envienta™

MAKERSPACE REINVENTED


POWERED BY

ECOHOUSE

TECHNICAL SPECIFICATION

envienta™

OPEN SOURCE EVERYTHING

SPECIAL
SOFTWARE

Introducing **ECOHOUSE**, which can be built in a few days for much less than an average home! As an intelligent home, it has an automatic ventilation system, it can detect the exhausted air or close the windows also when it is raining. It is monitoring and controlling the temperature, optimizing the consumption of the electronic devices and sending reports to the owner. Additionally, there is a built-in smart garden system.
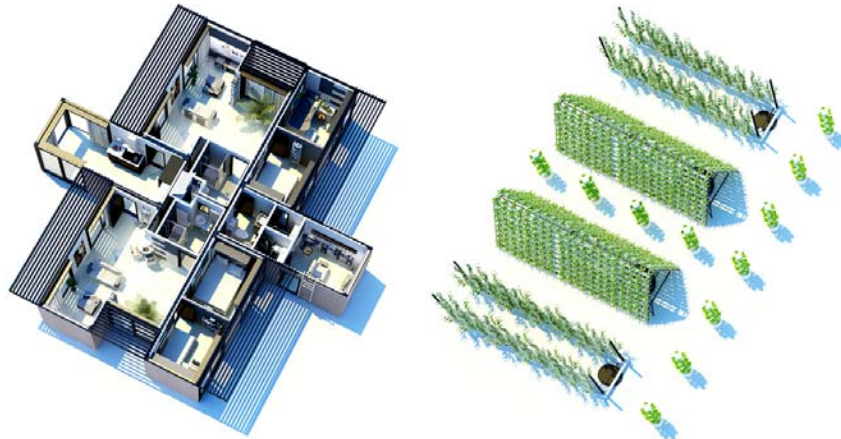
MAIN ASPECTS AND STANDPOINTS

- Liveable, cozy, luxurious, practical, natural, universal and easy to handle
- Minimized ecological footprint
- Low energy consumption with maximal experience and safety
- Self-supplying and self-supporting environment (eg. smart garden, agricultural robots, drones)
- Cost effective, practical, universal and the most optimal planning and construction processes
- Passive construction with the most cost effective maintenance
- The electronics is self-made directly from the parts by us, the system is operated by touch panels and mobile devices
- We take care of using parts for the construction and assembly -either in structure or in electronics-, which could be easily purchased at any place of the world
- Maximal lifetime (there is no planned obsolescence)
- Can be built in a few days and ready for moving in
- Compared to the traditional construction process, the price is fractional
- Improvement in life conditions such as:
    - Measurement of the air purity, activated carbon air purifier on request
    - Set up of optimal humidity level
    - Temperature set-up and fixing
    - Faraday-cage, if there is a demand for it
- Open protocol based on the standards, which means that anyone could further develop tools and moduls attached to it
- The object's certain sources could be shared in case of surplus (additional batteries)

SELF DEVELOPED ELECTRONIC AND SOFTWARE SYSTEM

- It does not need long-lasting educational process, since it is lifelike, logical and practical
- Real-time system
- Browser-based and independent from any platforms
- There is no hidden costs since it does not require additional investments
- With regards to its operation, it outweighs the industrial criteria
- Easy to configure and use without any specialized knowledge
- It optimizes the efficiency of electrical devices

WATER AND SEVERAGE

- Greywater system
- Cistern
- Water purificator

SELF DEVELOPED & PRODUCED WOODEN STRUCTURE & SANDWICH PANEL

- Oriented Standard Board (OSB) + rockwool + OSB (It is a high-strength material with the minimized level of adhesive content at around 5%, and this primary commodity is suitable even for the roof covering purposes.)
- +/- 50°C is the temperature tolerance
- Life expectancy is 50 years
- Electric heating (Infrapanel)
- Air conditioning
- Ventilation
- Doors and windows can be operated electronically
- Security moduls: motion sensors, cameras, smoke and gas detectors, etc.

THE ROOF

- Flat roof structure due to several reasons
- The solar panels are set to move always towards the sun in order to ensure the maximize their efficiency
- Smart gardening can be placed to the roof, eg. sensors send us signs about the ripeness of the planted vegatable (optional)

PRODUCTION OF RECYCLED PARTS

- The polystyrene production is R&D in recycling: it is a system of carbon dioxide foam from discarded plastic
- Recycling of other wastes
- Natural components

OPEN SOURCE

- The blueprints, electronics, hardware and software are accessible and could be downloaded for free
- The complete system could be reproduced by anybody, anywhere and at any time. Since not everyone understands the partial processes such as eg. from carpentering to software development and microcontrollers, we are ready to launch manufacturing in our own production lines.

THE MINIMUM STANDARD REQUIREMENT SYSTEM OF THE ELECTRIC MODULES AND THEIR CONTROLLING ELECTRONICS

- Touch screens and voice control, where it is practical to be applied
- Maximum security levels
- Low consumption
- Power consumption monitoring wherever it is possible (Consumption data can be accessed and quiried based on time intervals from central database)
     - Monitoring and interpreting discrepancies of data and values
     - Creation of diagrams
     - Intervention is possible
     - Self-diagnostics
- Support of industrial communication standards (RS485, CANbus, X11 etc.), own X11 system, R&D
- Support of wireless communication protocols (2,4 GHz, fullduplex)
- Beacon (Position light) (In case of external fitting)
- Motion sensors (In case of external fitting)
- 2A USB charger (In case of external fitting)

MODULES

- Maximum support for people with altered abilities (Sensors, voice control, braille options)
- Certain levels of authority are equivalent to bank security regulations
- Human voice output with the chosen language, set-up is possible
- Central flowmeter (Network, sun collector)
- Motion sensors
- Carbon monoxide, fume and sensors for other contaminants (Basic equipment)

We do not use ready-made smart home systems available, since those systems and parts cannot reach our defined minimum technical requirements and they are not suitable for implementation and on the top of it, they are irrationally expensive. We develop and prepare our own microprocessor system, so we build the targeted hardware.

FINANCIAL CORNER POINTS – COMPARED TO TRADITIONAL CONSTRUCTION

- The constructional cost is one third ($\frac{1}{3}$)
- The running/maintenance cost is one third ($\frac{1}{3}$)
- It can be built by 4 persons within 4 working days

The above mentioned ratios are in inverse proportion with the level of comfort and security, it can provide.

FURTHER NOTES

- **ECOHOUSE** is a mobile home, but it is also allowed to be fixed in case it is not against the eco-approach and you have all necessary local permissions.
- For the variability of its dimensions, it is possible to produce unique specimen that feature full caravan functions with hitch, chassis and undercarriage, properly modified.
- The **ECOHOUSE** has a modular structure, so in case of higher demand for place owing to growing number of residentials, it is easy to erect and link a new room or new building part to the system
- Although the purpose of the **ECOHOUSE** is to reach an affordable price, we could also work out rental opportunities in order that we could make the product available and sellable for all kind of people