

IS SUSTAINABILITY THE NEW LUXURY?

How Woodoo Founder *Timothée Boitouzet* seeks to revolutionize the way we use an age-old material

“By 2030, there will be six billion people living in cities. We will have to find new materials and new building technologies to build denser, higher cities, yet with more consideration for the environment.”

Timothée Boitouzet,
Founder & CEO, Woodoo

What if the cities we live in could be built of a material available in abundance, in a cost-effective manner with a low carbon footprint? Though it sounds like something out of science fiction, that's exactly what *Timothée Boitouzet*, an architect turned chemist who went on to found Woodoo, an award-winning CleanTech startup based out of Paris, is aiming to achieve.

“After training as an architect in Kyoto, I was lucky enough to work for some of the greatest architects of our time,” explains *Boitouzet*. “One day, I realized that we cannot build the buildings of tomorrow with the materials of yesterday while trying to cope with the environmental and demographic challenges of our era.” So, *Boitouzet* continued his studies at Harvard and MIT, focusing his research on wood engineering. “This material is available everywhere and doesn't require energy to grow. It's exciting to think that today we can rediscover a 420 million-year-old material through technology and transform it into the material of the 21st century.”

Boitouzet's reasoning is backed by some alarming statistics: The price of sand, the key ingredient in concrete production, has increased by more than 600 percent in the past 20 years, and steel is becoming more scarce. China has used more of the

former between 2011 and 2013 than the United States did during the 20th century. Wood, on the other hand, is widely available. More than 30 percent of wood's annual growth in Europe is unexploited, presenting both an interesting industrial opportunity and a chance to replace less sustainable material. “Woodoo needs 50 percent less energy than concrete, 1,700 percent less than glass and 13,000 percent less than steel to produce,” claims *Boitouzet*.

Woodoo uses a patented process to remove lignin from wood, which acts as the cement between fibers, replacing it with a natural resin that provides the material with remarkable physical and optical properties. The company claims that this biochemical process can transform any type of wood, making the material translucent, weatherproof, fire-resistant and substantially stronger than in its original state. “I founded Woodoo at the end of 2016 to bring this augmented wood material to the market. It is transformed at the molecular level to overcome the inherent limitations of wood.”

Boitouzet's efforts have not gone unnoticed. In the two years since Woodoo's founding, the company has won over 30 international awards, including the MIT European Innovator of the Year 2016, the Global Shaper

2017 award from the World Economic Forum and the Solar Impulse Foundation Award 2018. His goal is to expand enough to have a tremendous impact on the material industry. “Speeding up towards mass-market applications is our primary goal,” he explains. “Our strategy is to target luxury applications first to gain a quick presence on the market, then gradually to move towards larger market applications.” The LVMH Group has already begun working with Woodoo within various brands to create cosmetic packaging and applications in the watchmaking industry. “More flagship products are in discussion,” he says. “Sustainable is the new luxury.” Woodoo has also set its sights on the automotive industry, working closely with several luxury manufacturers to explore interior options using their innovative material.

Woodoo plans on releasing its first pilot applications to the public in 2019, focusing on the luxury and automotive industries. They are also investigating use cases for yachts and jet interiors. “Ultimately, we plan to bring this material to the construction industry by 2022, first for façade system elements and then for primary load-bearing applications.” ←

Woodoo materials are translucent and touch sensitive, which enables innovative controls and screen displays

WORDS Nicholas Thompson. IMAGE © Paul & Henriette. woodoo.com