Project Design Phase-I
Solution Fit

Date	10 October 2022
Team ID	PNT2022TMID17876
Project Name	**Project** – Predicting the energy output of wind turbine based on weather condition

Define CS, fit into

1. CUSTOMER SEGMENT(s) CS

The power plant distributors are being able to predict the accuracy of the wind energy prior a month and thus it exploitation is reduced based on LSTM.

6. CUSTOMER CONCONSTRAINTS CC

The distributors tends to use way more renewable energy than they need to predict the accuracy which leads to exploitation.

5. AVAILABLE SOLUTIONS AS

Using LSTM and xgboost regressor , the accuracy can be estimated without any further more reduction of the resources.

Explore AS, diffe

J&P

2. JOBS-TO-BE-PROBLEMS

The output to be predicted more accurately , by that energy suppliers can coordinate the collaborative production of different energy sources more efficiently to avoid costly overproduction. Develop a time series model to Predict the power output of wind farm based on the weather condition.

RC

9. PROBLEM ROOT CAUSE

Most of the limitation of wind energy predicting is due to varying weather condition, the nature of the wind changes according to the weather prevailing during that particular time.

7. BEHAVIOUR BE

Wind intensity and speed changes according to the climate and thus customers want the prediction to be accurate during seasonal swings and estimate it prior.

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

3. TRIGGERS

TR

The constant motive to increase the economic growth by predicting the renewable wind source and thus reduce the dependence of the fossil fuels.

4. EMOTIONS: BEFORE / AFTER

EM

The output to be predicted more accurately , by that energy suppliers can coordinate the collaborative production of different energy sources more efficiently to avoid costly overproduction. Develop a time series model to Predict the power output of wind farm based on the weather condition.

10. YOUR SOLUTION

SL

Identifies the suitable weather which tends to produces more wind energy,predicts the wind power generated accurately for real time data,predicts the wind power generated for a given location .

8. CHANNELS of BEHAVIOUR

CH

8.1 ONLINE

The customer makes use of the web application available online to identify weather which tends to produce more wind energy.

8.2 OFFLINE

Customers analyse the wind energy output in the wind farm.