### Project Design Phase-I - Solution Fit Template

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

### Project Title: Early Detection of Chronic Kidney Disease using Machine Learning

**Team ID: PNT2022TMID35612**

**Explore AS, differentiate**

**Deﬁne CS, ﬁt into CC**

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

1. Patients and health professionals can make use of public WIFI or internet cafes for their network availability.

2. If people do not have access to devices, they can either borrow it from someone they know or can make use of rental devices or make use of a computer center or anything related to that.

3. To make sure healthcare facilities are accessible to everyone, in specific to even to people in rural areas.

4. Informative sessions, useful journals and guide book to educate everyone on how to use the system.

**AS**

**5. AVAILABLE SOLUTIONS**

What constraints prevent your customers from acting or limit their choices

of solutions? i.e. spending power, budget, no cash, network connection, available devices.

1. Network connection

2. Availability of devices.

3. Pre-requisite knowledge of their medical reports.

4. Knowledge of accessing the system.

**CC**

**6. CUSTOMER CONSTRAINTS**

**CS**

**1. CUSTOMER SEGMENT(S)**

Who is your customer?

i.e. working parents of 0-5 y.o. kids

1. Health professionals

2. Patients or anyone who show symptoms of

Chronic Kidney Disease.

3. Mainly age group 65 years and older.

4. Predominant in female than men.

**Explore AS, differentiate**

**Define CS, fit into CC**

**BE**

**7. BEHAVIOUR**

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)

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

-Doctors and health professionals can make use of this system for generating reports for the patients, for cross-checking their results and re-checking the reports provided by them.

**RC**

**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 must do it because of the change in regulations.

Early detection might help prevent kidney disease from progressing to kidney failure and save the person’s life. CKD refers to the loss of kidney function over time. This means that the kidneys are not able to filter fluids as well as they should. The excess fluid and waste that aren't filtered remain in the body. This may cause other health problems, including heart disease and stroke.

**J&P**

**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.

-Finding out whether a person has Chronic kidney disease or not by going through their medical reports and checking their levels and studying their report.

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

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| **Identify strong TR & EM** | **3. TRIGGERS**  **TR**  What triggers the customer to act? Eg: Seeing their neighbors install solar panels.  -Strong developing symptoms of their body that makes them suspicious of the presence of Chronic Kidney Disease or not.  **Identify strong TR & EM** | **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 behavior.  Solution: To build a system that does “Early detection of chronic kidney disease using Machine Learning” and the build a web application using Flask.  Our system will provide the best and the most accurate way to find out whether the person has chronic kidney disease or not, and an interactive web application which can be easily used by common people and people in the medical profession. | 1. **CHANNELS OF BEHAVIOUR CH**   **Identify strong TR & EM**  ONLINE  What kind of actions do customers take online? Extract online channels from #7  OFFLINE  What kind of actions do customers take ofﬂine? Extract ofﬂine channels from #7 and use them for customer development.  ONLINE  Users can input their medical record and find out whether they have Chronic kidney disease or not.  This will act like a second opinion to confirm the presence of any problem in the kidney.  OFFLINE  Medical professionals and People can find out the presence of Chronic kidney disease. CKD is a condition in which the kidneys are damaged and cannot filter blood as well as they should. Because of this, excess fluid and waste from blood remain in the body and may cause other health problems, such as heart disease and stroke. |  |
| **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.  BEFORE:  Confused, in need of help and assistance, helplessness.  AFTER:  Clear, Confident, Assurity. |