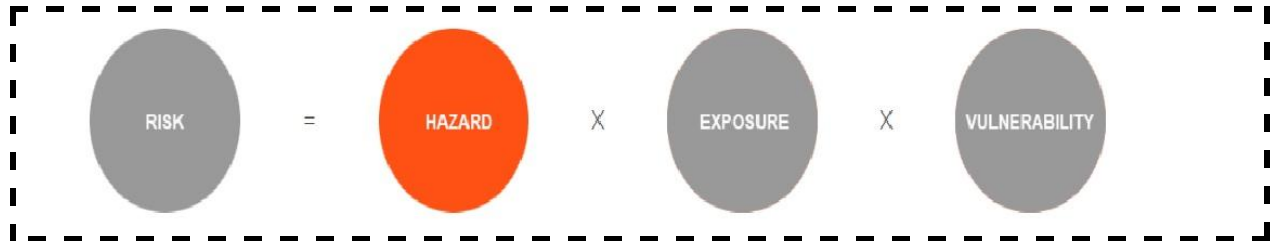


PROBLEM STATEMENTS FOR AN IOT BASED HAZARDOUS AREA MONITORING FOR INDUSTRIAL PLANT

In dangerous working environments, safety is not only a priority — it's a requirement. When sending workers into hazardous areas, **excellent communications are key to ensuring they remain safe.**



➤ Who does the problem affect?

Workers and people in close proximity : In and around the industrial plant.

➤ What are the boundaries of the problem?

Property Loss, Employee Health, Machinery Damage, Work Intensity, Natural Resource Damage.

➤ What is the issue?

- > Incompliance of manufactured products and quality requirements.
- > Downfall and Loss of employee productivity
- > Micro Downtimes
- > Improper Logistics Management
- > Refitting Machinery and Machine Malfunctioning

➤ When does the issue occur?

Firstly, due to the irregular maintenance of Machines. Industrial plants in which flammable substances are used or in environments in which combustible gas are produced due to natural or chemical reactions are highly prone to explosions and other such relevant incidents.

Explosive atmospheres can be caused by flammable gas, mists or vapors or by combustible dusts. If there is enough of the substance, mixed with air, then all it needs is a source of ignition to cause an explosion.

➤ **Where is the issue occurring?**

For example, combustible gas can occur in chemical factories, paint factories, when solvents are used, in the vicinity of fuel storage tanks, in power plants, in the oil and gas industry, as well as in waste water treatment and sewage treatment plants.

➤ **Why is it important to fix the problem?**

- > Minimizing lethal risk factors in the working environment.
- > Reducing risk of failure.
- > Improving efficiency in industries and plants.
- > Keeping the working environment safer.
- > Improving safety standards.
- > Employee Life Assurance and Increased productivity.