

Project Design Phase-I

Problem Solution Fit

Date	15 OCTOBER 2022
Team ID	PNT2022TMID06422
Project Name	Gas Leakage Monitoring and Alerting System for Industries

Define CS, fit into CL	<div>1. CUSTOMER SEGMENT(S)<div>CS</div><div>Who is your customer? The industrialists who use gases for their manufacturing. The detection of leakage prevents the loss of lives.</div></div>	<div>6. CUSTOMER LIMITATIONS<div>CL</div><div>EG. BUDGET, DEVICES</div><div>What limits your customers to act when problem occurs? High budget in installing other products make them to move far from modern technologies.</div></div>	<div>5. AVAILABLE SOLUTIONS<div>AS</div><div>PLUSSES & MINUSES</div><div>Which solutions are available to the customer when he/she is facing? Buzzer to indicate the leakage. GSM module helps us to get notification when there is a gas leakage. Usage of sensors to sense gas Leakage.</div></div>	Explore AS, differentiate
	<div>2. PROBLEMS / PAINS<div>PR</div><div>+ ITS FREQUENCY</div><div>What problem is your customer facing? Suffering from many losses due to gas leakage. • Having no proper system for controlling or monitoring the leakage. • Facing heavy budget problems in buying and installing a system for monitoring and controlling.</div></div>	<div>9. PROBLEM ROOT / CAUSE<div>RC</div><div>What is the root of the problem? Sometimes sensor doesn't work properly which can cause the major problem. • Man power could reduce electricity cost and monitor properly, it may cause high risk for their life. There is also a cause of some errors due to manpower.</div></div>	<div>7. BEHAVIOR<div>BE</div><div>+ ITS INTENSITY</div><div>What does customer do? If the gas leaked is heavily toxic, there is a chance of causing hereditary health issues too. • To determine the gas characteristics and solve the issue, they will locate the leak and identify the warning.</div></div>	
Focus on PR, tap into BE, understand RC	<div>3. TRIGGERS TO ACT<div>TR</div><div>What triggers customer to act? The heavy damages or higher health issues due to the toxic gases urges them to find out a solution as soon as they could possible.</div></div>	<div>10. YOUR SOLUTION<div>SL</div><div>If you are working on existing business - write down existing solution first, (N/A) Develop an efficient system & an application that can monitor and alert the workers. Low cost IOT based device that can be easily accessed and fixed by people. Network strength must be boosted in the device. Device can be manufactured in multiple standards based on the environment.</div></div>	<div>8. CHANNELS of BEHAVIOR<div>CH</div><div>ONLINE: Extract channels from Behavior block Promoting through social media..Monitor the status of the sensors .Notification incase of any gas leakage.</div></div>	Focus on BE, tap into BE, understand RC
	<div>4. EMOTIONS<div>EM</div><div>BEFORE / AFTER</div><div>What emotions your customer has before and after the problem? Before: The heavy losses due to the leakages made them feel of guilt due to reduced reputation of their products. After: Increased the level of confidence and feel secured</div></div>		<div>OFFLINE: Extract channels from Behavior block and use for customer development Prevent physical damage to sensor. Through newspaper advertisements and complaint letters.</div>	
Identify strong TR & EM				Extract online & offline CH of BE