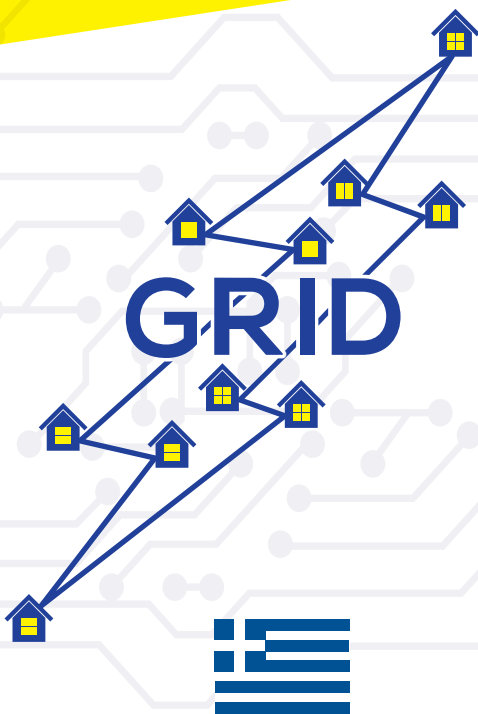


Because sustainability is about sharing

Olympic Distinction
WRO 2017



Team Members:
Iason Stavros Somoglou*
Ioannis Papadopoulos

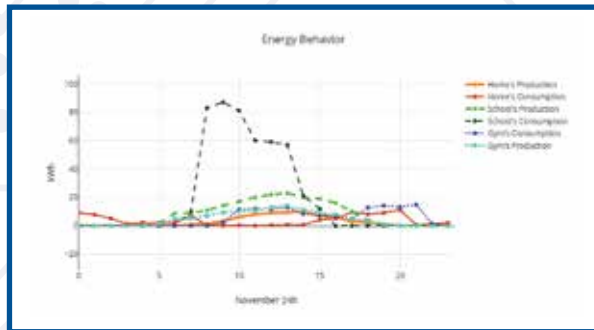
Coach:
Dialekti Athina
Voutyrakou

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SHARE ENERGY

Between households:

- In the following graph we present the average production and consumption of energy for each building in GRID community since 2013.



- Using this data, our algorithms can request energy, send energy, and can calculate energy loss along the way.



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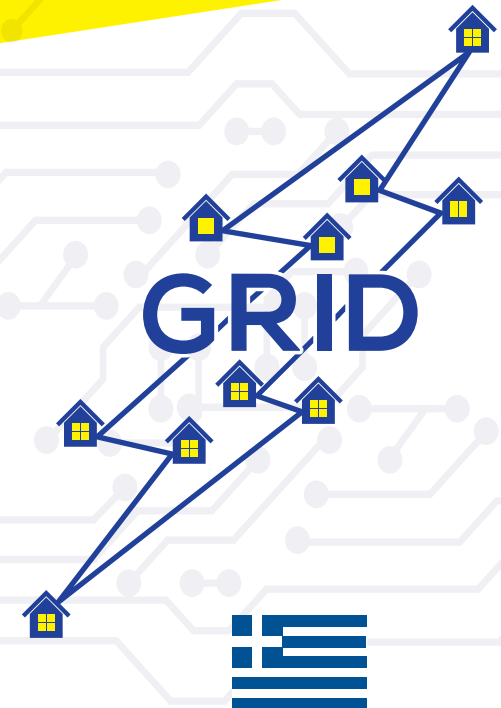
Lectus adv.



* GoogleUdacityScholars

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GRID COMMUNITY

A sustainable and eco-friendly community in which:

- Every building acts as a substation and is in a position to analyze its consumer's habits choosing how to manage the energy that is left over.
- Electricity is produced from renewable sources of energy.
- Kinetic and dynamic energy is converted into electricity.
- Each building can save energy through automations.



In order to create GRID, we gathered and analyzed fine-grained data from real houses in Texas, which are available for research purposes through "Pecan Street.org".

SAVE ENERGY

Through the following automations:



Sensors which control lights and electric devices in the gym and the house.



Thermistor which controls the temperature, for example, in the gym.



Bluetooth system, through which each tenant or school's principal, can manage the lights, the fan and all other electric devices.

PRODUCE & CONVERT ENERGY

Through the following ways:



Solar panels produce energy for:

- Pedestrian lights
- Street lights
- All the buildings
- Substation



Wind turbine produces energy for:

- Substation



From the playground, kinetic and dynamic energy is converted into electricity for:

- Street lights
- Substation