**Phase 1 : Problem Definition and Design Thinking**

The purpose of the document is to identify the problem assigned to us and find solution for water fountains.

**Project Definition :**

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* Fountains require regular cleaning, upkeep, and repairs. Access to components, pumps, and plumbing can be challenging, and maintenance costs can escalate if not planned for adequately.
* Traditional water fountains often waste water due to continuous flow, leaks, or inefficient cooling systems.
* Compliance with local building codes, zoning regulations, and environmental laws can be complex and may vary depending on the location of the fountain.

**Design Thinking:**

Having understood the problem statement , we can approach the solution by the designing idealogies.

* Conduct user research to understand the needs, preferences, and pain points of potential users of IoT-based smart water fountains.
* Brainstorm ideas that leverage IoT capabilities, including sensors, connectivity, and data analysis, to enhance water fountains.
* Consider features like real-time water quality monitoring, predictive maintenance, touchless operation, and user app integration.
* Evaluate the impact of IoT technology by analyzing data collected from sensors and user interactions.
* Measure water conservation, maintenance efficiency, and user engagement facilitated.
* If the pilot is successful, plan for the widespread deployment of IoT-based smart water fountains across various locations andConsider scalability, IoT platform integration, and user scalability for larger deployments.