Project Title: Developing a Flight Delay Prediction Model using Machine Learning   **Project Design Phase-I** – **Solution Fit Template**

Team ID: PNT2022TMID27775

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) `CS`

Who is your customer?
- domestic and international passengers/travelers
- Airlines
- Airport maintaining Companies

6. CUSTOMER CONSTRAINTS `CC`

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.
- Data collection
- Some solutions need high budget
- Unaware of technology
- less influence
- out of their capacity for some customers
- Known solution will quit complex

5. AVAILABLE SOLUTIONS `AS`

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

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
- always ready with precautions
- predefined alternate plans
- Backup officers, fight, infrastructure, plans
- change their schedule

Explore AS, differentiate

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

2. JOBS-TO-BE-DONE / PROBLEMS `J&P`

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

-They face unnecessary delays, need to change their schedules, financial losses, decrease in reputation of airlines while flight delays.

-unable attend the events, spoiling image of Airlines while flight canceled.

-Unnecessary tensions, rushes for airport authorities, passengers and Airlines

9. PROBLEM ROOT CAUSE `RC`

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.
- Air traffic
- weather condition
- Technical fault
- previous flight delay
- medical emergency
- Other extremes like war, terrorism

7. BEHAVIOUR `BE`

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)
- very anxious and tension
- Search reason or cause to that problem
- Search solution to that problem
- deep think about what to do next
- sometimes become vauge

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.

-Economic Losses

-Unable to attend the important meetings create anger

-spoil of their reputation

- frustration created by delay or cancelation of flights

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.

Before:
- Worried
- About missing important events
- About missing layover flights
- If the flight is gonna be cancelled Frustrated
- About the unexpected delay/cancellation
- Not knowing the news of delay beforehand
- About the weather
After:
- Gets to enjoy the airline benefits
- Stay relaxed after getting a proper update from airline
- Relieved if an alternate solution can be

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 customer behaviour.

By building prediction model that give prediction of flight delay using Machine Learning Algorithms which gives the best accuracy and less error. The prediction provides the indication of flight delay earlier to that event. So, we can prevent delay by identifying and solving issues or take other precaution steps to avoid economic losses, tension etc.

8. CHANNELS of BEHAVIOUR   CH

8.1 ONLINE

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

-In online, they try contact flight travel agency, helpline, customer care, inform to their boss or office and home

8.2 OFFLINE
What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.

-In offline, they try contact officers, clerks for help people and discuss with neighbors to find cause and solution