•All – Half a page on your thoughts - Include any dead-ends you may have followed, decisions made, and changes that have been made to the project plan. This will need to include a significant amount of detail, so that it is easily seen what precisely you have done and are planning to do.

In researching competitors in this space, it was interesting to come upon FarmBot (<https://farm.bot/>) a robotic gardener that can tend a small garden bed. Believe it would be an interesting proposition for a larger scale product offing from gardenMates, sometime in the future.

Reviewing documentation from Zigbee alliance, I was particularly interested in Green Power. Green Power is a feature of Zigbee that allows for energy-harvesting technology to be used directly with the Zigbee stack. Green Power adds convenience to smart home markets by relieving the pain point that is replacing batteries that consumers may have to put up with (*Green Power*, no date)

The chosen sensor is fitted with a button battery and there is insufficient time or money to build our own, however if we were to explore designing our own sensor in the future this is technology we should look to adopt.

An option for the back end database that could also provide a small footprint db on mobile devices is couchbase. It is supported by Amazon and has the ability for the mobile app to be offline and sync later. Couchbase unfortunately is not open source but a paid subscription which makes it a less desirable option.

The first time use of the sensor, hub and app has to be super easy with as much automatic configuration as possible, I have suggested incorporating ProbMe capability into the application. The use of a QR code on the packaging will provide the passkey for ProbMe(‘ProbMe Simplifies Thing WiFi Connection’, 2014).

*Green Power* (no date) *Zigbee Alliance*. Available at: <https://zigbeealliance.org/solution/green-power/> (Accessed: 12 February 2020).

‘ProbMe Simplifies Thing WiFi Connection’ (2014) *EEJournal*, 16 September. Available at: <https://www.eejournal.com/2014/09/16/probme-simplifies-thing-wifi-connection/> (Accessed: 3 February 2020).

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