

LOOKING BEYOND THE RAFALE

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On October 8, 2019, the first Rafale fighter aircraft for the Indian Air Force (IAF) was handed over to Defence Minister Rajnath Singh in France. This milestone is the latest in a series of much-needed yet perennially delayed steps to bolster the IAF's combat capabilities. The IAF has historically been one of the best-equipped forces in the region, but has seen its advantage, particularly quantitative, against China and Pakistan narrow dramatically over the past two-odd decades. The IAF is today faced with the twin tasks of having to acquire technological superiority over its two adversaries, as well as mustering enough aircraft to head off any collusive misadventures.

On the technological front, the Rafale jet brings to the table an unprecedented air-to-air capability in the form of the MBDA Meteor missile, as well as a new long-range precision strike capability with the MBDA's SCALP air-launched cruise missile. The aircraft also finally provides the IAF with a combat platform that is more completely and tightly integrated by the original equipment manufacturer, rather than any number of modified and upgraded aircraft presently in service. The Indian government is paying top dollar to Dassault to not only modify and certify the aircraft to an exacting specification but also to stand by its reliability in service — something that has never been done with a fighter aircraft in Indian service to date.

Going by past operational experience and certain common factors in aircraft upgrade programmes and acquisitions such as the Rafale, some key aspects of IAF thinking are revealed. A preference for integrated and ideally self-contained electronic warfare suites, for example, along with a requirement for open architecture avionics are clear. The former is self-explanatory, while the latter would allow for integration of a range of imported and indigenous weaponry at a lower cost by doing the expensive flight trials in India itself.

Unfortunately, air power is an expensive business, and in a scenario where manpower and running costs consume the lion's share of the budget, the principal impediment to a comprehensive renewal of the IAF is a financial one. As such, lower capital costs and lower sustainment costs have to go hand in hand — it is simply not enough to argue that expensive western aircraft make up for their high upfront costs over lifetime sustainment. Enter the indigenous option — HAL's Tejas Light Combat Aircraft. Domestically produced and paid for mostly in rupees, it is not only fiscally attractive but also certainly good enough to replace the IAF's ageing MiG-21 and MiG-27 fleet as it stands. However, non-compliance with a 1980s Air Staff Requirement and low production rates continue to raise questions about the type's future. Notwithstanding these concerns, the IAF has committed to a large number of an upgraded evolution of the type incorporating a range of modern improvements such as an active array radar as well as fixes to problems identified early on, such as lack of a self-protection jammer. If this variant can be delivered cheaply and quickly, it will arrest the dramatic hollowing out of the IAF that is anticipated to take place around 2024-25, by which time some 100 aircraft could be withdrawn from service.

In the middle of the French import and the domestic LCA sits a fledgling tender for a third type of fighter — a foreign design to be made in India under the controversial Chapter 7 of the 2016 Defence Procurement Procedure (DPP). Where the budgetary support for a programme of 114 modern fighters, and indeed the ability of the country to establish and sustain two fighter manufacturers, will come from is not clear. Defence budgets have remained effectively flat for a long time, and with the economy flagging, an increase in capital outlay is not likely. Procurement funding will also necessarily have to compete with funding for research and development for

upcoming domestic projects such as the redesigned LCA Mk.2 and fifth-generation Advanced Medium Combat Aircraft (AMCA).

Finally, even if all near-term procurements proceed to plan, there is still a 'ramp up' period to contend with — the training of air and ground crew, building of infrastructure and actually operationalising new types will pose their own challenges that will slow the effective rate of force accretion.

Meanwhile, the Pakistan Air Force (PAF) and China's People's Liberation Army Air Force (PLAAF) are not standing still. The PAF is saddled with a number of legacy issues that are similar to the IAF. However, with the Sino-Pak JF-17 available cheaply and in numbers, along with access to a wide range of Chinese weaponry developed for the type, Pakistan is well placed to recapitalise a significant proportion of its air force with a relatively modern aircraft. Development and production of the JF-17 can be extended to replace the PAF's Mirage fleet at short notice as well, if so required. And as China ramps up its fifth-generation aircraft programmes and unit costs drop, there is little doubt these platforms will also find their way to Pakistan.

The PLAAF's growth has been well documented. And in addition to a fourth and fifth generation re-equipment programme, the service benefits from a large number of force multipliers, including tankers, surveillance and control aircraft, and long-range bombers. While primarily oriented toward taking on the U.S. military in the Pacific and beyond, China's formidable aerial arsenal cannot be ignored in New Delhi.

So as the IAF gets ready to welcome its new acquisitions, it should be clear about the challenges it faces at a time when India's strategic and operational environment is undergoing a dramatic transformation. Ad hocism should give way to strategic thinking if these challenges are to be effectively met.

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