All smart devices collect their data and send it to the system:

In the example of a Fridge:

Every 5 seconds for 1-minute, the fridge makes a record of its status (temperature, kilowatts used in past 5 seconds etc.). At the end of the 1 minute, it sends this data to our system and restarts this process.

Our system then records this data into the database on separate rows. This allows our system the possibility (as we may not be able to implement) of showing almost real-time status of usage (1 update a minute).

Each device will be assigned to a Category such as Water, Electric, Gas, etc.

These rows can then be queried to produce data such as “Usage of Device 1 over the past 6 months” or “Cost of all Gas devices this month”.

The UI will allow the user to navigate to pages, which contain easy inputs (date picker, sliders) to provide input for these queries and receive back data. For instance, a user can navigate to one of their devices, and click “View Usage”. The site will then by default show usage **up to** the last 3 months, however onscreen the user can change the data parameters to view more or less data.

Questions

1. We could have a user assign their own devices to their account, allowing devices in a house to be split between users, but still see the overall usage.
   1. Should a device belong to a user? Or should the users just be able to view the system and view the overall data?

I personally don’t see an advantage of having a device belong to a user to track trends, because everyone uses every device eventually.

<https://www.youtube.com/watch?v=rvAM3BCiHJs>