



# PEF6007 – Projeto e Verificação de Estruturas de Madeira

Aula 1

Introdução

*What about our ecological footprint?*



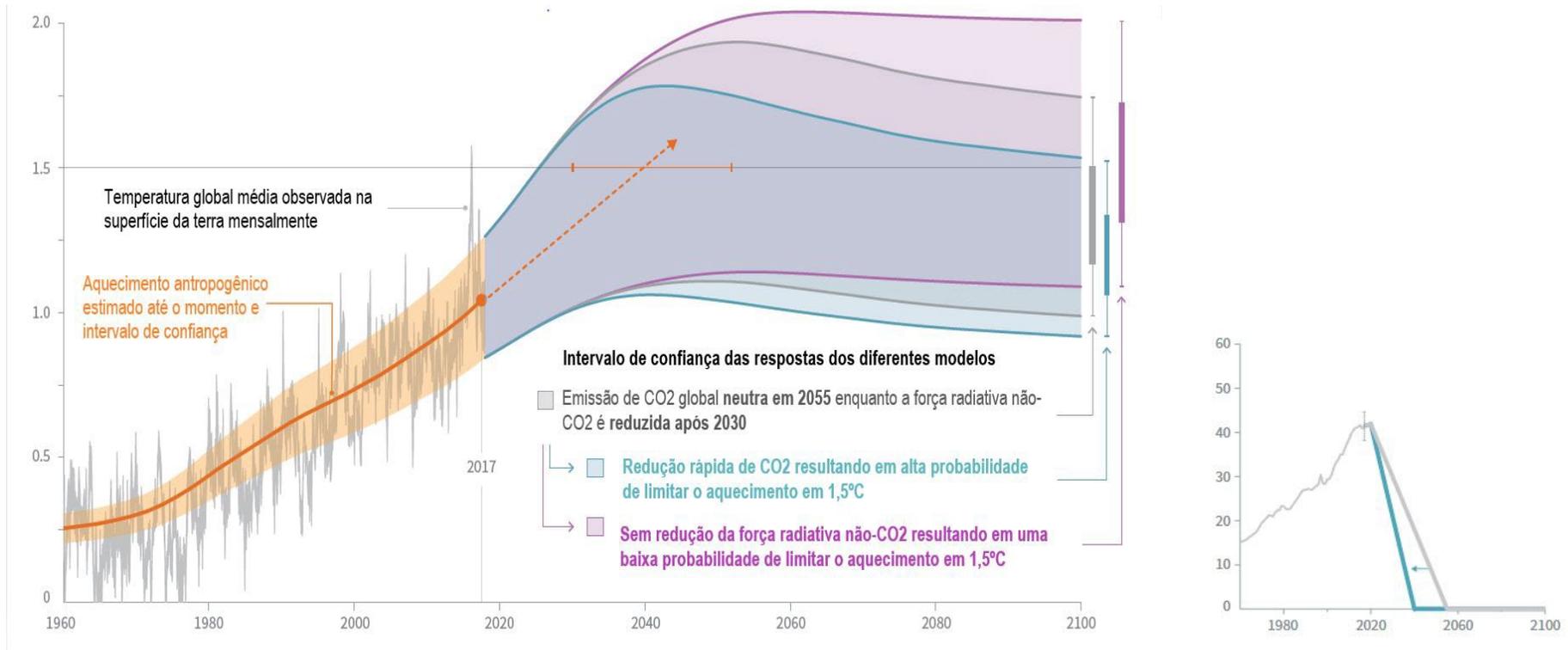
*What about our ecological footprint?*



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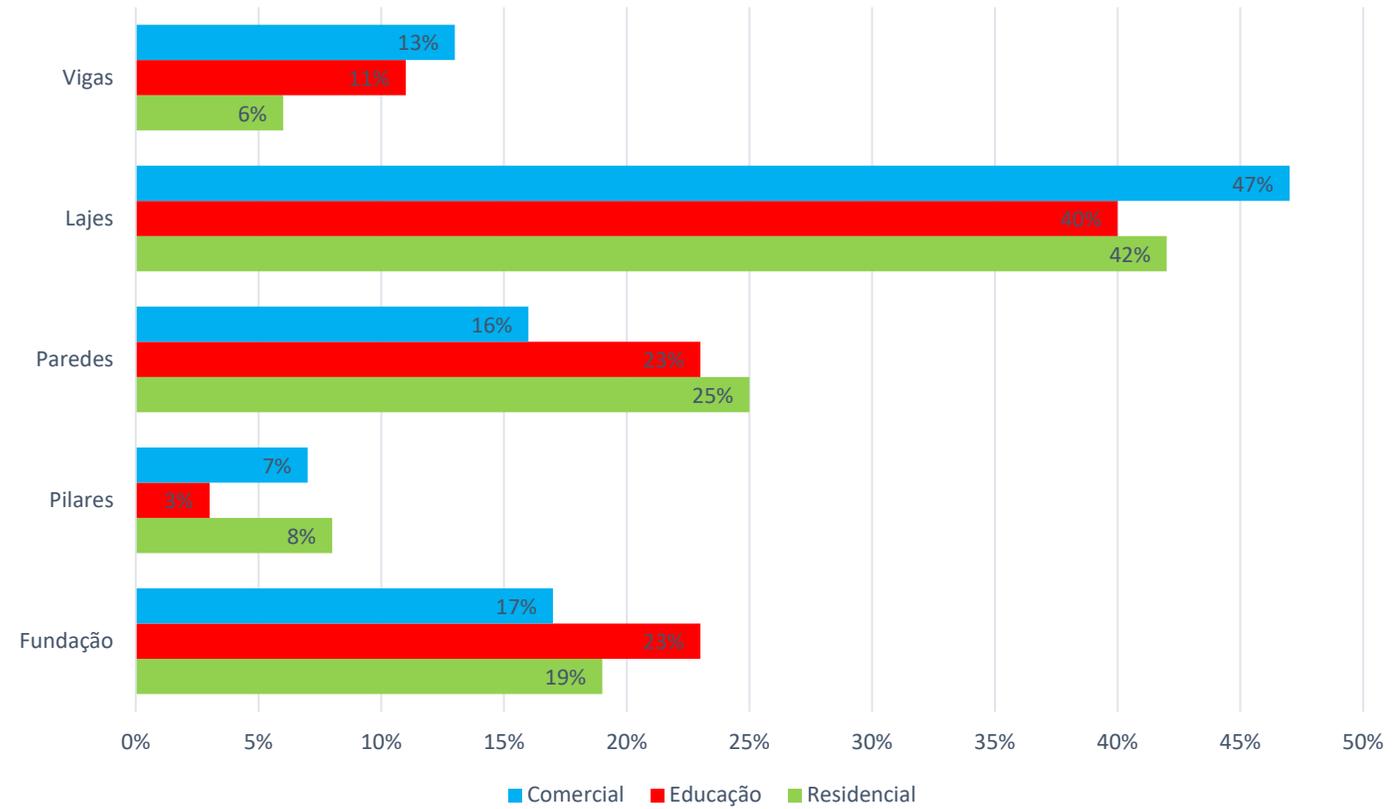
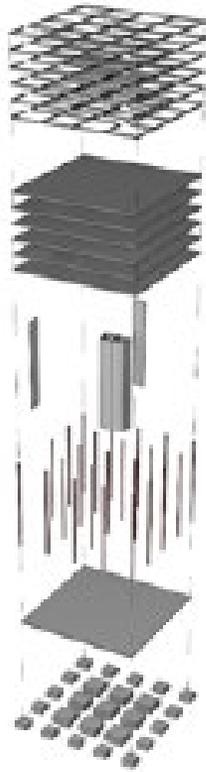


# Mudanças na temperatura global



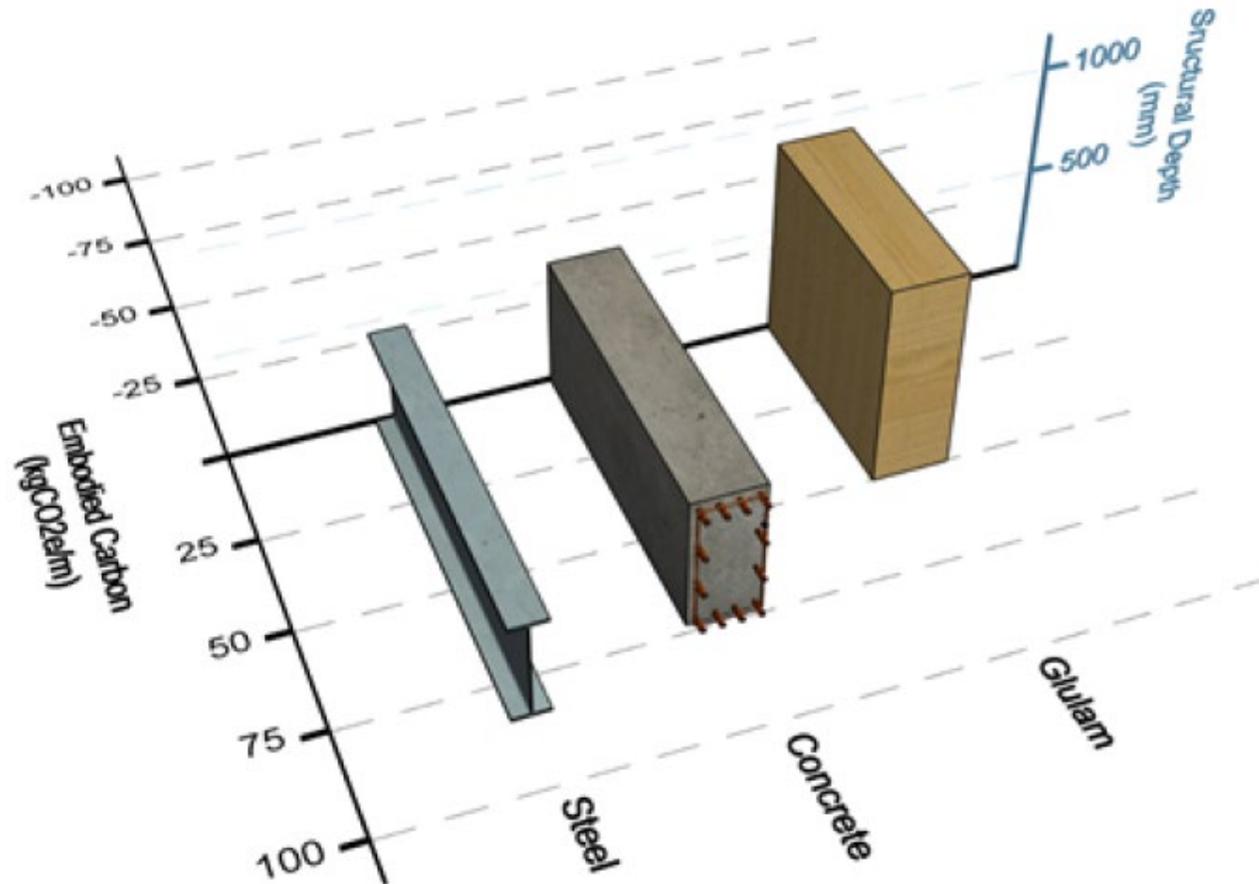
IPCC, 2018

# Consumo energético para diferentes soluções estruturais



# Consumo energético para diferentes materiais estruturais

Vigas com 7,5 m de vão  
Carregamento 40kN/m





## Coming full circle: wood and the circular economy

Woodcircles is a European innovation project to develop circular solutions for sustainable wood construction. The goal is to accelerate the construction sector's green transition.

The project aims to:

- decrease GHG emissions, waste generation, and materials consumption in European construction through increased circular use of wood materials in buildings.
- create new circular, sustainable value chains for recycled renewable materials.
- harness digital technologies to accelerate adoption of high-volume, high-impact circular solutions for wood in construction.
- improve quality and consumer trust in reused and recycled materials.

The Woodcircles solutions will be demonstrated in three pilot European cities (Rotterdam, Tartu and Turin).

The project is coordinated by the Danish Technological Institute and gathers the expertise of twenty organisations, covering the entire wood value chain.

For further information please contact:

[info@woodcircles.eu](mailto:info@woodcircles.eu)

### Stay updated on the project's latest developments:



[Download the press release](#)



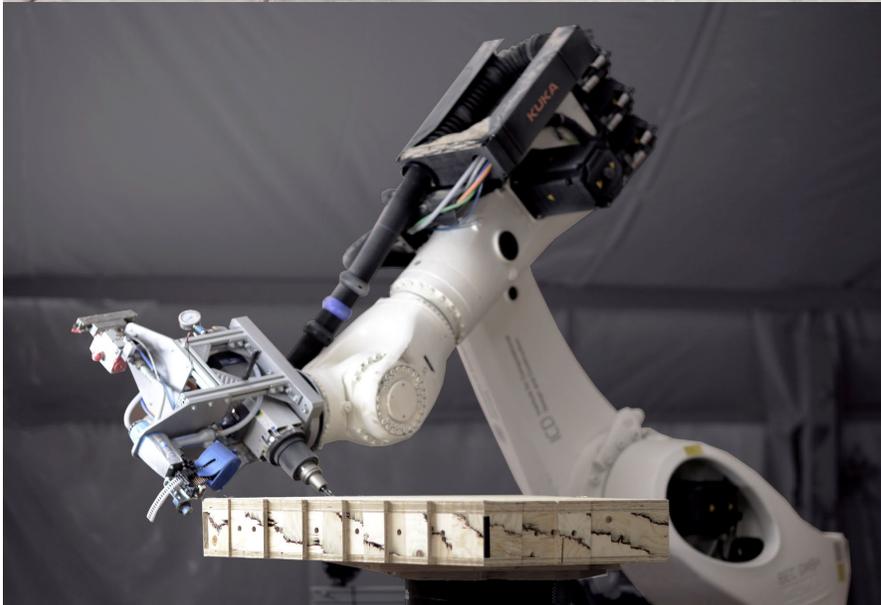
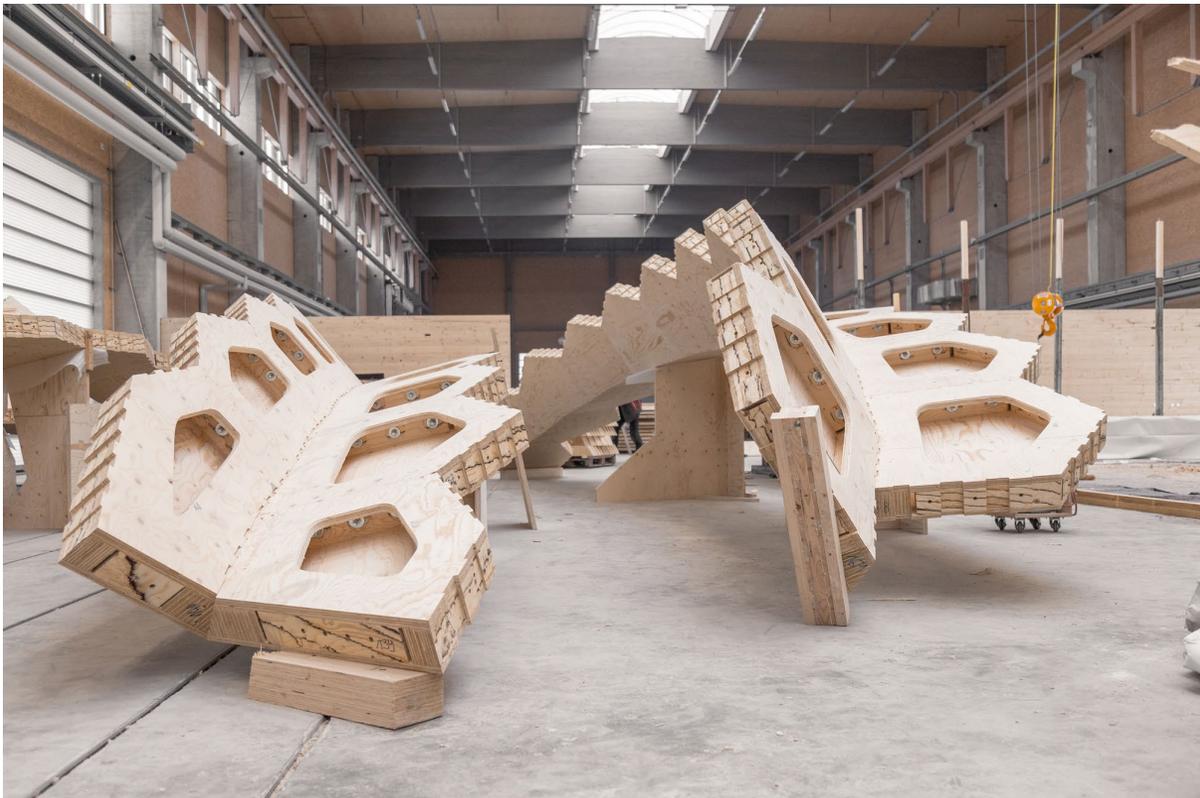
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*Soluções em estruturas de madeira*  
*Buga Pavillion, Stuttgart*





*Mass timber*





Bunjil Place, Melbourne, Australia. Francis-Jones  
Morehen Thorp, 2017. Photo © John\_Gollings





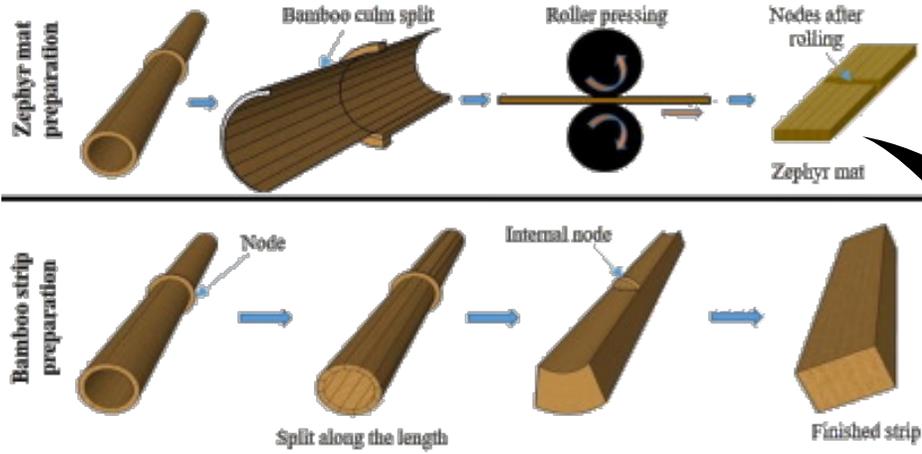
Aspen Art Museum, Colorado, USA. Shigeru Ban Architects, 2014. Photo © Michael Moran / OTTO





# Bamboo

## Engineered bamboo



Natural bamboo



Barajas airport, Madrid, Spain



Max Feffer cultural center, São Paulo, Brazil



**The Arc – Green School Gymnasium**





ReNüTeq®