**PROJECT DESIGN PHASE-I** - **SOLUTION**

**Project Title: Gas Leakage monitoring & Alerting system for Industries**

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**AS**

**3. AVAILABLE SOLUTIONS**

* **PROS:** Monitors the gas level in the present atmosphere.
* Alert us ,when any gas leakage.
* Low power consumption.
* **CONS:** The challenge of operating electrical equipment as exhaust fan.
* Needs an UPS for uninterrupted **functioning.**
* Detect and ventilate the leaked gas.
* Turn off gas valve automatically.

**CC**

**2. CUSTOMER CONSTRAINTS**

**CS**

1. **CUSTOMER SEGMENT**

* The customers for our project is people Such industries include agriculture, manufacturing, construction, transportation, and communication, among others.

**BE**

**6. BEHAVIOUR**

* Choosing the right sensor
* Reliable components
* Calculating the usage

**RC**

**5. PROBLEM ROOT CAUSE**

* The danger happens when gas leaks out. It is dangerous because gas is flammable, which means that if there's a flame or even a spark in the area of a leak, it could cause a fire or explosion.
* A gas leak can happen if a gas pipe is damaged or a fitting is loose.
* There is a possibility of avoiding such dangerous problems, by ventilating the leaked gas out of the area, and by alerting the people.
* Goal of our Project, “ Provide the safe and best product using Internet of Things, to people which detects the gas leakage and alert them , and ensure their Safety ”.

**J&P**

**4. JOBS-TO-BE-DONE / PROBLEMS**

* Detection of gas leak,
* Alert surrounding through ALARM,
* Send SMS through GSM module.

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|  | **7. EMOTIONS: BEFORE / AFTER**   * Prevents gas leak * Avoid fire accidents * Safe environment | **8. PROPOSED SOLUTION**   * Gas detection * Alert alarm * Alert sms |  |  |