Project Design

Phase-I Problem – Solution Fit Template

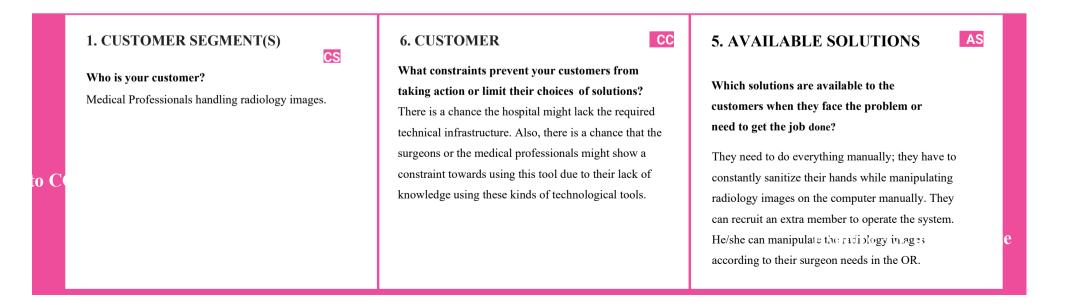| Date	15.10.2022
Team ID	PNT2022TMID09899
Project Name	Gas Leakage Monitoring and Alerting System using IoT
Maximum Marks	2 Marks

Problem – Solution Fit Template:

A hand gesture system for MRI manipulation in an EMR image database called "Gestix" was tested during a brain biopsy surgery.

This system is a real-time hand-tracking recognition technique based on color and motion fusion.

Purpose:
- This paper presents "Gestix," a vision-based hand gesture capture and recognition system.
- That interprets in real-time the user's gestures for navigation and manipulation of images in an electronic medical record (EMR) database.
- A sterile human—machine interface is of supreme importance because it is the means by which the surgeon controls medical information avoiding contamination of the patient, the OR and the surgeon.

Template:

1. CUSTOMER SEGMENT(S) CS

Who is your customer?

Medical Professionals handling radiology images.

6. CUSTOMER CC

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

There is a chance the hospital might lack the required technical infrastructure. Also, there is a chance that the surgeons or the medical professionals might show a constraint towards using this tool due to their lack of knowledge using these kinds of technological tools.

5. AVAILABLE SOLUTIONS AS

Which solutions are available to the customers when they face the problem or need to get the job done?

They need to do everything manually; they have to constantly sanitize their hands while manipulating radiology images on the computer manually. They can recruit an extra member to operate the system. He/she can manipulate the radiology images according to their surgeon needs in the OR.

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.

Medical professionals can create a sterile environment using this model.

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?

The problem of non-sterile environment is the root cause for this problem which increases the complexity for the surgeons.

7. BEHAVIOUR `BE`

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

They will look for a new technology which can make their work easy and sterile.

into

into

3. TRIGGERS `TR`
What triggers customers to act?

Reading/Learning about a more efficient solution. As every field is growing towards AI, medical professionals motivate one another to use AI to their needs to improve their work life.

4. EMOTIONS: BEFORE / AFTER `EM`

How do customers feel when they face a problem or a job and afterwards?

Complex work, Unhygienic environment

Sterile environment, easy/simplified process.

rong TR & EM

10. YOUR SOLUTION `SL`

We use AI to make Gesture based tool for medical professionals by which they can access radiology images in operation theaters efficiently.

8. CHANNELS of BEHAVIOUR `CH`
8.1 ONLINE
What kind of actions do customers take online? Extract online channels from #7

Navigate and browse radiology images.

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

Identify strong TR & EM

Store data such as radiology images.