

Define CS, fit into CC

## 1. customer segment

Who is your customer?  
i.e.  
Wind mill installer.

CS

## 6. CUSTOMER CONSTRAINTS

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

i.e.  
Initial cost ,un predictable,technology immaturity

CC

## 5. AVAILABLE SOLUTIONS

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.  
1.wind power prediction is solution to increase power  
2.pros are increased efficiency,advances in technology,real time data and production insight.

AS

Explore AS, differentiate

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?

Poewer prediction analysis,problem detector,maintain,repairs wind turbines

J&P

## 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.  
1. The problem exists because of fluctuating weather conditions,so it is difficult to predict  
2.customers have to do it,because to find problems present in windmill

RC

## 7. BEHAVIOUR

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

i.e.  
For more accuracy and prediction combined prediction is done

BE

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

Identify strong TR & EM

## 3. TRIGGERS

What triggers customers to act?  
i.e variable speed transmission,constant speed generator and sophisticated programming of loads and RPM.

TR

## 4. EMOTIONS: BEFORE / AFTER

How do customers feel when they face a problem or a job and afterwards?  
i.e if wrong prediction,in control-multi step windpower prediction, irregularity, intermittency,non smoothness.

EM

## 10. YOUR SOLUTION

We examine the impact of different weather conditions on the energy output of wind frams.we are building an IBM watson AUTOAI machine learning technique to predict the energy output of wind turbine.The model is deployed on IBM cloud to get scoring end point which can be used as API in mobile app or web app building .we are developing a web application which is build using node red service.

SL

## 8.CHANNELS of BEHAVIOUR

### 8.1 ONLINE

What kind of actions do customers take online?  
For correcting cumulative error,multistep prediction is done

### 8.2 OFFLINE

What kind of actions do customers take offline?  
Include constant speed generator and sophisticated programming of loads and RPM

CH

Extract online & offline CH of BE