

Biocomposite materials:  
**A sustainable wood alternative.**









**What is a biocomposite material?**

# Biocomposites

# Biocomposites

Plastic reinforced with natural fibres.

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Plastic reinforced with natural fibres.

» Fibreglass

# Biocomposites

Plastic reinforced with natural fibres.

- » Fibreglass
- » Carbonfibre

# Biocomposites

Bioplastics



# Biocomposites

Bioplastics

» Polylactic acid (PLA)



# Biocomposites

## Bioplastics

- » Polylactic acid (PLA)
- » Renewable resource



# Biocomposites

## Bioplastics

- » Polylactic acid (PLA)
- » Renewable resource
- » No petrochemicals



# Biocomposites

Extrusion

# Biocomposites

## Extrusion

- » Improved fibre alignment and adhesion

# Biocomposites

## Extrusion

- » Improved fibre alignment and adhesion
- » Superior mechanical performance



# Biocomposites

Natural fibres

» Rice husks



# Biocomposites

Natural fibres

- » Rice husks
- » Wood flour



**A sustainable wood alternative.**

# Wood Alternative

**Sustainable**

# Wood Alternative

## Sustainable

» Recyclable

# Wood Alternative

## Sustainable

- » Recyclable
- » Biodegradable



# Wood Alternative

## Sustainable

- » Recyclable
- » Biodegradable
- » Efficient material usage

# Wood Alternative

## Sustainable

- » Recyclable
- » Biodegradable
- » Efficient material usage
- » No toxic treatments or glues

# Wood Alternative

## Workability

# Wood Alternative

## Workability

- » Processed as timber

# Wood Alternative

## Workability

- » Processed as timber
- » Excellent finish

# Wood Alternative

## Workability

- » Processed as timber
- » Excellent finish
- » Extrusion streamlines production process



# Wood Alternative

Versatile

# Wood Alternative

## Versatile

- » High strength to weight ratio

# Wood Alternative

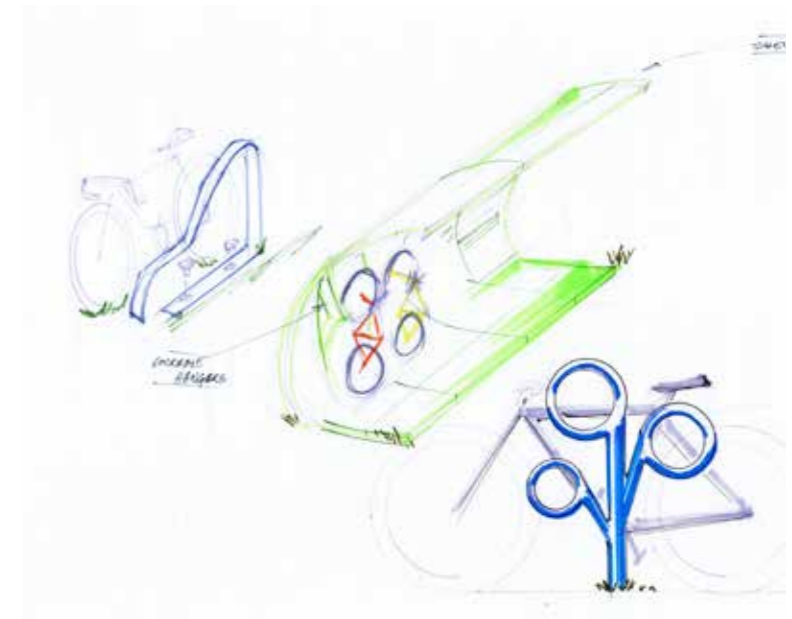
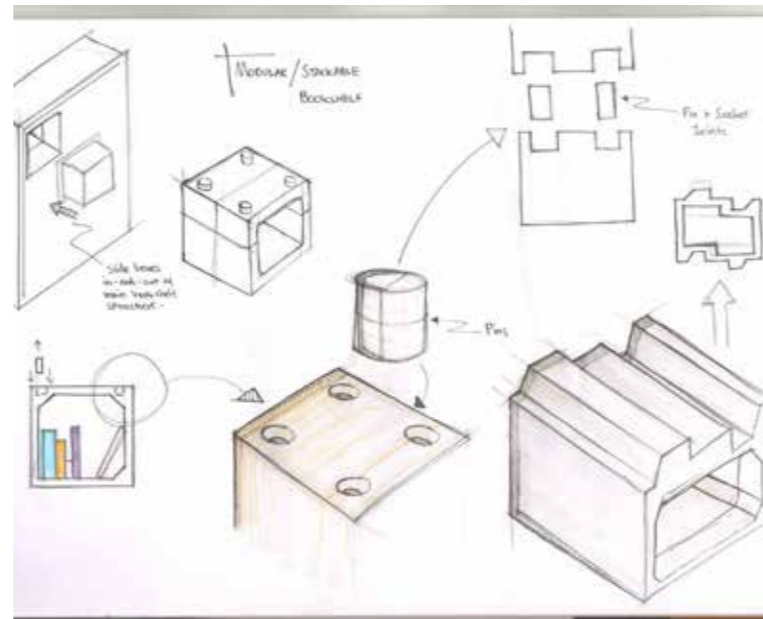
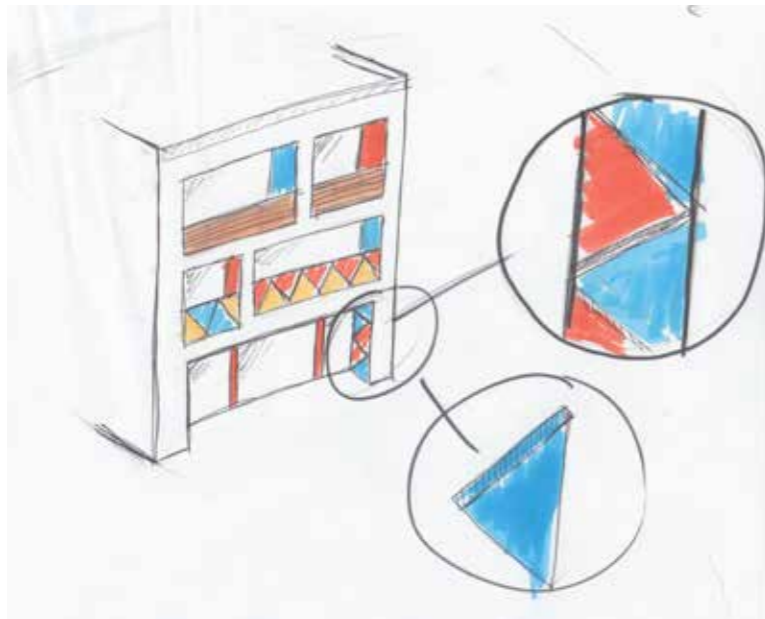
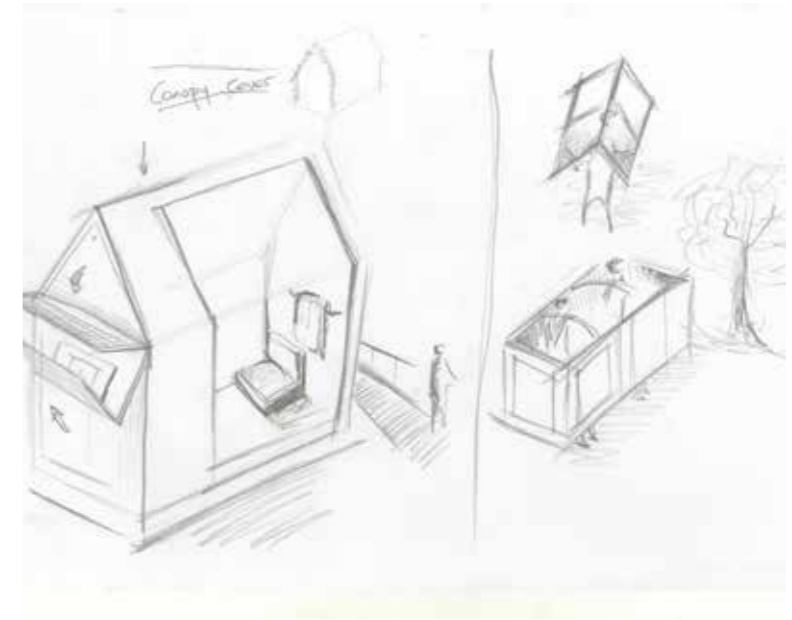
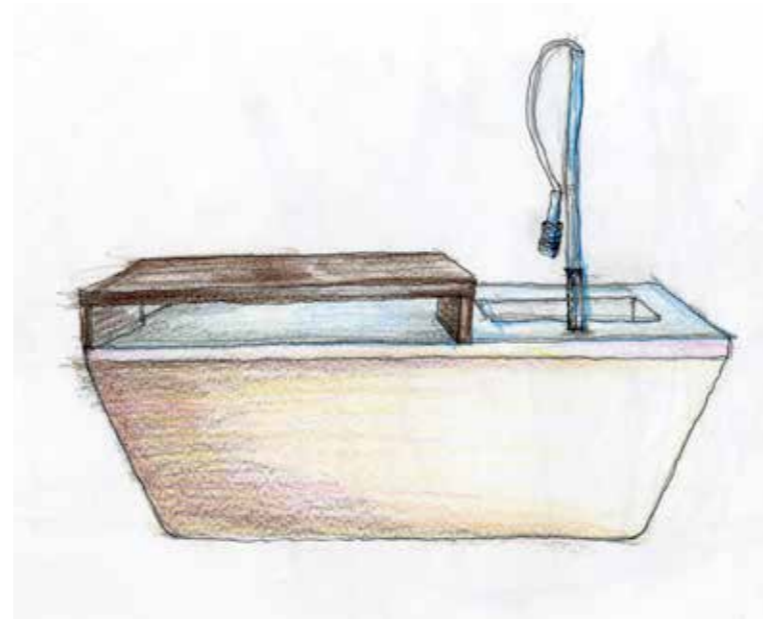
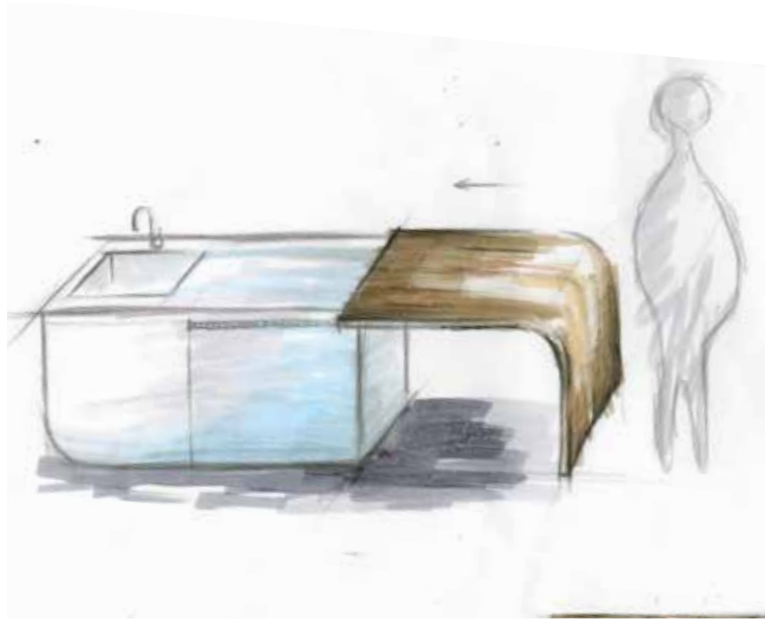
## Versatile

- » High strength to weight ratio
- » Customisable material

# Process

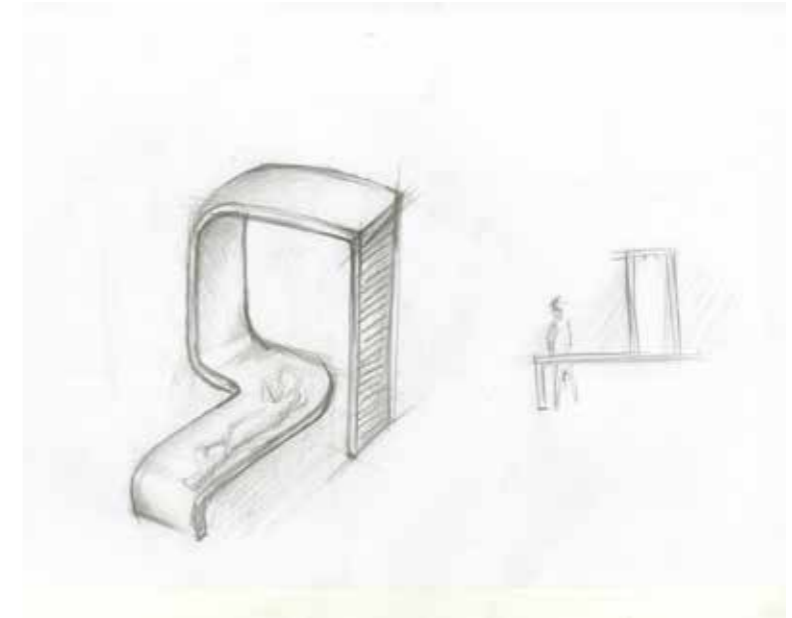
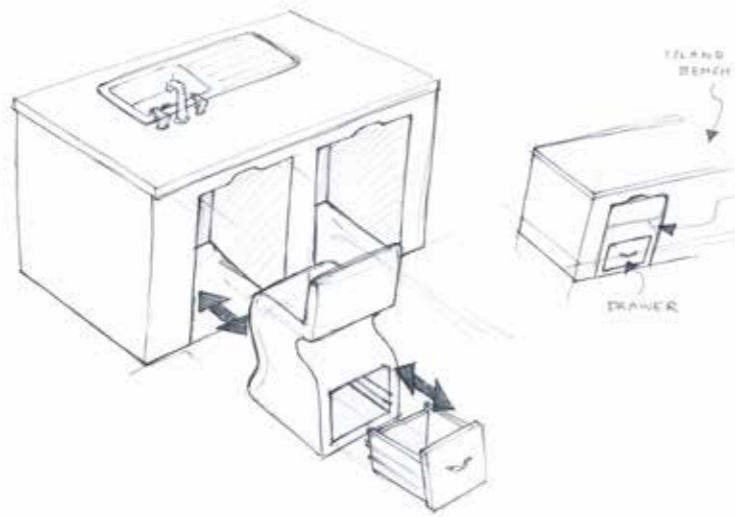


# Process





# Process

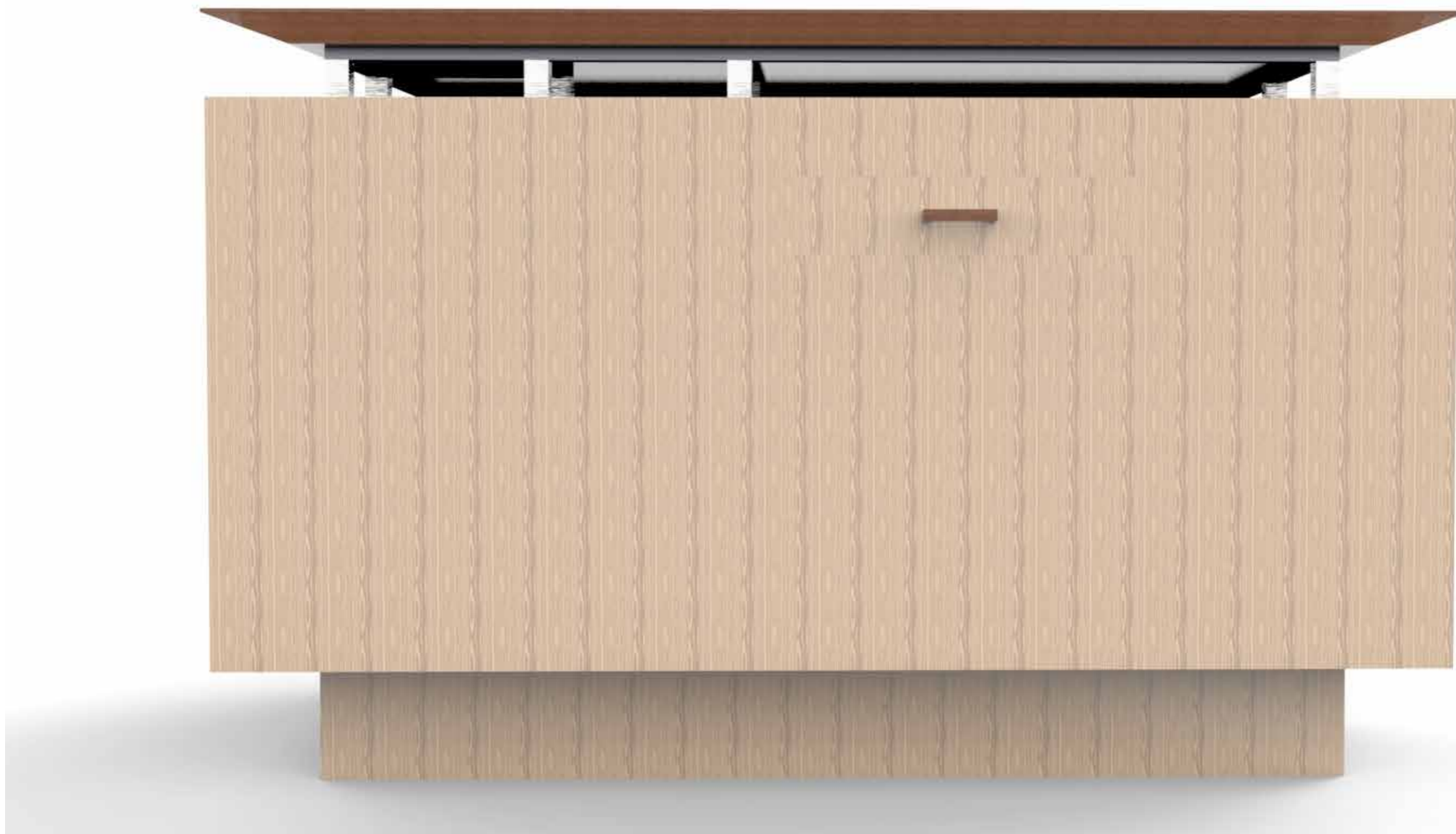




**Where to next?**



# Proof of concept

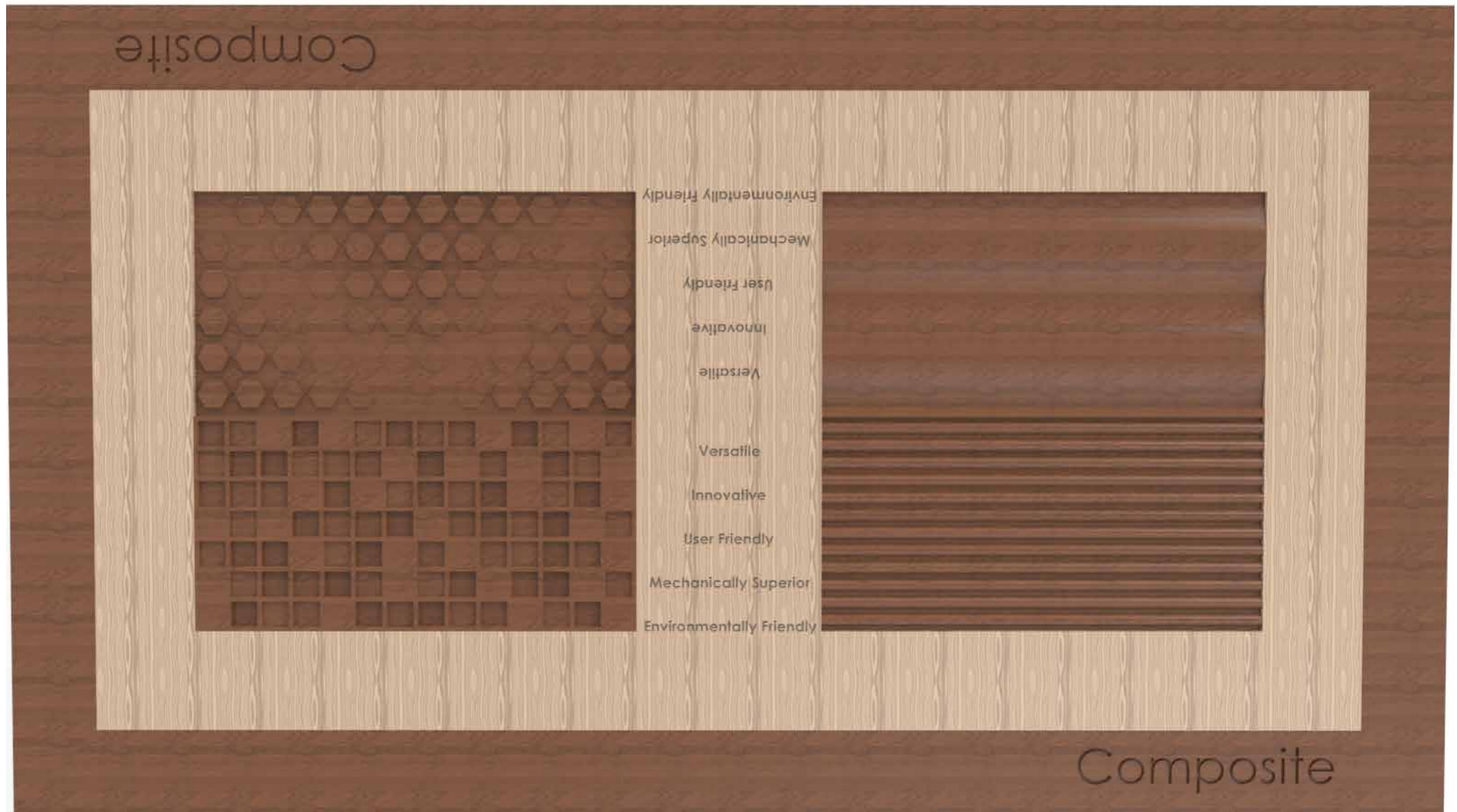


# Proof of concept





# Proof of concept



# Material Testing





# Material Testing



Sustainable  
Mechanically superior  
Versatile





Biocomposite materials:  
**A sustainable wood alternative.**

