

# Weather Data-Driven Battery Life Optimizer



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## TEAM 24

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## PROJECT BACKGROUND & DESIGN GOAL:

H2O Now wants to provide a device that can utilize the refrigeration cycle to condense gaseous water in the air into liquid water. This water is to be used to irrigate crops where water is otherwise hard to acquire. **The goal of this project is to increase the amount of water collected per kilowatt of energy consumed.**

## DESIGN OUTCOMES:

We created a battery life optimization algorithm that tells the device when to turn on and off based off weather conditions. This will conserve power and give the device the longest possible daily runtime to pull water from the atmosphere.

## DESIGN CONSTRAINTS:

- Globally compatible software for worldwide reach
- Powered by 2 12V or Lithium-Ion batteries to increase accessibility.
- Withstanding normal weather conditions to survive in the field.
- Collecting water for up to 6 hours a day depending on battery charge



Version 2 of the Device in the Field



Version 3 of the Device