# Goals

This documents states the goals for the week between January 30th and February 6th.

It comprises two set of goals: those that stem from Theme 1.3 and those that stem from Theme 1.4

## Branching from Theme 1.3

Last week, we have studied Meta Reinforcement Learning as an approach to increase the learning speed of our algorithm. Meta-Reinforcement Learning requires, however, that an agent be given the opportunity to learn in multiple tasks, so it can learn how to learn the one task we are actually interested in. Where can we get data to provide the model with such multiple tasks? After brainstorming possible answers to this question, we have decided that the best option is to train the model in buildings of different kinds.

Different kinds of buildings have different behaviors as regards to demand for energy. In order to generate data for the Meta-Reinforcement Learning process, we will train an agent on different kinds building. Learning in each kind of building is a unique experience, to the extent that different kinds of buildings have different demands (e.g. the demand for energy of a commercial building peaks at different times than that of a residential building). Yet, the process of learning is sufficiently similar for patterns *in the process of learning* to be identified.

Hence, in this week, our goals will be to

- study the different kinds of buildings available at the CityLearn simulator;
- analyze how to generate data for each kind of building;
- collect this data and explore its applications as an input to the MAML meta-reinforcement learning algorithm

## Branching from Theme 1.4

Taking the first steps to actually presenting our work to the world, we have accomplished the following goals this week. Yes, we have already did them, but we cite it for completion of these goal reports:

- Create open-source repository on GitHub
- Upload source-code to GitHub repository

The latter is an ongoing goal, and will be done periodically.