**RISK MANAGEMENT**

Risk management is the identification, evaluation and prioritization of risks followed by coordinated and economical application of resources to monitor, minimize and control impact of unforeseen events to realization of objectives

not deflect the endeavor from the business goals.

The risk management plan involves the following:

1. **Risk and Consequences –** This involves the risks that may occur during the project and how they will affect the schedule and the objectives.

2. **Probability** - The table contain a probability of the risk occurring in this case it is represented in a scale of numbers 1-5 (minimal to major).

3. **Impact** – This is the impact the risk will cause the whole system if the it occurs. It has impact of 1-5 (minimal to major).

4. **Risk level** – this is the level which the risk can affect the system if it occurs. It is represented in percentage.

5. **Mitigation** **Response** – A brief overview of mitigation steps to eliminate or reduce the risk.

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| Risk event | Impact | Probability | Risk Level | Consequences | Mitigation | Risk prevention measure |
| Faulty and wrongly calibrated sensors sensors | 5 | 2 | 70% | Failure to detect correct process variables (PH and pressure) causing wrong PID control action | Check whether the PH and pressure sensors are functioning well. | Check for and replace faulty sensors  Ensure correct calibration of the PH sensor |
| Wrong wiring pattern | 5 | 2 | 70% | Setting wrong connections for instance wrong input-output connections could lead to short circuit and malfunctions. | Ensure the I/O connections are marked and placed at the correct places during wiring. | Mark all the terminals in accordance with the delegated addresses. |
| Loss of program files | 4 | 1 | 50% | Failure of the virtual assistant (face-recognition and chatbot) | Develop a front end (web UI, application &/ software) to wrap around the backend processes | Research and implement model deployment for the face-recognition and chatbot models |
| Lack of internet access | 3 | 3 | 25% | Failure of the voice assistant | Type in messages to the assistant | Installation of fast and reliable internet |