Building a Force That Wins: Recommendations for the National Defense Strategy

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The 2018 National Defense Strategy (NDS) reoriented DOD’s planning and resource priorities toward great power competition and conflict

- Requires the services to size and shape their forces to defeat peer aggression, sustain nuclear deterrence, defend the homeland, and deter a 2nd lesser aggressor
- Adopted a new theory of victory: defeat a peer adversary’s *fait accompli* invasion of a U.S. ally or friend (Taiwan, Baltic states, etc.)

Mitchell Institute’s report addresses three issues stemming from 2018 NDS guidance that increase risk of future strategic failures:

1. Sizing & shaping the force for a short *fait accompli* denial operation could create decisive capability gaps in an extended duration conflict with a peer adversary

2. Sizing & shaping the force for one war increases risk a 2nd aggressor would choose to take advantage of a major U.S. engagement in another theater

3. DOD lacks all-domain warfighting concepts that inform force structure and capability tradeoffs needed to maximize combat power given flat/declining defense budgets
Most stressing challenge for sizing & shaping the force: defend U.S. allies against a peer adversary’s *fait accompli* invasion

- Deter/defeat a Chinese or Russian invasion of an area on their periphery that is covered by their A2/AD network (such as Taiwan, the Baltic states)

- The 1991 Desert Storm warfighting model is outdated: Deploying an iron mountain of forces before launching a counteroffensive would give China/Russia time to achieve a *fait accompli* and reinforce, making the cost and risk of a counteroffensive prohibitive
DOD adopted a new warfighting approach and force employment model

DOD’s new theory of victory: defeat a peer adversary’s *fait accompli* strategy

- China and Russia’s warfighting strategies combine gray zone and high-end operations protected by their A2/AD complexes to achieve a *fait accompli* before the U.S. and its allies can intervene

U.S. forces must be prepared to:

- Respond within hours to counter an assault, blunt, and then defeat invading forces
- Operate in contested environments throughout conflict (operating concepts that assume threats can be “rolled-back” are outdated)
Day 19: 431 fighters remaining with 3% attrition, 236 with 5% attrition, etc.

This example does not include hundreds of fighters and other aircraft that could be destroyed by PLA air and missile strikes on the USAF's theater airbases.

Risk: Sizing the force for a short *fait accompli* denial campaign could create decisive capability gaps in a longer war.
Not just platforms ... advanced PGMs and other critical expendables could be quickly depleted

Assumes 2,768 total JASSM and LRASM (about 50% of USAF inventory) are allocated to the Indo-Pacific

Days all weapons are depleted for various bomber attrition rates

- 9 days at 1% bomber attrition
- 10 days at 3% bomber attrition
- 11 days at 5% bomber attrition
- 12 days at 7% bomber attrition
- 13 days at 9% bomber attrition

Assumptions for this example:
- B-52s are the only combat aircraft delivering JASSM/LRASM
- Each B-52 carries only 12 JASSM/LRASM per sortie (external carry only)
- B-52s have an 80% mission capable rate

- Entire inventory of JASSM & LRASMs in theater depleted in less than 14 days by B-52s
- Other aircraft would also use JASSM/LRASM – this would accelerate inventory depletion
More than 1,500 AMRAAMs needed for daily defensive counterair sorties, fighter escorts (6 missiles per sortie), fighter strikes (2 missiles per sortie)

Cumulative AIM-120 AMRAAMs expended on threats

AMRAAMs in theater at start of fight

Shortfall after day 28

Replenishing AMRAAM stocks from other theaters would impact deterrence and other global mission requirements

Same future China-Taiwan *fait accompli* denial campaign as the previous example

USAF requirements would outstrip AMRAAM inventory in theater by Day 28
Recommendation: The 2022 NDS should hedge against a protracted war with China

- DOD’s theory of victory should hedge against a Chinese decision to continue their offensive with the intent to exhaust the U.S. military

- U.S. forces should be sized to conduct a punishment operation if required after a successful *fait accompli* denial
  - The ability to inflict costs that China considers unacceptable would enhance deterrence

The Air Force, Space Force, and Navy would be the predominant force providers for a punishment campaign against China

- 5th gen fighters & bombers, penetrating ISR
- Next-gen counterair systems to deny China control of the air
- USVs & UAVs including low-cost attritables for teaming ops
- EW to suppress area-denial threats and dominate the EMS
- Offensive cyber, offensive space, space domain awareness
- Increased PGM stocks including anti-ship weapons
**Risk:** Sizing and shaping the force for one war creates opportunities for a second aggressor

From 1990 to 2018 DOD maintained a two-war planning construct

“We do not want a potential aggressor in one region to be tempted to take advantage if we are already engaged in halting aggression in another”  
(DOD 1993 Bottom-Up Review)
Example: Long-range strike shortfalls may be the USAF’s most significant capacity gap

- Current bomber force size falls short of requirement for 1 peer conflict plus nuclear deterrence – more than twice that shortfall for two wars
- Unlike in the past, it would be difficult to “swing” bombers from one conflict to a second fight in another theater
- The USAF must add 5 bomber squadrons by 2030 to meet requirements and eventually grow the force to include at least 240 stealth bombers
Similar story for the USAF’s fighter force

- A major concern: will the future USAF “high-low” force mix have sufficient 5th gen stealth fighters to fight (or even credibly deter) a second peer aggressor?
  - Future force in this example is 44% 5th gen, today is only 20% 5th gen, 80% legacy
Recommendation: DOD as a whole should have a two-war force, not every service

- Would better deter and hedge against a second peer aggressor (or even a rogue state) would take advantage of a U.S. military fully engaged in another theater
- Determine pacing scenarios each service must use to size and shape its future force based on predominate forces needed for peer conflicts

**Air Force:** size to defeat both Chinese and Russian aggression; forces critical to defeating *fait accompli threats* in both regions

**Navy and Marine Corps:** size primarily to deter/defeat Chinese aggression in the Indo-Pacific

**Army:** size primarily to deter/defeat Russian aggression against NATO
Risk: Joint Warfighting Concepts could support spending on excessively redundant capabilities

• In order to be useful for planners and programmers, operating concepts should:
  1. Address how the U.S. military will operate differently in the future
  2. Inform cross-service and cross-domain tradeoffs to help maximize DOD’s combat power as a whole
  3. Have buy-in from those who will use them to inform DOD’s requirements and resource priorities

• A Joint Warfighting Concept that is the product of a consensus-driven doctrine development process will likely fall short of some of these criteria
  o Ladened with each of the service’s equities to protect their programs of record
  o Increases risk DOD will waste resources on excessively redundant programs desired by multiple services and exacerbate existing shortfalls for other mission areas (like airbase defense)

“Each service is going to have the ability to do defense as well as long-range strike, from their own formations.”

VCJCS General John Hyten on the draft Joint Warfighting Concept
The 2018 NDS stressed the need to create new, innovative operating concepts

- Operating concepts describe objectives military forces should achieve and how they should be organized and employed to achieve them
  - Each service has developed their own concepts for future peer conflict
    - Joint Staff is developing a Joint Warfighting Concept for all-domain warfare
  - Significant commonality across concepts:
    - Based on 2018 NDS planning assumptions
    - Integrate operations across all domains, including space, cyberspace, and EMS
    - Must generate combat power from inside contested areas
    - Conduct dispersed operations to increase survivability, disadvantage enemy
    - Most require significant resource growth
Service strategies/concepts inform their future planning forces

- “Planning forces” are independent service assessments of what they believe is needed to support the NDS; they also create competing demands for more resources

<table>
<thead>
<tr>
<th>“Battle Force 2045,” 546 ships (84% growth including unmanned)</th>
<th>“Force Design 2030,” divest “2nd land army” capabilities</th>
<th>“The Air Force We Need” 386 operational squadrons (24% growth)</th>
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<tbody>
<tr>
<td>Navy</td>
<td>USMC</td>
<td>Air Force</td>
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<tr>
<td>Aircraft carriers</td>
<td>Active component infantry battalions 24 21</td>
<td>Airlift squadrons 53 54</td>
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<tr>
<td>Big deck amphibious ships</td>
<td>Cannon artillery batteries 21 5</td>
<td>Bomber squadrons 9 14</td>
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<tr>
<td>Other amphibious ships</td>
<td>Rocket/missile artillery batteries 7 21</td>
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<tr>
<td>Large surface combatants</td>
<td>Tank companies 7 0</td>
<td>C2ISR squadrons 40 62</td>
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<td>Small surface combatants</td>
<td>Light armored recon companies 9 12</td>
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<tr>
<td>Attack submarines</td>
<td>Assault amphibian companies 6 4</td>
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<tr>
<td>Ballistic missile submarines</td>
<td>Fighter/attack squadrons 18 18</td>
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<tr>
<td>Combat logistics force</td>
<td>Medium tiltrotor squadrons 17 14</td>
<td>Remotely piloted aircraft squadrons 25 27</td>
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<td>Support vessels</td>
<td>Heavy lift helicopter squadrons 8 5</td>
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<td>Unmanned surface vehicles</td>
<td>Light attack helicopter squadrons 7 5</td>
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<tr>
<td>Unmanned underwater vehicles</td>
<td>Aerial refueler transport squadrons 3 4</td>
<td>Tanker squadrons 40 54</td>
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- OSD traditionally assesses planning forces on a service-by-service basis instead of determining the size and capabilities mix of the future joint force as a whole
Recommendation: Need all-domain warfighting concepts that maximize DOD’s future combat power

Cost-per-effect analyses must inform new all-domain operating concepts and acquisition priorities

**Costs included:**
- Cost of expended munitions
- Cost to acquire new long-range fires battery & stealth bomber
- 30-year operating and support costs for each system

**Not included:**
- Excludes cost of C2ISR network that provides target data to ground battery and cost of logistics to support battery deployed to a theater

**Starting point:** cost to acquire new stealth bomber then operate & sustain it for 30 years

**Starting point:** cost to operate and sustain B-52 for 30 years

**Starting point:** cost to acquire new long-range fires battery then operate & sustain it for 30 years

Comparing cost effectiveness of long-range strike alternatives

- Battery with LRHW Hypersonic Boost Glide Weapon
- Battery with $20M Ballistic Missile
- New stealth bomber with SiAW
- B-52 bomber with Airbreathing Hypersonic Weapon

Points where green lines cross over blue lines indicate where air launched effects become the less expensive option for strikes over long ranges.
Cost-per-effect analyses should inform force structure and capability tradeoffs.

- $80 million for 2 weapons
- $80 million for a reusable 5th gen fighter
- $80 million for 66 weapons

Cost per weapon:
- $40 million
- $1.2 million

- 2 ground-launched Long-Range Hypersonic Weapons (LRHW)
- F-35A
- 66 air-launched Stand-in Attack Weapons (SiAW)
Summary of recommendations for the 2022 NDS

- **U.S. theory of victory should hedge against a Chinese decision to continue operations to exhaust the U.S. military**
  - Sizing and shaping the force for a *fait accompli* denial plus a follow-on punishment operation would enhance deterrence and reduce risk that China would take advantage of an undersized U.S. military
  - Will require additional air, naval, and possibly space and cyber capabilities

- **Return to a 2-war force sizing construct to deter / hedge against a second opportunistic aggressor**
  - DOD as a whole should have a 2-war force
  - Differentiate how each service should size and shape based on predominate forces needed in Europe and the Indo-Pacific

- **DOD senior civilian and military leadership should be directly involved in the development and approval of all-domain warfighting concepts**
Need a focused review of service roles & missions to inform all-domain warfighting concept development

Complete review at the front end of the concept development process

Consolidating space roles & missions from other services

Future long-range strike force providers

Responsibility for airbase air and missile defense

DOD senior civilian and military should lead development of all-domain concepts used to assess cross-service/cross-domain priorities