



## CONBOU

Project Leader  
**Wassilij Grod**  
 Organisation  
**CONBOU**  
 Designed By  
**Wassilij Grod**  
 Project Location  
**Germany**  
 Project Website  
[www.conbou.de](http://www.conbou.de)  
 Name of nominating Icsid Member organisation  
**VDID**

### Please describe the project and the challenge it intended to address

CONBOU is the brand name for a material made of bamboo. It is a resource-saving, sandwich material made of bamboo. It aims to give people a cheap, decent and renewable alternative option to the materials available. CONBOU is a start up company. Currently we produce CONBOU in small series by order. Financing for mechanical production and market penetration is being sought. The technology uses the fastest renewable resource in an efficient way. The properties of bamboo are transferred to a plate material. By doing this a new compound material is created with a flat surface that looks as good or better then conventional wood veneer. Because of the growing world population and their demand for materials, this bamboo lightweight construction material has a very high social relevance.

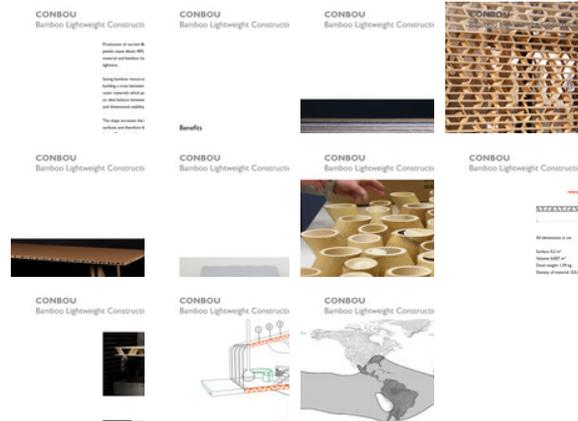
Currently CONBOU is handcrafted in small series. We have developed templates for existing machines but manual labor is still involved. In the near future the production processes will be automated to make the material available to a broad class of consumers. The production of current bamboo panels causes about a 40% waste in materials and the bamboo loses lightness. Saving bamboo resources by building a truss between two outer materials, provides an ideal balance between weight and dimensional stability. The slope increases the bonding surfaces and therefore blocks the forces. The desired features of a bamboo culm are converted into a sheet material. Multiple variations of surface, height and construction of the middle layer are realized. This offers a broad spectrum for diverse application areas where there is a demand for lightness and stability.

The aim is to offer a house of 50m<sup>2</sup> for 5000 €. This building is not only from a CO2 neutral view; attractive, it is as well naturally air-conditioned, and very suitable for earthquake regions in the world, due to it's mechanical robustness.

### What are the objectives of the project and are the outcomes same as those originally intended?

The aim of the project is to create an eco-friendly and user-friendly building material. There are still many hurdles to overcome, especially when it is used as a building material. The first step for market

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introduction is the furniture manufacturing industry and packaging industry (for logistics).

### **How was the community engaged through the life cycle of the project?**

The invention aroused great interest. Generally the people called the material simple and brilliant. Public institutions with civil engineers, such as the Bauhaus University Weimar and University for Sustainable Development Eberswalde see a huge potential in the material. The material is going to be researched and optimized there.

### **Include the society of interest and describe any other relevant stakeholders and partners that were involved or consulted.**

The material created a lot of interest especially for architects, interior designers and furniture manufacturers. Even car makers like BMW and Volkswagen have expressed an interest. BMW has only requested material samples for testing. Volkswagen has built prototypes of their internal overseas transport container from CONBOU. The containers will be tested and adjusted. On 6th of September they will be presented at the Volkswagen Innovation Day. The interest for the material in the automotive companies as an alternative to wood is due to its lightness and the stability of the CONBOU sandwich panel. In addition these large corporations benefit from the superior CO2 balance of the material.

### **How has this project benefited the community of interest?**

It saves material resources in production and transportation. The material minimizes CO2 emissions. It is inexpensive and renewable. It is largely available as a natural resource on earth. The properties of bamboo are transferred to a plate material. By doing this, a new compound material is created with a flat surface that looks as good or better than conventional wood veneer. In the regions of the earth where bamboo grows, jobs and homes are urgently needed. Production and sales of CONBOU will be done locally in areas where bamboo grows and it will create jobs and environmentally safe, decent houses. Ancillary products and services as windows, sanitary equipment and construction will be sourced preferably locally too hopefully, creating even more jobs.

### **What metrics are used to track the impact of the project?**

The material will be tested thoroughly to meet the exacting DIN standards of Germany. A successful implementation of the project requires strong partners with contacts in governments, NGOs and industry.

### **How will winning the Prize raise awareness of the project and further its impact?**

Through the participation in the World Design Impact Prize awareness levels will increase. Winning will give us worldwide recognition. The network of the project will expand. We hope we will gain contacts with organizations and people that can assist us in the successful implementation of the project.

### **Briefly describe the challenges the project currently faces**

As already described, the material must pass all relevant material tests. It needs DIN certificates for successful market introduction. A very big hurdle will be the wood industry because they see bamboo as serious competitor. Also a machine for the production must be developed. The handcrafted production process must be partly or fully automated. The

adhesive technology and fire protection must be optimized.

**Please include any other relevant information you would like to share**

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The World Design Impact Prize is an initiative of:



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of Societies of Industrial Design**  
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