IOT SUPPORT OF DEPENDING ON THE WEATHER

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The original motivation for this project was to support more energy efficient clothes drying habits, i.e. hang them outside and don't forget about them.

More specially if known in advance that at least 3 consecutive daytime hours, with little or no rainfall, and humidity less than 70% was due, clothes and pegs could be ready. Notifications could also be sent if the actual conditions change significantly, if the clothes have been abandoned when leaving the house or night falls.

I hope to incorporate additional activities that are dependent on weather but also require advance notice to make them happen, and so the aim of this project has become: to define weather dependent "windows of opportunity", get local weather forecast data, identify and take an action to make use of those opportunities.

Examples of additional activities that could be included:

- whether heating should come on automatically dependent on expected temperature
- whether an alarm should be set 20 minutes earlier if it's a good morning to walk the kids to school
- or include tide information and find a Saturday morning for a sea swim

Tools, Technologies and Equipment

The following are expected to be part of the solution:

- An MQTT service to get, via HTTP, the local weather forecast
- Python programme to take in that data, and using predefined parameters, identify opportunities and publish those.
- Raspberry Pi and sensors to monitor actual outside conditions in the clothes drying example and ensure whoever is responsible hasn't left the vicinity…
- An IoT platform to integrate all of the above and action notifications within set parameters

Project Repository

https://github.com/KathleenMK/IoT_Weather_Dependent