

Project Design Phase-I - Solution Fit

Project Title: Deep Learning Fundus Image Analysis for Early Detection of Diabetes Retinopathy

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Define CS, fit into CC

1. CUSTOMER SEGMENT(S)

Who is your customer?

The customers here are the eye specialist hospitals, the diagnosis centers, and also eye camps where the patients suffering from diabetes retinopathy are included.

6. 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.

Here, the constraints include the area where the model can be fit in for scanning and also that there must be network connection while scanning. The budget of this product can be paid as per the usage.

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. pen and paper is an alternative to digital notetaking

The available solution includes manual diagnosis of The diabetes retinalopathy and this might be time-consuming and high-cost.

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? There

could be more than one; explore different sides.

Examining the diabetic patient, whose severity in this case may result in vision loss.
Scanning of the retina with the trained model and obtaining the result of the patient

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. customers have to do it because of the change in regulations.

Diabetic retinopathy is caused by high blood sugar due to diabetes. Over time, having too much sugar in your blood can damage your retina — the part of your eye that detects light and sends signals to your brain through a nerve in the back of your eye (optic nerve). Diabetes damages blood vessels all over the body..

RC

7. BEHAVIOUR

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)

The abnormal blood vessels associated with diabetic retinopathy stimulate the growth of scar tissue, which can pull the retina away from the back of the eye. This can cause spots to float in your vision, flashes of light, or severe vision loss.

BE

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

Identify strong TR & EM

3. TRIGGERS

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

Diabetes requires a blood sugar test, insulin injections, a healthy diet, and medications on a regular basis.

TR

4. EMOTIONS: BEFORE / AFTER

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.

Time and effort required > Time and effort saved and less reliance on doctors > Less dependence on doctors

EM

10.YOUR SOLUTION

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.

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8. CHANNELS of BEHAVIOUR

ONLINE

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

Online consultation can be taken by the patients for their time being and easier way of contacting the doctors

OFFLINE

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

Consult the doctor about your intake of insulin, medicines, etc. This can be an effective way as the detection of diabetes is easy.

CH

Extract online & offline CH of BE