

Fifth generation rise of Korea and Turkey



Turkey and South Korea are the two countries that have stunned the world with the rapid rise of multi-domain advanced indigenous technologies, enriching as well as steering themselves towards self-reliance in the true sense. Today we will dive into the journey of their fifth-generation fighter jet development programmes to understand their objectives, planning, progress, obstacles and process of achievement.

KF-X KF-21 Boramae

The Korean fighter jet programme dates back to 2001, when then President of South Korea Kim Dae Jung envisioned a programme for a multi-role fighter jet to replace the F-4D/E Phantom II and F-5E/F Tiger. The "Joint Chiefs of Staff" soon formulated the requirements, but practically no movement could be observed till 2009 amidst the risk of a highly ambitious programme. The limited indigenous capability steered Korea to concentrate on the then under development FA-50 programme and F-X Phase 3 acquisition. However, the 2010 North Korean attack on Yeonpyeong Island changed the course forever, and Seoul zeroed down to develop a fighter jet under a programme named "KF-X".

To reduce the risk, it was decided to

have a fourth generation platform first rather than jump to an ambitious fifth generation one. The same year, in July, Indonesia officially joined the programme under a partnership to provide 20% of the funding for the project. However, until January 2024, not much progress regarding investment has been made, so keeping the Indonesian side of the story out of the picture. Surprisingly, in the same year, Turkey was also reported to join the programme and contribute 20% of the total investment.

Thus, at one point, it could become a trilateral partnership between South Korea, Indonesia, and Turkey. But Turkey departed within months, announcing their MMU TF-X, which would later give birth to "Kaan." Defence Acquisition Programme Administration (DAPA) got involved in configuration studies and outlining technical requirements. Based on the requirements, the design teams started drafting the basic shape. The Agency for Defence Development (ADD) presented two basic designs: C103 and a canard C203, keeping the potential results of F-X Phase 3 in mind.

Meanwhile, Korea Aerospace Industries (KAI) proposed a single-engine alternative design, the C501, as a cost effective solution. In 2013, General Electric F404 and F414 and Eurojet Turbo GmbH EJ200 were selected as the potential engines of the KF-X. KAI and Korean Air Aerospace Division (KAL-ASD) were selected as the two competing companies to develop KF-X. KAL signed a MoU with Airbus, while Lockheed Martin became a partner of KAI. In May 2015, DAPA awarded KAI as the official establishment to continue the KF-X programme. The next year, in May, a contract worth an estimated \$3.5 billion was awarded to General Electric for the supply of 240 (and spare) F414 engines. The local variant would be

