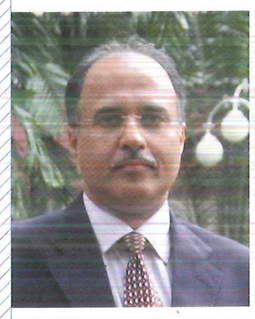
Defence Policy

Coming together for 'Create in India'

BY ANIL SARDANA AND RAHUL CHAUDHRY



ABOUT: For six decades, India had the desire but never the determination to be self-dependent in defence requirements. Vested interests played their part in keeping India dependent on foreign purchases. But no power in the world can claim military supremacy by buying its way through defence needs. **Anil Sardana, CEO & MD, Tata Power** (lead contractor for Pinaka Multi Barrel Rocket Launcher and Akash Missile Launchers), and **Rahul Chaudhry, CEO of the company's Strategic Engineering Division,** write on why 'Make in India' matters for India's defence preparedness.

To be a sovereign state means to be free from the control of any external influence. But to anyone who has read about the challenge India experienced during the Kargil War and Operation *Parakram* (planned after the Parliament attack), would realise the limited space available to India in her strategic manoeuvres. Take for instance, the GPS degradation during the Kargil war that propelled India to create its own GPS-Aided Geo Augmented Navigation (GAGAN), primarily for civilian use, making India the third country in the world to have this capability. In this world of technology denial, Trojans and malware, our sovereignty is not only challenged by those occupying the Tiger Hill, but also by those who limit our ability to act in national interest. Despite realising the limitations of GPS and having created GAGAN, we are still in the infancy of using it for our armed forces. This is but natural as we had to take calibrated steps to beat the denial regimes. While India remains dependent on foreign defence equipment for its security, will it be able to achieve its dream of being a permanent member at the UN Security Council and, at the same time, pursue strategic independence that is built on national capabilities with clear objectives and tenacity to follow through?

How to achieve substantive self reliance is well articulated in the Defence Production Policy released by the Ministry of Defence (MoD) in 2011, keeping Team India and not just defence public sector units (DPSUs) and Defence Research and Development Organisation (DRDO) at the heart of its implementation. The policy document articulates a gradual phasing-in of Indian industry capability and mandates a 10-year term in which all defence platforms (products) will be indigenously developed. It is not the policy but its implementation through defence production procedure that has been a challenge.

The crux of defence preparedness for any country is its focus and ability to create in-depth strategic capability. Defence capability (platform) development cycle normally runs in decades and mere procurement from a request for proposal (RFP) to an induction takes seven to 10 years. Thanks to the lost decade for defence, it is a pity that the decision-making process today is merely focussed on procurement and not on developing strategic industrial capabilities. In the procurement, we are chasing tail lights of technologies as countries developing products will tend to first induct them into their own armed forces and then export the proven version, which is in the middle or end of its life. The money received by exports is usually used to upgrade to the next version and, thus, the capabilities of these foreign countries remain a cycle ahead. This is evident in many government-to-government deals where products have gone obsolete and factories closed (in the country of origin), even before India concluded her acquisition deal. A measure used by the government to combat the so-called "obsolescence" is through joint development programme funding. Here, also we have seen aircrafts fly three days after India gave a billion dollars.

The message is simple – strategic self reliance has to be earned, it will not be purchased or gifted. It is true that substantive self-reliance cannot be about reinventing the wheel in today's world, but it has to be about know-why and not mere know-how. We need to know why the wheel is spinning at a particular RPM, how to repair the wheel and, more importantly, how to upgrade to the next generation. We need to move from the concept of "systems integration"– a

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nice name for mere assembly and testing to "systems engineering", i.e., the ability to define product specifications, develop the design, maintenance and upgrade capabilities using multiple subsystems, some of which can be from the global supply chain.

This clamour about Make in India – Defence to connect Indian manufacturing to global supply chain is an oxymoron. If India is a mere part of the supply chain but not the owner of the intellectual property (IP) creating defence products and systems, then the foreigners, however friendly, knows the true measure of our capabilities. Thus essence of "strategic manoeuvrability" is compromised. France and the UK both NATO members, still maintain their independent nuclear deterrent. Closer home, it is well documented that expensive, mission-critical military equipment were per force grounded because of denial of spares and repairs post Pokhran-II embargoes.

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Cost of strategic independence cannot be measured just in monetary terms. However, there is strong economic rationale for developing substantive self-reliance in defence and promote systems engineering to deliver Indian sefence products and systems over the next five to 10 years, a dream enshrined in the Defence Production Policy of 2011. In today's knowledge economy, value addition in manufacturing is shrinking. This trend is going to be enhanced with advanced 3D printing and integration of design to manufacturing, i.e., Industry 4.0. This phenomenon is already creating jobless growth in advanced nations and threatening the mass market factories in China. The factory of the world is now driving "created in China" as the growth mantra for transforming its economy by 2025.

Defence production in terms of volume has always been niche, demanding highest level of reliability and quality. This is a sector where IPR and WTO rules do not apply. So if Make in India – Defence" becomes a movement to replace the DPSU assembly lines with private sector assembly lines, nothing much will be gained, not even substantial job creation!

Jobs in any sector have direct correlation to "value addition". If we can focus on systems engineering for creating indigenous products then this 'Create in India' thrust will have both short- and long-term benefits for the Indian economy and for Indian defence. It is a well known fact that for defence products, life-cycle costs are usually four to seven times the capital acquisition cost and the cycle lasts over decades. Upgrades are critical to keep your weapon systems relevant in this era of rapidly-changing technology. Our current track record of importing foreign technologies for assembly in the Indian factories has delivered, at best, an expensive armed forces inventory where costly upgrades from the original equipment manufacturer (OEM) have been the order of the day. A few of the DRDO technologies, such as *Akash*, *Pinaka* and *Bramhos* (joint development with the Russians) have been successfully inducted. However, it is evident that the life cycle cost of the indigenously-developed systems are a fraction, maybe 20-25 per cent of the life-cycle cost being paid to foreign OEMs. Systems Integration only brings in low-tech, low-value jobs. However, if we move to 'Create in India' through system engineering, the upgrades and life-cycle support, and high value jobs will substantially benefit our economy.

DRDO, with an annual budget of $2 billion today, stands in similar league with DARPA, the US develop-ment agency, with about $3 billion annual budget, which is credited with inventions such as the Internet, unmanned aerial vehicle (UAV), stealth fighters, etc. DRDO is an organisation with over 60,000 people and DARPA has just around 300 project managers who deliver entirely working through the industry. It is DARPA and US DOD's famed CMMI certification that measures the maturity of systems engineering capability. Today, with many CMMI Level 5 companies, India has the knowledge pool to take on relevant system engineering projects and to create defence products and systems.

Given our high inflation and consequent high interest rates in India, cost of the financing difference between an indigenous supplier and foreign supplier is ***10-12%*** *per annum. If an Indian OEM is buying a complete sub-system from a foreigner, it will be imported at zero duty. Depending on the tenure of the supply project, foreign companies can be at a 6-10 per cent-plus cost advantage, if you consider just the financing cost*

Earlier, defence used to lead the R&D spends in the world. Today, it is the Internet and communication (where India has inherent strengths), which is creating RMAs (Revolution in Military Affairs) by bringing network centricity to the tactical battlefield. Strategic electronics brings in the precision to modernise weapon systems. Today, India has very little strategic independence on electronics and the corridors of power do not know how to deal with Chinese origin chips being part of all our critical infrastructure, including the Indian Railways, power transmission and communications. Defence and security, where no WTO treaty obligations apply, offer the Government of India a chance to create indigenous capabilities that can eventually help in reducing civilian electronics imports, which threatens to exceed our oil imports by 2020.

To realise this dream, the first step is to take basic implementation steps under the defence procurement procedure and the government, especially Ministry of Finance, must differentiate and support defence R&D and manufacturing beyond what they normally do for other sectors. Some recommendations are:

Allow defence manufacturers to own design, quality

Today, Indian defence companies do not control their own quality. MoD's quality agencies inspect even at the intermediate production state and act as an internal quality checking system for the companies. On the contrary, if a system or sub-system is coming from abroad, a mere Certificate of Conformance from a foreign company is acceptable. Therefore, on the shopfloor it makes no sense to indigenise a sub-system or develop progressively higher capabilities and upgrade, whereas the innovation is detested because of inspector intrusion and lack of openness to unfamiliar techniques.

Cost of financing long gestation programmes

Given our high inflation and consequent high interest rates in India, cost of the financing difference between an indigenous supplier and a foreign supplier is 10-12 per cent per annum. If an Indian OEM is buying a complete subsystem from a foreigner, it will be imported at zero duty (exemption certificate granted by MoD) and, that too, the Certificate of Conformance is accepted by MoD QC. Hence, it can be brought on time. Given the low interest rates or cost of financing abroad, supplier's credit till the product is delivered to the MoD and the money received can be negotiated. Depending on the tenure of the supply project, foreign companies can be at a 6-10 per cent-plus cost advantage, if you consider just the financing cost.

On the contrary, if the Indian OEM is brave enough to go for developing the indigenous sub system, despite the deterrence of losing independence to the defence quality agency, high cost of capital limits its risk-taking ability, and there is no support for such projects. While the technology develop-

ment fund that has been talked about for years by the MoD and specific provisions for it were announced in the 2015/16 Budget, the scheme needs to be notified expeditiously.

The MoD gives Indian industry payment terms of 15 per cent advance, 75 per cent at factory acceptance test or at the time of dispatch, and 10 per cent at the user acceptance stage on site through the Controller of Defence Accounts (CDA), the process takes more than six months to get the money. The Indian industry has been requesting similar payment terms as are applicable to foreign vendors (paid through Letter of Credit) and DPSUs (liberal stage payment terms akin to government infrastructure projects thus maintaining a positive project cash flow). There, foreign OEMs get timely payments and DPSUs have a float of cash, thus eliminating the issue of working capital and cost of financing, whereas the other industry players have pressures on funding the jobs.

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Need for higher support for defence by Ministry of Finance

Defence R&D cycle is five to 10 years. MoF provides R&D 35(2AB) income tax benefit, which currently has a sunset clause till 2016/17. Usually MoF keeps extending the sunset timeline by a year or two. This causes uncertainty and is counterproductive for the defence industry due to long cycle times. The MoF needs to realise that the same talent and resources can be readily deployed for the export market earning tax-free returns at substantially lower risk. Therefore, the industry recommendation of a sunset clause for defence R&D till 2029/30 is a reasonable demand.

For capital-intensive projects, such as infrastructure, corporate tax benefits are granted under 80-I, which is available even to the hospitality industry, but not for defence manufacturing despite the need for substantial capital investment.

Unfinished agenda

It is to the credit of the present NDA Government that some long pending issues, such as a level-playing field, availability of government test infrastructure, and defence licensing, export norms have been addressed. However, there is still an unfinished agenda.

While parity on taxes and duties have been granted on domestic tax vis-a-vis DPSUs, parity with foreigners on imported system and sub system still remains an unresolved issue.

Exchange rate variation granted for all tenders issued beyond August 2015 will effect procurement after five to seven years, and the defence industry has requested its application to ongoing RFPs, too, especially where the price bid has not been opened.

In December 2015, applicability of Services for offset credits was reinstated. However, the methodology of value addition determination in Services for offset purposes is not yet defined, thus leaving a door open for potential misuse. Similar reasons for the Services being banned earlier under offsets.

Make in India - Defence is about exercising sovereign freedom over matters of our national security interest. This can only be realised through the Create in India campaign involving Team India. ◆