Project Title*: *ML Based Predictive Analytics for Aircraft Engine Project

Design Phase-I* - *Solution Fit

Team ID*: *PNT2022TMD41447

Date*:*29SEPTEMBER 2022

1.CUSTOMER SEGMENT(S) (**CS)** > Customers are businessmen, student, tourist, traveler and all the people traveling in flight.	2.JOBS-TO-BE-DONE / PROBLEMS (**J&P**) > Engine failure occurs when a turbine engine unexpectedly stops producing power due to malfunction. This lead to a lot of customer dissatisfaction.	3. TRIGGERS **(TR)** > To accurately predict the failure of an engine and track the flight 4. EMOTIONS: BEFORE / AFTER (**EM)** > The aircraft engine failure occurs, passengers often get annoyed and frustrated. They also might lose to reach on time to some important occasions.
5. AVAILABLE SOLUTIONS **(AS)** > The reliability analysis of aircraft engines is essential for ensuring the smooth functioning of each component of an aircraft engine.	6.CUSTOMER CONSTRAINTS **(CC)** > Customers require accurate and early predictions of the flight engine failure. And they also look for an alternate solution.	7. BEHAVIOUR **(BE)** > The purpose of this research is to develop methods that can be used to generate reliable and timely alerts
8. CHANNELS OF BEHAVIOR (**CH**) > Check the engine regularly and maintained properly. And also check the fuel and oil levels regularly in the aircraft engine.	9. PROBLEM ROOT CAUSE (**RC**) > The root cause of the problem is unforeseen & unpredictable engine failure that cause cancellations and arrival, departure delays.	10. YOUR SOLUTION (SL) > Preventable fuel problems such as exhaustion. Structural failures where a broken connecting rod, crank, valve, or camshaft is present account for seventeen percent of engine failures occurs.