# Project Design Phase-I - Solution Fit Template

| PROJECT TITLE | A GESTURE BASED TOOL FOR STERILE BROWSING OF RADIOLOGY IMAGES |
|---|---|
| TEAM ID | PNT2022TMID15559 |

**Define CS, Fit, Into** / **Explore AS. differentiate**

### 1. CUSTOMER SEGMENT(S)

- Deaf and dumb
- Drivers and passengers

### 6. CUSTOMER CONSTRAINTS `CC`

- Limited image recognition due to poor gestures given as input
- Object or image recognition problems due to ineffectiveness in the devices used for detection which will lead to bad accuracy.

### 5. AVAILABLE SOLUTIONS `AS`

- People can easily express the idea by gesture.
- Gestures are naturally used by many people and especially are the major and nature interaction way for deaf people.
- The effects from lighting, environment and camera can be greatly used to detect gestures which is given as input to depict the desired output.

**Focus on J&P, tap into BE,**

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

customer should contain error free and accurate devices for effective recognition of input(gestures) to provide desired output

### 9. PROBLEM ROOT CAUSE `RC`

- Effective and reliable devices is not used by the customers while providing gestures as input to the system.
- Poor effect of lighting and complex background from the side of customer can lead to inaccurate image recognition.

### 7. BEHAVIOUR `BE`

When the customer is not aware or unclear of providing the gestures as input in an effective manner in order to reach the desired accuracy.

**Focus on J&P, tap into BE,**

## 3. TRIGGERS `TR`

- proper awareness and knowledge should be given for the customer to enrich the knowledge about recognition and input processing.

## 4. EMOTIONS: BEFORE / AFTER `EM`

**Before:**
- not clear about the functionality or procedures when the input gestures is given to the system

**After:**
- Confident in providing the gestures in a clear and accurate manner.

## 10. YOUR SOLUTION `SL`

- The first stage is the image detection. The target of this stage is to detect hand gestures in the digital images or videos. Many environment and image problems are needed to solve at this stage to ensure that the hand contours or regions can be extracted precisely to enhance the recognition accuracy.

- Common image problems contain unstable brightness, noise, poor resolution and contrast. The better environment and camera devices can effectively improve these problems. Hence, the image processing method is a better solution to solve these image problems to construct an adaptive and robust gesture recognition system.

- The second stage is object recognition. The detected hand objects are recognized to identify the gestures. The third stage is to analyze sequential gestures to identify user gesture and provide output.

## 8. CHANNELS OF BEHAVIOUR `CH`

### 8.1 ONLINE

- Online applications
- Online Websites

### 8.2 OFFLINE

- Customer provide feedback and suggestions.