



ADEME

Agence de l'Environnement  
et de la Maîtrise de l'ÉnergieClub ADEME  
International

ACTIV HOME

## ECOSTRAUV

Activ Home developed a simple solution (named ECOSTRAUV) to reliably fill wooden frames with and use those modules as wall, floor and roof material in new constructions. This innovative use of a waste material builds on a 100 year old french heritage bringing straw insulation of homes to modern times thanks to the filling process and architectural framework developed by Active Home. The equipment used for filling increases the productivity of module making thereby making the process more price competitive versus traditional building material alternatives. A demonstration house was built successfully further proving the viability of the technology.

The solution main advantages are:

- the production capacity with 8 people shifts reaching 40000m<sup>2</sup> per year (around 200 individual houses 100m<sup>2</sup>). If we want to double capacity, just need to set a second shift;
- the environmental benefit is obvious when compared to common brick or concrete buildings. Even when compared to today's framewood buildings insulated with mineral fibers according to today's rules, the carbon print of the thermal insulation and the heating energy need are both lower, because the straw stores carbon and its thickness brings a better thermal insulation
- the economic performance. We can easily compete with traditional construction system and offer 3 times the higher thermic performance with carbon storage;
- the economic model based on the circular model. We want to duplicate our process on all territories with available resources and use local workers with no particular skillful requirement;

We can propose different solution levels according to budget and initials needs. We engineered our process from basic to full industrialized mode. We can also start with machine rental and technical and production support;



France

### Thematic



### Prestations provided

Équipementier/fabricant



We take care of the machines' delivery, set up, people training and certification and provide assistance contract and geographical exclusivity.

## Post-project results

After a first successful establishment in the Allier, we are in the process of setting up a second production unit in Hauts de France near Saint Quentin (02). For this future unit, we are associated with local grain producers. We plan to start activity by the end of 2020.

### Economic benefits - Allier site

We are staying the course of the economic forecasts announced with a 1-year delay compared to the initial planning. This discrepancy is due to the fact that until we could finalize the implementation we could not take orders.

2020	2021	2022	2023	2024	2025
892 500 €	1 904 000 €	3 049 000 €	4 244 000 €	5 920 000 €	8 320 000 €

### Economic benefits - national:

This Allier forecast can be multiplied by as many new production units in the territory.

Within 5 years, we can estimate the overall annual economic benefits at around 30 to 50M €

### Social benefits - Allier

Since October we have hired 3 additional people, bringing the salaried workforce to 5 people in production.

We can also add value to 1 additional indirect job for the manufacturing of raw materials, transport and construction sites for operations entrusted to external companies.

Under 5 years we plan to recruit 3 to 6 additional people.

### Social benefits - France

Between the manufacturing of machines (Made in France!) And the development of new production units (production and sites), we can estimate the potential for jobs to be created at 200 people.

Industrial benefits: Within 5 years, the number of machines sold everywhere in France is estimated to be between 20 and 30. The second machine will be sold by the end of 2020 as part of the partnership mentioned in Hauts de France.

### And we can do the same worldwide

We provide a much needed environmentally benign solution for home builders using a net positive material that has 9kg of CO<sup>2</sup> sequestering potential per square meter of building material that is quite impressive in comparison to the highly polluting concrete/brick production. What is more, straw is an agro-industrial waste that is repurposed to be used as an insulator instead of the oil derived polystyrene insulation blocks that is used frequently. A hidden but important benefit is the massive reduction of the energy need of the house that brings it close to a passive house quality meeting the coming

The other major advantage of this type of construction from an environmental point of view is the almost elimination of all site waste linked to the use of materials.



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With more than 130 members, the Club ADEME International assists the SMEs in its network in the development of innovative projects and international partnerships. The objective is to participate in the dissemination of French knowledge, by supporting the private and public sector in the ecological and energy transition sector in order to meet global environmental and climate challenges.

More information : [www.clubinternational.ademe.fr](http://www.clubinternational.ademe.fr)

