



## The AMCA – a 2022 review

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### A statement of the situation

If a combat aircraft cannot obtain a clear IOC within twenty years of start it will be overtaken by further progress. Our scientists cite lack of technology and facilities but the clear evidence is that the problem is localised to certain projects. The ALH, AWACS programmes indicate what is possible. The crucial Tejas and the simpler technology HJT 36 continues to be “work in uncertain progress”. Technology disparities alone do not explain the great disparity in outcomes. The Government should commission an analysis of different projects’ performances; the findings will help AMCA timelines which is already critical. Given the closer Government monitoring and that the Customer been taken on board ab initio means that in the AMCA programme there will be less insouciant flouting of dates seen earlier. Whether that alone will be enough is doubtful.

The 2025 dateline for first flight will probably not be seriously overrun. Whether the performance objectives have been met will be clear only when the prototypes start to fly. By then, it will be too late to avoid delays if things need serious mending. This misgiving about the need for serious mending stems even from the scant “open

source” evidence it seems ADA/DRDO and the higher direction of the project has not put to use the earlier lessons. ADA will once again use critical new technologies that it has not yet mastered- stealth, DSI intakes, and the design of the weapons release system in the stealth mode to name but a few. Mending mistakes on the prototypes, mislabelled as “Technology Demonstrators”, is time consuming as Tejas has amply demonstrated.

The matters are not helped by the fact that the IAF DCAS Plans has issued a very challenging specification. The specifications are very good but will cause delays because of overreach; the fault of the specification lies in being “excellent” instead of “good enough”. The Raptors and J 20s need to be countered. Rather than “matching” specifications we should explore combinations of simpler airborne platforms with ground- based systems. This alternative, unacceptable for “expeditionary” war plans, is the only option for us.

The final fear that we may repeat the history of infinite delays and depleting squadron strengths is that there is no parallel AMCA programme which run until the proposed AMCA takes off and trials show sufficient promise and reassurance,

optimistically circa 2027. Insurance programmes e.g., the YF 23 to the F 22 and the Boeing YF 32 to the LM F 35 works out cheaper surer and faster. What happens if the AMCA needs massive corrections?

### Timelines of the AMCA

The AMCA programme’s details are available on the Net and the following is a summary.

The project studies were initiated in 2005 with official start in 2007 and the ASR was issued in 2010. The Project definition phase PDP was completed in 2013. There should have been several tens of alternatives examined but only known is a finless design-which was, perhaps mercifully, not proceeded with it being as ugly as sin. The layout finally chosen, a shoulder mounted rhomboidal wing design with a “chined” fuselage, twin engines with a matching rhomboidal tail and twin fins has a general resemblance to this genre of aircraft e.g., the Raptor/FC 31. The configuration was refined through studies 3B01 to 3B09 between November 2013 to December 2014. These studies were related to the checking out of area ruling, weapons bay details and similar basic project detail design rather than examining configurational