

Seven Questions for Air & Missile Defense

Considerations for a New Policy Review

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Tom Karako
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The people you meet in missile defense policy

- Hit-to-kill denier
- Cheerleader
- Rowboat stabilizers
- Guy in the white lab coat
- Cold Warrior
- Green eyeshade accountant
- Skunk at the garden party



Seven questions

- Silver bullets, old ruts, or spectrum?
- What is the Trump missile defense legacy?
- Was Admiral Davidson right?
- Three battles or one?
- Whither the missile defense enterprise?
- What about arms control?
- What concepts should inform the next MDR?

Characteristics of the Next Missile Age

- Realizing the prophecies of Ogarkov and Slipchenko
- A surge in the global supply and demand for a spectrum of aerial and missile-based attack capabilities & the means to counter them—among adversaries, allies, and partners alike
- A new geopolitical, technological, and arms control landscape
- No more monopoly on PGMs, or assured air superiority
- Internationalization, improved technical maturity, and expanded missions of active air and missile defense
- New imperative for distributed operations, passive defense
- Increased prospects for non-nuclear strategic air and missile attack require reexamined expectations for escalation control, crisis stability, & deterrence.



"We are witnessing the emergence of an era of missile warfare."
– USMC *Commandant's Planning Guidance* (2019)

Complex & Integrated Air & Missile Attack

- “integrated and structured attacks ... a complex and nearly continuous threat spectrum across the characteristics of altitude, speed, propulsion type, and range.”
- “Missile defeat” paradigm to contend with the spectrum of projectiles arriving in or through the atmosphere.
- Need regional and warfighter-centric focus with increased attention to lower tier, complex air defense threats
- Not about any bright shiny object, but the imaginative construction of attacks, mixing & matching effects from across the spectrum.



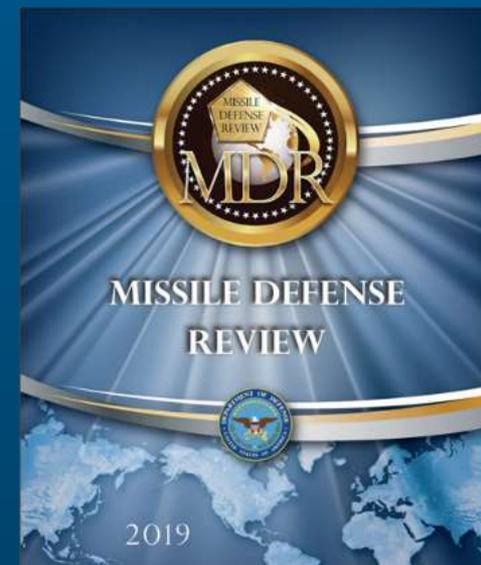
What is the Trump missile defense legacy?

Good

- Description of new missile threat spectrum
- Recognized theoretical contribution of active MD to deterrence, stability
- Affirmed offense-defense integration concepts developed by Joint Staff
- Nods to importance of space, DE, boost phase
- Flexibility & adaptability
- Allies and partnerships

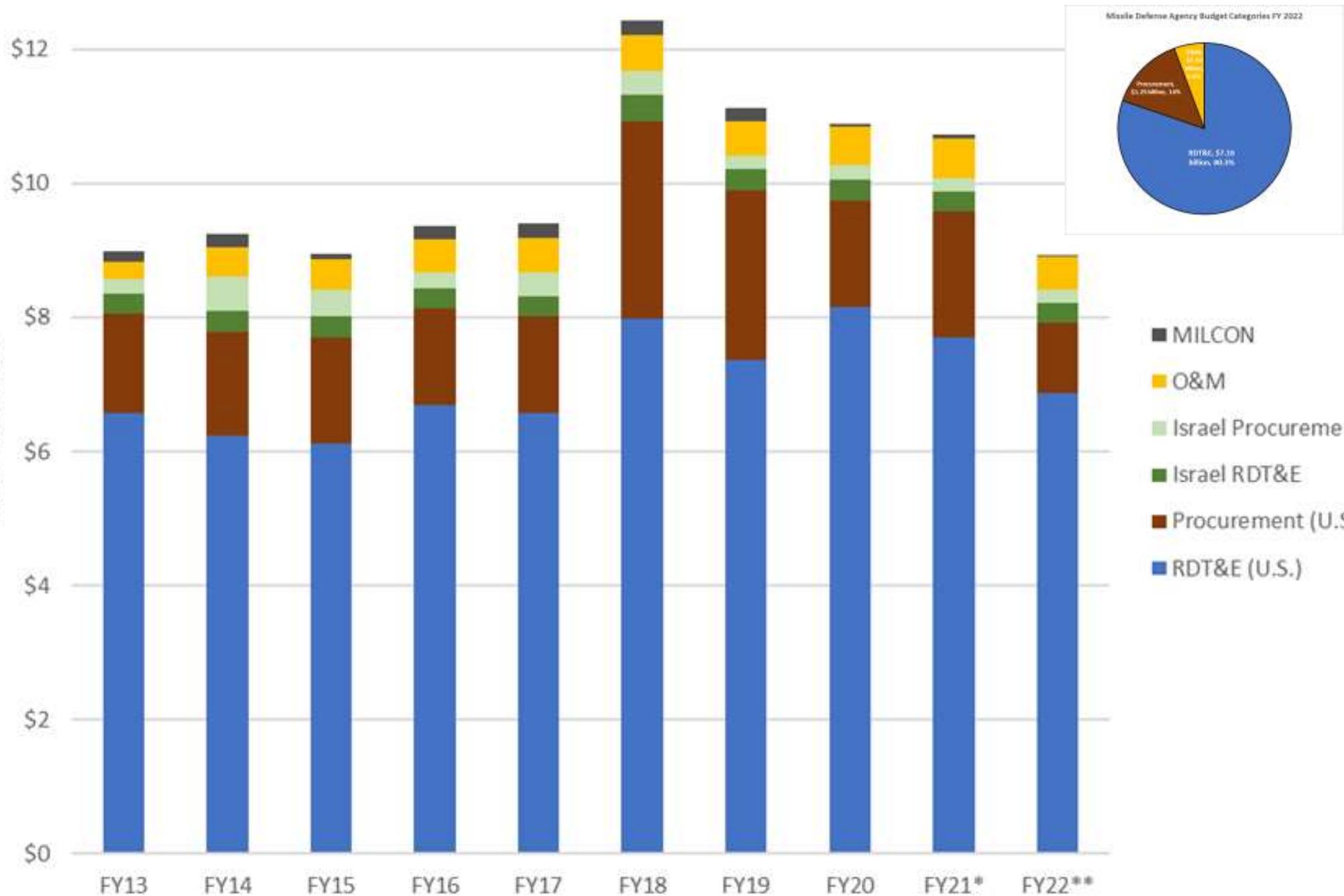
Less good

- Still largely focused on the rogue state BM threat
- Attention to IAMD largely limited to theory
- No adaptation or evolution of the PAA/EPAA
- Limited interceptor evolution
- Minimal homeland or theater CMD efforts
- Insufficient attention to mobility, survivability, integration, & air defense inadequate to complex & integrated attack
- Limited pursuit of hypersonic defense
- Homeland BMD plans obsolete in 127 days
- Did not answer, partially answered, or deferred 11 of 17 statutory criteria
- Ignored statutory task to shape missile defeat paradigm
- Aspirational statements disconnected from MDR, budgets
- Last time



Insufficient alignment with the National Defense Strategy

Missile Defense Agency Budget Categories, 2013-2022



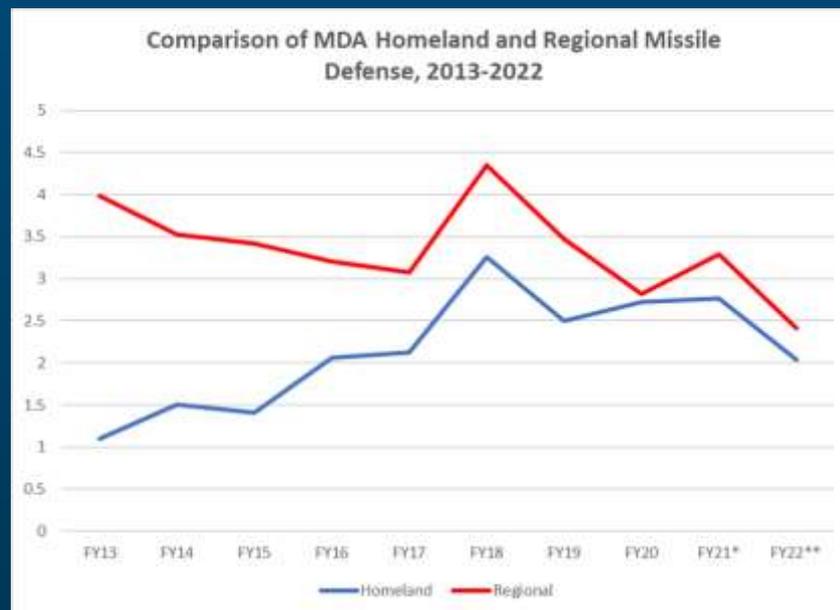
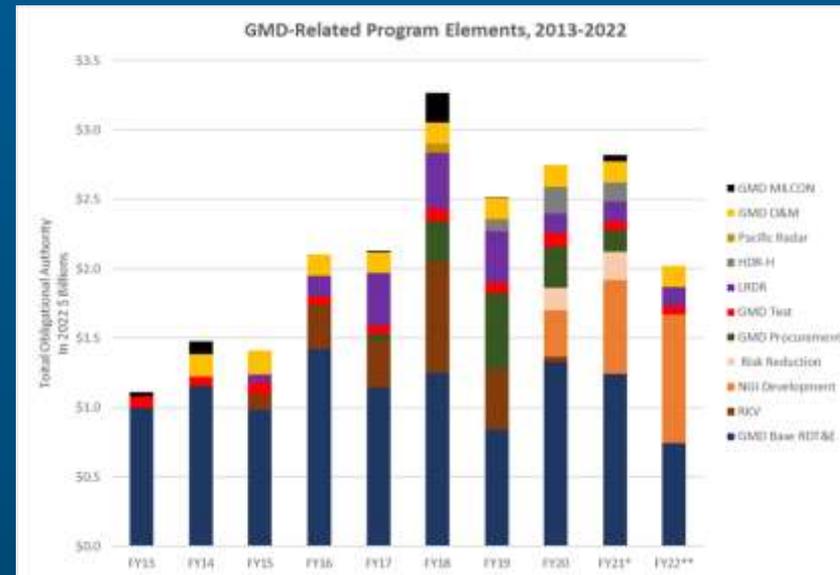
Was Admiral Davidson right?

- “Taiwan is clearly one of [China’s] ambitions ... and I think the threat is manifest during this decade, in fact, in the next six years.”
- “Guam is a target today. It needs to be defended and it needs to be prepared for the threats that will come in the future, because it is clear to me that Guam is not just a place that we believe that we could fight from, as we have for many decades. We are going to have to fight for it in order to be able to do that.”



Three battles or one?

- Homeland, regional, force protection.
- Gen. VanHerck on all-domain awareness
- North America is a region too.
- Defense of Guam
 - Cornerstone for adapting to the “central challenge of our time”
 - Shouldn't look like Romania: need different sensors, effectors, missions, concepts of operation.
 - Element distribution, survivability, track record, capability, range, manning, interoperability.



More Distributed AMD Operations

Today's Launchers and Effectors

- Stovepipes of excellence
- Single points of failure
- Over-focus on ballistic threats
- High cost, low capacity



Alternative Concepts

- Network centrism: any sensor, best shooter
- Element dispersal: redefine firing unit
- Mixed loads: layered defense in a box
- Offense-defense launchers: any launcher, any mission
- Multi-mission effectors: any target, any missile
- Containerized launchers: any launcher, anywhere
- Passive defense shell game: some full, many empty

Today's Radar Archipelago

- Sectorized coverage
- Terrestrial basing
- Lots of emissions
- Overreliance on radiofrequency
- Insufficient force protection
- Non-dedicated asset integration



A New Sensor Roadmap

- Domain rebalance
- Disaggregation and distribution
- Technological diversity
- A new culture of sensor fusion
- More advanced radar capabilities and operations



Today's AMD elements are too susceptible to suppression.



Sources:

- *Distributed Defense: New Operational Concepts for IAMD* (Jan 2018)
- *Shield of the Pacific* (May 2018)
- *Beyond the Radar Archipelago: A New Sensor Roadmap for AMD* (Nov 2018)

Three battles or one?

The Promise of the MDS

- A comprehensive approach to the air and missile threat spectrum
- Integrated with Service AMD, missile defeat
- Prioritize warfighter needs, operational analysis
 - ORSA → architecture → systems
- The Alton Brown Doctrine



The only unitasker allowed in my kitchen is a fire extinguisher.

— Alton Brown —

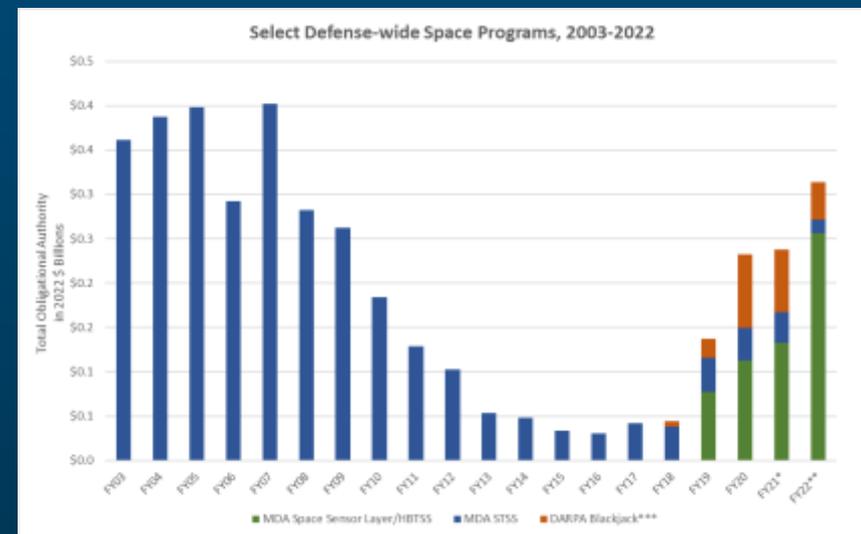
AZ QUOTES

Whither the enterprise?

- The enterprise will continue to need a missile defense-centric materiel development organization
- MDA 2.0
 - Acquisition authorities
 - Colors of money
 - Alignment under R&E vs. A&S
 - Relation to SDA, Space Force, Service AMD
- HBTSS: the canary in the coal mine
 - Questions about organizations, orbits, missions, & sensors will shape the character of the future MDS
- Redefining transition and transfer at O&S
 - Enough already.
 - "Those interceptors need to be procured by somebody." – VADM James Syring (2016)
- Update 5134.09, but with attention to warfighter involvement, decision speed, and agility.

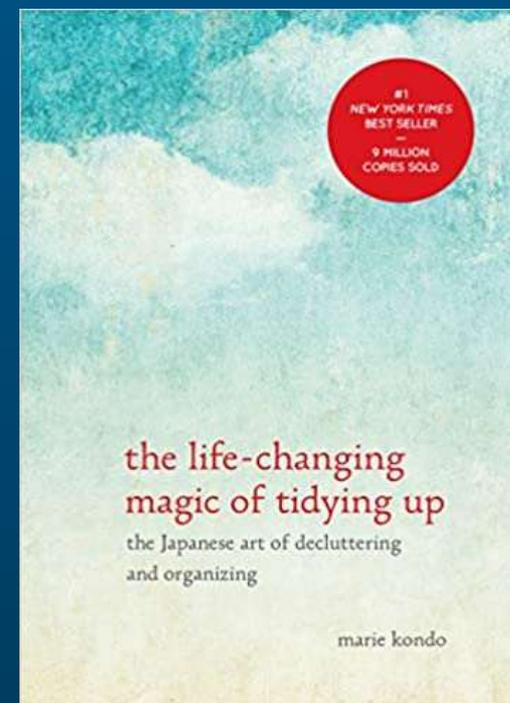
Principles

- Do no harm
- Don't fear risk
- Beware program breakage
- Avoid mission silos of excellence
- Tailor the enterprise to suit the missions, not the other way around



What about arms control?

- The Marie Kondo Doctrine
- "If it no longer brings you joy, thank it for its service and send it on its way."
- Proliferate conventional missile strike to contribute to deterrence, stem nuclear programs



Ground-Based, Long-Range Fires Are Not Stupid

- Complicate surveillance and targeting
- Impose multiple dilemmas
- Cost of delivered effect vs. cost of round
- Dispersal, deception, decoys
- No more basing business as usual
- Navy: ~1,800 VLS tube reductions this decade
- Bomber reliance alone permits enemy to focus only on airfields and tankers.
- Air Force: ~100 B-21s not available until late 2030s
- “Multi” in multi-domain fires: three or more domains.

“There’s a couple [people] that are arguing pretty aggressively for a kind of a roles and missions look. But that’s looking at the world from 1948. We got to look at the world from 2021.”



What concepts should inform the next MDR?

Missile defeat paradigm

Its all about the spectrum

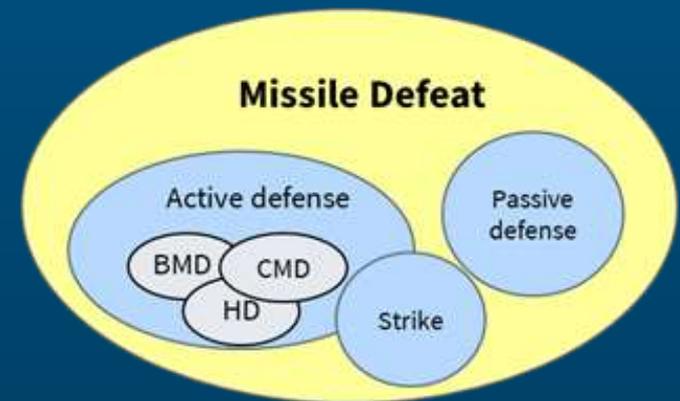
Regional, warfighter-centric focus

From legacy to next-gen offsets

Enterprise 2.0

Allied interoperability, capacity building

Arms control and counterpro



INDOPACOM IAMD can be this administration's version of EPAA.



MISSILE DEFENSE PROJECT

missilethreat.csis.org