

Project Design Phase-I Problem – Solution Fit Template

Date	29th September 2022
Team ID	PNT2022TMID17830
Project Name	Deep Learning Fundus Image Analysis for Early Detection of Diabetic Retinopathy
Maximum Marks	2 Marks

Problem – Solution Fit Template:

The Problem-Solution Fit simply means that you have found a problem with your customer and that the solution you have realized for it actually solves the customer's problem. It helps entrepreneurs, marketers and corporate innovators identify behavioral patterns and recognize what would work and why

Purpose:

- ☐ Solve complex problems in a way that fits the state of your customers.
- ☐ Succeed faster and increase your solution adoption by tapping into existing mediums and channels of behavior.
- ☐ Sharpen your communication and marketing strategy with the right triggers and messaging.
- ☐ Increase touch-points with your company by finding the right problem-behavior fit and building trust by solving frequent annoyances, or urgent or costly problems.
- ☐ **Understand the existing situation in order to improve it for your target group.**

Template:

Define CS, fit into	1. CUSTOMER SEGMENT(S) CS <small>Who is your customer?</small> Ophthalmologist - physician who specializes in the diagnosis and treatment of diseases of the eye.	6. CUSTOMER CC <small>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.</small> <ul style="list-style-type: none"> Correct prediction of disease The accuracy of the predicted disease End user's health issue 	5. AVAILABLE SOLUTIONS AS <small>Which solutions are available to the customers when they face the problem</small> <table border="1" style="width: 100%;"> <thead> <tr> <th>Treatment</th> <th>Pros</th> <th>Cons</th> </tr> </thead> <tbody> <tr> <td>Laser</td> <td>Treat new blood vessels</td> <td>Aching or discomfort</td> </tr> <tr> <td>Eye Treatment</td> <td>New blood vessel formation</td> <td>Eye irritation or discomfort</td> </tr> <tr> <td>Eye Surgery</td> <td>Remove vitreous humour</td> <td>bleeding</td> </tr> </tbody> </table>	Treatment	Pros	Cons	Laser	Treat new blood vessels	Aching or discomfort	Eye Treatment	New blood vessel formation	Eye irritation or discomfort	Eye Surgery	Remove vitreous humour	bleeding	Explore AS, differentiate
	Treatment	Pros	Cons													
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2. JOBS-TO-BE-DONE / PROBLEMS J&P <small>Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.</small> <ul style="list-style-type: none"> Diabetic Retinopathy (DR) is a common complication of diabetes mellitus, which causes lesions on the retina that affect vision The manual diagnosis uses much time and cost to predict unlike the computer aided systems 	9. PROBLEM ROOT CAUSE RC <small>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.</small> <ul style="list-style-type: none"> Correct prediction of disease The accuracy of the predicted disease End user's health issue whether the patient doesn't gets affected. 	7. BEHAVIOUR BE <small>What does your customer do to address the problem and get the job done?</small> <ul style="list-style-type: none"> laser treatment – to treat the growth of new blood vessels at the back of the eye (retina) in cases of proliferative diabetic retinopathy, and to stabilise some cases of maculopathy eye injections – to treat severe maculopathy that's threatening your sight eye surgery – to remove blood or scar tissue from the eye if laser treatment is not possible because retinopathy is too advanced 	Focus on J&P, tap into BE, understand													
3. TRIGGERS TR <small>What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news.</small> Persons with floating eye, blurred and fluctuating vision	10. YOUR SOLUTION SL <small>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.</small> As a student, till now the current laser treatment is the best procedure for diabetic retinopathy and limited usage of VEGF drugs	8. CHANNELS of BEHAVIOUR CH <small>8.1 ONLINE: What kind of actions do customers take online? Extract online channels from #7</small> An online diabetic retinopathy screening tool for patients with type 2 diabetes <small>8.2 OFFLINE: What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.</small> Optical coherence tomography, fundus fluorescein angiography, slit lamp biomicroscopy, and fundus imaging		Extract online & offline CH of BE												
4. EMOTIONS: BEFORE / AFTER EM <small>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.</small> fear, anxiety, vulnerability, guilt, loss of confidence, anger, stress and self-perception																