TESTIMONY BEFORE THE SENATE ARMED SERVICES COMMITTEE

To receive testimony on defense innovation and acquisitions reform

January 28, 2025

Statement by Shyam Sankar
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Chairman Wicker, Ranking Member Reed, distinguished members of the committee, thank you for the opportunity to testify on one of the most important topics facing the U.S. Department of Defense and our nation: defense innovation and acquisition reform.

Mr. Chairman, I want to commend your report on this subject, Restoring Freedom's Forge: American Innovation Unleashed. I also want to commend your bill, the FORGED Act. Restoring defense innovation and fixing our acquisition system will require boldness, vision, and sustained attention. Your leadership is an important piece of the puzzle.

I want to assist your work by sharing insights gleaned from nearly two decades at Palantir, where I've worked to battle bureaucracy and deliver innovative technology for our nation's warfighters.

My message today is simple: Defense innovation and procurement are broken. And they are broken at precisely the moment we need them to deter and defeat our enemies.

The members of this committee scarcely need to be reminded about the threats we face. President Xi Jinping has instructed the People's Liberation Army to be ready to invade Taiwan before the decade is through. Even now, Chinese shipyards are building large transport vessels that could be used in an amphibious invasion. Russia is continuing its bloody war of attrition against Ukraine, sustained by China's seemingly endless industrial base and fanatical North Korean troops. Iran is licking its wounds and reorganizing its proxy armies to continue their onslaught against Americans and allies in the region. Amid these threats, time and complacency are luxuries we cannot afford.

Our defense industrial base and defense innovation base are wholly ill-equipped for these challenges. More than ever, the United States needs mass production and speed to deter conflict. The stockpile is not the deterrent; the flow of mass production is the deterrent. There is little evidence our industrial base, as currently constituted, is delivering this deterrent capability.

I believe this problem is caused by perverse incentives embedded in our broken acquisitions process. Put simply, the Pentagon is a difficult customer. It is also the only customer. The defense market is functionally a monopsony, where the sole buyer shapes the market with overly prescriptive requirements, overly complex regulations, and five-year plans more reminiscent of the countries we defeated in the last century than America's free, innovative, capitalist system.

This monopsony has created a vast gulf or “Great Schism” between the defense sector and the commercial sector. Innovative companies capable of competing in the larger, more lucrative commercial market have fled the defense market. Meanwhile, specialist defense contractors have been cut off from the refining pressure of the marketplace and have consequently grown bloated and uncompetitive. Today, most defense contractors resemble their government customer more closely than the founder-driven, innovative companies they once were.

Bridging this divide and introducing greater competition and market pressure into the defense sector is the first step to sparking defense innovation and repairing defense acquisitions. These changes must be accompanied by a change in mindset. We need to overcome the complexity and bureaucracy of the present system and understand that winning is the only requirement that matters. If we can drive substantive reforms of the process and create a bias toward speed and decisive action, then I am confident the many patriots in government and industry will rise to meet this moment.

Appended to this statement is a copy of The Defense Reformation, a treatise I produced late last year that explores these issues in greater detail and provides actionable recommendations for reform.

I am honored that the Committee on Armed Services has invited me to share my views on these challenges and I look forward to taking your questions.

Palantir

The Defense Reformation

WRITTEN BY Shyam Sankar / Palantir CTO

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As a nation, we are in an undeclared state of emergency.

Around 2014, Russia annexed Crimea, China militarized the Spratly Islands in the South China Sea, and Iran was allowed to pursue the bomb. A decade later, we have had more than 300 attacks on U.S. bases by Iran, 1,200 people slaughtered in a pogrom in Israel, an estimated 1 million casualties in brutal combat in Ukraine, and an unprecedented tempo of CCP phase zero operations in the Taiwan Straits.

This is a hot Cold War II. The West has empirically lost deterrence. We must respond to this emergency to regain it.

We have a peer adversary: China. “Near-Peer” is a shibboleth, a euphemism to avoid the embarrassment of acknowledging we have peers when we were once peerless. In World War II, America was the best at mass production. Today that distinction belongs to our adversary. America’s national security requires a robust industrial base, or it will lose the next war and plunge the world into darkness under authoritarian regimes. In the current environment, American industries can’t produce a minimum line of ships, subs, munitions, aircraft, and more. It takes a decade or two to deliver new major weapon systems at scale. If we're in a hot war, we would only have days worth of ammunition and weapons on hand. Even more alarming is our lack of capacity and capability to rapidly repair and regenerate our weapon systems.

Given the vast sums we have spent on defense in these decades of Pax Americana, it would be reasonable to wonder: what went wrong?

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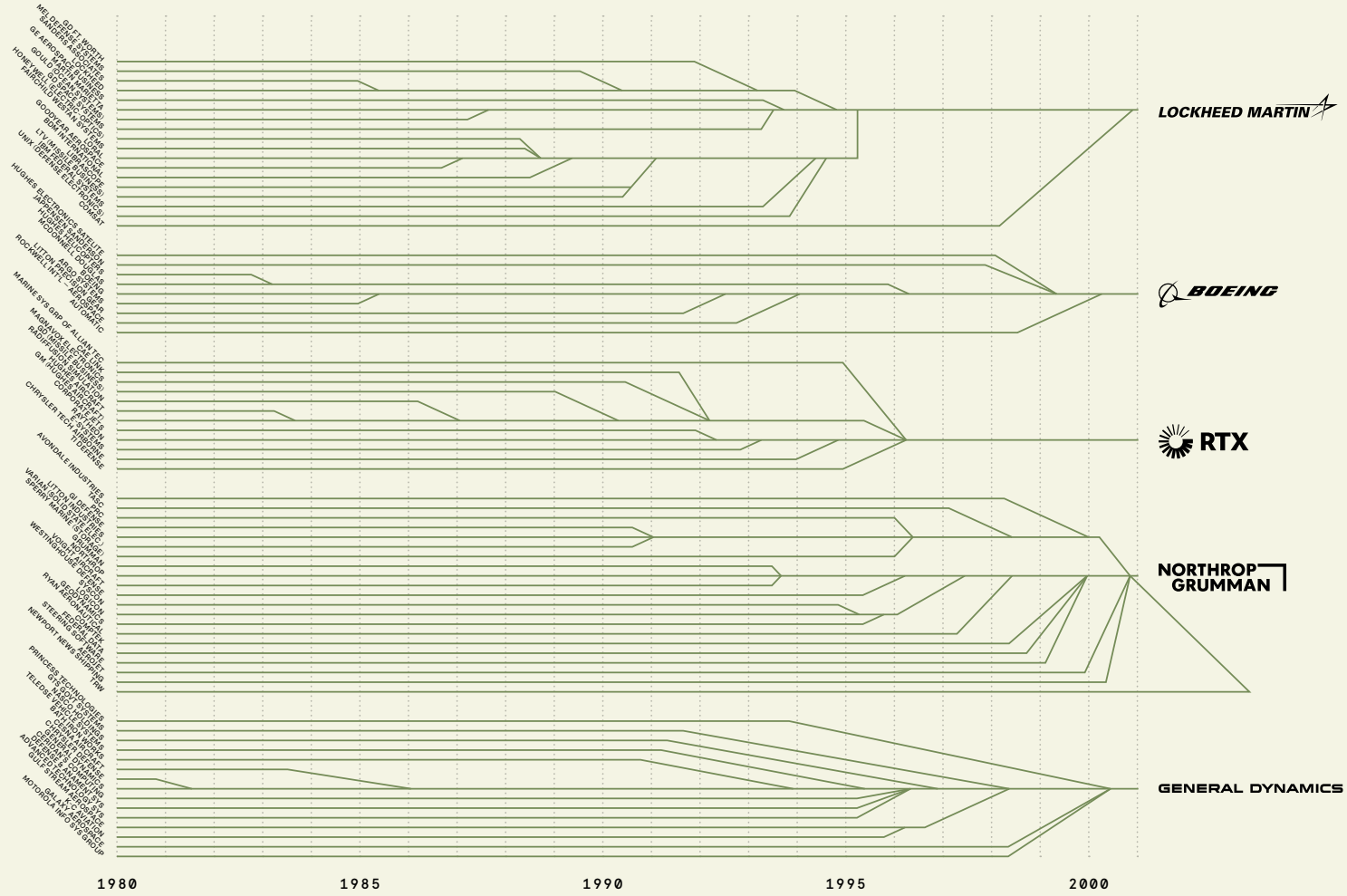
The Last Supper and Great Schism

In 1993, after the end of the Cold War, America wanted a Peace Dividend and defense spending was slashed by 67%. The Secretary of Defense held a dinner at the Pentagon — the so-called “Last Supper” — to tell the 51 primes they would not all survive. Today, there are 5.

FIG 01

Corporate consolidation in the defense sector



Source: Department of Defense Report on the State of Competition within the Defense Industrial Base, February 2022

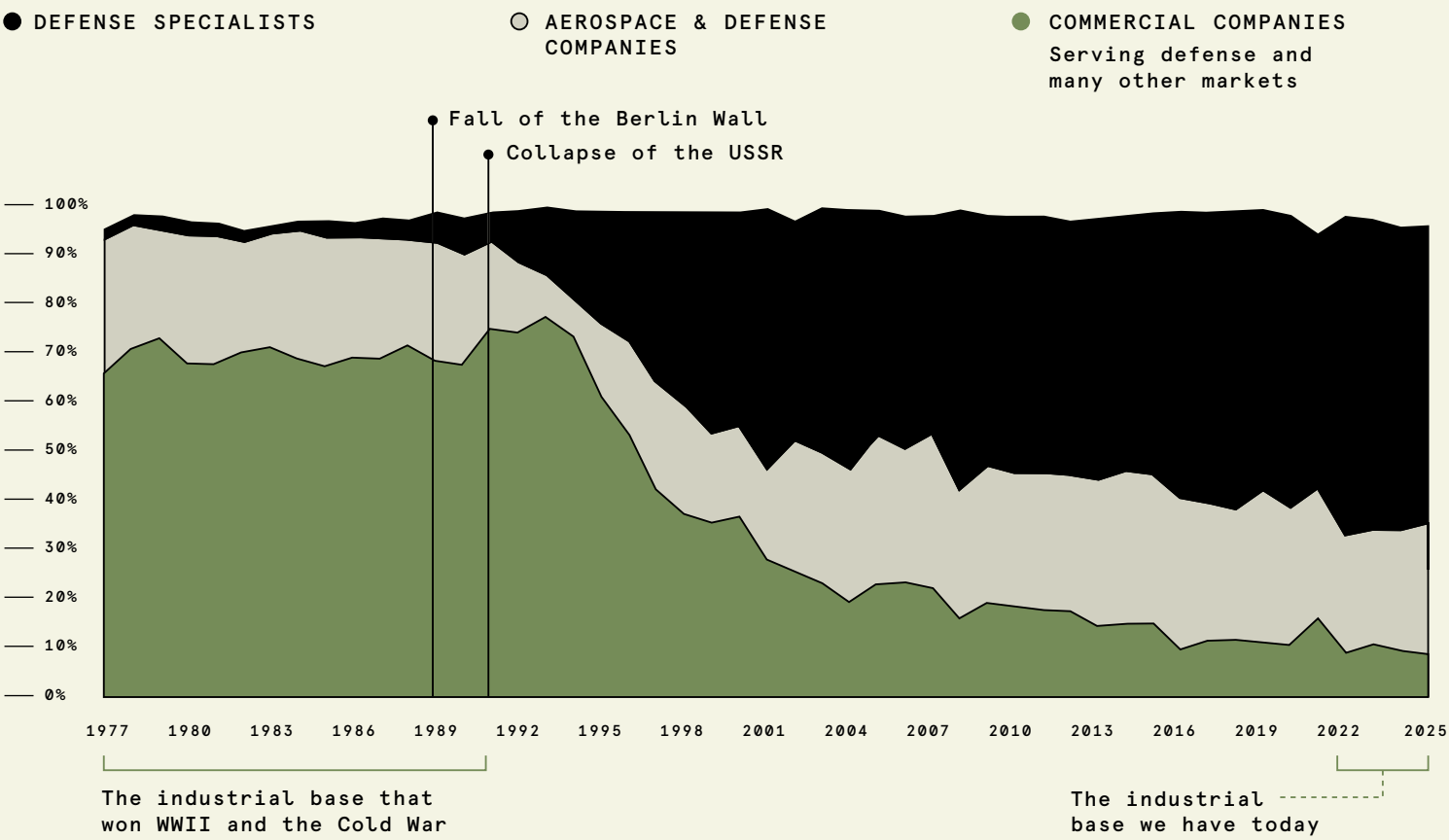
The most important consequence of the Last Supper wasn’t a reduction in competition in the Defense Industrial Base, but the decoupling of commercial innovation from defense and the rise of the government Monopsony. Consolidation bred conformity and pushed out the crazy Founders and innovative engineers.

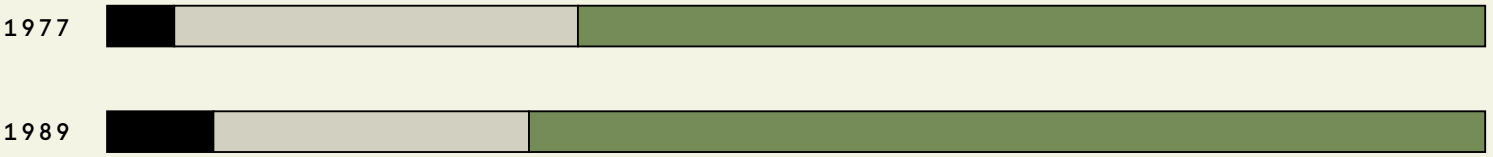
This was the Great Schism of the American Industrial Base.

Before the fall of the Berlin Wall, only 6% of defense spending went to defense specialists — so called traditionals. The vast majority of the spend went to companies that had both defense and commercial businesses. Chrysler made cars and missiles. Ford made satellites until 1990. General Mills — the cereal company — made artillery and inertial guidance systems.

FIG 02

Major weapon systems acquisition budget: share by industrial base category





Fall of the Berlin Wall, Collapse of the USSR

Note: “Major weapon systems” includes MDAPs and some additional spending, not the entire procurement and research, development, test, and evaluation budget
Source: Martin Bollinger, based on the DOD’s Annual Report to the Congress and Program Acquisition Cost by Weapon System, fiscal years 1977 through 2025

But today that 6% has ballooned to 86%. The Monopsony's fixation on cost-plus contracting, control, and tedious regulation has made working in the national interest bad business, suitable only to risk-averse investors who are addicted to dividends and buybacks — a luxury only affordable at the end of history. That is not what the most dynamic parts of the American economy do — only the dying parts.

Working with the Monopsony as a defense contractor is so unappealing that Ball would rather make beer cans than satellite buses. That is depressing.

The S&P 500 last added a defense company 46 years ago — until Palantir's addition in September 2024. That resembles Europe's sclerotic capital markets, not America's.

FIG 03

Defense companies by market cap

COMPANY	MARKET CAP	EMPLOYEES	FOUNDED
Palantir	$173,827,400,000	3,892	2003
RTX	$157,046,600,000	185,000	1934
LOCKHEED MARTIN	$121,606,200,000	122,000	1912
BOEING	$115,012,000,000	171,000	1934
GENERAL DYNAMICS	$74,736,470,000	111,600	1952
NORTHROP GRUMMAN	$69,008,600,000	101,000	1939
L3HARRIS	$44,503,790,000	50,000	1926
Huntington Ingalls Industries	$7,354,361,000	44,000	1886

Note: Data as of December 2024 from public sources

But Palantir's addition will not be the last. Because today the Founders are back — in the hundreds — and they are backed by hundreds of billions of dollars of private capital to build in the national interest.

However, their effort and capital alone is not enough to resurrect the American Industrial Base.

We need a defense Reformation to upend the Monopsony and transform the way the government does business. Here is my treatise on how to get that done.

The Department's Heresy

Everyone, including the Russians and the Chinese, have given up on communism except for Cuba and the DOD. The only problem is that we are bad commies.

We run a centrally unplanned process that neither has the supposed advantages of a planned economy nor the (far superior) advantages of a free market. Bill Greenwalt explains the sins of our poor attempts at copying the Communists:

> This [ideology and management] approach, now deeply engrained in defense management culture, process, law, and regulation, is based on the concepts of scientific management that were once fashionable in the Soviet Union and at the vanguard of the 1950s U.S. auto industry before it was outcompeted by Japan in the 1970s. Centralized, predictive program budgeting, management, and oversight were then thought to be superior to the trial and error and messiness of time-constrained, decentralized experimentation and the seemingly wastefulness of having multiple sources rapidly prototyping potential solutions.
>
> BILL GREENWALT

There is no process that can save us. Reform will be painful. We must be very careful not to conflate pain with error. As world champion cyclist Greg LeMond said, "It doesn't get easier, you just go faster." Just as there is no pain-free world class cycling performance, innovation will always be painful, messy, and subject to retrospective bureaucratic critiques from those not in the arena.

Our centralized, predictive program budgeting, management, and oversight process values time spent, not time saved. It values costs and effort, not value and outcomes.

The Great Schism has created a religion in government that is unaware or dismissive of power-law outcomes from power-law talent. In Silicon Valley we call them 10x or 100x engineers, meaning they are 10x to 100x as valuable and productive as normal engineers. We once understood this in defense, too: Rickover, Kelly Johnson, Ed Hall and countless legendary talents fought the bureaucracy and got stuff done. We seem to generally appreciate that Usain Bolt is more than a generational talent — even the gold medalist at Paris 2024 was not faster than him. But this is also true for Tom Mueller, Elon Musk, Palmer Luckey, Brian Schimpf, Ryan Tseng, and the Founders at the First Breakfast. Reforming the system means renouncing the communist conformity that's slowing us down and unleashing the charismatic leaders who can drive outcomes — in the boardroom and on the battlefield.

The 18 Theses of the Defense Reformation

① Monopsony is the root of what ails us.

The root of our pathology is a lack of competition inside of Defense. Avoid a monopsonistic buyer at all costs by approximating market mechanisms and dynamics as a key principle of the design of the DOD (e.g., the newly created Space Force is a worthy competimate to the NRO). What looks like duplication is insurance against complacency and unpredictability — there is nothing more costly than losing. When only Monopsony persists, things will not work, they will be expensive, and they will make us weaker. The last great Monopsony was Walmart. In the 90s their TV advertisements promoted everyday, low prices. The strategy was to squeeze suppliers on prices rather than encourage innovation. They never saw Amazon coming, and are now ⅓ of the size. Will we let that happen to America?

② Cost-plus contracting makes the nation dumber, slower, and poorer.

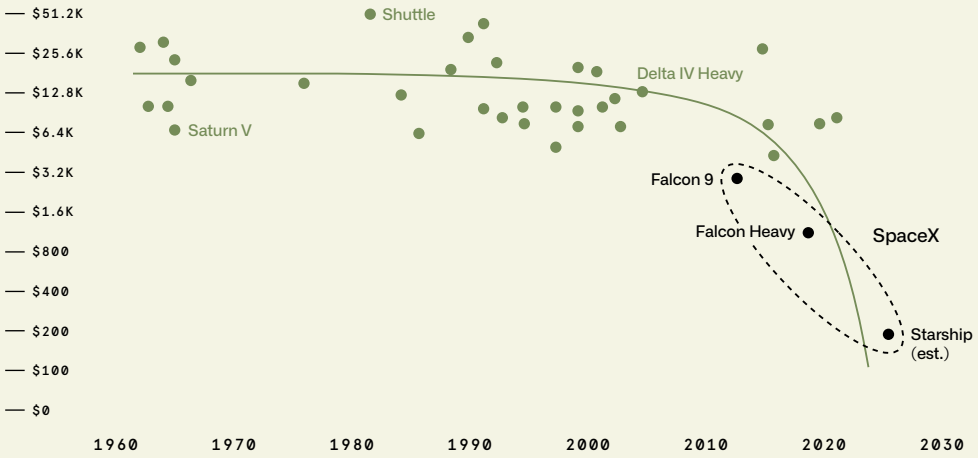
Maybe it is the right way to buy an aircraft carrier, but it is the wrong way for 95% of things. It robs any reward for going faster or developing innovative approaches, institutionalizing a lack of incentive to compete on price by valuing time spent over time saved. SpaceX reduced launch costs by 85% — that simply isn't possible in a cost-type domain. In fact, NASA estimated the cost of developing the SpaceX rocket at $4 billion when SpaceX did it for $400 million. Cost-plus is the reason that defense costs grow faster than inflation and don't result in compounding price performance decreases. In the commercial world, people are viewed as expensive, and technology is considered cheap. In government, there is a perversion where people are viewed as abundant, and technology is viewed as unaffordable. Meanwhile, Starship will reduce launch costs 100x over Falcon 9 and 1,000x over the progeny of cost-plus approaches in a timeline that is well inside the development loop of the $2 trillion, 30% available F-35.

Cost-plus launch kept costs in the stratosphere. Commercial drove costs into the ground.

- Falcon 9 was 10% of the cost of legacy
- Starship Heavy will be 1% of the cost of Falcon 9 at $10-20 per kg (no, that's not missing any zeros)
- In short, commercial innovation made launch costs 1,000x cheaper

FIG 04

Launch cost per kilogram



Source: CSIS Aerospace Security Project, PayloadResearch estimates (2024)

③ A budget is a plan, and no plan survives first contact.

Military doctrine states plans are useless, even if planning is invaluable. “I support the President’s budget” is an evasion. No company could survive if it took two years to POM budget for projects internally (DOD’s Program Objective Memorandum, or POM, process). They would be outcompeted. And that is what our adversaries are doing to us now. We must invest in closing the Cash Chain to close the Kill Chain. The fiscal OODA loop to move money around is not survivable. We must be able to reprogram money inside of 2 months, not 2 years. Messy and imperfect discretion is required. We require DevSecOps for budgets.

④ The person is the program: the primacy of people.

The Defense Officer Personnel Management Act (the rules that apply to how military officer careers and promotions are governed) must be reformed. There is a reason that Rickover was the Director of Naval Reactors for over thirty years and that all great programs had a leader who saw them to completion (Schriever and Intercontinental Ballistic Missiles, Groves and the atomic bomb, Boyd and and the F-16, Bierbauer and the Predator). Talent is not fungible. Talent-Problem fit is rare and hard and determinative. Rotations for officers every 2-3 years only ensures they haven’t had enough time to learn anything beyond surface-level platitudes. Knowledge and know-how compound. We need to care more about winning than about providing experiences to fill out a bingo card. Additionally, Congressional oversight can’t end with Program Element numbers. Which heretical individuals are Congress protecting and holding in place against the will of their service?

⑤ The only requirement is winning.

The most important projects don’t come from requirements. America’s cultural strengths are fundamentally creative and improvisational. The requirements process ensures we play to our weaknesses. In a fight, no one cares about the requirements document. The only requirement is winning. And winning requires engaging in the messy, overlapping, seemingly wasteful but actually efficient process of being better. Validating requirements leads to solving yesterday’s problem without today’s context. We have countless validated problems.

⑥ Put the pebble in the right shoe.

You can’t separate the roles of creating requirements and delivering capabilities. All value accretes in the seams between teams — this is an unnecessary seam between requirement and solution. No company could compete commercially today under such a structure. Instead we need more competition inside of government across programs with overlapping mandates. Rickover built and operated the subs. He constructed many of the safety standards he would then enforce, and he was “often forced to send letters to himself to request certain things.” Innovation is a consequence of productivity. If you don’t produce, you can’t innovate. The LLM revolution was inspired by Google’s attempt to improve Google Translate 3% — not by blue sky thinking disconnected from reality.

7 Conway's Law: you ship your org chart.

Conway's Law reveals the connection between an organization's internal structure and the results it delivers to end users. The core idea is that the way members of an organization communicate and collaborate will shape the design and character of the systems and projects it produces. The problem with Goldwater Nichols is that it didn't go far enough. You can't have a joint Department if Services have monopolies on their Title 10 equipping responsibilities. We need more competition amongst the services or you can say "joint" until you are purple in the face — it won't make you joint. Conway's Law leads to the profane conclusion that that CJADC2 (Combined Joint All Domain Command and Control, the Department's vision for machine-to-machine connection across services and allies to close kill chains) isn't possible inside the Military Departments as currently conceived, with each developing its own set of capabilities for its service, and must be delivered either by the Office of the Secretary of Defense (OSD), the combatant commands (CCMDs), or by all the services competing for COCOM and component adoption of their solution (approximating a market mechanism). This is how we built ICBMs — with Army, Air Force, and Navy all competing. No Joint Program Offices. No Monopoly. Creative, fast, and ultimately cheaper results.

8 CCMDs need budget to introduce strategic competition.

Enabling CCMDs as the buyers approximates market forces. Programs will have to respond to the needs and feedback not of a captive service alone but also the folks that must employ these capabilities in anger. Even a budgetary reallocation of 5% would enable this market mechanism. With a modicum of economic power, CCMDs can harness the defiant and creative American spirit by creating situations for Service PEOs to respond to. This is how free markets work.

9 National security is economic prosperity.

DJI should not exist. The drone was an American birthright. But bad policy from the FAA, which prohibited beyond line of sight operations, and DOD's rigid ITAR restrictions deprived America of untold economic prosperity. We got it right with the Jeep, GPS, and semiconductors — technologies where the government was the initial customer but not the most important in the final calculus. We must counter the Monopsonist's desire for control. RAND thought Lockheed would dominate integrated circuits because it had fifty PhDs and Intel only had two. But Bob Noyce understood that military and intelligence customers were just a pit stop on the way to Moore's Law. For another example, there has never been a dominant naval power that was not also a dominant commercial shipping power. China understands this. Do we?

10

Make the primes business-worthy.

America should demand that its primes have commercial businesses to subsidize taxpayer R&D and to prove they are competitive. Most of the primes today do not have commercial businesses. When they do, we are reminded that they are not competitive (see: Boeing and Starliner). In the 1980s, Raytheon tried to diversify by entering the commercial construction industry. Harvey Sapolsky notes "this proved to be an expensive mistake because defense is like no other business in its forgiveness of cost overruns and time slippages: Raytheon could not manage construction and environmental cleanup projects, even for government customers, the way it was used to managing defense projects." If GDIT is so good, why don't they serve the commercial IT market? Because they can't compete, having developed a business as far from the commercial market as the Galapagos Islands are from the mainland. Chinese primes only earn 30-40% of their revenue from the PLA; the remainder is commercial. Those cheap products your neighbor is buying on Amazon are subsidizing lethality which could be used against our men and women in uniform, much the same way that during the Cold War your purchase of an American car, camera, and cereal subsidized America's lethality against her enemies.

FIG 05

Defense revenue as a percentage of total revenue for 2023

US

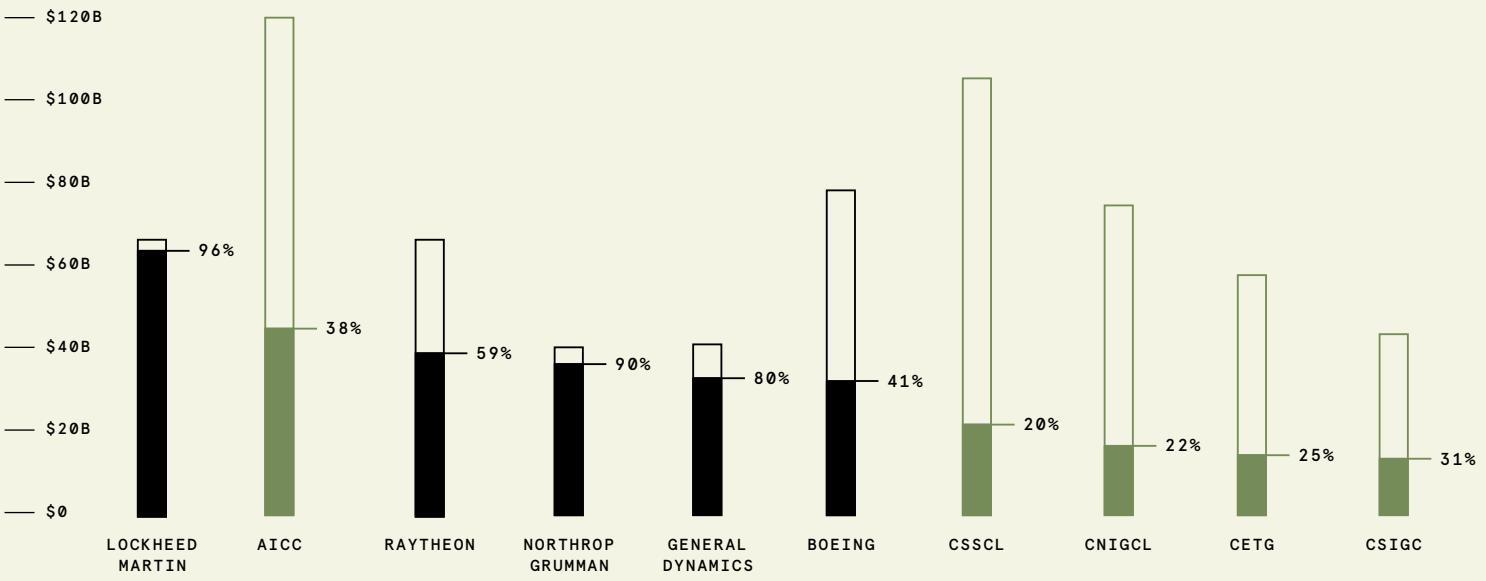
● DEFENSE REVENUE ○ TOTAL REVENUE

73.4% Average

CHINA

● DEFENSE REVENUE ○ TOTAL REVENUE

27.2% Average



Source: DefenseNews Top 100 Defense Companies (2024)

11

Risk capital, not taxpayer capital.

Cost-reimbursed independent research and development (IRAD) is an indulgence. It isn't real R&D. Cost-type contracting enables contractors to play with house money (reimbursed by taxpayers). Private R&D in the commercial world far outstrips government R&D. The 1960s are gone. Companies must invest their own capital — their assses must be in the hot seat if we want innovation. Apple didn't charge you for their failed self- driving car in your last iPhone purchase. Contractors shouldn't be able to charge you when their lab experiments run amok, either.

12

Small business programs should not be welfare.

The goal of our founder-driven, creatively destructive market system is for small business to get big, not to remain indentured servants. The Department should judge its small business efforts through the lens of market cap creation: wealth for Americans. The point of national security is to underwrite freedom and economic prosperity. Small Business Innovation Research (SBIR) programs should measure how many of their small business got big, not how many programs received follow-on funding. We want to have a vibrant, dynamic group of companies with many new entrants. In the last 50 years, Europe has created zero companies worth more than $100 billion. America created all of her $1 trillion companies in that time period. Our Defense Industrial Base and the bureaucracy that demanded it is European.

13

DOD and its proxy forces must stop competing with industry.

Federally funded research and development centers (FFRDCs) have the false moral certitude of being "non-profits," which is about as believable as America's hospitals being non-profits. FASA's Commercial Item Preference is the most violated law in the land. Government often seeks to recreate products industry has already developed. This is not a pathology unique to government — it's in the commercial world, too. But in the commercial world the market is a harsh and quick judge of custom development. No such feedback mechanism exists in government (yet another strong argument for increasing competition inside of government). No Program Manager will recreate the wheel if a competing Program Manager is going to move faster than them by adopting something that works today. Also, it's the law.

14

Productivity is more lethal than weapon stockpiles.

We obsess about stockpiles, but stockpiles are irrelevant. Our munition deliveries to Ukraine were Cold War-era kit sitting on shelves collecting dust while decades of innovation occurred. The consumption of 10 years of production in 10 weeks of fighting in Ukraine demonstrated that the rate of production was the actual weapon all along. We must be able to produce everything at speed and scale, we must design requirements and incentives for manufacturability, and we must never stop producing. No more participation trophies for having a weapon sitting on a shelf — it only counts if you can make it. Pontiac didn't have a stockpile of antiaircraft guns they sold to the government during World War II, but they became the leading manufacturer of the 20mm Oerlikon and dramatically decreased production time per gun.

15

Reference architectures can't be created, they emerge.

Government attempts to avoid pain and vendor lock-in upfront will fail in the most drawn-out ways possible. For any interesting class of problem (i.e. non-trivial innovation) it isn't possible to deductively design a reference architecture. Instead you must build and let the architecture emerge. You maximize the chance of getting it right by having multiple competing companies and programs with interoperability requirements at inception. Government Reference Architectures are the 21st century equivalent of Robert McNamara's notorious Total Package Procurement (TPP), which produced failures like the F-111 and C-5A. TPP fell into the trap of trying to eliminate uncertainty and predict the chaos of the universe by inflexibly defining every program requirement and dollar spent, from R&D through production, before any work had actually been done. Chaos won.

16

Rule of law works.

Contractual agreements enable the government to get the protections it wants. Fearmongering that companies will turn off their capabilities when war starts is a tired excuse to exclude commercial companies, protect the legacy Defense Industrial Base, and justify violating FASA. The only companies that have ever tried to own the government's data are in fact the legacy platform providers whose R&D was financed by the government in the first place. Why does this concern not exist in the commercial market but does in government? Because it isn't real — there are simple contractual mechanisms to ensure the government has continuity of operations and desired flexibility. Let's remove the excuse for why Mass must be in Latin with only the Monopsony's priests delivering the sermon.

17

Let the people speak to the mission.

Martin Luther taught that the people could ascertain God's truth directly from the Bible — they didn't need priests to interpret His meaning. Today, we are told companies building for Defense cannot possibly understand the warfighter and that even the warfighter can't understand what he really needs, that his needs must be intermediated through the Acquisition's priestly class. The result is countless Kafkaesque causality dilemmas. You can't get clearances unless you have a classified contract, but you can't get clearance unless you are part of the existing class of cleared people. The same is true for SCIF sponsorship and access to classified networks. The priestly class alone decides the timeline and schedule to let a company access the top secret network from its offices (Palantir has been waiting twenty years). There are too many monopolies, and we have long since passed the point where they resembled legitimate security concerns. It is time the church holds itself to SLAs and creates a transparent process to enable the industrial base. The Cardinals from the legacy primes have enriched themselves because they are the only ones with access behind the SAP door. Private industry will pay its own way here for this enabler. It does not require the government to front these funds. Enable American capital to show up and purchase network, SCIF, classified cloud compute, and clearances — all governed by investor confidence that the company and team can credibly turn that investment into value.

18

Warriors fight with guns and git.

Warfighters need to know how to code, not because they will build industrial strength platforms that industry is delivering (they won't, not without $10 billion and the nation's top computer scientists), but because software is the most important and malleable weapon system. Software is a unique American strength and our warriors must develop fluency to understand how to wield the software industrial base to maximize lethality. Knowing if your feature request will take 1 hour, 1 day, 1 week, or 1 year to implement is critical. Knowing how to bend the software to your will is how you will bend the enemy to your will. Software and its malleability will define the clock speed of the OODA loop.

The Resurrection of the American Industrial Base

I hold it that a little rebellion now and then is a good thing, and as necessary in the political world as storms in the physical.

THOMAS JEFFERSON in a letter to James Madison

I nail these theses to the Pentagon Metro entrance not because I hate the Department and my nation, but because I love them profoundly.

We are in a state of undeclared emergency. For more than three decades, we've accepted a stagnant Defense Industrial Base born from a complacent Monopsony with no great power competition. We have prayed at the altar of process for too long. Change is now possible because we all realize there is something worse than change: irrelevance and obsolescence. We have no time to waste in resurrecting the American Industrial Base we depended on in the depths of the Cold War.

It was the American Industrial Base that underwrote American victory and Pax Americana. It can once again if we embrace it as our savior.

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