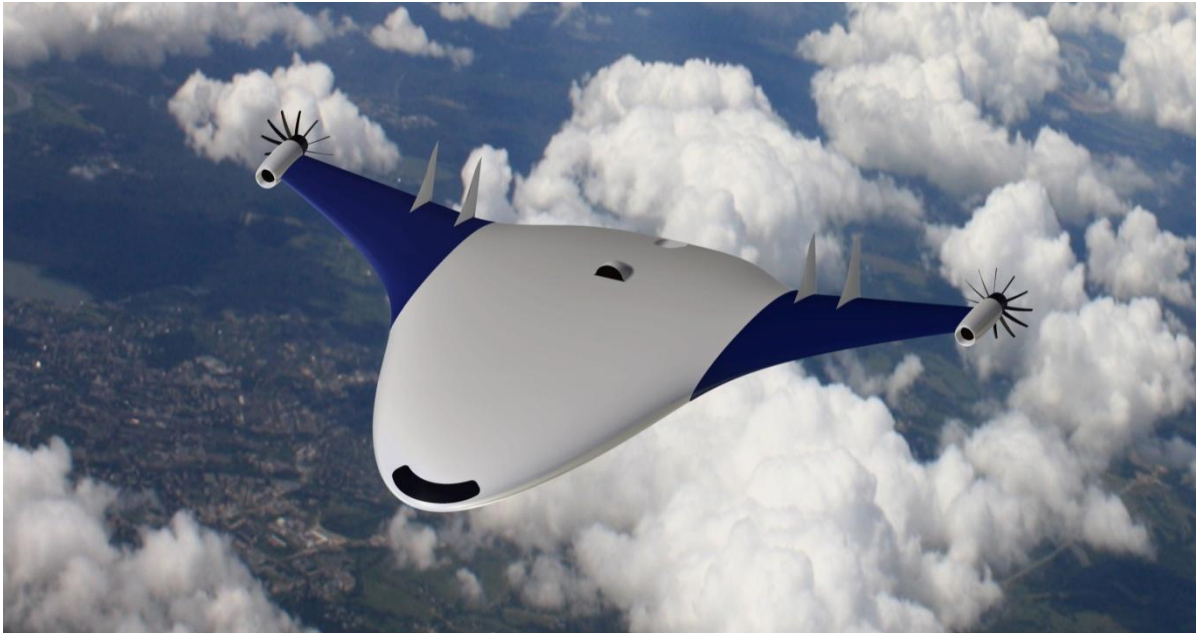

AURA MITHRA



**HINDUSTAN
UNIVERSITY**
HINDUSTAN INSTITUTE OF TECHNOLOGY & SCIENCE

INDIA

FACULTY ADVISER

ASSOCIATE PROF. SURENDRA BOGADI

STUDENT LEAD

NIKHIL JOHN

DATE SUBMITTED

2ND MAY, 2012

ABSTRACT

Aura Mithra is an aircraft designed with the primary aim of reducing fuel consumption. Noise reduction is also part of the objective. The aircraft mainly features a Blended Wing Body design. It is powered with three engines-two open fan engines and one ultra high bypass engine. The two open fan engines are placed at the wingtips while the ultra high bypass engine is buried in the rear fuselage. The aircraft is provided with elevators and flaperons. It is also equipped with technologies such as micro vortex generators and pneumatic landing gear fairings-all aimed at reducing the drag throughout the mission profile. By combining all these technologies Aura Mithra is estimated to have an increase in fuel efficiency by around 86%. It also reduces the noise produced by certain components without affecting the performance significantly making it less noisy than conventional aircrafts.