

Problem-Solution fit Design Phase-1

Project Title: Gas Leakage Detection and Alerting System
Team ID: PNT2022TMID35841

Define CS, fit into CC	1. CUSTOMER SEGMENT(S) Who is your customer? I.e. working parents of 0-5 y.o. kids Restaurant Managers and equivalent positions responsible for the kitchen security in Hotel Industries.	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. 1) Cost of the currently available products 2) Success rate of the available products 3) Installation Labour	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 Available Solutions - Only High cost devices used for factories and industries are available currently for this purpose. Tried Solutions - Physical solutions like improving the quality of pipes, periodic replacement and tightening of Valves & Washers. Pros - Improved quality of the pipelines Cons - High Cost and Time waste	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. 1) Prevention of large scale kitchen fires. 2) Preventing inhalation of LPG gas and its harmful health effects in restaurant chefs due to accidental gas leakage.	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. 1) Customers have to mandatorily install Gas Detectors in their kitchens as per safety regulations. 2) Improper fitting and fixing of gas lines across the Kitchens. 3) Using of Low quality valves and washers, Brittle pipes etc.	
Identify strong TR & EM		3. TRIGGERS What triggers customers to act? I.e. seeing their neighbour installing solar panels, reading about a more efficient solution in the news. Reading about the harmful effects that arise due to inhalation of LPG gases and kitchen accidents around the Hotel community 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. Before - Vulnerable and Insecure After - Safe and secure	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. Low cost Gas detecting and alerting system using Raspberry Pi along with Python and Industry Grade Gas Sensor to sense LPG gas leakages within a big Hotel Kitchen. Can also be adapted for household use.	8. CHANNELS of BEHAVIOUR 8.1 ONLINE What kind of actions do customers take online? Extract online channels from #7 Share the incident over social media and create awareness among the general public and the authorities involved. 8.2 OFFLINE What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development. Inform the agencies involved about the failure of their products to prevent future incidents.



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