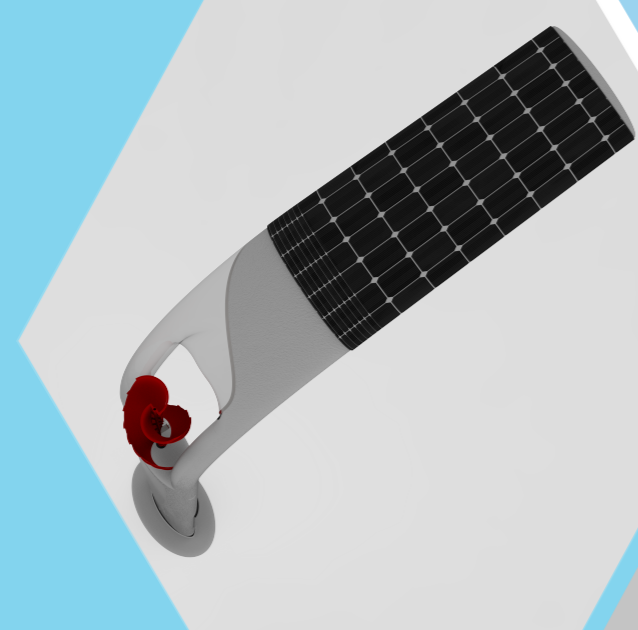


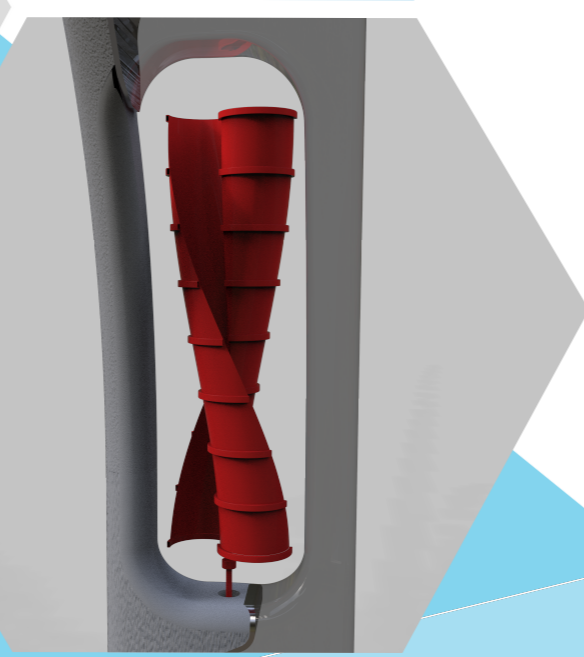
URBAN NODE

The urban node system is designed to fit the medium sized city Vilanova i la Geltrú in Catalunya, Spain. The project is a pilot towards making Vilanova into a smarter and more sustainable city. The urban node will have a positive energy usage, which means that the system will generate more energy than it uses, and send the extra energy to the city's electrical grid. The main focus of the project is to make people interact with each other and with the urban node system. The aim is to provide information about sustainability to the public by increased interaction.

RENEWABLES



"Generate more energy than it uses", the urban node will have a solar panel, a vertical axis wind turbine, piezo-electricity and an energy generating outdoor gym.

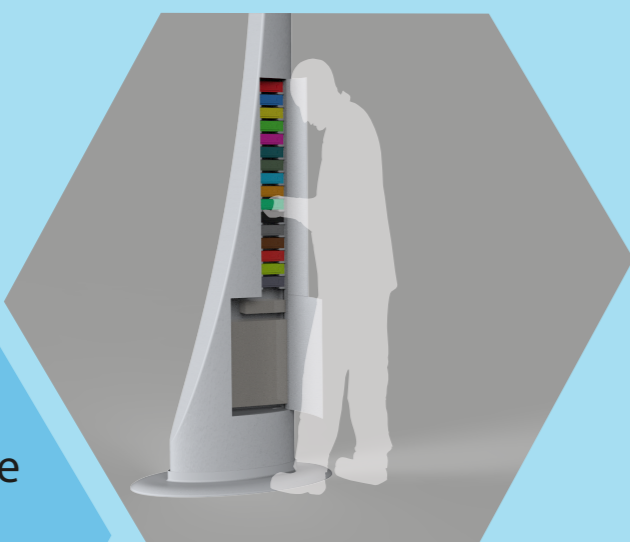


The node will also have two grid tie inverters (GTI) to be able to send the energy from the renewables to the city grid

Infrared: Motion sensor to modify the light.
LUX intensity: Control the light needed and work together with a dimmer to save energy
Ultrasonic: Detect parked cars, shows available parking spots.

Real time information.
« Temperature
« Humidity
« Air quality
« Decibel sensor

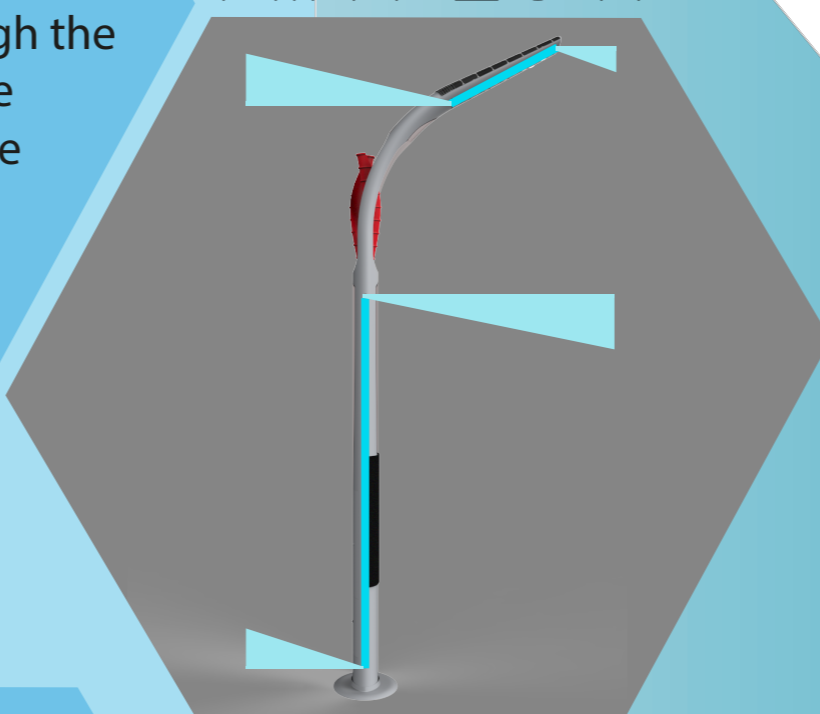
MAINTENANCE



The sensors will be placed in different boxes. The boxes will have the same size easy access and different colors to facilitate maintenance.

An airflow on the bottom of the node prevents sensors to overheat by cooling the GTIs and the boxes. Another airflow will go trough the top of the node, making sure that the solar panel and the wind turbine do not overheat.

AIR FLOW



The standard node is the version of the urban node without the touch screen. This type of nodes will be providing the system with a positive net of energy. This assures the system to always be self sufficient.

STANDARD



LED-lighting on top of every node. The nodes with screens, which have a transparent polycarbonate part, will also have LED-lights in the metal-border, lighting up the urban node from the inside during night time with different colors.

LIGHT

INTERFACE

The interface will be specially designed for the urban node system. A borderless layout, which allows several users at the same time. The user will be able to find information about Vilanova i la Geltrú: maps, transportation, news, possibility to connect to other people and emergency service.

The urban node will have a server and provide real time information. The public will be able to connect to the server via a webpage, a smartphone app but also trough multi touch screens. The screen will, as more or less every other function, be modular.

MULTI TOUCH SCREEN

