COMMENTARIES

Goalposts in Motion: How Shifting Military Requirements Are Stalling India's Defence Indigenisation

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EXECUTIVE BRIEF & KEY FINDINGS

In June 2020, Indian and Chinese troops clashed in the Galwan Valley, exposing critical capability gaps along the northern frontier. The lesson appeared straightforward. India needed faster procurement, accelerated innovation, and a defence industrial ecosystem capable of rapidly translating battlefield requirements into deployable military capability. Six years later, however, many of the systems conceived in response to those lessons remain trapped in development cycles, testing loops, certification processes, and procurement delays.This raises an uncomfortable question. Is India's defence indigenisation challenge really a problem of industrial capacity, or is it equally a problem of constantly shifting military requirements?The public debate often focuses on delayed deliveries, underperforming defence public sector undertakings, or the limitations of domestic industry. Yet far less attention is paid to a recurring phenomenon within India's acquisition ecosystem: programmes that begin with one set of operational requirements only to encounter changing expectations midway through development. For manufacturers, this can be akin to running a race where the finish line keeps moving.The result is a persistent cat-and-mouse game between capability and requirement. Industry struggles to meet evolving demands while the military waits for urgently needed platforms. The consequence is that systems intended to address today's operational challenges risk entering service only after tomorrow's threats have already emerged.The question is not whether India should demand excellence from its defence industry. It should. The question is whether the current acquisition ecosystem is structured in a manner that allows excellence to be delivered at the speed modern warfare demands.

It wouldn't be frivolous to suggest that the Indian military and the Indian military industrial complex share a love hate relationship. While the private sector loves to promote itself as 'Atmanirbhar Bharat', 'Viksit Bharat', patriotic and so on, they are stuck in a constant tussle with the Armed Forces when it comes to delivery of battle-ready, mission-critical equipment. In the last 12 years, defence exports have undoubtedly risen, indigenization is the flavor of the hour and a number of homegrown defence companies have taken centre stage, but inspite of their success (on paper), nowhere mainstream do Indian companies enjoy similar levels of success. Not on the global market nor do they quench the thirst of the Indian military – so it seems.

I want to refer some case studies to drive this point. Take the case of the Zorawar light tank and LCA Tejas Mark1-A. Defence enthusiasts have seen their name all over the media whenever a trial is successfully conducted and jump in joy. 'Best performing Light tank at high altitude' or 'Most nimble aircraft in its weight category'. Unfortunately, these are nothing more than participation certificates if these platforms never see the light of operational deployments. A light tank that was needed post the Indo-China border skirmishes of 2020-21 and a variant of a 4th generation fighter that was initially conceptualized on paper at the start of the 21st century are yet to see any combat experience. In comparison, take the Chengdu J-20, a 5th Generation fighter that was the immediate requirement of the Peoples Liberation Army Air Force (PLAAF) of China at the start of the 2000s. It was put on paper, designed, prototyped, tested, improved, deployed and manufactured *en masse* to the point where 300+ are deployed on the ground in flyaway condition as of right now.

In today's debates, comparisons with China reveal the same constant, stark and unavoidable truth; they are far ahead. As such, it is pointless to look and not feel envy and eventually gets to the point where it's pointless to even look.

Comparisons often end here. Ultimately, if the aim of the Indian military is to face adversary on 2 fronts, the path to resurgence begins with asking 'Why?'. Why are we seeing self-issued laurels to platforms that have not even been deployed on forward formations? If the Zorawar truly is the best performing light tank at high altitude then why are our armoured regiments still waiting for delivery?

The issue is a cat-and-mouse style back and forth between what is required and what is available. Capability versus Requirements. In my experience of attending acquisition meetings, a common milestone in discussions is usually the disclosure of GSQRs or ORs. General Service Qualitative Requirements or Operational Requirements. A formal declaration by the Indian military on what are the standards needed in the field. All bidders base their product on these SQRs/ORs. Its akin to laying the foundation of a building. All the hard work a vendor is about to embark on is based on these requirements. However, this serves as a friction point as well. Any change at or during the design, development and/or testing stage can throw a wrench in the entire plan.

The case of Zorawar is recent, so it can serve as an appropriate case study here. After the tense Indo-China border standoffs during 2020-21, it was realized during events on the ground that there was a need of a light tank capable of operating at the high altitudes of Ladakh. Hence, the Indian Army quickly formulated its GSQRs and issued the RFI* for a new class of light tanks. DRDO ultimately won the contract to develop a new *Zorawar* light tank and at the time, the requirements called for STANAG 4569** Level 4 class armour protection. Level 4 protection requires 360-degree protection against 14.5 x 114 mm armour-piercing bullets fired at a range of 200 metres travelling at a velocity of 911 metres/second. These rounds are used commonly by Russian machine guns mounted tanks. It also calls for protection from a 155mm high-explosive artillery shell detonating 30 metres away and resistance against 10 kilograms of TNT under the wheel, track or the belly of the tank.

As much stick at the DPSUs*** get, DRDO fast tracked the entire project and had the tank ready for trials in record time. As of June 2026, the total number of tanks produced stands at a staggering 2 prototypes. Furthermore, rumors circulating online are suggesting that the tank might face a delay of 2 more years as the army has changed its

requirements from STANAG Level 4 to Level 6. Level 6 armour protection calls for protection against the most modern and lethal class of anti-tank armaments - Armour Piercing Fin Stabilized Discarding Sabot rounds. APFSDS rounds travel at 5 times the speed of sound. They cover a kilometer in roughly 0.58 seconds and function by piercing tank armour with a pyrophoric, depleted uranium rod. As dangerous as it sounds, modern technological advances have ensured that countermeasures against these kinds of threats are available or in development – a discussion for another time. However, the question that should be posed is, again 'Why?' Why was there a need to change the requirements while the project was underway? Why does a light tank, optimized to perform in rugged, mountainous terrain need protection against APFSDS rounds when it is clearly classified as a 'Light' Tank. Modern Battle Tanks themselves are susceptible to APFSDS rounds, when the scope of the project was decided to centre around a light tank, was it feasible to change it midway?

I agree, these are all surrounded by rumors, but this is not the first instance. The LCA Mark1-A, what was supposed to be the pride and joy of the Indian Air Force is seeing similar issues. 180 aircraft are on order, and delivery was supposed to begin in 2024 with the first order of 83 placed in 2021. As of now, not even a single aircraft has been formally inducted into the Indian Air Force. A 4^{th} Generation platform, already reaching obsolescence by todays standards are still on order right now. While majority of the blame has been placed on delays in delivery of engines and production bottlenecks, a known issue has been the gap between certification awarding and standard setting. By no means is HAL innocent, they are responsible for majority of the scrutiny they are under, but who will ever question the reasoning in the constant changing of Quality Acceptance and Certification & Validation? Especially when a Mark 2 is in the works, an AMCA is waiting in the background, and a so-called Super Sukhoi upgrade is pending as well. There was little need to constantly change the scope of the project half way through it.

Given the immense burden the PSUs are to deliver, the private industry is to assist (which is a blatant misuse of capability, but yet again, a topic of discussion for another day) and the military is to induct, it seems counter intuitive to constantly say "add this as well". Modern military industrial complexes have evolved to be modular and elastic capable of operating under duress and ever-changing environments. The burden is shared so that there is no single point of failure in any major procurement.

There is a real split between the so called "import bahadurs" and those who truly want to make in India, both of which have compelling arguments. On one hand, importing ready to use, combat proven systems improve geopolitical ties, inoculate research and development in key areas and offer variability in terms of capability while creating dependence, additional complex logistical pathways and burn a hole in the wallet.

On the other, if you truly want to make in India, investment in key technology is key. In the introductory pages of the Defence Acquisition Policy 2020, aero engines are mentioned as a 'key technology' which would take priority. However, the much-anticipated Kaveri engine has received funding of a quarter billion dollars over 3 decades. In comparison, the GE 404 engine that is apparently causing delays in production of the Tejas cost General Electric a billion dollars to develop. Just to compare, we had spent ~1.7 billion U.S dollars for 212 GE engines and the estimated cost for the MRFA tender is ~40 billion for the purchase of 114 Dassault Rafales. Its hard not to laugh. Going one route would have given India complete ownership of crucial defence technology that would have enabled it to mass produce, build self-sustainability and maybe even become an attractive vendor to foreign countries. But we always manage to drop the ball in some way or the other.

The writing is on the wall. If conflicts in the last decade have taught us anything, it is that no one can be trusted when it comes to defence technology. China understood quick and learnt how to play around the system. We keep getting caught with our tail between our legs and focus our efforts in redundant, short term returns that don't translate into anything meaningful. And then we wonder why we keep lagging and immediately blame the PSUs.

The truth is the system simply does not work by 21st century standards. Like most things Indian, the cycle is slow. The OODA loop# exists in the world of procurement too and needs to be tightened. The ever-changing standards of the military complements the delays that the PSUs are famous for and the result is a long wait for urgently needed technology that will see the light of the battlefield only when the next generation of technology is in the hands of our adversary.

Military leaders always say that battlefield experience is a crucial learning lesson to adapt to the rules of modern warfare. If that truly is the case, then for India the following can be applicable. The days of cost plus contracting are far behind and R&D needs to be given centre stage so that long, expensive and redundant procurement cycles are no longer incentivized. This is how Anduril and Palantir are redefining the rules in America. Academia needs to be further integrated into the defence ecosystem. Dual use technology is the way forward. Not just a handful of IITs but the entirety of the young, talented and hungry student base needs to be utilized to its maximum. This is how China is fostering its Civil-Military partnership. Engineers shouldn't be sitting in silos at a PSU waiting for approvals or larger budgets. They need to be at the frontlines with the people who are using their equipment so that modifications can be made on the fly in a decentralized, independent and cost-effective way. This is how Ukraine is challenging the worlds largest country. Israel's Unit 8200 is directly plugged into Silicon Valley so that alumni can identify security threats and structure startups to address those exact problems. South Korea has combined its industrial scale and a deliberate export strategy backed by funding from President Lee Jae Myung. Estonia and surrounding Baltic countries have become pioneers in cybersecurity after a major Russian cyberattack in 2007. Turkey identified drones to be the next biggest thing and heavily invested in a drone-carrier ship, cost-effective loitering munitions and what is now a globally reputed UAS ecosystem. Everywhere around the world, countries are learning, adapting, investing in their strengths and bearing the fruits of their labour while reports emerge that our army soldiers are buying foreign equipment out of their own pocket.

If India is serious about its strategy of 'Viksit Bharat 2047' serious changes and decisive action is necessary. Long gone are the days of monopolized PSUs controlling the market – even in socialist countries. Private-Public cooperation is essential to meet the standards of today. Serious investment is required, you can't build a tank or a jet with all the toys on spare change. Active cooperation with academia, autonomy-in-procurement, parallel processing procurement are all needed. In spite of being the world's largest democracy, those who run the defence PSUs are never held accountable and are incentivized to control the entire market. This is what happened in the U.S with the so-called 'primes'^. Today, we are watching a weakened U.S unable to sustain conflicts in the war with stockpiles rapidly depleting and forecasts estimating years before ammunition reserves will be replenished.

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Image Source: ChatGPT