Project Title: Predicting the energy output of a wind turbine based on weather conditions.
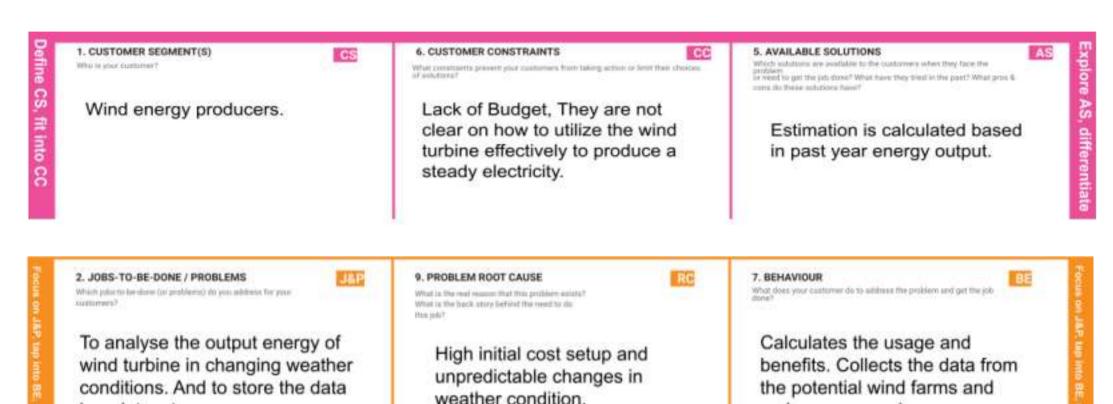
Team ID: PNT2022TMID25491

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1. CUSTOMER SEGMENT(S) `CS`

Who is your customer?

Wind energy producers.

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6. CUSTOMER CONSTRAINTS `CC`

What constraints prevent your customers from taking action or limit their choices of solutions?

Lack of Budget, They are not clear on how to utilize the wind turbine effectively to produce a steady electricity.

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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?

Estimation is calculated based in past year energy output.

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

Which jobs-to-be-done (or problems) do you address for your customers?

To analyse the output energy of wind turbine in changing weather conditions. And to store the data in a dataset.

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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?

High initial cost setup and unpredictable changes in weather condition.

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7. BEHAVIOUR `BE`

What does your customer do to address the problem and get the job done?

Calculates the usage and benefits. Collects the data from the potential wind farms and makes a comparison.

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Define CS, fit into CC

Explore AS, differentiate

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

3. TRIGGERS **TR**

If the customer finds it as an efficient solution. It will automatically trigger all other customers to do it.

4. EMOTIONS: BEFORE / AFTER **EM**

Confused with improper energy flow. After: Happy with the efficient technique.

10. YOUR SOLUTION **SL**

The inlet condition of the wind turbine is forecasted by an auto regressive model. Hence it reduces the need for balancing energy and reserved power output energy.

8. CHANNELS of BEHAVIOUR **CH**

It will analyse the data which are previously uploaded and predict the output energy.

8.2 OFFLINE what kind of actions do customers take offline?

The inlet condition of the wind turbine is maintained constantly.