



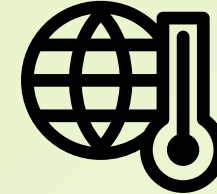
W I D U Z

ENGINEERING BAMBOO FOR SUSTAINABLE FUTURE CITIES

Problem Statement



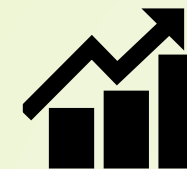
10 million hectares
of forest are cut down annually



15% of greenhouse gases
comes from traditional building materials
such as concrete and steels



Long timber growth period
Oak takes 80 years while Teak takes 70 years



24% demand increase
from 2015

Bamboo Veneer Lumber™ (BVL™)

High performance carbon-neutral structural composite made with bamboo fibers



Up to 3x stronger
than existing alternatives



Up to 20% lighter
in structure



5x more renewable
raw material



Modular and
Circular Design



Up to 40%
less CO₂ *

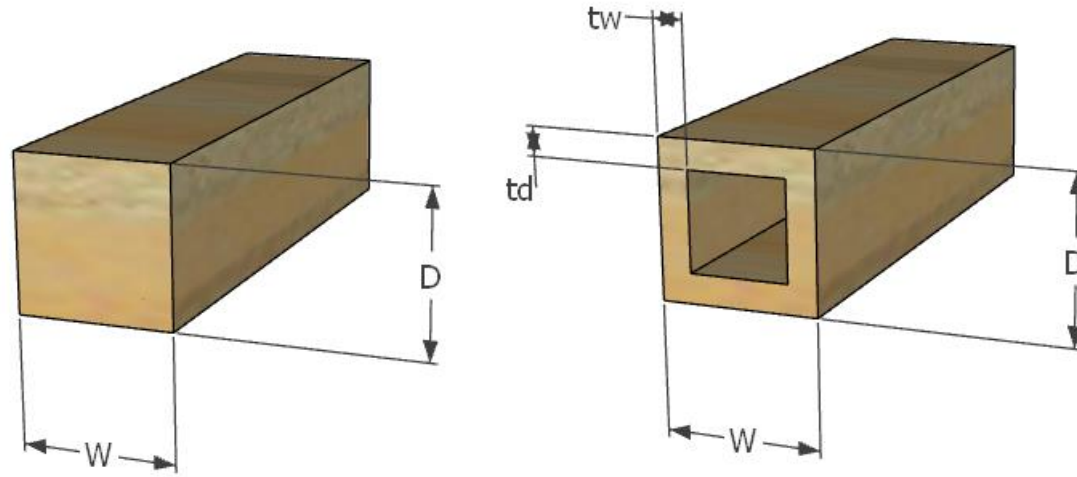


*As compared to steel reinforced concrete beam.
Results from a life cycle assessment carried out by ETH in 2019 for a construction beam in Indonesia.
Suitable LCA against use of wood will be carried out in future



LVL vs BVL™ Comparison

Technical Comparison with Mass Engineered Timber

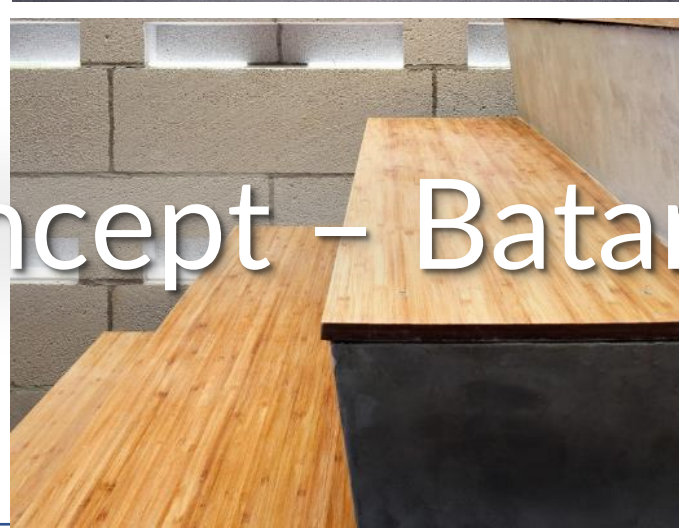


	LVL	BVL™
Young's Modulus	14 GPa	25 GPa
Density	600 kg/m ³	1,200 kg/m ³
External Dimensions	150 mm x 150 mm	150 mm x 150 mm
Wall thickness		tw = 14 mm; td = 14 mm
Cross Section Area	22,500 mm ²	7,616 mm ²
Weight	13.5 kg/m	4.8 kg/m

64% lighter than LVL

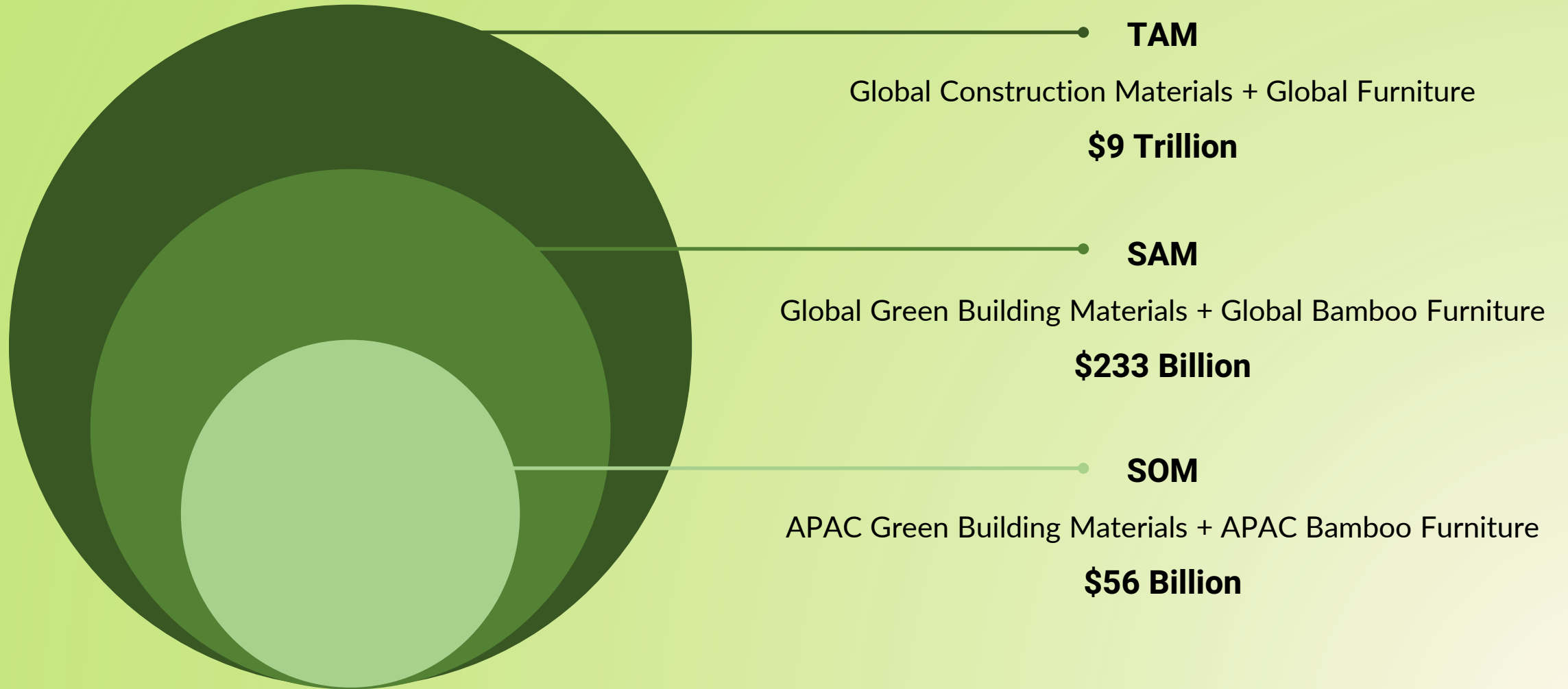
BVL™ Competitiveness





Proof Of Concept – Batam, Indonesia

Market Size



Business Model

B2B with IP-leveraged approach



Produce and supply
BVL™ materials



Sustainable & Green Furniture Market Furniture producers & Interior Designers

- Standard Planks
- Specified custom sizes



Sustainable Construction Market Contractors, Developers & Architects

- Produce custom structural elements with size customizations



Prefabricated Modular sustainable housing Contractors & Architects

- Supply pre-fabricated Modular Homes
- Engage & train local contractors to assemble, install and commission

Team



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**JOIN US TO BE
THE LEADING ENGINEERED BAMBOO PRODUCER
AND SUPPLIER GLOBALLY**

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