Fortum

Project 2: Gamification model for heating systems

Project description for ESGI144

Background

As pointed out in the description of Project 1, human behaviour is very important in designing of energy efficient heating systems in apartment buildings. There are three crucial elements that very important:

- perception of the thermal comfort in the apartment and in the building – common spaces and neighbour's apartments,
- ability to influence heating and cooling settings with access to feedback information,
- knowledge on how heating and cooling settings influence energy consumption and settlements

All above elements require human interaction – giving feedback about comfort perception, providing preferred settings, interacting with other apartment owners and building administration, analysing forecast information, etc.

The problem

The goal of this project is to design gamification model that would collect user feedback for use in heating and cooling system. The main incentive to the participants is energy efficiency resulting in smaller bills, however the model should consider a few other elements. There are different preferences of thermal comfort in apartments, financial goals and environmental awareness among apartment owners. Gamification model should not prefer one goal, e.g. energy efficiency, rather should reward being interactive and willingness to support preferences set by majority in the community.