Project Title: A Gesture-Based Tool for Sterile Browsing of Radiology Images **Project Design Phase-I - Solution Fit Template** **Team ID:** PNT2022TMID53208

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) CS

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

Our customer are medical professional that deal with medical image manipulation. They can be either technicians or doctors in or outside the operation room.

6. CUSTOMER CONSTRAINTS CC

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 trajectory of the action are hard to track and requires good lighting to capture the images, therefore the gesture recognition accuracy is dependent on the external factor. Further, the medical professionals may be hesitant to spend money on such high computational power solution if its accuracy is not maximum.

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? i.e. pen and paper is an alternative to digital notetaking

The contamination of medical equipment was one of the main worries. The instruments were thoroughly cleaned and sterilised at regular intervals. Contamination did occur, though.
The following are some benefits and drawbacks of our solution: prevents medical equipment contamination and guarantees an easy method of control. However, one disadvantage is that in order to assure efficient procedures, doctors will need to become proficient in the new gesture system and learn how to use it.

Explore AS, differentiate

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

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.

The cleaning and disinfection of most things may be facilitated by a variety of mechanical cleaning devices. This equipment, which is frequently automated, might boost output, enhance cleaning efficiency, and reduce worker exposure to bodily fluids. All used things sent to the central processing facility should be deemed tainted.

In order to use a new technique to its full potential, it should also be simple to learn. The ease of learning for surgeons must be taken into account. Additionally, the model should be reasonably priced and expensive to be advantageous from a technological and financial standpoint.

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 navigation and control of computer-aided devices, which have been created to lower the danger of contamination during surgical procedures, depend on hand gesture recognition systems in operating rooms (ORs).
The cleaning and disinfection of most things may be facilitated by a variety of mechanical cleaning devices. Careful hand cleaning may be necessary for delicate and detailed items as well as items that are sensitive to heat or moisture. Consider all used products sent to the central processing facility to be polluted.
Researchers have used visual and microscopic investigation to describe the level of cleanliness. Although the study indicated that 91% of the instruments were visually clean, 84% of the instruments had residual contamination when they were examined under a microscope.

7. BEHAVIOUR BE

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)

One of the easiest ways to govern the system without any physical interaction is to prevent outright contamination. The surgeons would need to master a new gesture detecting technology in order to do this. Once this was discovered, a lot of time that could have been spent cleaning up the contamination would be saved. Learning a new skill is challenging and not always desired.

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

Identify strong TR & EM

3. TRIGGERS TR

What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news.

The use of this product may increase as a result of seeing new technology in action and learning how simple it is to use at other hospitals. Moving to contact free controls would also be encouraged by the amount of time saved on cleaning.

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.

Surgeons may first feel uneasy about acquiring a new skill and have a tendency to return to traditional methods. However, with time, people would begin to recognise the benefits it offers and would begin utilising it without difficulty.

10. YOUR SOLUTION SL

If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality.
If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour.

The navigation and control of computer-aided devices, which have been created to lower the danger of contamination during surgical procedures, depend on hand gesture recognition systems in operating rooms (ORs). This could be utilised for contactless gesture interaction to navigate and control many kinds of computer-aided devices and applications.

By preventing contamination and providing an easy way to manage with contact, our solution will help save time and resources that would otherwise be required for decontamination.

8. CHANNELS of BEHAVIOUR CH

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

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

A few motions that have been intentionally kept simple would be necessary for the surgeon to learn. Before employing it for actual surgeries, they would need to practise and make sure they were proficient.

Identify strong TR & EM