**Project**

2 years in progress. PhD student (EN) coordinates all the data gathering. The research team is in English. Therefor English will be the language to use.

Students helped install the sensors. Sensors are highly calibrated, NOT right off the shelf.

(Can we get acces to the powerpoints?)

**Type of data**

2 files

* Data base structure opschaler (later on read it with com?)

Energy data from the smart meter. Smart meters for gass have a measure per hour, that’s not much. Temperature has been taken into account for.

**What exactly are the people doing in the house?**

Was someone at home or not? -> CO2 sensor, CO2 goes up when somebody is breathing.

Gads boiler burns gas, but also uses electricity.

Can we define a pattern of what the people are doing?

Comfort App probably will not be important for us. There are other students who use this dataset and analyse it.

**Batch 1**

One folder per house, read it in the documentation.

**What I would like to see about it, what is the end product.**

Can I predict the energy consumption? Can I forcast what’s the energy consumption of next month with the data from previous month known?

Can I try to say if the person was at home or not? Or what he was doing etc.

(Discussion about models) One model for everything would be the best. IS the type of electronics used known? Create a rule system for what the guy was doing in the house.

We would like you to explain how it works, it’s a research paper. We would also like the algorithms.

Hugo: Consumptions of energy? How about the production of energy? What do you do with that?

TB: The algorithm is about consumption. The second question is about the patterns, then we have to take this into account. If the house is not consuming, then we need to know why it is not consuming. Is it producing? That data comes in the smart meter.

Daan: What’s the end goal?

TB: The companies want to know what the people are doing in the house. If we could have an influence on them, it can change a lot. Companies don’t have enough capacity for the power peaks. Force companies to change their schedule by maybe 30 mins? It’s crazy.

Max number of pages for the research paper is on blackboard. We try to get a paper to go to congress.

What papers are already out there?

TB: Create your sprints now. Clean, process your data. Create the algorithms. First plan is to create a planning. In the next session we will discuss about this. For example, 2 ppl looking for papers about the topic, 2 ppl algorithms, 1 working on the data. Create roles, communication, people in charge, taking decisions etc.

TB: Can meet with you 2 times per week.

TB, Hugo Monday: 9.30 – 12.00

Maybe sometimes it will be short, sometimes it might not be.

TB, Thursday: 9.30 – 12.00

Send items to TB before the meetings. The end results of the data will be public. Try not to make everything in the middle public, because it’s ongoing research.

Literature recommended by TB:

2 master thesis reports. One of them explains how to clean and process data. The other is about forecasting energy.

Daan: There probably has been a lot os research been done already about this. What can we do different?

TB: Add uncertainty. The art is to find: The less data gives us the best result.

Snowfall: Look on the list of references for this paper. Once you know more about algorithms, ask about it to your teachers. Read first, then ask the right questions and you will go a lot faster.

TB: Atleast try to predict per hour. But the end product is to predict it for one month ahead.

Climate data is required: KMNI climate data is also required.

Create a list of questions at the end of the week so other researches can also see those.

TODO:

Task list, define roles

General group meeting

TBK: general overview

TN: technical overview

Work preferencis:

Be present in the building, when needed we can contact each other. Have general meeting hours also.

TODO:

Brian: Git GitHub done, see if it’s possible to link Jupyterhub to github automated.