Wood in Carbon Efficient Construction

Wood in Carbon Efficient Constructions

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Wood in Carbon Efficient Constructions
Content

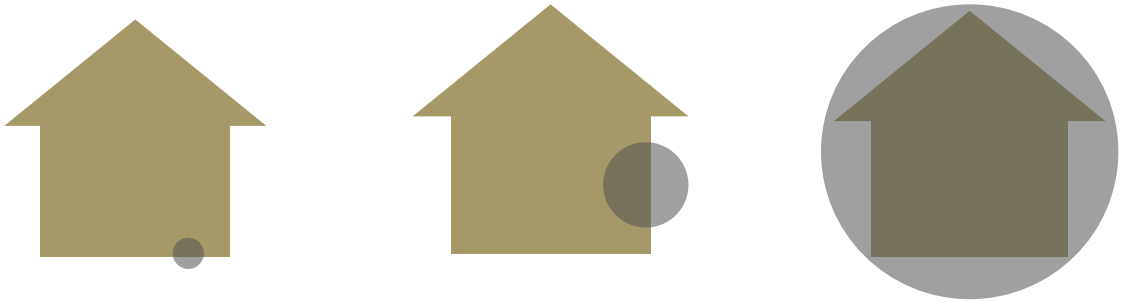
- **Specific characteristics of wood in LCA**

  GWP

  PE (CED)

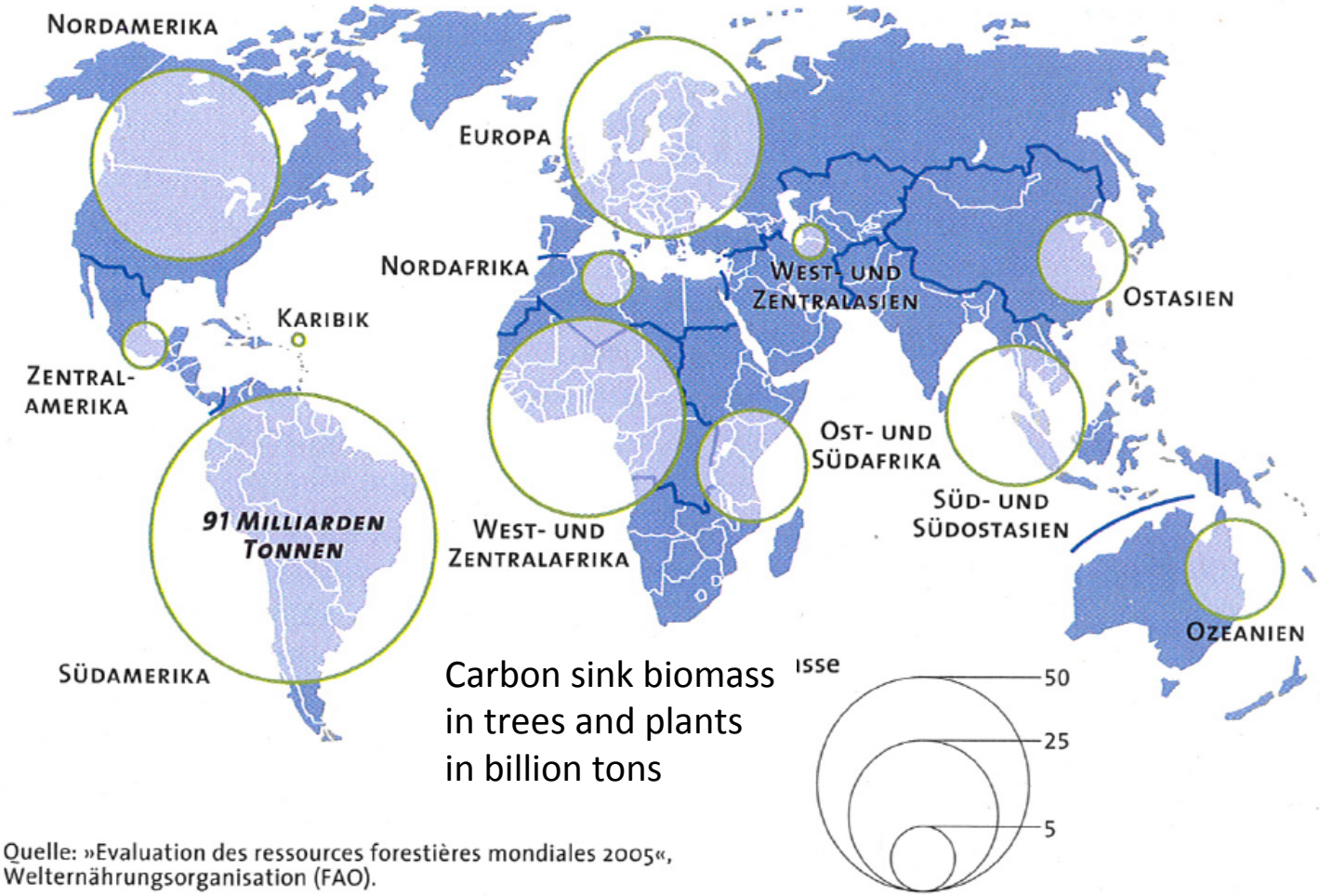
  Sustainable forests

- **Application of methodology in LCA of**



Products Components Buildings

Wood in Carbon Efficient Constructions
Carbon Sink Biomass



Carbon sink biomass in trees and plants in billion tons

Quelle: »Evaluation des ressources forestières mondiales 2005«, Welternährungsorganisation (FAO).

€CO2

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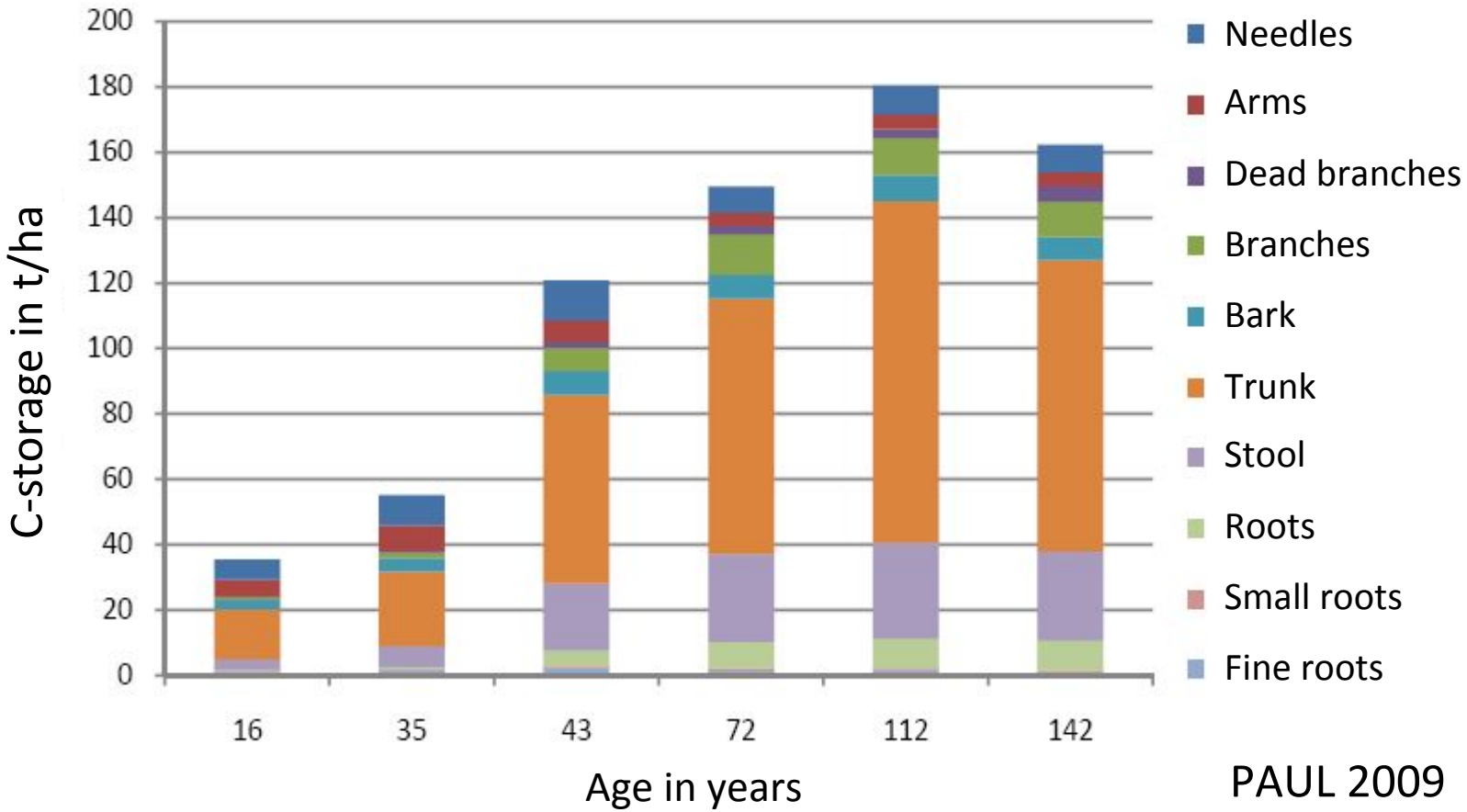

PAUL 2009

Distribution of stored carbon in tree components

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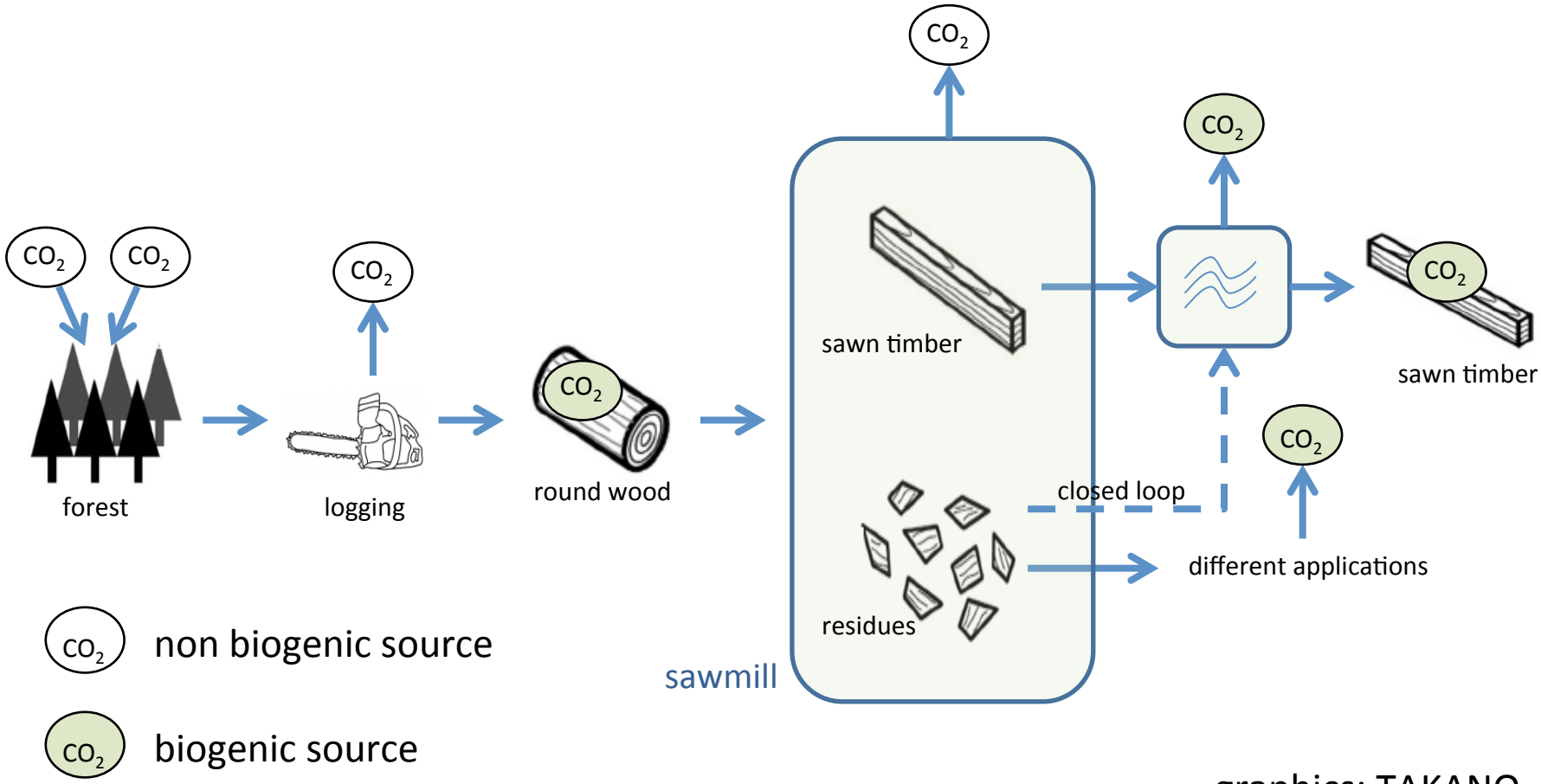
A1-A3 Production – sawn timber



graphics: TAKANO

ECO2

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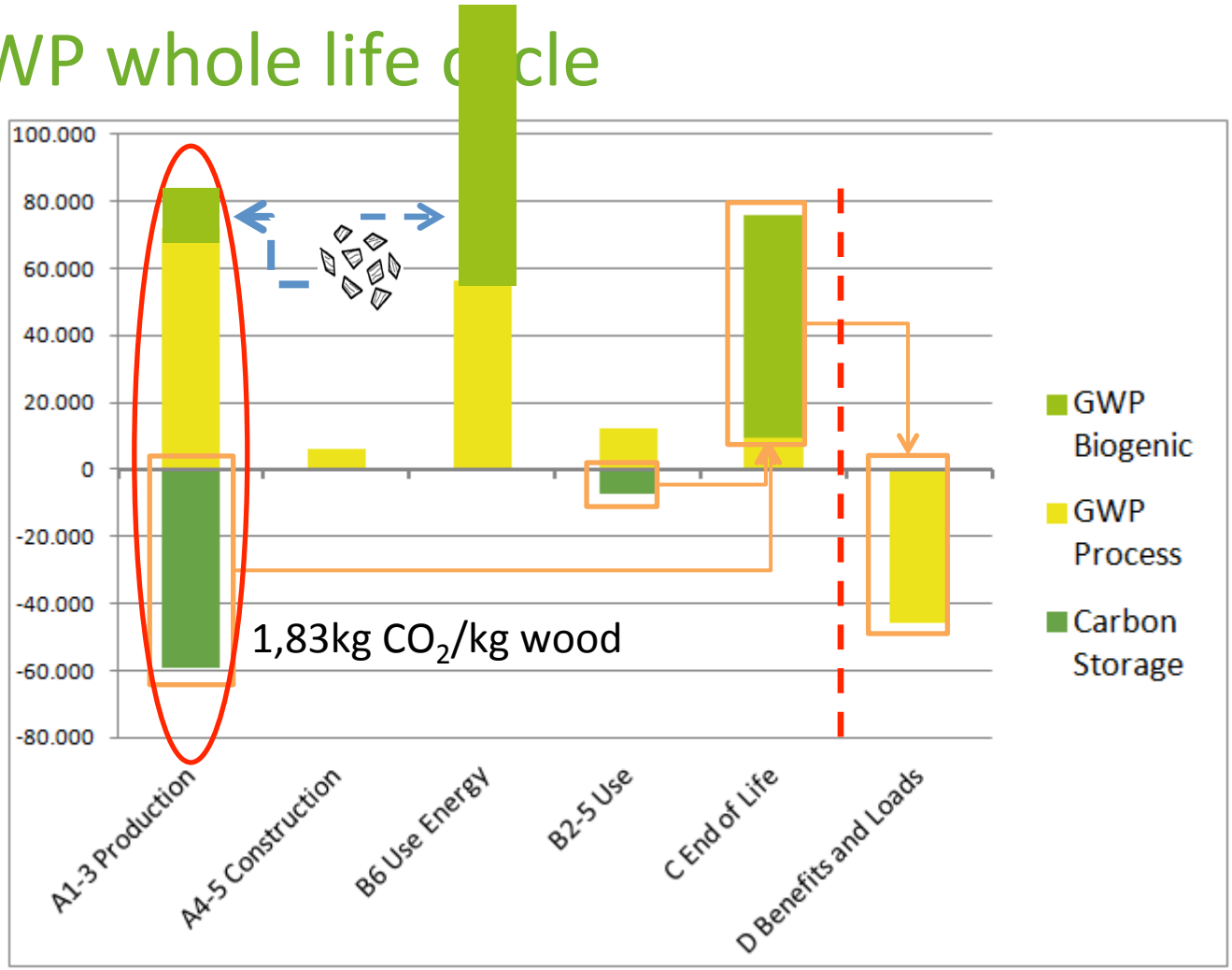
GWP whole life cycle



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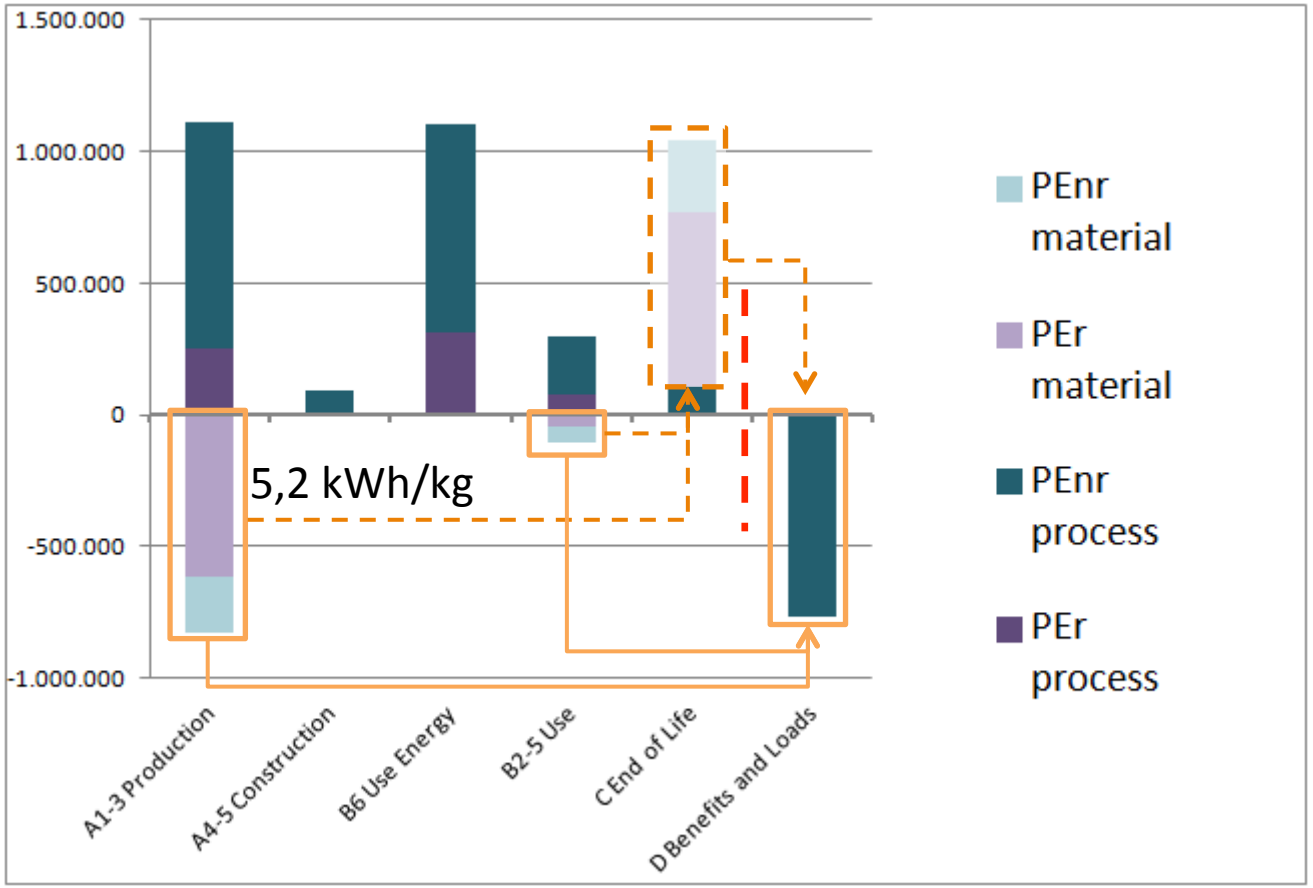
PE whole life cycle



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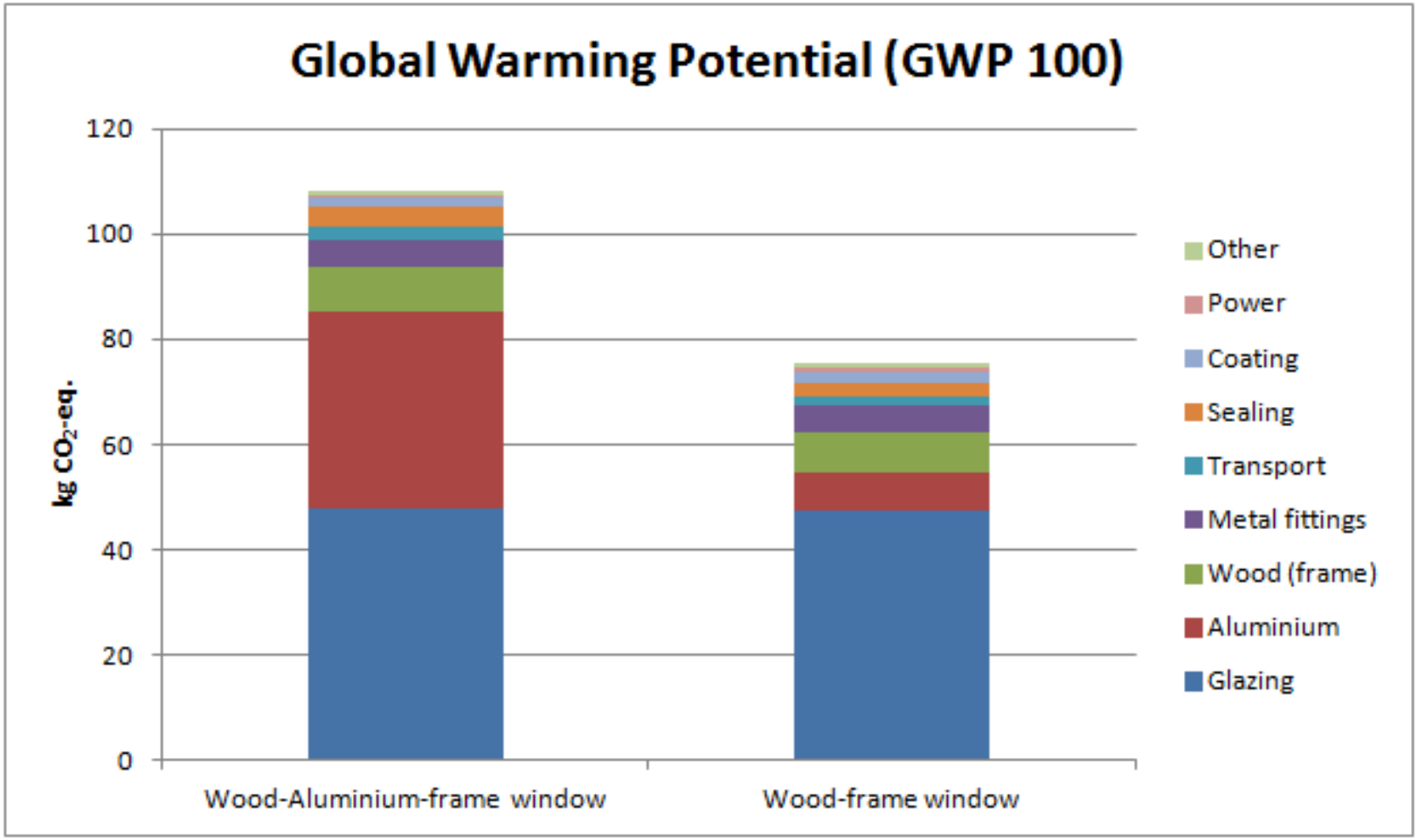
Production A1-3 - windows



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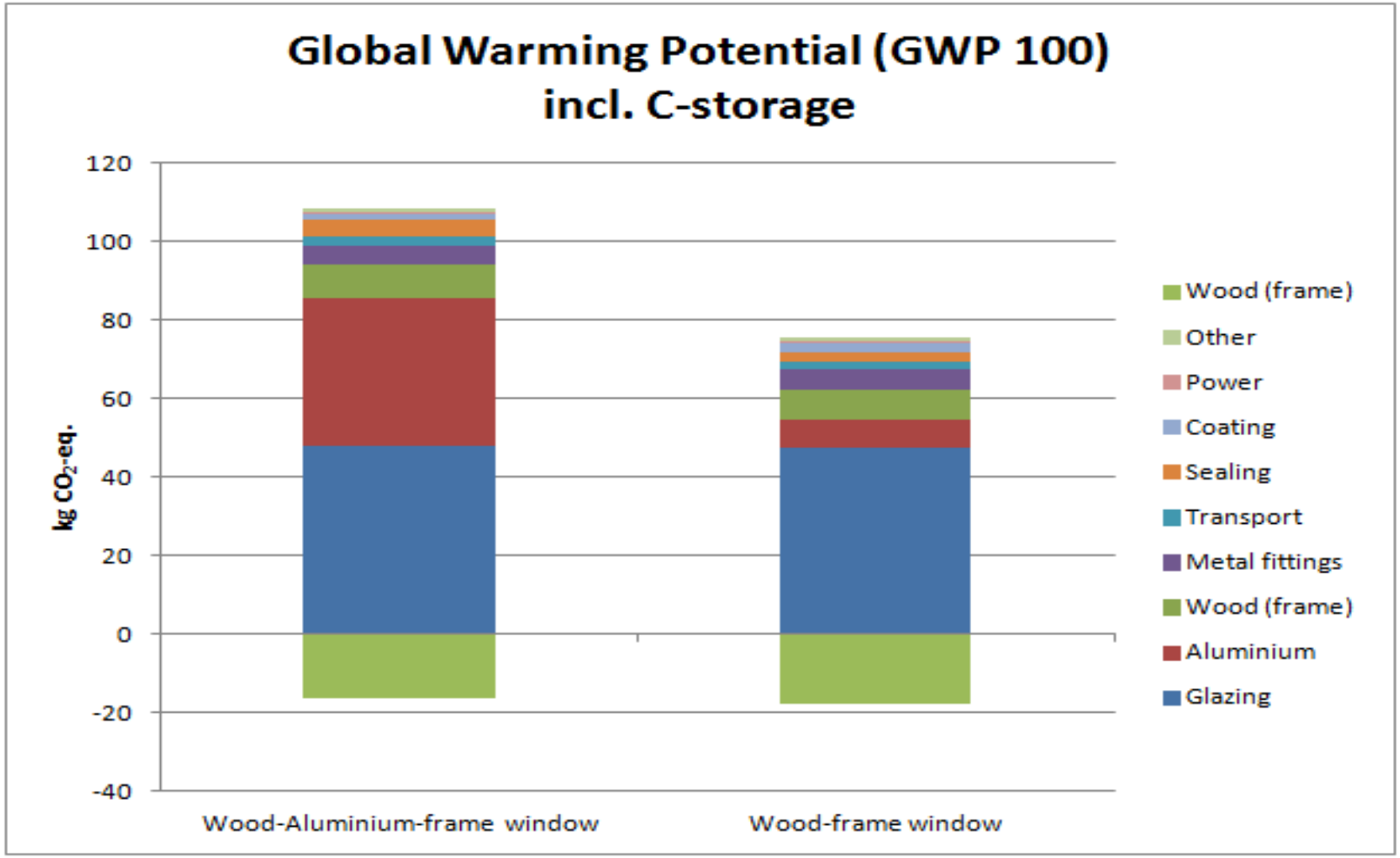
Production A1-3 - windows



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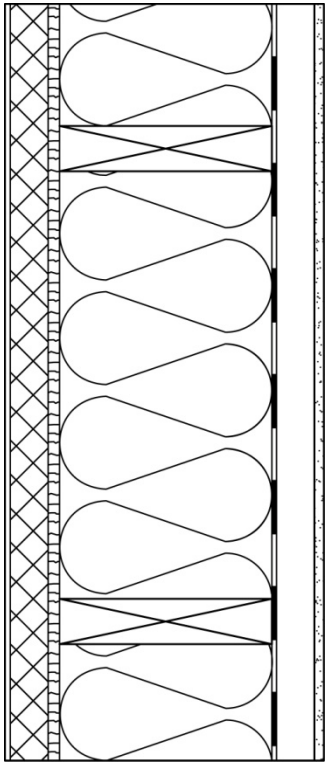
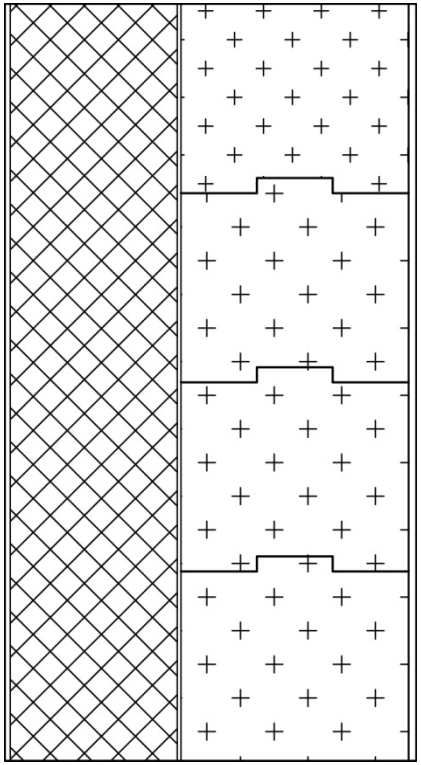
Wood in Carbon Efficient Constructions Components

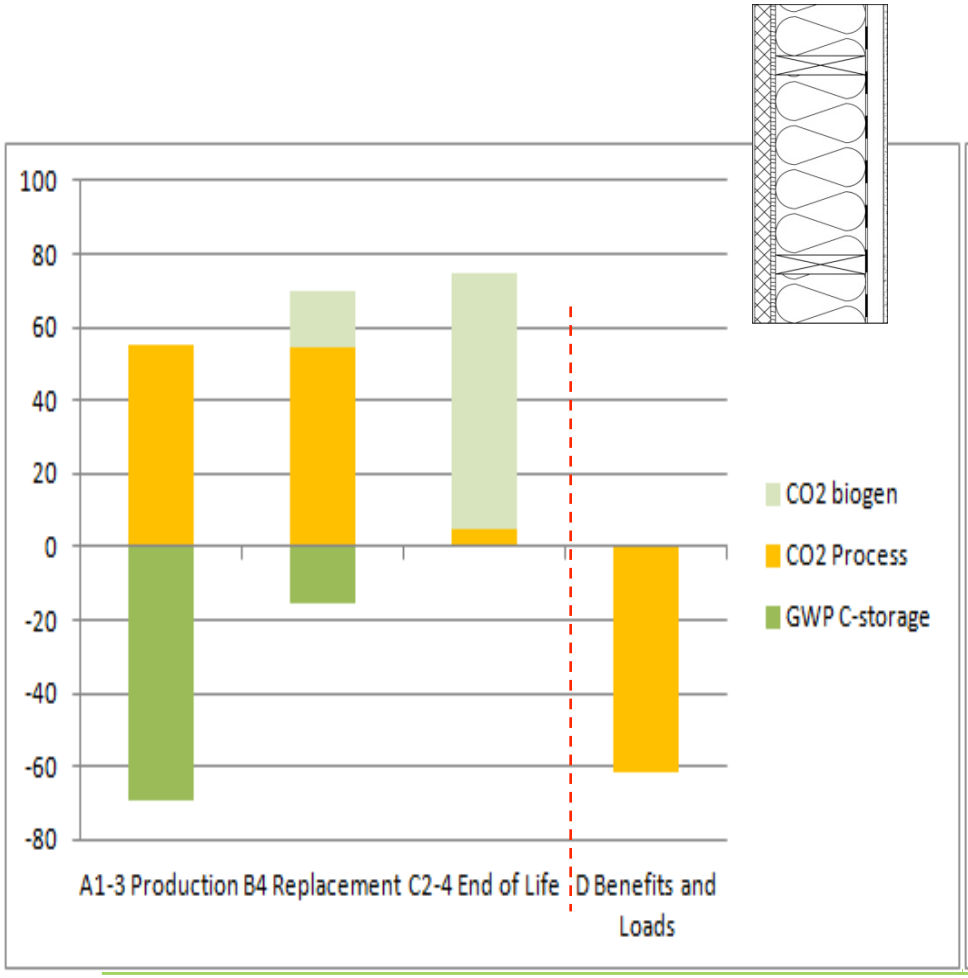


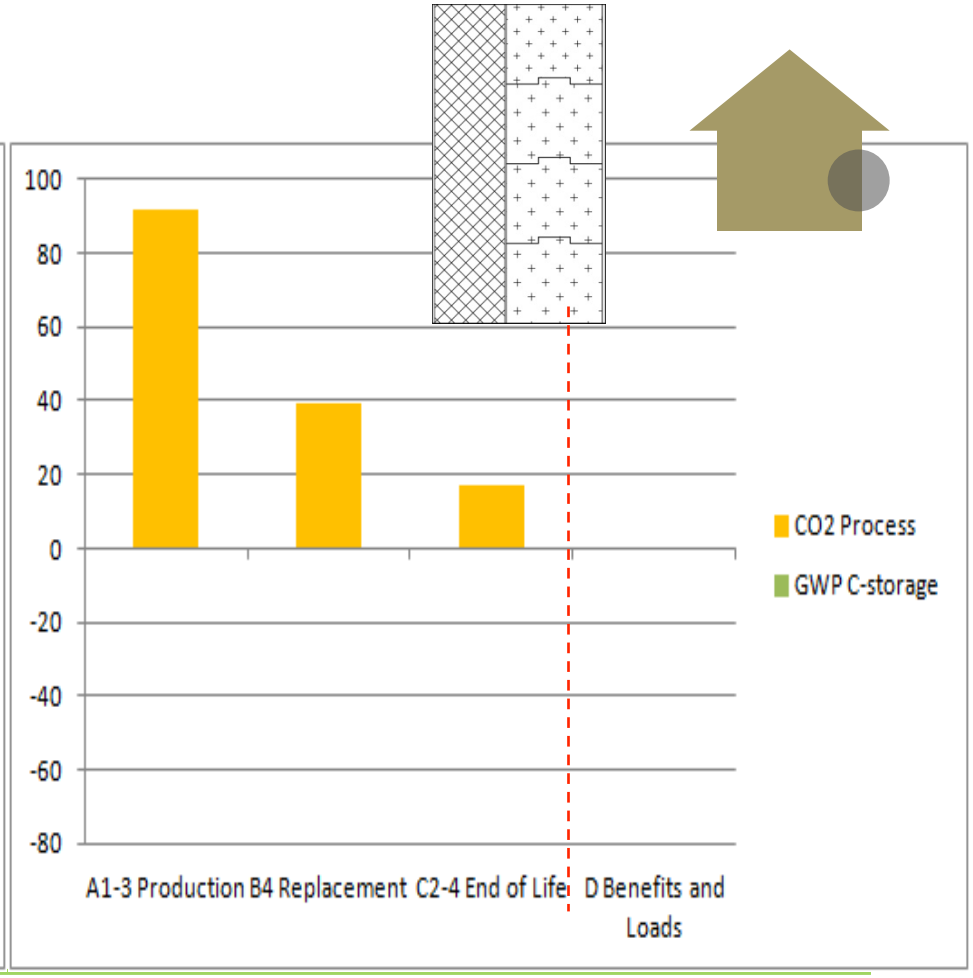
Timber frame



Brick with ETIC

Wood in Carbon Efficient Constructions Components - GWP





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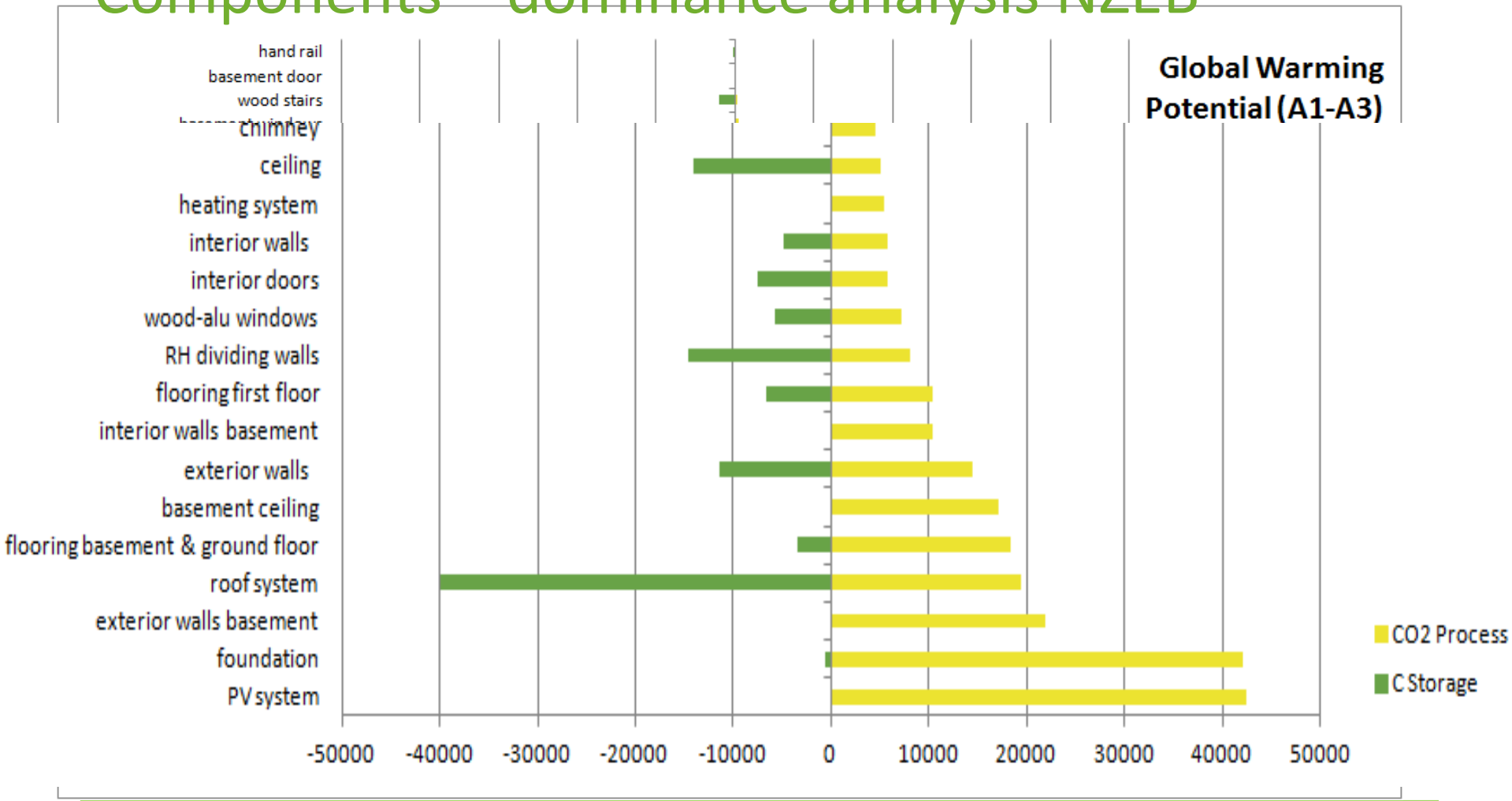
Wood in Carbon Efficient Constructions Components – dominance analysis NZEB



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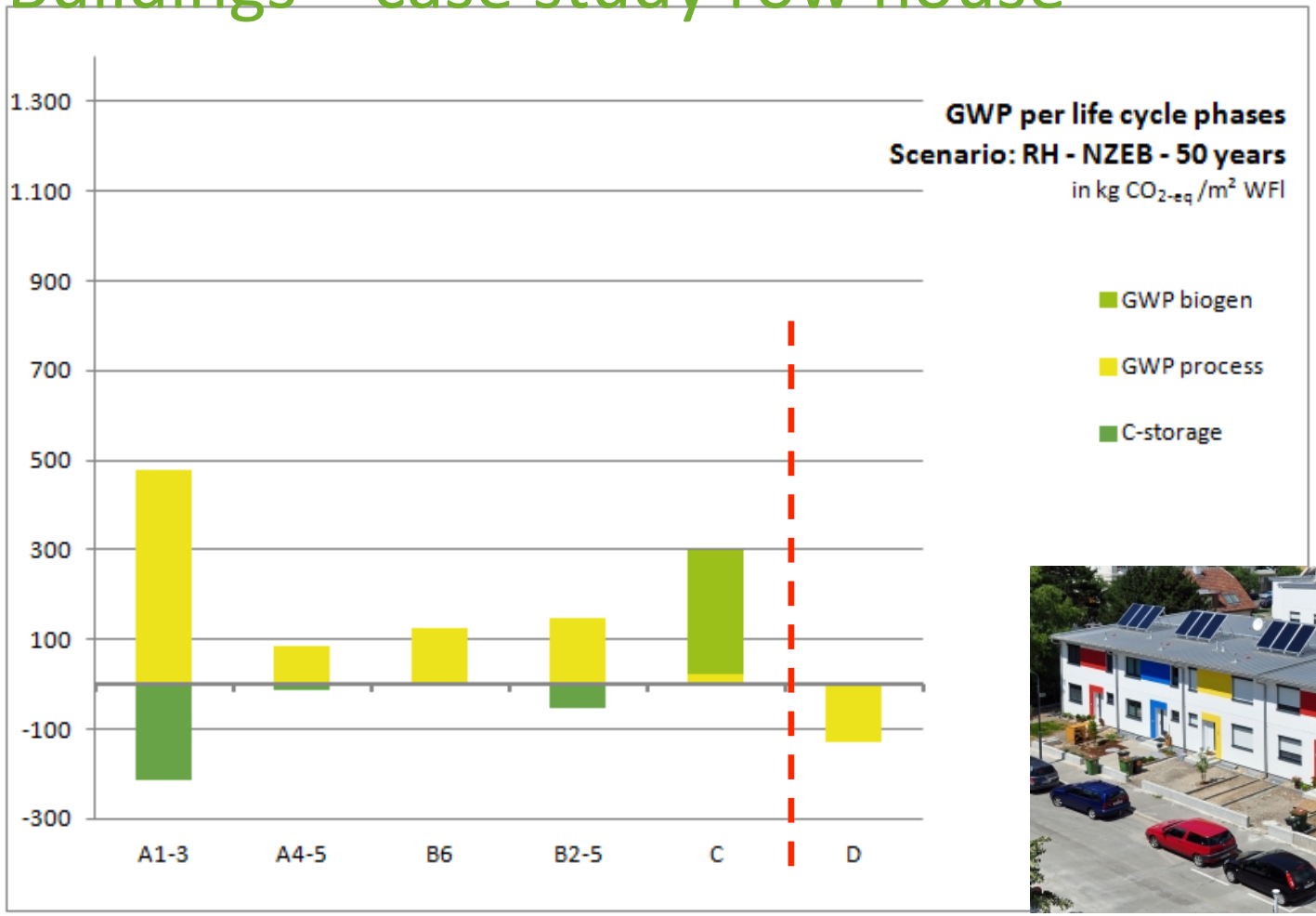
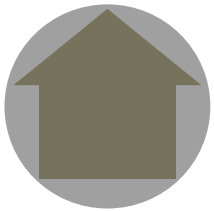
Wood in Carbon Efficient Constructions Buildings – case study row house





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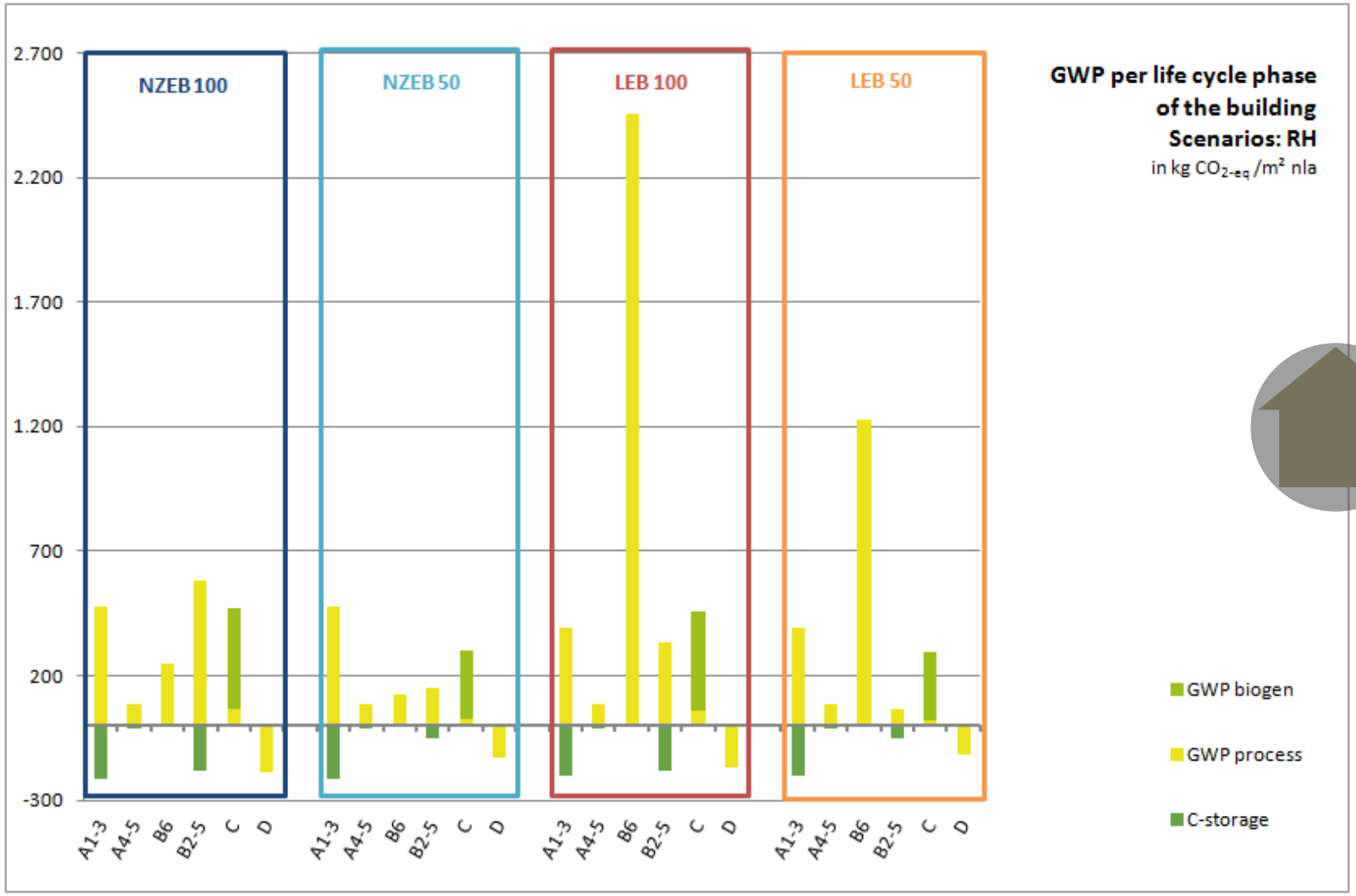

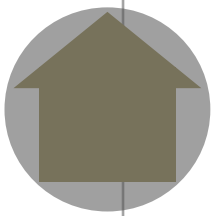

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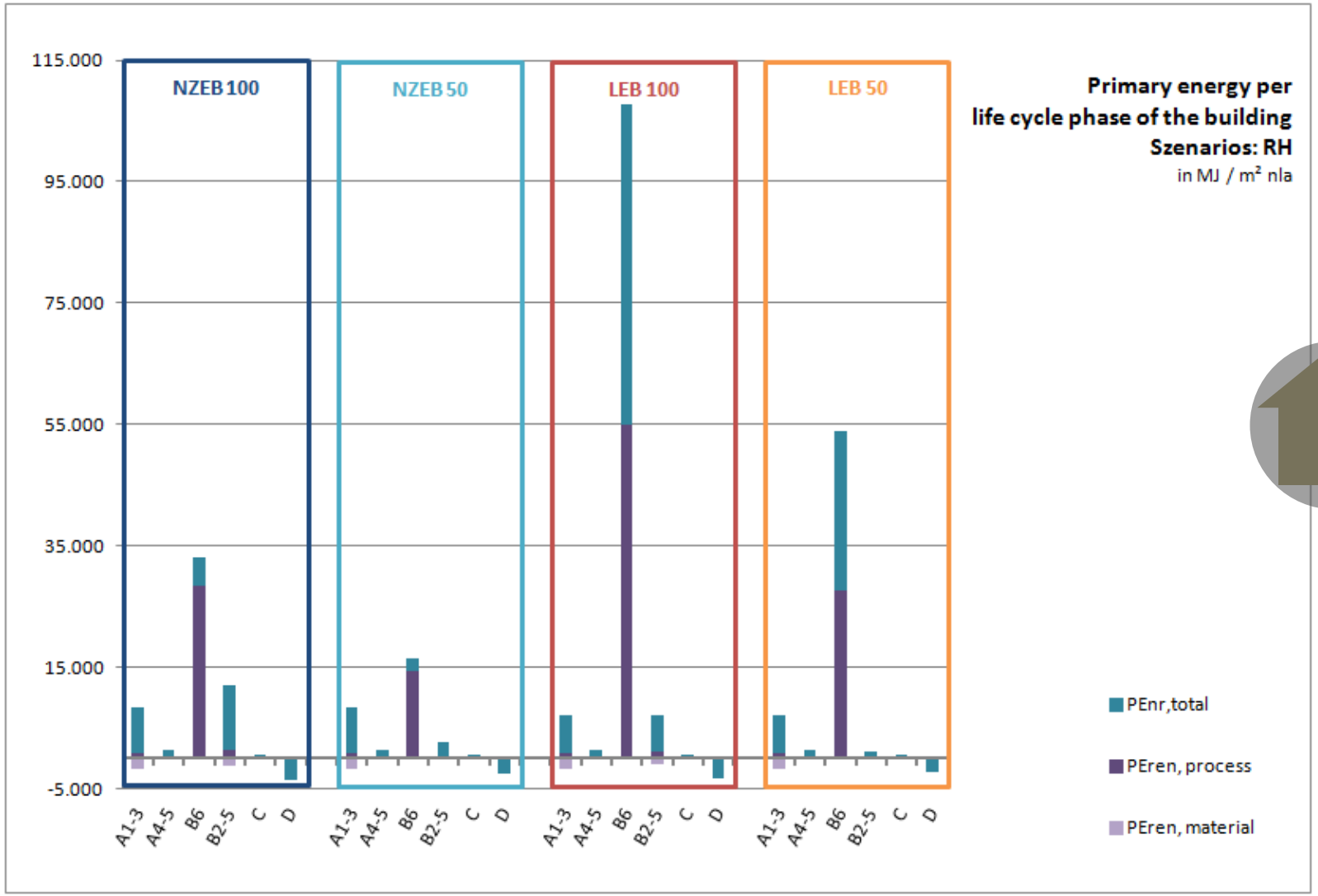

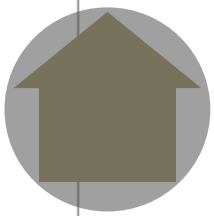

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Conclusions

- Due to carbon and energy content of wood, LCA's complexity is higher
- Carbon and energy flows have to be tracked consequently in order to avoid leaving it unconsidered or double counted
- Examples for products, components and buildings show that biogenic carbon can be reported or not, but should be done consequently.
- Reporting of biogenic carbon increases complexity, but information as well.

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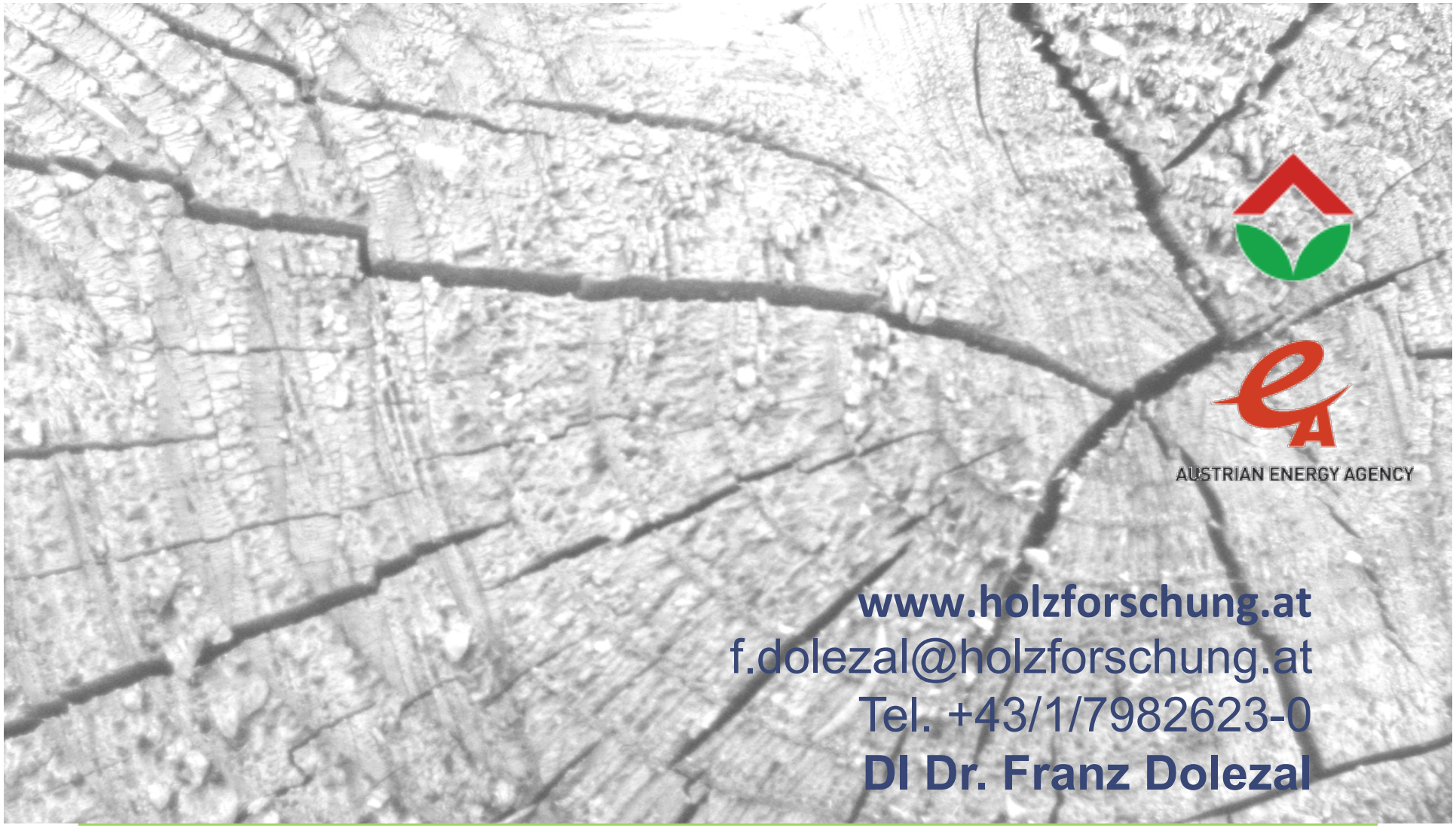

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