

Project Design Phase-I - Problem Solution Fit

Project Title: Machine Learning-Based Predictive Analytics for Aircraft Engine

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PROBLEM STATEMENT

Define CS, fit into CC

1. CUSTOMER SEGMENT(S)

Who is your customer?
i.e. working parents of 0-5 y.o. kids

CS

Aircraft agencies - They check the condition of the engine and make sure it's fit for travel

6. CUSTOMER CONSTRAINTS

What constraints prevent your customers from taking action or limit their choices of solutions? i.e. spending power, budget, no cash, network connection, available devices.

CC

It's important that your business remains covered for standard risks, especially if your store or office is unoccupied for a period of time. In general, cyber insurance policies will include coverage for working from home too.

5. AVAILABLE SOLUTIONS

Which solutions are available to the customers when they face the problem

AS

or need to get the job done? What have they tried in the past? What pros & cons do these solutions have? i.e. pen and paper is an alternative to digital notetaking

If an engine fault have been predicted previously they should be rectified before severe damages ,so they can also have a another possible way for safe landing.

Explore AS, differentiate

PROBLEM STATEMENT

Focus on J&P, tap into BE, understand RC

2. JOBS-TO-BE-DONE / PROBLEMS

Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.

J&P

The Fuel Factor
Overcapacity
Labor Unrest
The Emergence of Low-Cost Carriers
Passenger comfort
Technology

9. PROBLEM ROOT CAUSE

What is the real reason that this problem exists? What is the back story behind the need to do this job? i.e. customers have to do it because of the change in regulations.

RC

The engine could face failure because of regular wear and tear. It could face this problem because the hardware was not properly maintained and installed

7. BEHAVIOUR

What does your customer do to address the problem and get the job done?
i.e. directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace)

BE

Closely monitor the engine parameters reported by the aircraft's instrumentation. So, if any malfunction occurs in the measurements it can be rectified by them.

Focus on J&P, tap into BE, understand RC

3. TRIGGERS

TR

What triggers customers to act? i.e. seeing their neighbor installing solar panels, reading about a more efficient solution in the news.

The passengers complain about

- Baggage theft
- Delayed flights
- Uncomfortable seats

4. EMOTIONS: BEFORE / AFTER

EM

How do customers feel when they face a problem or a job and afterwards?
i.e. lost, insecure > confident, in control - use it in your communication strategy & design.

The aircraft engine failure occurs, passengers often get annoyed and frustrated. They also might lose to reach on time to some important occasions.

10. YOUR SOLUTION

SL

If you are working on an existing business, write down your current solution first fill in the canvas, and check how much it fits reality.
If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches the behaviour of the customer.

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.

8. CHANNELS OF BEHAVIOUR

CH

ONLINE

What kind of actions do customers take online? Extract online channels from #7

OFFLINE

What kind Of actions do customers take offline? Extract Offlinechannels from #7 and use them for customer development.

Online: Measure and manage all the sensor data

Offline: To check the physical hardware overlook and check for any open damages