



Futures and Concepts Center

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24 APRIL 19

Compete

Penetrate

Dis-Integrate

Exploit

Re-Compete



Next Generation Combat Vehicle



EM-50 Urban Assault Vehicle



EM-50 Urban Assault Vehicle



Mobile

It even closed with,...



Survivable



...engaged, and destroyed...



Troop Transport



...an enemy in close combat



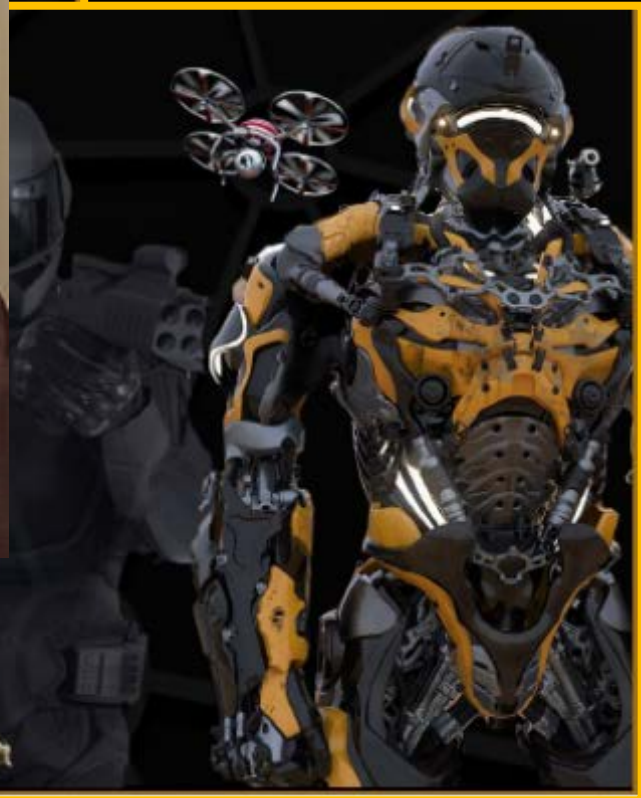
Lethal



And easy to learn and operate by even the most “challenged” of soldiers



...who may one day rise to become a General Officer.



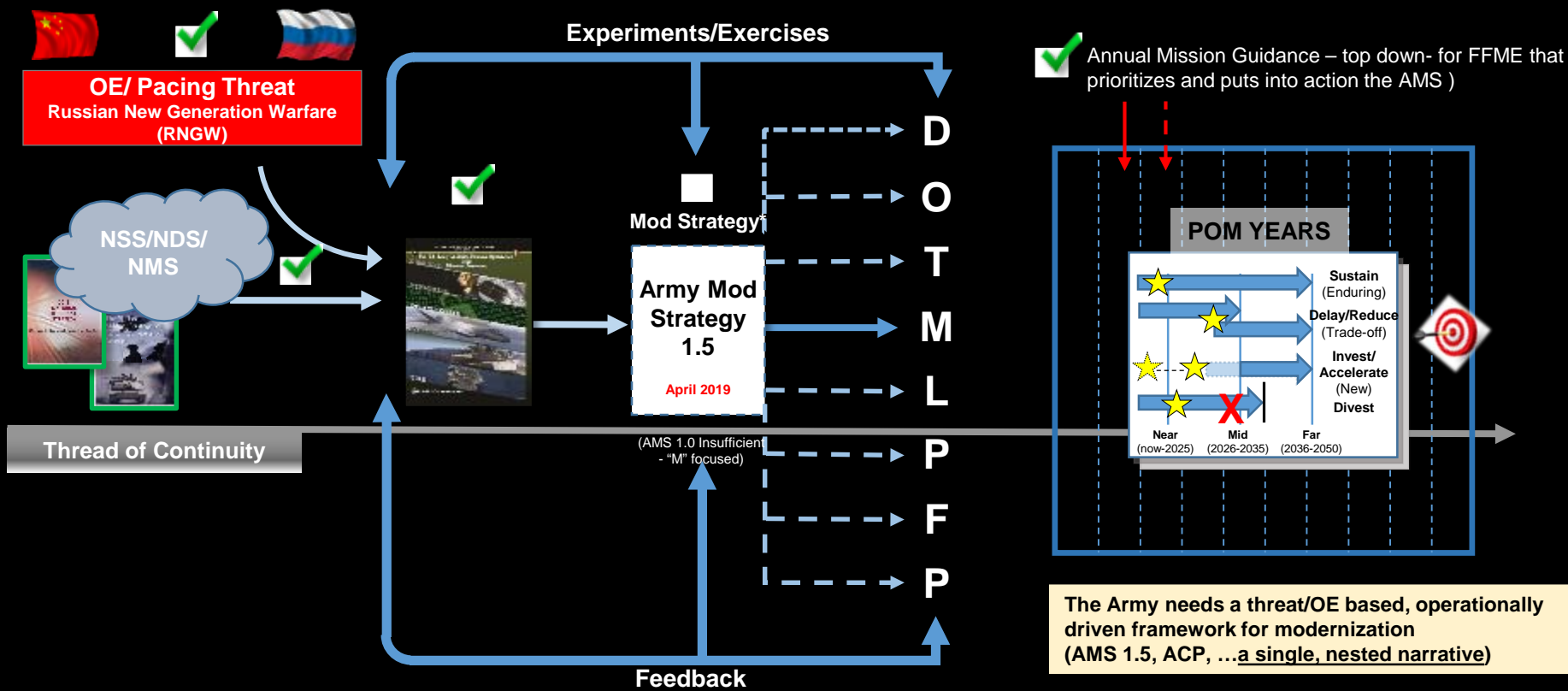


Modernization Framework



“The Army of 2028 will be ready to deploy, fight and win decisively against any adversary, anytime and anywhere, in a joint, combined, multi-domain, high-intensity conflict, while simultaneously deterring others and maintaining its ability to conduct irregular warfare”

- SEC Mark Esper, GEN Mark Milley



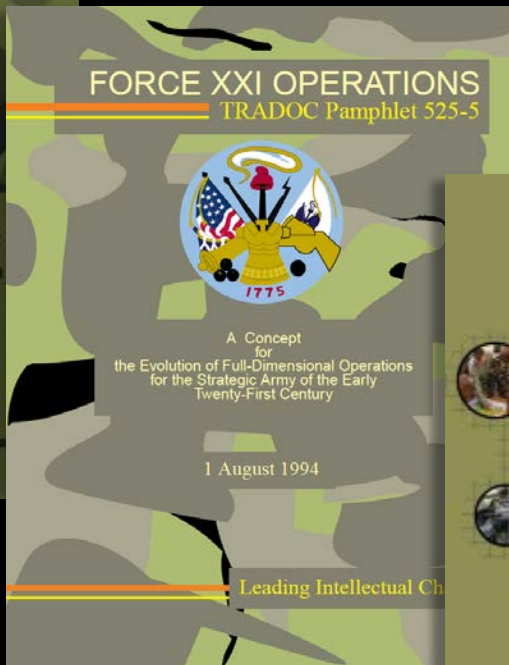
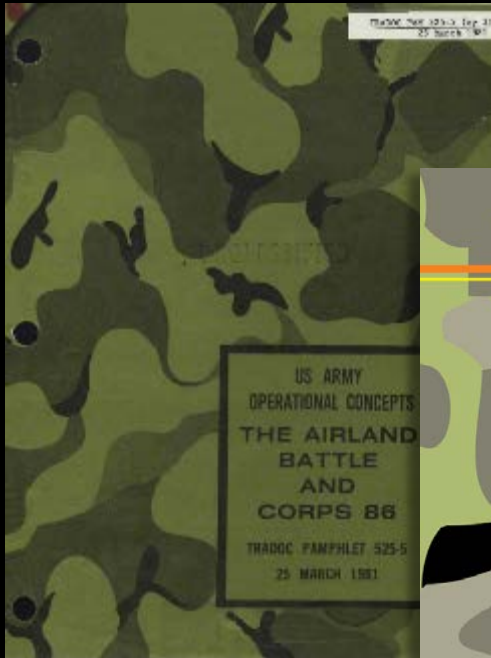
Annual Mission Guidance – top down- for FFME that prioritizes and puts into action the AMS)

The Army needs a threat/OE based, operationally driven framework for modernization (AMS 1.5, ACP, ...a single, nested narrative)

*Note: AMS 1.5 must address a comprehensive DOTMLPF-P modernization plan; the current AMS is “M” focused while CAC has sought to maintain doctrinal change commensurate with capability. Ideally, the AMS becomes an Army guidance document driving the entire enterprise across the ACOMs...potentially serving as the modernization chapter to the ACP (LOE #2 of the Army Strategy)



Concepts Drive Change



Compete

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Operational Environment



- ❑ Identifies four interrelated trends that shape the future Operational Environment
 - Contested in all domains
 - Increasingly lethal and hyperactive battlefield
 - Leverage Competition Space
 - Multiple Layers of Standoff
- ❑ Challenged deterrence





Central Idea



Army forces, as an element of the Joint Force, conduct Multi-Domain Operations to prevail in competition; when necessary, Army forces penetrate and dis-integrate enemy anti-access and area denial systems and exploit the resultant freedom of maneuver to achieve strategic objectives (win) and force a return to competition on favorable terms.

Current Force Posture Options

- **Do nothing** and concede competitor actions and readjust strategic objectives
- **Win a protracted conflict** by regaining the operational initiative and defeating enemy forces

MDO Capable Force 2028/2035 Options

- **Do nothing** and concede competitor actions and readjust strategic objectives
- **Expand the competitive space** on favorable terms to deter enemy aggression (*preferred method*)
- **Respond quickly** to deny a *fait accompli* attack and achieve an operational position of advantage
- **Win a protracted conflict** by regaining the operational initiative and defeating enemy forces



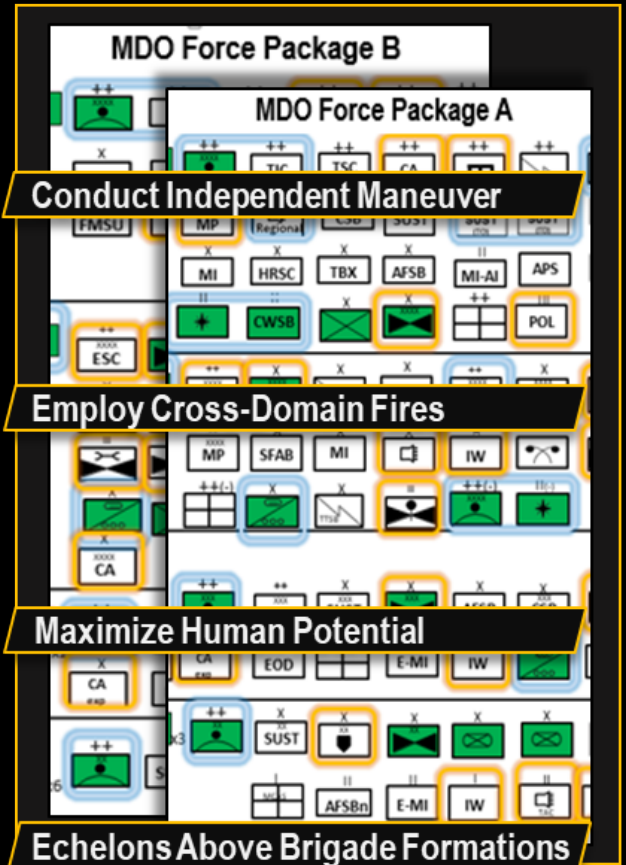
Tenets of Multi-Domain Operations



Calibrated Force Posture

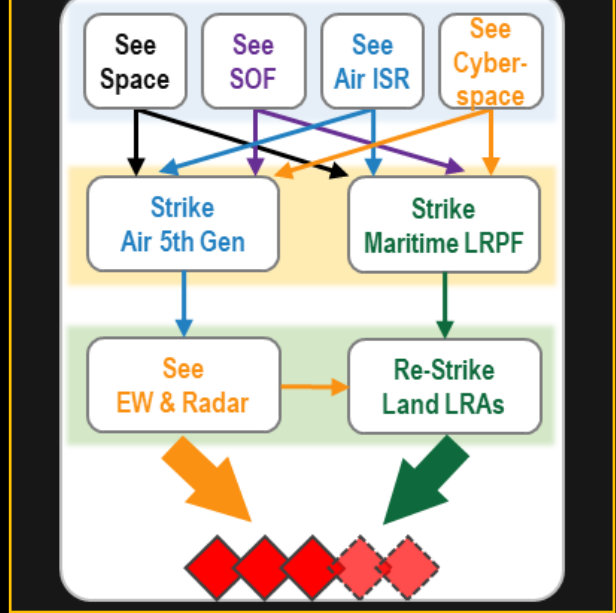
Multi-Domain Formations

Convergence



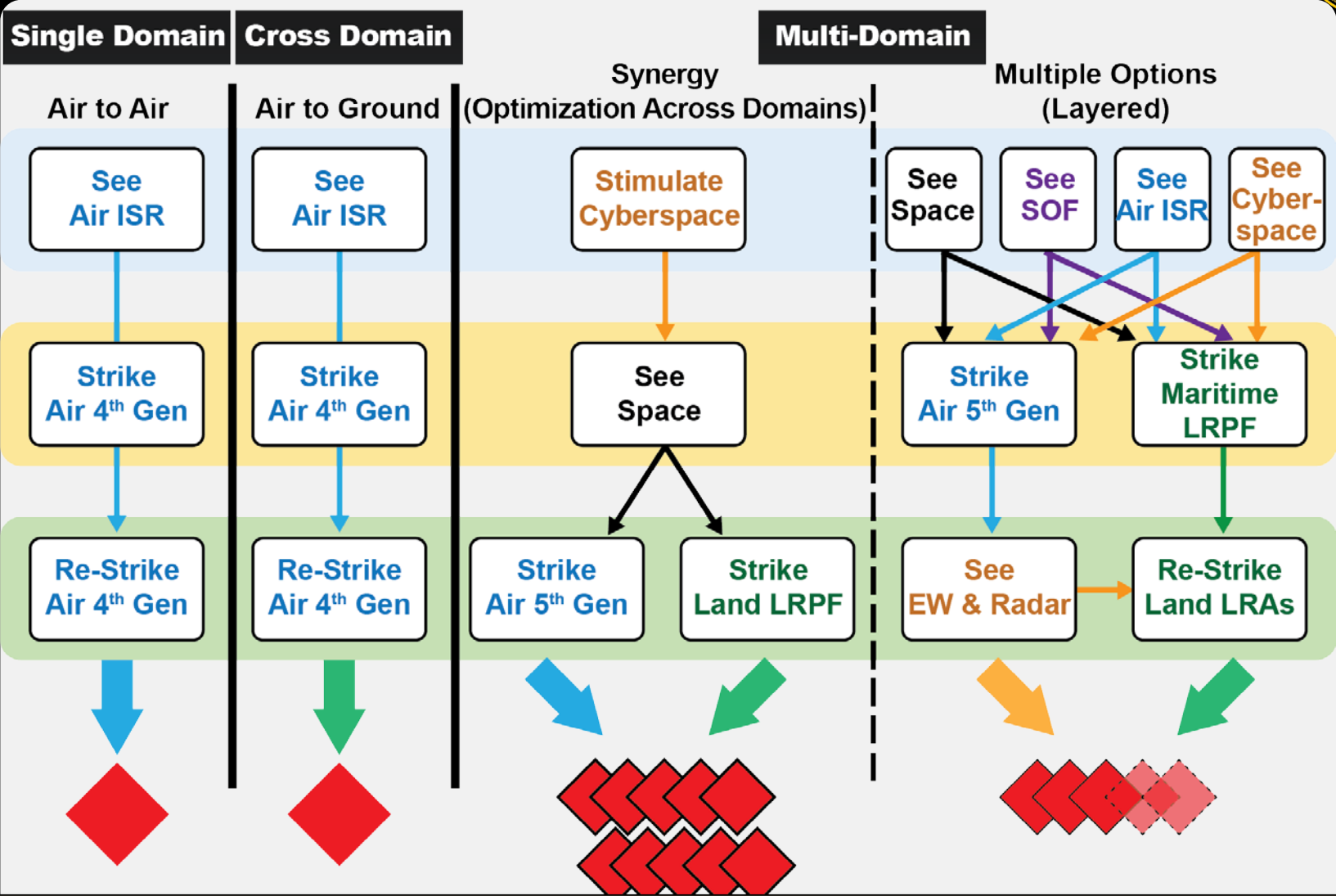
The rapid and continuous integration of capabilities in all domains through:

- **Cross-Domain Synergy**
- **Redundant Kill Chains**
- **Mission Command**





Convergence



Multi-domain operations today rely on episodic synchronization ... executing capabilities after days and weeks of synchronization ... in future operations against a peer threat it will require rapid and continuous integration ... integrating capabilities within hours





Technology: Missing the Mark

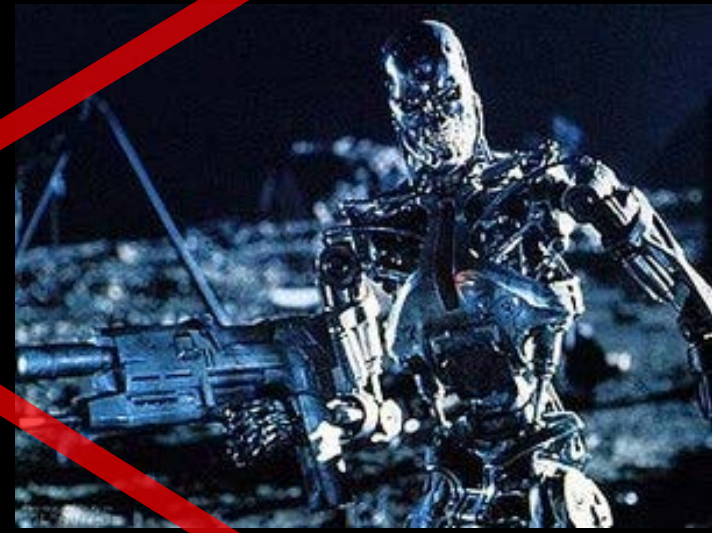




What We Are Not Trying To Do...



HAL 9000





Key Take-Aways



Operational Environment



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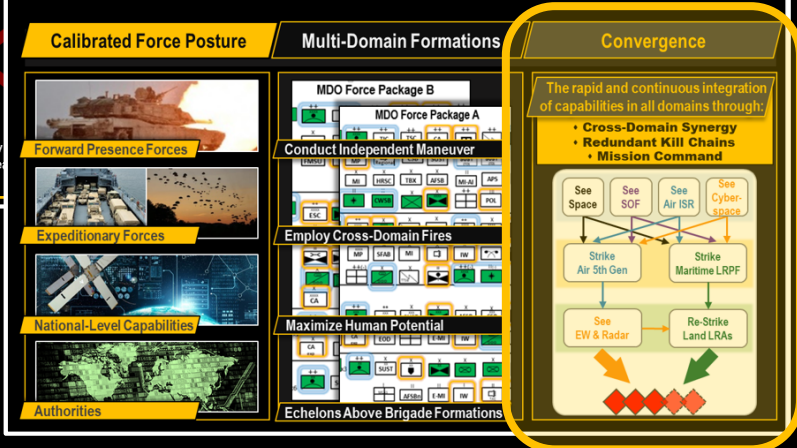
- **Lethality**
- **Stand-Off**
- **Penetration**
- **Convergence**

Current Force Posture

- ~~Do nothing~~ and concede current readjust strategic objectives.
- ~~Win a protracted conflict~~ by operational initiative and defense.



Tenets of Multi-Domain Operations





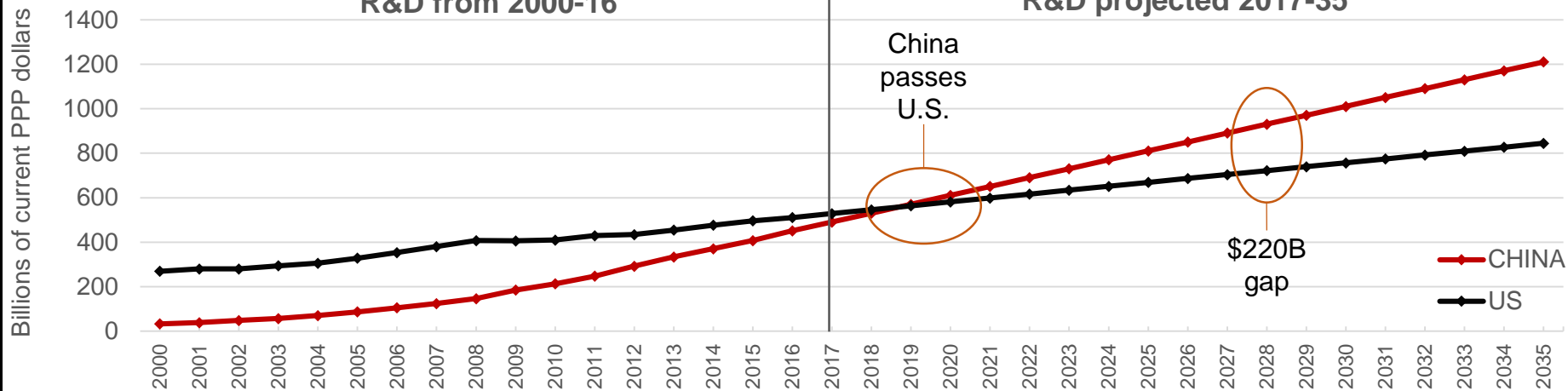
US-China R&D Expenditures



**The U.S. may lead in basic research –
but China is slipping past us in applications.**

Gross domestic expenditures on R&D from 2000-16

Gross domestic expenditures on R&D projected 2017-35



Overall Spending Growth ('00-'15):

U.S. = 4% avg.

China = 18% avg.

At current growth rates – China will surpass the U.S. in the next few years and outspend the U.S. by \$220B by 2028.

“China’s plans for technology innovation comprise ‘a top-down, government-driven agenda that provides a roadmap for strategic collaboration between industry, academia, and civil society’ ...and the U.S. should reflect on the Chinese government’s recognition of innovation as a driver of economic growth.”

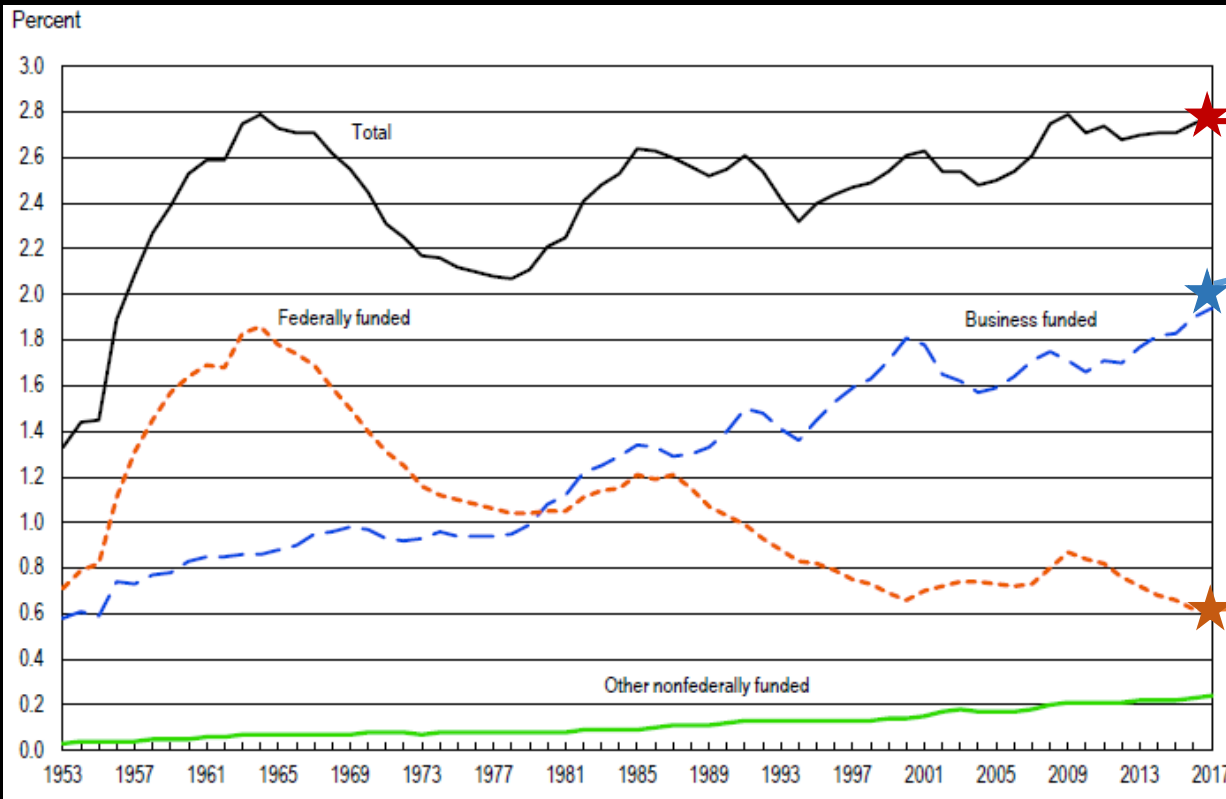
– Elise Stefanik (R-NY)
House Armed Services Subcommittee

<http://data.uis.unesco.org/Index.aspx>

<https://www.aip.org/fyi/2018/biennial-report-shows-us-risk-losing-global-rd-leadership-china>



US R&D spending by sector



2016 record for highest US R&D spending (\$515.3B)

Business 69% (\$355.5B)

*Applied/Experimental R&D

\$239.4B gap between Business-Federal R&D

Federal 23% (\$116.1B)

*Mostly Basic R&D

<https://www.nsf.gov/statistics/2019/nsf19308/>

Keeping pace and achieving overmatch of our adversaries requires a new way of modernizing our forces...and that way requires closer partnerships with industry to enable faster adoption of new technologies and rapid innovation.



Holyfield-Tyson



Conflict like Holyfield

- Strategic reach
- Precision
- Technical
- Agile

Compete like Tyson

- Closes distance
- Punching power
- Aggressive
- Feared





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<https://futuresconcepts.army.mil>