

# Project Design Phase-1

## Solution Fit Template

Project Title:

Real-Time Communication System Powered by AI for Specially Abled

Team ID: PNT2022TMID45380

### 1. CUSTOMER SEGMENT(S)

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

Deaf-Mute people had difficulties to communicate and express their ideas to the normal people through their sign language.

CS

### 5. 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.

The main constraints would include,

1. The specially abled people wants to share their Knowledge with their sign language.
2. Also the specially abled people like to know the reply form normal people.

CC

### 6. 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. pen and paper is an alternative to digital notetaking

1. The recognition of sign language from hand gestures, face expression should be recognised and it will be stored in the database.
2. The stored sign language can be converted into voice for the normal people.
3. The voice of normal people can be stored and it should be converted as the sign gestures,

AS

For customer satisfaction & retention

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.

1.The interaction between the deaf-mute people and the normal people are difficult task.

2. Solving this problem of recognising sign geastures and voice of the people.

o  
B  
E,  
un  
de  
rs  
ta  
nd  
R  
C

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.

- The communication problem between the Deaf-mute people and normal people are identified and give a solution.
- 

7. BEHAVIOUR

BE

For customer satisfaction & retention

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)

- By start collecting the key points from Mediapipe
- Holistic and collect a data from keypoints.
- Build a LSTM model and train in our stored data it will helps us to recognaise the hand geastures action.

o  
BE  
un  
de  
rst  
an  
d  
R

### 3. TRIGGERS

TR

- The deaf-mute people cannot express their idea and knowledge in problem situation.
- They have an hesitation to communicate to normal people.

### 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: Hesitation, fear, lonely.

After: Brave, Believe them to communicate with normal people.

### 10. YOUR SOLUTION

SL

- Our system aims to accurately recognize the sign gestures of the normal people and it can be stored in the database.
- The normal people voice can be stored in the database. If the deaf-mute people display their hand gestures the database will recognise and convert as the voice .
- Then the voice of the normal people can be converted as the sign gestures .
- In this way the communication between the normal people and the specially abled people will be more effective.

### CHANNELS of BEHAVIOUR

CH

#### ○ ONLINE

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

- Facing the difficulties to communicating with the normal people.

#### 8.1 OFFLINE

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