- n All levels must set the example of challenge status quo
- n Encourage “radical honesty” while maintaining bearing/decorum



Applications Continued



n Personnel


n Recruiting -

- n Hire the best candidates possible
- n After leadership potential, also look to creative genius
- Education - Incentivize a multi-disciplined workforce to solve the complex problems of tomorrow

n Assignment

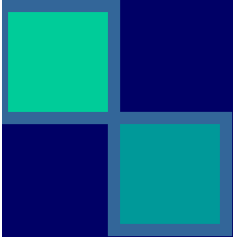
- n Appropriate skills engender enthusiasm & productivity
- n Too much broadening is counterproductive

n Promotion

- n Peer/subordinate reviews included in promotion folder
 - n Evaluate creativity & audacity in performance reports
- 



Conclusions & Recommendations

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- n US military still promotes & rewards a statist, Cold War construct
 - n We no longer have a monopoly on instruments of maneuver (IED is a good, recent example)
 - n Need to change from an attrition to a dimensional maneuver mindset
 - n Must not be “out-maneuvered” in a dimension of battlespace not thought of
 - n The answers or “actionable solutions” will come when we’ve begun to unleash the creative genius within national security establishment
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